THE

CYCLOPÆDIA;

or,

Universal Dictionary

of

ARTS, SCIENCES, AND LITERATURE.

VOL. VII.
CASTRAMETATION.

Castrametation is, in its strict and limited sense, the art of tracing out and disposing of, advantageously and regularly, the different parts of a camp on the ground. But taken in its more indefinite and unlimited acceptation, it extends to and is connected with all the ordinary operations of the campaign, as well as the conducting and management of sieges. Under the spirit of these considerations, an able officer, in choosing situations for the encampment of his troops, will endeavour to derive advantages from every situation, of which the variety is almost endless and indefinite, that nature presents to his view, as plains, mountains, passes, hollow ways, ponds, marshes, rivers, particularly such as are navigable and commodious for the transportation of forage and provisions, rivulets fit for forming inundations, woods convenient for making abattes and furnishing abundance of palisades and fire-wood; positions advantageously situated for works, for commanding and keeping open his communications with those tracts or districts of country from which he draws his supplies of forage and provisions; for covering and protecting his convoys; for securing a sufficiency of ground commodious for drawing up his troops on in order of battle, if necessary, and for their facile and expeditious performance of all the requisite movements without disorder or confusion even in the face of the enemy; and posts well calculated for bridding the enemy's operations, and checking his inroads into his country, whilst they facilitate his incursions into the enemy's. He should not only be capable of discerning these advantages, but should also be able to turn them immediately to account without suffering the opportunity of profiting by them to escape him. And under the lead of these considerations, when the besieging army is unavoidably encamped, as is indeed often the case than otherwise, that the different parts of it are separated from one another by rivers, great or small, ravines, or other obstacles and obstructions, he should know how to open and establish such communications between them, in the most expedient manner, as will render their co-operations, in either covering, forwarding, and protecting the different branches of the approaches, or in checking and curbing the assailers of the besieged, as convenient, easy, and efficient as possible. He should not only be able to discern, almost immediately, the positions in the environs of the place most advantageously situated for facilitating these purposes, but ought to occupy them whether they be a little too near to or too far from the enemy's works, taking care to keep the rear of his camp (the form or figure of which he must change or vary from what is customary, but, at the same time, secondum artum to make it suit his situation and circumstances) out of the reach of their cannon. He should know how to determine without loss of time the precise distance from the works of the place he invests, necessary for the safety and security of his camp against annoyance from them, that he may avoid the unnecessary labour, delay, and trouble of throwing up too extensive lines of circumvallation. He should carefully guard against his camp's being looked into by commanding ground near any part of it in front, on either flank, or in the rear. For it is better to occupy such eminences with good redoubts or to make the lines themselves communicate with them, than to leave the camp exposed to danger or molestation. And in the disposition or arrangement of the line of circumvallation for its defence, he ought to avoid himself of heights, riviers, ravines, steep banks, and slopes, dikes, ditches, pits, walls, buildings, fences, abattes, thicketts, &c. and, in short, every thing that can be embraced by it, and from which any additional strength or advantage can be derived to it.

In every country its quarter-master general ought to be a man of the most extensive military knowledge and information, as ruinous consequences may result from his being a peron of a different description. And the officers under him ought also to be men of the first intelligence. They ought
ought not only to understand how to trace out ground for troops to encamp in the usual or customary manner, but they ought also to be so far conversant in geometry and in the doctrine of ratios or relation, as to be able without confessing themselves to the rules prescribed by any writer on castration, which are applicable to every situation, with such prudence and readiness to vary the form of an encampment in such a manner as to make it suit the circumstances they are placed in, preferring, at the same time, in the different parts of it order, regularity, and due proportion. They should possess knowledge enough to enable them to discern immediately which of two positions, apparently in other respects alike advantageous for an encampment is capable of being secured and defended with the least trouble and difficulty. They ought to understand the principles of fortification, and particularly of irregular construction, without which the camp itself cannot be carried to much perfection. And they should, in short, be well acquainted with the doctrine of politics and the combinations of attack and defence, which unit, if, form the sublime part of war.

In a nation, or tribe of people, even the most savage and uncivilized, has had a particular mode of encamping. By which a regular method of forming an encampment was first introduced, cannot with certainty be determined. A home knowledge, however, of geometry, was necessary for taking out a camping site; but it is more than probable, that regular encampment was not made use of in Egypt. The great numbers of people all crowded together, and exposed to the inroads of canes and other produce, was much worked in that country, must have been encamped, as they could not return home daily. But the first, before they left Egypt, must have been often and long encamped, and, of course, after the manner of the Egyptians. Mofes gives us no account of the way in which they encamped, either in Etham, or near Pelusium, in front of Bad-sephon, before he carried them into the Red Sea. But in the regular chapter of the book of Numbers he delivers a general view of what he was commanded to observe in regard both to their castration and order of march. They were ordered to pitch their tents, every man by his own camp, and by his own standard, throughout their several hosts.

Those, who were under the standard of Judah, viz. the tribes of Judah, Thadoc, and Zebulan, to the amount of 185,000 fighting men, formed the east line of the camp, to the right side of the sun. They, on descending, were the first, or lead the van, and were commanded by Nahum, Nelson, and Libah.

Those under the standard of Reuben, viz. the tribes of Reuben, Simeon, and Gud, amounting to 151,500 warriors, formed the north side of the camp. They were commanded by Liban, Swhat, and Ezemp.

Those under the standard of Ephraim, viz. the tribes of Ephraim, Manasse, and Benjamin, amounting to 187,500 warriors, formed the west side, and were commanded by Liban, Gudrei, and Abdon.

Those, however, on a march, did not follow immediately those that formed the north side of the camp, but the Levites, who with the tabernacle followed the warriors under the standard of Reuben.

Those under the standard of Dan, viz. the tribes of Dan, Asher, and Naftah, to the number of 177,000 fighting men, formed the north side, and were commanded by Annez, Paged, and Ahira. Those, on a march, brought up the rear.

In the middle of that immense encampment, the Levites, to the number of 21,000, encamped with the tabernacle of the congregation afar off from the sides of the camp, with Mozes and Aaron and his sons in front of it, towards the east.

It is probable, may be said evident, that this huge camp was a square, as nearly 600. For although the number of fighting men that pitched their tents under the standard of Judah, on the east side of the camp, amounted to 185,450, exceeding the number of those who encamped toward the west, or on the opposite side of the camp, under the standard of Ephraim, by 72,050, yet the number of warriors encamped on the north side of it, under the standard of Dan, amounting to 157,050, exceeded the number of those encamped on the south side, under the standard of Reuben, by 6,150 only. Now had they encamped in the latter manner as we must now suppose they did, and with the same depth in each front or side of the camp, we would have been a trapezium, having it sides to one another as the numbers 185,450, 157,050, 157,050, 138,550, 21,000. This however, would have been a very awkward and inconvenient figure for it; by making the depth of the encampment on the east side to that on the north side, as 170 to 157; and the depth of it on the west side and south side respective as 157 to 157, they might easily have made their camp a square. And it is more than probable, that it was a perfect square when the ground adapted for it. For Mofes was made in all the knowledge and learning of the Egyptians, and they were sufficiently acquainted with geometry to know that all rectilinear figures with the same perimeter, the square contains the greatest area.

Mofes neither ordered nor how their tents were arranged, nor whether they formed their camp with an unbroken front. That fanciful French writer, however, M de l'Ecluse, in his "Traite de l'Attaque et de la Defense des Places des Autres," article third, modestly affirms, that Mofes always interchanged his camps. In speaking of lines of circum-vallation and counter-vallation, he uses the following words: "On ignore que des Egyptiens, des Juifs, des Almogins, ils en ont servi premier. Je penfe heros plus pour les premiers que pour les autres, parce que je les crois plus anciens. Mofes le ret a nous toujours dans les campements, l'escarre ne doit pas qu'il eût le premier, qui ne fût le ro des forces de precuation, et lorsqu'il parle de l'escarre des villes ou ne voit rien, que puifle marquer ou faire un effet que c'est plus par la premiere fois."

Mofes tells us, that the Israelites, on quitting their camp, moved in four large bodies, of three tribes each, with the Levites and the Tabernacle of the congregation between the second and third of these divisions.

The Romans also, on quitting their camp, marched in four principal bodies or divisions, but the extraordinary led the van; next to them marched the allies of the right wing, who were followed by the baggage of both; after them marched the first of the two Roman legions, with its own baggage behind it; then followed the second legion with both its own baggage behind it, and that of the allies of the left wing, who closed the rear. The cavalry marched in files in the rear of the respective bodies to whom they belonged, and sometimes on the flanks of the bundles of burden lined with the baggage, keeping them together, and covering them from shot. When any attack was expected to be made upon the rear, the extraordinaries of the allies were placed there, instead of leading the van.

The two legions and the two wings of the allies changed their places daily on a march, which the four principal bodies of the Israelites do not appear to have done, that they might
CASTRAMETATION.

might enjoy by turns the advantage of arriving first at water and forage. When they were threatened with any immediate danger, and were marching through an open country, they advanced in three parallel lines behind one another, with the baggage of each line in its front.

Before the end of a march, and the approach of the army to the place of encampment, a tribune, accompanied by some centurions, advanced to examine and survey the ground, to determine the situation of the camp, and on which side of it the legions could be most conveniently encamped.

As to the castrametation of the Romans, according to Polybius, and during the commonwealth, see the article Camp. The French Encyclopædia, following Justin Lycurgus, chiefly make it nearly an equilateral quadrangle or square; but Polybius makes it a perfect square.

As to the castrametation of the Greeks, we understand from Polybius that they had no invariable, fixed, or determinate method of encamping. Xenophon, in treating of the Lacedæmonian republic, delivers Lycurgus’s sentiments respecting castrametation, and informs us, that that lawgiver regarding the four angles of a quadrangle, or square, as inferior, enjoined the circular form for a camp, unless it were secured by a mountain, or had its rear covered by a wall or river.

His words are these: "Εννοεῖ δε καὶ ἐπηρετηθῆσθαι τριερότερα τριερότερα τριερότερα τριερότερα, χρείας Λυκοργῷ δὲ καὶ μὲν γέγορο τὰ τὰ γενεάτα, τὰ τετραγωνίων ἀρχήτων υπώκωται, καὶ δύο ἐπιστάξις ἔχει, τὸ τετράγωνον ὑποτάσσεται τοιούτῳ ἐπιστάσιμ διότι τοιούτῳ ἂν ὑποτάσσονται αὐτότως, καὶ οὐλόμενον ἁπατήν τοιούτῳ." Even this mode of castrametation, delivered by Lycurgus, was not fixed or determinate, but might vary with the circumstances of ground and situations; and we have the authority of Polybius for asserting, that the Greeks in general, when they encamped, considered chiefly the natural strength of the position they chose for that purpose, and accommodated to it the admeasurement and disposition of the different parts of their camp, partly from anxiety to avoid the labour of throwing up an intrenchment round it, and partly from the persuasion that works raised by art are less secure than those that are made by nature. In compliance with what the nature of the ground demanded, they were accordingly obliged not only to give their camp occasionally every kind of figure, but also to vary the positions and dimensions of its several parts, as the place for each was favourable or otherwise. Hence, this judicious historian tells us, arose that great inaccuracy, namely, that the Grecian soldiers never knew either his own place in the camp, or that of the body to which he belonged. On the other hand, he says, the Romans willingly submitted to the task of throwing up an intrenchment, and to other painful labours, for the sake of the advantage they found in employing a method of castrametation that was never changed, and which rendered all the parts of the camp familiar to the army.

The Romans, on their marches, cheerfully underwent much greater fatigue for the security of their camps than the Greeks were willing to submit to, each folder frequently carrying three or four palisades for the intrenchment. This was a labour, Polybius tells us, which in the discipline of the Grecian armies was regarded as impracticable; whereas the Romans performed it without much difficulty. The Greeks, he says, on their marches, were hardly able to support the toil of moving along their own bodies. But the Romans, after flinging their shields with the leather braces behind their shoulders, took their javelins in their hands, and were at the same time able to carry the palisades. They also discovered more judgment both in the choice and shape of their palisades than the Greeks, whose aversion from labour and fatigue must have frequently left their camps in a state of great insecurity.

Besides the account given by Polybius of the Roman method of encamping, there is a description of their castrametation, given on a mutilated scroll or label by Hyginus, who observes to have been a camp and land measure in the time of Trajan and Hadrian, when the empire was in its highest pitch of glory, as Trajan had extended it beyond the Tigris on one side, and beyond the Danube on the other. Hyginus’s fragment was first published in 1605, but in a form so defective and mutilated, as to be hardly intelligible. In 1665, it was published at Amsterdam, with a very curious, learned, and elaborate commentary on it by Rhabdus Hermannus Schadenius.

In the time of Marius, the military affairs of the Romans without doubt underwent a considerable change, which probably affected their ancient system of castrametation, but to what extent it is impossible to determine. But the alterations then introduced gradually occasioned a great departure from their former rules and regulations. It is no wonder then that their castrametation, according to Hyginus, differs so materially as it does from that of Polybius. Though the empire of the Romans was at its utmost extent, and exulted in full force and vigour, their language was on the decline, and its purity in a great measure lost. The legions, by refiling long in the conquered countries, adopted by degrees the barbarisms of the natives, and became familiar to their manners and customs. The attacking of large bodies of mercenaries to them gave rise to a different establishment, both for their national and auxiliary troops; in the latter of whom they could not always place so much confidence as formerly, and occasioned the creation of many new officers and appointments, which rendered a new method of castrametation necessary. Hence, this writer makes use of terms that are not to be found in any other author, and seem to have been unknown in the time of Polybius. The scroll or label containing his rules of castrametation is entitled "Hygin Gromatici de Castrametatione Liber."

He informs us, that a complete army consisted of three legions, with their supplementa, or auxiliaries, making use of this number for the purpose of exemplifying or illustrating his castrametation, and observing at the same time that the largest army was composed of no more than five or six such legions. He tells us, that every camp, as often as circumstances will permit, should be one half longer than it is broad, or have its length to its breadth in the ratio of three to two. Such a camp he calls castra tertio. He accurately makes the length of a camp for three legions equal to 2,400 Roman feet, and its breadth equal to 1,600 feet. General Roy, however, says that the particular measure is given by him do not correspond exactly with these general dimensions, and makes the fun of them, as he has collected them from the original, give the length of the camp equal to 2,270 feet only, and the breadth equal to 1,600 feet, the one falling short of 2,400 feet by 50, and the other exceeding 1,600 by 20.

When the camp was longer in proportion to its breadth, than in the ratio of three to two, it was called castra clausa, because a general founding of all the martial instruments together became necessary, as the buccinum or bugle horn founded in front of the praetorium could not then be distinctly heard at the distant parts of the camp.

Hyginus divides the length of his camp into three unequal parts, by streets extending across the whole breadth of it. The first of these, lying in front of the praetorium, he calls the praetorium. The second, lying between the principal street
street and the quintan street, and in the middle of which stands the praetorium, he calls the latera prætorii; and to the third, situated beyond the quintan street and behind the praetorium, he gives the name of reventura.

The principal street, according to him, was 60 feet broad, and had the middle of it before the centre of the praetorium distinguished by the name of gruma, from the crux-ruffed, or some similar instrument, which was used for tracing out the right angles of the camp. And those employed in this business, or in making allotments of lands in the conquered countries for the veterans, were probably called grumacei. The praetorium street, leading from the gruma perpendicularly to the principal street, is also 60 feet wide. The breadth of the quintan street is 30 feet as well as that of the singular street, which runs quite along the four sides of the camp, dividing the interior part of it from the exterior, or that which lies between the said street and the intrenchment. But when an army consisted of five or six legions, the breadth of each of these streets was equal to 10 feet. The interval between the tents on the outside of the singular street, and the intrenchment making part of the exterior division of the camp, is every where 60 feet wide. This camp commonly had only four gates, viz., the right and left principal gates, the decuman gate, and the praetorium gate. Hyginus says, that the decuman gate received its name from the tenth cohort of the legion's being encamped near it. General Roy, however, places this gate differently from Hyginus, and differs also from Schelius in several particulars in regard to the interior divisions and arrangement of the camp.

It was the practice of the Romans during the commonwealth to place their own legions in the centre, both in the camp and when drawn up in order of battle. Hyginus, however, places the most of the legionary troops in the exterior part of the camp without the singular street, and nearest to the rampart, for the defence of which they were more to be depended on than the mercenaries, in whom they did not confide so much as they formerly used to do in their socii or allies. He alleges that the foreign troops, by being kept thus within, or surrounded by the Roman legions, were more easily rendered obedient and attentive to their duty. They certainly had it left in their power to defect, or carry intelligence to the enemy, than they would had they been encamped next to the intrenchment. The form of his camp must in a great measure have depended on the proportion which the number of the legionary troops bore to that of the mercenaries, or auxiliaries, since when the last was but small, the Roman cohorts could encamp with a greater depth and left extended front, leaving more space between the singular street and the rampart; and when it was great, with a smaller depth and a more extended front, leaving less space between the said street and the rampart.

Hyginus tells us, that a complete century of foot consisted of eighty men, and that one tent held eight men. When all the men of a century then were off duty, they would have required ten tents. But as part of each century was always on duty, they pitched only eight tents, leaving thereby sufficient room for that of the centurion. For every tent a space of 12 feet in length was allowed. The length of the ground then occupied by the men of the century and the centurion was equal to 120 feet. The breadth of the space allowed for each tent was equal to 10 feet. Five feet more were allotted for the arms, and nine for the bat-horses, or beasts of burden. The whole breadth therefore of the hemistrigium, or half-striga, amounted to 21 feet; and the length of it was what Hyginus terms intalulina. Another hemistrigium lying contiguous to this, but in an order reversed, that the horses might stand those in the other, and feed at the same manger, made a breadth of 48 feet for one striga, to which, if a width of 12 feet along the whole length of the space occupied by it for a striga, between it and the next striga be added, we get 60 feet. The whole space then, including the said street of 12 feet wide, allotted for one striga, or two hemistrigia, consisting of two centuries or 160 men, contained 120 multiplied by 60 feet, or 7200 square feet. And a cohort, which consisted of six centuries, occupied of course 21,600 square feet. For the Hygian camp of a Roman army, composed of three legions, with their supplementa or auxiliaries, consisting of 47,626 men, see Plate of Cæstremetation, figs. 1, 2, 3.

It is evident that in the Hygian camp the fame number of troops occupied a much smaller space than they did in the Polybian camp. The Roman armies under their emperors were more impatient of labour and fatigue than they were under the commonwealth, which led to the shortening of the length of the intrenchment and the crowding of as many men as possible into a given space. They also got into the practice of employing a much greater proportion of cavalry to their number of infantry than they did before their government became imperial. And the cavalry were commonly exempted from working on the intrenchments. Thise and other caules made them depart gradually from their ancient systenm of castramentation, as described by Polybius, and make their camps sometimes rectangular, sometimes triangular, sometimes circular, and, to avoid labour, give it different forms to suit the circumstances of advantageous ground, and the necessity of their situation.

Distribution
## Castrametation

Distribution of the troops in the Hyginian camp, containing three legions, with their supplements, or auxiliaries.

### In the Pretentura, or Front Division of the Camp.

<table>
<thead>
<tr>
<th>Legionary foot</th>
<th>Auxiliary or other foot</th>
<th>Total infantry</th>
<th>Horse</th>
<th>Total</th>
<th>General total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ten legionary cohorts of 480 each, placed without the fagular street</td>
<td>4,800</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three legionary cohorts of the same number within that street</td>
<td>1,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One first cohort of the legion double in number to the ordinary cohorts</td>
<td>1,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The vexillarii of one legion attached to and encamped with this cohort</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marines of Misenum</td>
<td></td>
<td></td>
<td></td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Marines of Ravenna</td>
<td></td>
<td></td>
<td></td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Attached to the hospital for the men, the veterinarium for the horses, including artificers and labourers of all forts</td>
<td></td>
<td></td>
<td></td>
<td>2,200</td>
<td></td>
</tr>
<tr>
<td>Exploratores, or scouts</td>
<td></td>
<td></td>
<td></td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Moorib horse</td>
<td></td>
<td></td>
<td></td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Pannonian vexillaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four ala milliariæ, or wings of horse, of 1000 each, from which, deducting 95 supernumerary horses belonging to the officers, there remain 905 for the effective establishment of each ala</td>
<td></td>
<td></td>
<td></td>
<td>3,616</td>
<td></td>
</tr>
</tbody>
</table>

### In the Praetorian, or Central Division of the Camp.

<table>
<thead>
<tr>
<th>Legionary foot</th>
<th>Auxiliary or other foot</th>
<th>Total infantry</th>
<th>Horse</th>
<th>Total</th>
<th>General total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six legionary cohorts of 480 each, without the fagular street</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two first cohorts of the legions within the fagular street, on the right and left, each consisting of 960 men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The vexillarii of these two legions, encamped with their respective first cohorts, at 500 each</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four prætorian cohorts, reckoned only at the establishment of the ordinary legionary cohorts, 480 each</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The primipilarii and evocati, who encamped with them, might amount to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Five quingenarii alae of 500 each, from which deducting 64 supernumerary horses, belonging to the officers, and their establishment is reduced to 436 horsemen in each ala</td>
<td></td>
<td></td>
<td></td>
<td>2,180</td>
<td></td>
</tr>
<tr>
<td>Praetorian horse</td>
<td></td>
<td></td>
<td></td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Singular, or select horse</td>
<td></td>
<td></td>
<td></td>
<td>450</td>
<td></td>
</tr>
</tbody>
</table>

### In the Retentura, or Rear Division of the Camp.

<table>
<thead>
<tr>
<th>Legionary foot</th>
<th>Auxiliary or other foot</th>
<th>Total infantry</th>
<th>Horse</th>
<th>Total</th>
<th>General total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eight legionary cohorts of 480 each, without the fagular street</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three milliarii cohorts of foot of 960 each</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three quingenarii cohorts of foot of 480 each</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two milliarii pedesterian equestrian cohorts, each consisting of 760 and 240 horse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four quingenarii pedesterian equestrian cohorts, each consisting of 380 foot and 120 horse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statores</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auxilia nationum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palmyreni</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daci</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cantabri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Britones</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
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<p>| | | | | | |</p>
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<td>17,34</td>
<td>16,030</td>
<td>33,420</td>
<td>9,200</td>
<td>26,660</td>
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N.B. Hygines does not give the number of the emines imperatoris, or chief attendants on the emperor; neither are we told how many camps there were with the regular (fri-
date or drivers), when they were to go out against the enemy, used to encamp in the phalanx or the phalan-
men; but when defeated, a heavy battle, were placed in the retentura, or in some other part of the camp.

Through general Hygines's principle of proportion or diff-
tinction between the different cohorts, He does not mention

Hygines places 12 ft of the camp, without the regular street, or the exterior part of the camp.

General Roy thinks that Hygines be the fana meant the front of the cohort, and by his depth, it is
regard to the fight of tents he came from Schloss, who
knew them turn parallel to the regular street, whereas he
places them perpendicular to it. He says that the width
of the camp with the regular street was every where equal
to 1260 feet; that the length of the prestentura within
the same street was equal to 720 feet; that the distance
across the pretentura, from the principal to the quintus dec.,
was also equal to 720 feet; but that the distance across the
pretentura was only equal to 450 feet, or two thirds of the
distance of either of the other two parts. See figs. 1, 2, and 3.

Of modern Castrametation.

The invention of gumps wider and the application of it to
military purposes, have necarily rendered modern castramet-
tation very different from that of any nation among the an-
cients. The principal object of Europeans in forming their
encampments is the convenience or facility of drawing up
their troops at the heads of them. Hence it follows that
we should necessarily in such a manner as to be able with
expedience and without confusion, to assemble and parade
them in the way division which is regarded as the best
for fighting in the situation we happen to be in. The order
of battle therefore should determine and regulate the order
of enencampment. Consequently, the place of each regiment
in the line of battle should be at the head of its own encamp-
ment, and the extent of the battle from the right to the
left of the camp should be equal. The front of the troops
formed in line of battle, with the same intervals in the one
as in the other. The front of principal line of the
camp, commonly directed or laid out in such a manner as
the commandant may direct, the other.

It being once admitted that the army should be enencamp-
med in the order in which they ought to fight, it was
much matter to deliver general rules for the adaiinencamp-
ment and the tracing of camps.

A camp does not always supply a politics, though a
position occupied usefully supposes a camp.

The dispositions and the order of battle unavoidably vary
with the nature of the ground and situations. The arrange-
ment of the troops in their camp vary as circumstance
demands. The order of battle all frequenly depends on the
views and intentions, genius and capacity of the General,
and on his facility in executing and relative powers. That
wonderful man and extraordinary general. Amidst the loss
of the no less celebrated Amorcan Baraer, made a differ-
ent order of battle and arrangement of his troops in almost
every engagement with the Romans. Whenever the ground
and weather admitted of his employing fagagets and his
enemies, he was sure to pierce it as at Treba and the
Thasymene lake. And when he found no circumstances of
ground, situation, or weather, that he could convert to his
advantage, he changed the disposition of his troops and his
order of battle, as at Cannae.

Were there but one fixed and determine order of battle,
or method of arranging troops for action, there need be
but one invariable mode of encamping, or method of
castrametation. But nature delights in variety. Ground is
admirably various and diversified, and fire arms are by no
means foated to all this diversity, or to the effect of con-
sequent accidents. The Roman army, order of battle, or
manner of fighting, were adapted to all times and in all sorts
of ground, and were calculated for combating equally well
in every district, and for preventing a front in the enemy by a
side or rear movement, from whatever quarter they might be
foully attacked. The Macedonian phalanx, on the other
hand, from which our manner of forming troops in files is
manfully derived, was adapted to only one time and place,
and to see fixed or determine manner of action. It was
fitted and tardy in its movements, and its whole strength,
like that of our infantry, confined in its remaining an un-
broken and entire body, or in the conjoint action of those
who composed it. Whenever they were obliged to en-
gage the Romans individually, they were sure to be de-
feated and destroyed. The phalanx could neither move
forward nor backward, nor to the right or left. It could
not break, and having engaged, it was certain to be
out breaking and leaving intervals or openings. If troops
engaged with it in close action, surrounded with arms and
armour, alike calculated for either resistance or encoun-
ter, to rush in and attack these separated and broken parts,
both on their flanks and in the rear. The phalanx, there-
fore, never engaged the Romans on ground uneven and ir-
regular, without being defeated, and meeting its destruc-
ction. Of this, the battle of Cynocephale was a remark-
able instance. The phalanx also, like our infantry, was not
well adapted either to defensive or offensive operations in
the dark, or during the time of night; whereas, the Ro-
man arms and mode of fighting were alike fitted both to
day and night. The Macedonian phalanx, like a modern
army in close action, when its fire becomes useless, required
ground that was level, plain, naked, and free from every
obstacle, such as fences, ditches, walls, woods, thick-
ness, breaks, chasms, and rivers, &c. The troops in it left
all their strength and capacity of doing when they engaged either in separate
companies, or man with man. A Roman soldier, on the
other hand, when once armed and ready for service, was
equally fit for moving in any time and in any place, or
upon any emergency of an army. However sudden or un-
expected, and however grave its issues, he and his com-
pany were able to engage in the same manner and the
same spirit as Gallic foot troops, or even in the very
heat, or with great part of it; whether in a separate
company or a small unit of his own. Magnificyn
in attempting to present itself as an army and attempt
a country as this would be directly breaking and getting
into disorder whenever it met with the level or bare ex-
posure, or exposed. A few hundred active men, armed
each with the Roman shield and a light hick' would be
very few against any almost equal numbers of closing
around with the phalanx; but one part of such
a phaenant, body or an army, and of course using
a dreadful carnage among them with very little loss or injury
to themselves. Were the magnificy to fire on their closing
with them, the flame would only increase their confusion
and facilitate their defeat. If they attempted to de-
 fend themselves either immediately or in separate and small
bodies they would certainly perish. They would therefore
be reduced to the alternative of either surrendering them-
sefes prisoners without resistance, or of throwing away
their arms, and running as fast as their legs could carry
them;
them; for they could not carry their musquets along with them and retire with half the celerity that troops armed in the other way could follow them. Were there any reason for apprehending an invasion of this country, ten thousand active men armed in this manner would be of more use for the purposes of defense than sixty thousand of either sharpshooters, or common infantry. But custom and prejudice, and perhaps ignorance too of the proper mode of defending it, may possibly prevent the adoption of such a measure. As to cavalry, it is manifest that they can be of but little use in either attacking or defending it, since there are but few situations in it where they could be brought to act with advantage and effect.

As to the men in the phalanx had shields, or bucklers, as well as spears, the width or breadth of a file in it was equal to three feet. A Roman soldier standing under arms also occupied three feet, but in order of battle he necessarily occupied six feet, in order to have the free use of his large shield on his left arm, and the gladion in his right hand in action.

Though the arrangement of troops in a camp must vary with the nature of the ground, it is customary to suppose for each corps of an army such a fixed or determinate order of battle as can be made use of on a plain or level ground. Such an order serves for forming the tableau, delineation, picture, or description of the force of the army, and for regulating the order of service in regard both to the superior officers, and the troops that they command.

The number of men that forms a battalion varies in different countries of Europe, and has varied at different times. The space necessary for constituting the breadth of a file also varies: some make it equal only to 22 inches, but others, perhaps with better reason, allow two feet for it, as the three ranks are thereby left confined in their fringes.

Troops are divided not only by battalions and squadrons, but also by regiments and brigades.

An army generally consists of infantry, cavalry, and artillery, and may be called or denominated the union or junction of the battalions, squadrons, and artillery. The formation or arrangement of these three corps constitutes the order of battle. And this name or appellation for the said arrangement comes from the principal design or intention of making it, which is always to give battle.

The number of lines, on which an army ought to engage, is not at all fixed or determined; for the ground, the disposition of the enemy, the number of troops, &c. may render material changes or alterations necessary. It is a point, indeed, that no determination can be come to, which will suit every circumstance of ground or situation.

An army, however, when drawn up in order of battle, is generally ranged in two lines with a corps of reserve behind them, and confining like them of battalions and squadrons, to succour those parts that may be hard pressed and in danger of yielding or giving way. This corps is stronger or weaker as occasion requires. For the most part the infantry is posted in the centre of these lines, and the cavalry on the wings. The ground, however, makes it necessary sometimes to place the cavalry in the centre and the infantry on the wings, and sometimes part of the infantry on the flanks of the position, and the greater part of the cavalry on one wing with the remainder of it behind the infantry.

The common practice of posting the cavalry on the wings of the infantry, and in a line with it, seems to be in various respects improper and injudicious. It cannot advance quicker than the infantry without leaving its flanks of both uncovered and exposed. It cannot in such a position either protect the infantry or receive protection from it. Disposed of in this manner it therefore renders the movements of the whole slow and tardy. It is usually alleged that the cavalry is posted on the wings of the infantry in order to cover its flanks. This, however, is a very bad reason, for cavalry cannot form a flank for itself, but infantry may. The arrangement of our different species of troops, and the forming of them in files after the manner of the phalanx, excludes every idea of quickness or celerity, which is the very life and soul of military manoeuvres, and alone can render them successful.

It is generally a maxim in the order of battle to place the second line 900 feet at least, or 1000 feet behind the first, to prevent the enemy’s balls or shot from reaching it. This distance may, and most probably will change during the course and progress of an engagement. Attention, however, should be paid to it in placing the troops in order of battle.

It is customary to place fewer battalions and squadrons in the second line than in the first, when the first is full, in order that the first, if routed or thrown into confusion, may have sufficient intervals to pass through for the purpose of recovering from their disorder, and regaining regularity and order.

All the infantry of Europe commonly fight en ligne plaine, or in continuous lines, without any intervals between the battalions, but such as are necessary for the guns, for each of which about 20 feet is usually allowed. When intervals are admitted between regiments that consist each of more than one battalion, or between brigades, an additional allowance of 40 feet is generally made.

Sometimes hussars and dragoons are placed out of the line to cover the flanks of the cavalry. This, however, is for the most part a bad and injudicious disposition; for cavalry never can be so disposed of as to afford an efficient cover and protection to the flanks of cavalry, though infantry may. They are laid to be out of the line, because they ought to be posted a little behind the lines. All troops indeed, or bodies detached for any service, are laid to be hors de ligne, or out of the line.

In the camp, the same distance or interval of 20 feet for each piece of artillery is allowed between the battalions, or ought to be, as in order of battle; and when the divisions are admitted between regiments, or brigades, 40 feet more are allowed.

The situation of the park of artillery is not precisely fixed or ascertained. It is customary, however, to place it for the most part either behind the centre of the second line of infantry at the distance of about 1000 feet from the same, and in a line with the reserve; or behind the reserve, at the same distance of about 1000 feet. On other occasions, as circumstances make it advisable, or necessary, it is placed towards the centre at a greater or less distance from the first line of infantry. For the form of a park of artillery, see Plate, Castreametation, fig. 4.

When an army then encamps in three lines, and the park of artillery is in a line with the reserve, the depth of the camp cannot well be less than from 2500 to 2750 feet; and when the park of artillery is about 1000 feet behind the reserve, the depth of the camp must be from about 3500 to 3750 feet.

The depth of the tents of a battalion depends on the manner in which the companies composing it are encamped, whether by a whole company, a half-company, or a quarter-company, in each row of tents perpendicular to the front of the encampment. But, including the tents of the officers, futters, and servants, the depth is usually about 200 feet, and that of a squadron is about 400 feet.
The front or auxiliary houses of the first line, are of any length < 20 feet; beyond the front each house is continued in front of the house which determines the extent or length of the camp, and on which are placed the colours and standards of the troops that occupy it: and those of the second line are commonly about 150 feet behind the officers' tents. There ought to be nothing, however, in front of the camp that can in the smallest respect interfere with the movements and re-formation of the troops in order of battle.

The intervals between files of cavalry are different in different countries. And their depth, when encamped, will, of course, be influenced by that of the camp, which, itself, is not regulated by certain rules and arrangements founded on custom or usage.

If \( n \) be supposed to represent the number of men in a battalion, \( d \), the number of men in a file, and \( b \), the breadth or width of the file, the front of the battalion will be generally expressed by \( \frac{n \times b}{d} \). Thus, if \( b = 2 \) feet, and \( d = 3 \), the front of the battalion in feet will be equal to \( \frac{2n}{3} \), which, when \( n = 600 \), gives 400 feet for the front of the battalion; when \( n = 800 \), or the battalion is 800 strong, gives 533.33 feet for its front; and when \( n = 900 \), or the battalion is 900 strong, gives 600 feet for its front; and so on.

If the width of the file be supposed equal to 12 inches, or \( 1 \) foot, and \( d \) be equal to 3, the front of the battalion will be expressed by \( \frac{11 \times n}{18} \) feet. And if, in this case, \( n \) be 600, or the battalion 600 strong, its front will be equal to \( \frac{11 \times 600}{18} \) feet = \( \frac{6600}{18} \) feet = 366.66 feet 8 inches. If the battalion be 800 strong, its front, in this case, will be equal to \( \frac{11 \times 800}{18} \) feet = 488.88 feet; and if it be 900 strong, its front will be \( \frac{11 \times 900}{18} \) feet = 550 feet; and so on. And whatever is the length of its front in order of battle, the same ought to be the front of its encampment, when the ground and circumstances will permit.

If \( d \) be supposed equal to 2, or the files to be only two men deep, which is as deep, perhaps, as they ever should be, when it is intended that all the men shall fire without hurting or wounding another, one another, the length of the front of a battalion in each of the foregoing supposed cases will be but one-third greater. When the number of men in it is given, the length of its front will be as the breadth of the file directly, and the depth of the file in number of men inversely. When the number of men in it and the breadth of the file are given, the length of its front will be inversely as \( d \), the depth of the file. And when both the breadth of the file, and its depth in men are given, the length of the front of the battalion will be directly as the number of men in it.

The breadth or width of a file of cavalry is generally equal to three feet. The Macedonians allowed three feet of their measure for the width of a file in their phalanx, when drawn up in order of battle; and the Romans allowed also three feet of their measure to a folder when standing under arms, but its feet to him when in order of battle. If \( n \) then be supposed to denote the number of men in a squadron of cavalry, and \( d \), as before, the depth of the file in men, its front will be expressed generally in feet, by \( \frac{3n}{d} \), which, when \( d = 3 \), is simply equal to \( n \). Hence, then, it appears, that the front of a squadron, drawn up three deep, is equal to as many feet as there are men in it, and that its front, when it is drawn up only two deep, is equal to half as many more feet as there are men in it.

The width of the large squares in a camp depends also, in a great measure, on the number or encamping the companies. For, if \( f \) denote the front, \( h \) the length of a tent, \( n \), the number of the rows of tents, \( r \), the width of each of the small squares, \( m \), their number, \( q \), the number of the large squares, and \( v \), the variable width of one of them, we shall have \( v = \frac{f - 2q - m}{3} \).

The camp maxim most commonly delivered are the following:

To give the camp the same length of front that the troops occupy, when drawn up in order of battle, whatever be the width or depth of the file.

To make the troops encamp by battalions and squadrons, except the royal artillery, who usually encamp on the right and left of their parts, wherever it is placed, with the train horses in the rear of the same.

To place the bread-waggons in the rear of the camp, and as near as possible, for the convenience of distributing the bread easily.

That the commander in chief should encamp in the centre of his army, or, at least, at such a convenient distance from it, that a speedy and easy communication may be kept up at all times between head-quarters and every part of the camp.

To pay particular attention to the convenience of winter fuel and storage, and to cleanliness, for the preservation of health among the troops.

The highest and most important branch of castremetation, however, consists in the choice of situations proper for encampments and for engagements. The doctrine of positions, indeed, and the combinations of attack and defence, form the sublime part of war. And in illustrating this subject, we conceive we cannot do better than adopt the concise observations of marshall Saxe, who, in point of natural endowments, genius, and talents as a commander, as well as of military information, acquired by experience, study, and reflection, was certainly inferior to no general that has appeared in modern times.

Of situations proper for the encampment of armies, and for engagements.

It is the part of an able general, to derive advantages from every different situation which nature presents to him; from plains, mountains, hollow ways, ponds, rivers, woods, and an infinite number of other particulars, all which are capable of rendering great services, when they are converted to proper purposes: but although they make to material an alteration, both in situation and circumstance, wherever they happen to be, yet, as such advantages are frequently overlooked, till the opportunity of profiting by them is lost, it may not be unaccountable to enter into some detail upon the subject.

Let us then, in the first place, suppose a piece of ground divided by a rivulet, and a chain of ponds. See Plate, Castremet. tab. fig. 5 and 6. A represents the army marching up to attack BB, whose infantry is at first drawn up in one line to cover the ponds; but, as soon as the enemy arrives within reach, my infantry in the front of thee ponds, (fays the marshall,) marches back by the intervals or banks between them, to form a second line; and my cavalry is at the same time advanced upon the right, to keep in awe the enemy’s left wing, which movement alone is sufficient to disconcert him; if he attempts to attack this cavalry, it is to repel the intervals between the ponds, which are guarded by bodies of infantry, that are posted immediately behind them.
This manœuvre will have so long engaged the enemy's attention upon his left, that he will not have sufficient time to change his disposition, or to reinforce his right; because the moment my cavalry is arrived upon my right, I attack all that part of the enemy's line that lies between me and the rivulet, which very probably I shall throw into confusion. His right wing being thus defeated, the rest of his army will be assailed in front and rear by my two wings of cavalry, and in flank by all my infantry. If he inclines in the left to the right, in order to prevent a front to my infantry, he will thereby expose his left flank to the troops which I have polled upon my right, and upon the intervals between the ponds: under these circumstances, therefore, it will be impossible for him to make any movement, without being thrown into confusion.

According to this disposition, I suppose the enemy's army to consist of double the strength of mine: and although it may be imagined, that the cavalry upon my right is in danger of being cut to pieces, yet the more the attention of the enemy is taken up with an object in his front, the more he will be entangled in the snare that is laid before him; for I shall thereby be furnished with a better opportunity of falling upon his rear; after which my cavalry must be more than commonly unfortunate, if it be not able to make good its retreat by the intervals between the ponds, where the enemy will certainly not dare to pursue it.

Fig. 7, represents the two armies in another situation, where AA is to attack BB: C, C, C, are three strong redoubts thrown up at the distance of three hundred paces in the front of BB, furnished each with two battalions, and every thing else that may be necessary for their defence: D represents some detached cavalry: E, E, are two flanking batteries: F, F, two battalions posted in two redouls to cover the batteries. I suppose the enemy's army AA to be twice as powerful in numbers as BB; nevertheless, in what manner is he to attack me in this disposition? It is impofible for him to march up in line of battle, without being broken and disordered, till he has first rendered himself master of my redoubts; in attempting to do which, he will be exposed to a severe flanking fire from my two battalions; and to pass the redoubts, and leave them in his rear, will be impracticable: if then he resolves to attack them by detachments, I shall in like manner make others to maintain them; in which I must have considerably the advantage, on account of the damage that he will unavoidablely sustain from my cannon: if he advances with his whole army against them, I give the signal for my cavalry, which is concealed behind the wood, to move up at full speed, and fall upon his rear; at which time I also march up, and charge him in front; being, therefore, at once embarrassed by the redoubts, thrown into some disorder, and attacked in rear, there is all the appearance of my obtaining an easy victory.

This is an excellent disposition, where you can be certain that the enemy is either inclined, or obliged to attack you; for one cannot possibly be too careful in avoiding every step that may correspond with any hopes or expectations of his. This is a maxim in war never to be departed from, but in extraordinary cases, where no fixed rules can be given. A good opportunity for engaging should never be neglected, merely because the situation may happen not to be slightly agreeable to your fancy; for you must form your disposition according as you find it, and decline the attack altogether, unless you can make it with advantage; by which I mean, unless your flanks are well covered; unless you engage a small part of his army with a large part of yours; can amuse, or keep a check upon him, by the means of any small river, marsh, or other obstacle that may lie between you; supported by circumstances of which nature, you can attack him with confidence, although considerably inferior in numbers, because you will risk nothing, and may obtain a great deal.

Suppose, for instance, his army, BB, to be divided by a river, in the manner represented in fig. 8, and that I am to attack him with AA in that situation: I shall, therefore, make the following disposition for it. With my right wing I shall keep in awe his left, and with my left try all efforts to defeat his right: according to appearances, I shall be able to pierce him in the part marked C, upon the back of the river; for it is but reasonable to suppose, that the strong must overpower the weak; in consequence of which advantage, as the communication between the two divisions of his army will be thereby cut off, and the left, in which his principal strength confided, be no longer able to sustain the right, he will be rendered incapable of maintaining his ground; and, finding himself exposed both in front and flank, will undoubtedly retire.—Let us proceed to another example.

A is the enemy's army which I am to attack with B: the rivulet between us is supposed to be every where fordable; and the encampment of A to be made upon its banks, as is usually the custom in such situations, as well on account of the protection which it naturally affords, as for the convenience of the water: the enemy being in this disposition, I arrive towards the evening, and encamp with B on the opposite side. As he will not be inclined to trust to the uncertain event of an immediate engagement, he will undoubtedly, therefore, not pass the rivulet, or quit the advantage of his poll, to attack me in the night-time; on the other hand, I rather imagine that he will be altogether taken up in providing for the defence of it: on my side, I shall only leave one week line opposite to him, and marching all night with the remainder, gain the position, C. I have nothing to fear from the enemy, in making this movement; for he will certainly not venture to pass the rivulet, or to leave his poll unguarded, on bare furnaces or conjecture only. The day arriving I discoveries me upon his left flank, as well as in front; after which it will be impossible for him to make any disposition, or to form any order of battle, without being thrown into confusion; for I shall fall upon him before he can have sufficient time to finish it; but his attention will principally be taken up, in sustaining his poll upon the rivulet, which I shall attack at the same time, with the troops that were left on the opposite side for that purpose: he will detach some brigades to oppose me upon the left, which, arriving en detail, and having to engage with a large body, drawn up in good order, will easily be repulsed; innumeth that he will be in a manner totally defeated, before he can be even able to persuade himself, that the real attack was made on this side; and, after having thus at length discovered his mistake, he will scarce to be in any kind of capacity to remedy it.

Fig. 9, represents another situation, in which the enemy's army, AAA, is supposed to be formed in separate bodies, and extended to a considerable distance all along a large river, in order to cover a province, as is frequently the case. AAA is, therefore, to defend the river, and BBB is the offensive army, endeavouring to pass it; and extended in like manner upon the opposite borders. These large rivers have generally plains on both sides, bounded by mountains, out of which issue small ones, or rivulets, that are sometimes of a considerable size, and that discharge themselves into the greater: by the means, therefore, of such a rivulet, one must endeavour to build a bridge, unknown to the enemy; for
in this he the great difficulty of passing all rivers after having then prepared your bridge all along the rivulet, you are at this time near that part of the river marked C, where you are to force your passage; in which case, I take it for granted, you will be able to succeed, especially if you make at the first time two light attacks at the places marked D and E: the enemy will not dare to vacate any of his posts, neither will the general offices, planted in different quarters, execute any orders they may receive to that effect; for as, at this time, they will be engaged themselves, and as each will fear, of his to be the real attack, they will then have time to be induced, not unadvisedly, to sally, that their commander in chief had not been informed of it; during all this time the grand effect is making at the place between the rivulet and the mountain marked F. The first step to be taken after the passage, is to posts yourself of the enemies; by which means you divide the enemy, and, having cut off his communications, he can hardly hope to time his arrival afterwards so well, as to be able to attack you on both sides at once; and although he even does, he will, nevertheless, be easily demolished: the circumstance of your being posted of these advantages, without having suffered any loss in the obtaining of it, will add to his confusion: for, notwithstanding your passage should be disputed, yet the opposition you meet with can never be considerable enough to prevent it; especially when you have used proper precautions, and made your disposition with judgment. After you have once taken post, and erected your bridge, for which four hours are a sufficient space of time, and as much more will be required for the passage of 5,000 men, you may allow the enemy twenty-four hours to prepare into your real defense, and twenty-four more to allisable either half of his army, at the place in which he has attacked you; but even this will be rendered impracticable, because I suppose you to be effectually covered, after you have passed, by the rivulet on the one side, and by the mountain on the other.

All the large rivers that I have been produce a great variety of situations where passages of this kind may be executed; and smaller ones afford likewise the same; but they are seldom quite to commissioons, because the pangs and mountains which surround them are usually not so advantageous, nor the rivulets so considerable. In short, by discernment one may reap advantages from a thousand different sorts of situations; and a commander void of that cannot possibly be expected to do any great things, even with the most numerous armies.

The marshal concludes these remarks on the choice of situations for encampments and engagements with the following observations upon the battle of Malplaquet. If, instead of polling the French troops in bad entrenchments, the three woods over-against the hollow ground had been only cut down, and three or four redoubts thrown up in it, supported by a few bridges, I am of opinion (he says) that things would have taken a different turn; for, had the allies attacked them, they must have lost an infinite number of men, without ever having able to carry them. It is the property of the French nation to attack; but when a general is unwilling to depend altogether upon the exact discipline of troops, and upon that great order which, according to the present system, is always necessary to be observed in actions, he ought, by throwing up redoubts, to introduce the method of engaging in detail, and of attacking by brigades; in which he might certainly have succeeded very well. The first shock of the French is scarcely to be resisted; nevertheless it is the part of a general to be able, by the prudence of his disposition, to renew it: and no means can facilitate this so much as redoubts; for you can always

C A S

CASTRATION. a book, among Boodkellers, is the taking out of some lefs, Iheft, or the like, which renders it imperfect, and unfit for sale. The word is also applied to the taking away of particular passages, on account of their objection, too great freedom with respect to government, &c.

CASTRATION is also used among Gardiners, in speaking of melons and cucumbers; where it signifies the same with pruning or removing of other plants.

CASTRATION, in Surgery, from 

CASTRATION, in Surgery, from caphra, "quia castrum facit," the operation of rendering any animal incapable of generating, by the excision of the testicles in male subjects, and of the ovarics in females. This operation is commonly named GELIDING and SEPULRING among farriers, who are in the constant practice of thus stimulating various brutes for domestic use, &c. Even several of the watery tribe of animals have sometimes been castrated, for the purpose of rendering them more fat and juicy for the table of epicures! This operation has been performed by the Turks, Persians, Egyptians, and Hebrews, time immemorial, espiously upon their slaves, from motives of jealousy: nor was it unknown to the Greeks and Romans, as appears from the writings of certain ancient medical and liturgical authors; and, even in the present day, the Italians are so barbarous as to calibrate great numbers of male children, with a view to preserve their infant voice for singing! See Eunuch. The effect on the physical constitution of a man is the same; whether the testicles be injured by contusion, so as to break down their natural texture; whether the spermatic vesicles be oblitered, still leaving the testes entire; or, whether
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ther those organs be wholly removed by excision. In any of these cases, the offence was regarded as so atrocious, by the old laws of England, as to amount to felony: "et fe-
quirit aliquando pena capitis, aliquando perpetuum exi-
hum, cum omnium honorum ademptione," (Blaekst. fol. 1344); and this, says Judge Blackstone, although the crime of mayhem was committed upon the highest provocation: (Comment. vol. iv. b. iv. c. 15.). See Mayhem. But, in our pre- 

cence, the has cannot affect regular-bred Surgeons who per-
formance the operation, only with a view to the good of their pa-
tients; notwithstanding, a different opinion has been held by 
certain writers, who affirm, "that it is penal in Physicians and 

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Surgeons to excise even with consent of the party:" (See Encyclop. Brit. vol. v. p. 250, edit. ult.) It becomes, however, a doubtful and nice point, on some occasions, to decide upon the necessity and probable advantages of castrat-
ing a man.

We shall here say nothing of the corresponding more cruel mutilation in women, as it is very properly exploded 

from surgical practice; and although we are told by Anthe-
numen, Helychius, Sindus, Galen, Arbistote, and others, 

that the female ovaries (formerly called testicles) have 

actually been atrochemed by some barbarians, it is doubtful whe-
ether most of the cases alluded to did not rather consist in 
padlocking, or infestation; which Cornelles Cellius de-

scribes, as having been exercised also on boys. But, for 
a more detailed history of the origin and extension of this 

practice, as an act of policy or refinement, we refer to vol. 

i. of M. Dutard's Hist. de la Chirurgie, Introd. pp. 36-44. 

Paris, 1774; and to M. Mahon's pothumous work, entitled "Medecine 

Legale et Police Medicale," 5to. vol. 11. Paris, 1801. We shall now offer a few 

remarks on this operation, as it concerns the practical 

surgeon.

Castration is advisable in any case, where the life of a 

person is considerably endangered by a change of structure 

and loss of function in the testicle; as well as in many other 
cases, where the removal of an indurated and greatly enlarged 
testis would materially contribute to the relief or accommo-
dation of a patient. It can very rarely be requisite to ex-
tirpate a testicle for the existence merely of an abscess, or 

for varicocele veins of the spermatic cord; though this 

operation has been sometimes resorted to, under such cir-

cumstances. But when it has been resolved on as proper 

to be done, the following are the most approved modes of 

operating:

After having shaved the hair from the affected side of the 

scrotum and pubes, the patient is placed upon a table of a 

proper height, with his head and shoulders somewhat ele-

vated, his legs and thighs at some distance from each other, 

and his knees a little bent; and in this posture he must be 

secured by two attendants. Or, as Mr. Minnina observes, 

the patient may be placed upon a high and strong chair, 

while the operator sits upon a low one, or kneels down be-

fore him. The skin of the anterior surface of the scrotum 

is then drawn into a fold, in such a manner, that the inci-

sion by which this fold is to be separated, shall reach from 

the top to the bottom of the scrotum. The operator holds 

this fold at one end with the fingers of his left hand, while 

an assistant holds it at the other, and cuts it at once com-
pletely through with a bistoury. Mr. Theden draws the 

fold of the scrotum, with the aid of an assistant, as tight as 

the skin will admit; after which he thrusts his bistoury through 

this fold, with its edge turned upwards and the back direct-

ed towards the diseased testicle; he then raises the knife up-

wards, and thus cuts through the whole fold of the skin in 

the quickest manner, whereby he thinks the patient is spared 

a great deal of pain.

This incision may be so long, that its upper extremity 

shall reach above the abdominal ring, whilst the lower 

extremity terminates an inch higher than the base of the 

scrotum. Should the incision be found too small, it must 

immediately be enlarged either at its upper or lower ex-

tremity, as it ought to extend over the whole tumour, in order 

that the tumica vaginalis may also be cut through in the same 

direction. Although it is desirable that this incision should 

be made precisely in the middle of the fold, this is in some 

rare cases impracticable, on account of the dilated blood 

vessels being situated there, the division of which would 

produce a violent hemorrhage, when another place must 

be chosen for making the incision. But should these vessels 

occupy a very large extent, we are obliged to cut them 

through, in which case the bleeding arteries must be secured 
or compressed by an assistant, whilst the operator is making 

his second incision.

The lips of the wound are now drawn asunder at both 

sides, to the distance of some inches from each other; or, the 

operator directs them away from the tumica vaginalis, in 

order that he may gain more room. When there is any 

fluid contained in the tumica vaginalis, this must be divided 

from top to bottom, with the same knife, as in the hydro-
coccyx. If we now find the diseased testicle for the greater 

part detached, we lay hold of it with the left hand, separate 

it here wherever it is attached, and divide its stronger pos-
terior adhesion, with the scissors, in such manner as at the 

same time to separate all the diseased substance that may be 

found there; after which the spermatic cord is separated 

above from all its adhesions, and the whole of the cellular 

substance diseased away from it. The spermatic cord being 

thus laid bare, the operator accurately examines it, and if it 

be in its natural condition, he immediately ties it very 

firmly, (with many fringing waxed threads, twitted together), 

an inch above the diseased part, and then cuts off the testicle 

half an inch below the ligature. After this, the spermatic 

cord will be immediately retracted towards the abdominal 

ring, in which situation it must be kept without stretching it, 

and consequently the ligature, the end of which is fastened 

over the old pubes by means of adhesive plaster, must not be 

drawn any tighter, but held loose. By this means, and by 

the application of a little lint under the end of the spermatic 

cord that has been cut, it is prevented from having too much 

fluids laid upon it, as well as from forming its adhesion too 

low.

In most cases, however, it might be advisable to detach 

the spermatic cord from above down to the place where it 

is intended to divide it, and not to disengage the testicle till 

after the cord has been tied. For the excision of the testi-
ice is always combined with some degree of pain and spasm 

of the spermatic cord, which may be avoided by tying and 

dividing the spermatic cord, before we cut out the testicle.

Mr. Theden having (he says) observed various nervous 

affections, such as spasms and epileptic symptoms, to super-
vene upon the tight application of ligatures, adopted the 

Tamponade, the advantage of which he maintains upon the 

following grounds: After some hours the artery contracts 

so strongly that no hemorrhage is any longer to be appreh-
ended; the pain and irritation of the spermatic cord is 

avoided; a swelling of the spermatic cord, and a conglomera-
tion of fluids in the cellular substance situated on the outside 
of the peritoneum, and at the back, which may frequently 
give rise to fatal consequences, never take place when this 
method is adopted, as they do when ligatures are employed.

He performs the operation in the following manner: he first 

lays a piece of agaric, equal in size to the circumference of the 

spermatic cord, upon its divided extremity, and over 

that
that a larger, which he prefixes chiefly upon that part where the spermatic artery lies, and then pulls them, with a very gentle prehrief, towards the abdominal ring, so as not to excite the slightest pain to the patient. He then applies close to the divided spermatic cord several bunches of seraped lint, covers all the wounded parts with the same substanctie, wets the whole with his arquebuse diluted with water, and again directs the attendant to place his finger upon the spermatic cord. Finally, he covers the whole of the disclings with comprefles, which are also wetted with the arquebuse. For security's sake, he directs the spermatic cord to be kept constantly gently con prufed, for the space of twenty-four hours, by attendants who relieve each other.

Mr. Le Blanc also believes, that the fatal conquequences, which so frequently follow cafonation, generally depend upon the too great tightness with which the spermatic cord is tied. On this account, he directs that the ligatures should be drawn only moderately tight, and indeed of drawing them tight, to apply again, and secure it upon the part for several hours, by a gentle prehrief with the hand.

Mr. Warner stops the haemorrhage after cafonation, by applying gentle prehrief to the vessels, by means of his thumb and fore-finger, with which he lays hold of the vessel for the space of several minutes; he has also found the application of a small piece of linen to the orifice of the vessels, to answer his purpose without occasioning the slightest degree of pain.

But though the tamponade has been also used by other practitioners with success, it is, however, judiciously considered by the greater part as not perfectly safe. For reasons, which, though well known, are however very important, Mr. Marshall condemns it in the strongest terms, and recommends tying as the safest remedy; but the method, according to which he performs this operation, has something peculiar to itself, which will scarcely come into general use. He considers the prevention of the retraction of the spermatic cord into the abdominal ring, as the principal cause of all the troublesome symptoms. He therefore always separates the spermatic cord as high as the abdominal ring, loosening both it and the tefticle from all its adheions with the neighbouring parts, by means of his finger or a sharp instrument. He then divides the spermatic cord, an inch below the abdominal ring, and ties it, applying under the string, which conufts of four waxed threads, two small comprefles, in order to prevent its cutting the parts; besides which, he considers it to be very useful, to pull the spermatic cord into the abdominal ring, which consequently cannot be done without making an incision into the ring.

Mr. Lader concludes from his experience, that the spermatic cord may be tied, without there being reason to apprehend dangerous conquequences, provided we use the precaution first to separate it from the neighbouring parts to which it adheres, and tie it, with a broad ligature, gradually, and not tighter than is necessary. For this purpose, he uses a ligature, conuisting of five or six strong threads, which he applies loose round the spermatic cord, after having separated both that and the testicle completely from all the surrounding cellular substance; he then draws the spermatic cord gently forwards, cuts it through with a pair of scissors, and gradually tightens the ligature till the haemorrhage ceases, upon which he makes a second knot, and cuts off the ends of the ligature so as to leave some inches of the threads hanging out of the wound. For the sake of greater security, he applies, besides this ligature, sometimes and then narrower ones in a similar manner.

Mr. Morfinna, however, is of a contrary opinion. The ligature, which with him is formed of three strong waxed threads, he introduces at the proper place under the exposed spermatic cord, and fastens it anteriorly, with a double knot, in such a manner, as to draw the whole string as tight as possible, in order that all the parts included in the ligature may be, in a manner, crushed. The double knot he further secures by a single one, in order that it may not get loose. This violent method of tying, he says, at first produces exquisite pain; but that is only momentary, and afterwards nothing of it is felt. By this means almost all the violent symptoms, which generally succeed the operation, may be avoided, and the cure will be greatly acceleratod. Only when the ligature has not been drawn sufficiently tight, or when, in consequence of the spermatic cord being much loaded with fat, or not sufficiently detached from the cellular substance, it again becomes loose before the nerve has been destroyed, the pain, and sometimes also the hemorrhage, returns, which is frequently followed by nervous affections.

In order to prevent such accidents, he always applies a second similar ligature loose round the string, fastening the ends of the string, with a paff, upon the patient's belly, in order that in case of necessity, particularly if a haemorrhage should occur, they may be immediately nufed. When the patient, after the application of the ligatures, still feels pain in the spermatic cord, extending to the abdominal ring, the surgeon may conclude, that the ligatures have been applied too loose, or at least that the nerve has not been completely destroyed. In this case, he must renew the ligature, by applying a second string at the same place, and in order to prevent haemorrhage and all the other symptoms, he should continue to tighten it, till the pain entirely remits. Mr. Richter entirely concurs in this opinion, and appeals to experience in proof of the assertion, that a ligature drawn perfectly tight produces far less violent symptoms, than one which is only moderately tight, and merely irritates, instead of altogether suppressing the vital actions. Mr. Pearson, of the Lock hospital, whose instructions will be hereafter a-duded, is of the same opinion.

The method of stopping the haemorrhage employed by Mr. Sibold, is done without including the nerve in the ligature, whereby he thinks all the dangerous symptoms may be obviated; as the stopping of the haemorrhage is the only purpose for which the ligature is applied. He draws the spermatic artery forwards, with Bromfield's tenacleum, and ties it, without including any other part of the spermatic cord in the ligature, and without giving the least pain to the patient by the operation. Applying the ligature round the whole spermatic cord, he entirely condemns, and expresses his surprise that surgeons, notwithstanding all the dangerous conquequences that have been found to arise from it, still fasten to tie the spermatic artery quite separate from all the surrounding parts; an operation, which has not only always succeeded with him, but has likewise been always performed with great facility.

But after the excision of the testicle and the application of the ligature, should some other artery, besides the spermatic, either in the internal or external coats of the scrotum, bleed profusely, it is proper either to draw it forward with a needle and tie it also, or when this cannot be done, to apply pressure and styptic remedies.

When the scrotum is perfectly found, or when we are sure that all the indurated parts have been entirely removed from it, we ought, as Mr. Fearon advises, to endeavour to effect the healing of the wound by the first intention; for which purpose the divided parts must be gently drawn together, in order to bring the lips of the wound in as accurate contact as possible, in which situation they must be secured
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fenced by means of adhesive plaster; or, as Mr. Lodier ad
dvices, two futures may be applied, and between these long
flips of adhesive plaster.

In other cases the wound is to be filled up with dry lint,
and the lips of the wound drawn somewhat nearer together
by means of long slips of adhesive plaster, which are covered
with a pledge spread with ointment; over this is laid, a
thick, lint and dry compress, and the whole is secured with
the T bandage. After the dressings have been applied, the
patient is put in bed, where he should lie with his feet con-
fstantly stretched out. Mr.Schumacker directs us to lay the
patient, after the operation, in a horizontal posture upon
mattresses stuffed with horse hair, in order that the divided
portion of the spermatic cord may always keep the same
position, and not contract when the knees have been
drawn upwards, and are afterwards extended. This hori-
zontal position which is adopted by most practitioners, Mr.
Murinna conceives to be inconvenient, and therefore places
the patient on his back, with his head and shoulders some-
what elevated, and his thighs moderately bent.

The lint, that has been introduced into the wound, must
be suffered to remain there, till it spontaneously separates
in consequence of suppuration, which generally happens on
the fourth or fifth day; till which period the renewal of the
dressings must also be deferred.

After every thing that can easily be separated has been
extracted out of the wound, it must be carefully cleansed
of the blood and matter, again hoarsly filled up with dry lint,
and we must continue to draw the lips of the wound gently
together, by means of adhesive plaster, without however
exciting pain. Afterwards the dressings are to be renewed
daily, or, if the suppuration be very copious, twice a
day, till a complete cure is obtained. The upper part of the
wound, in which the spermatic cord is situated, must
not be suffered entirely to close till the ligature has been
drawn out; however, we must here also endeavour to pre-
vent too violent a suppuration. After the ligature has been
drawn out, the small wound must be cicatrizied by the
application of dry dressings and gentle preasure.

Upon this subject Mr. Pearson has offered some judicious
observations. He says, "1. It is seldom necessary to re-
move any part of the serotum when the diseace has not ar-
ived at the ulcerated state. I have never seen the mere
bulk of the part form a valid objection against leaving the
whole of the intestaments; for the serotum will generally
contract within very moderate dimensions. But where the
skin adheres to the tellbe; where it has undergone a mor-
bild alteration; or when the person has formerly been punctu-
ted several times for a hydrocele; the intestaments will be
found in such an indurated state, that it will be generally
prudent to remove the altered and callous parts. However,
the removal even of a considerable portion of the diseased
serotum will not necessarily prevent us from healing the
wound by the fifth intention; for the skin of this part dilates
so readily, that the lips of the wound can be easily detained
in contact by employing a few ligatures.

"2. Of all the methods that have been devised for the
suppression of hemorrhage, the application of a ligature
round the bleeding vesell is the least painful, and the most
certain; and in the operation of which we are now speak-
ing, it is the safest and most expeditious method, to tie
the whole spermatic cord. It has frequently been delivered
as the opinion of very respectable surgeons, that the most
dangerous consequences are to be apprehended, from in-
cluding the spermatic cord in the ligature. Some have for-
bidden us to include the cremaster muscle; others have ad-
viced the separation of the nerve; and some have only di-
rected us to avoid the vas deferens. Heister and other
eminent surgeons, have declared the separation of the nerve
from the blood vessels, to be both unnecessary and imprac-
ticable; and they who advise such a practice, are charged
with being ignorant of anatomy. It is however probable;
that in Mr. Bronnfeld's method of securing the spermatic
artery, the nerve may be generally avoided. I think this
mode of proceeding is not entirely free from objection; for
as the cord is divided at the beginning of the operation,
it must be truited to the fingers of an assistant till the divided
tellbe be removed from the serotum; but it has more than
once happened, that the cord has retracted, so as to escape
from the fingers of the assistant; and the operator has con-
sequently found great difficulty in securing the vessels under
such unfavourable circumstances. Mr. Pott has directed us
to tie the spermatic cord, after the operator has separated
the vas deferens from the blood vessels with his finger and
thumb. When the spermatic cord is in a natural state, there
will be little difficulty, or loss of time, in complying with
this direction; but where it has been for some time diseased,
the cellular membrane loses its mobility, so that the several
parts are not easily separable; in such cases, it is of con-
sequence to know whether the separation of the vas deferens
be a part of the operation, which cannot be omitted with-
out danger to the patient. It is the result of my experience
hitherto, that no danger nor inconvenience whatever will
ensue from including the vas deferens in the ligature: I am
farther of opinion, that by following a contrary rule, the
operation is made more complex, without being rendered
either less painful or hazardous: and in this opinion I am
supported by the authority of the most respectable writers
on surgery.

"Some practitioners have thought it advisable to interpose
a piece of lint, or some other soft substance between the li-
gature and the spermatic cord; and this was probably ad-
viced, either to prevent the waxed silk from cutting the ves-
sels; or by thus increasing the lateral preasure, to render it
unnecessary to draw the ligature so tight as to give much
pain. When the spermatic artery is perfectly free from
disease, and the cord is small and flexible, a very small de-
gree of preasure, thus applied, will no doubt be sufficient
to prevent a haemorrhage. But where the spermatic artery
is much enlarged, and the cord has become unnaturally dense
and elastic, a very gentle preasure will be insufficient to close
the bleeding vessels; and if the ligature be drawn very tight,
we shall in a great measure forego the advantages that were
proposed. Among the reasuns that have been offered
against including the whole spermatic cord in the ligature,
it has been urged: 1st. That the patient always suffers ex-
quise pain when the cord is tied; and 2dly. That severe
inflammation, great disorder of the contents of the abdomen,
and even alarming convulsion, are among the symptoms
that supervene to this mode of treatment. I do not pretend
to deny, that violent pain, and sometimes dangerous con-
sequences have attended the usual way of tying the spermatic
cord; but I would beg leave to suggest, that these con-
sequences may probably depend less upon including the whole
cord in the ligature, than upon tying it too gently. If we
were proposed to refrain the haemorrhage from the divided
spermatic artery, a very moderate degree of preasure would
be sufficient; but as a nerve, a muscle, &c. are also to be
included, there ought to be the farther intension of inter-
cepting all communication between the brain and the part
below the ligature: if a sufficient force be exerted to pro-
duce this effect, the vitality, and consequent the sensibility
of that portion of the cord will be quickly destroyed. I
therefore always draw the knot as tight as possible; and al-
though
though the patient may complain at the moment, yet the
pain very soon goes off; so that in no one instance where
this method was followed, have I ever known the least sub-
sequent inconvenience. All imperfect and partial pressure
must necessarily be followed by the alarming symptoms which
different practitioners have recorded. It would therefore
be much better not to tie the cord at all, than to fail of
drawing the ligature to such a degree of tightness, as im-
mediately to kill the included part; and this additional rea-
son for the operation may likewise be subjoined, that when
the knot is left comparatively loose, the separation will not
be completed as soon, a when the life of the parts that are
compromised by it is instantly destroyed. When the cord is
found at any time to denote an escape, that the ligature ap-
plied in the usual way, proves insufficient to restrain the
hemorrhage, we are advised to carry a needle with a double
ligature through the middle of the cord, and tie it on both
sides; this method will certainly be effectual, but the op-
erator ought to be careful lest he puncture the artery, when
he passes the needle into the spermatic cord." See Pearson
on Cancerous Complaints. p. 71. &c.

In most cases that require castration, the testicle is not
only entirely detached, but also so large as to fill the whole
tunica vaginalis, which is itself either partly, or entirely
detached, or has only formed flat adhesions with the testicle
in various parts. This may generally be discovered before
the operation, both by the eye and the touch, from the
size, the weight, and especially the hardness of this part.
When the testis has besides a rugged surface, and occas-
sions pain, we are enabled to distinguish the nature of the
disease with still greater certainty; namely, that there is
little or no water contained in the tunica vaginalis, and that
this is for the greater part adhering to the testicle, and dif-
cased. In this case, after having divided the external inte-
guments, and sufficiently laid bare the tumor, an incision
several inches in length, should be made into the tunica va-
ginalis, below the abdominal ring and over the spermatic
cord, the fluid that may be contained in it discharged, the
spermatic cord detached as much as possible from all its con-
nexion with the surrounding parts, and if it be free from
diseased, tied in the manner above-mentioned. The whole
tunica vaginalis, with the detached testicle, is then to be cut
out of the cellular substance of the femur, after which the
whole mass under the ligature is cut away with the
scapel.

Only it is necessary, in performing this operation, that
we should not care not injure either the spermatic ferot
or the spermatic cord itself. In order that this accident may
be avoided, we must draw the tunica vaginalis tight, by means
of a double tenaculum, and direct the assistant to draw tight
the external skin, in order that we may be able to cut as
much as possible within the cellular substance. When, as
happens in some rare cases, the tumor has formed adhesions
with the serotum, we must separate it with the scissors, but
cut not through the testis, as the incised parts of the
skin may be healed, and preferred during the suppuration.
In the still rarer case, when the tunica vaginalis adheres not
only to the testicle, but also to the external skin, on its
whole anterior side, in such a manner as to render it impos-
ible to draw the skin into a fold; we must divide the exter-
nal skin, by a perpendicular incision, lay bare the tunica
vaginalis, and then perform its excision, as well as that of
the testicle, after the manner above described.

Should the spermatic cord be indurated or diseased, which
may readily be discovered by the sight and touch, it must
be tied an inch above the diseased part. But should the
cord be diseased as high up as the abdominal ring, it must
also be laid bare higher, the abdominal ring itself enlarged,
the spermatic cord drawn tight, separated from all its con-
nexion with the parts in the abdominal ring, and tied as
tight as possible above the diseased part in order to pre-
vent the subsequent renewal of the disease, and effect a radical
cure. As it is not to be expected that the disease will ex-
tend higher than the abdominal ring, we may also tie the
cord, with hopes of a successful event, even though it should
be diseased as high up as the abdominal ring.

This indurated and diseased state of the spermatic cord
cannot be discovered before we undertake the operation
as the larger size of the tumor, the manner in which it has been produced, and the length of time during
which it has continued, will direct our attention to it.
When therefore we find the tumor to extend into the
abdominal ring, and that it is preternaturally hard and painful
to the touch, without the patient having previously been
affected either with an one of or internal hernia, the
spermatic cord is in all probability diseased. As even in
this case the operation has sometimes been successfully per-
formed, and the patient's life preserved, by widening the
abdominal ring, separating the spermatic cord, and then
vrying it; the surgeon ought also in such a case, provided
the other circumstances be favourable, to perform that
operation.

CASTRATION, in Rural Economy. See GIVING AND
SPARING.

Castration is a term which has sometimes used by
the older physicians to signify the cutting of violent med-
icines, especially purgatives. See Correction and Cor-
rectors.

Castration also denotes the art of retrenching, or cut-
ging away any part of a thing from its whole.

Castrato. A male singer, with a soprano or female voice, occasioned by a cruel act, which needs no
further explanation than what is given under the article
Castration, which see. It is a delicate and difficult
subject to discuss. The custom in the East has pre-
valed from the highest antiquity. The chambers of the
Egyptian kings, in the time of the Pharaohs, were enu-
neches, and in the East the practice of emasculation has long been
general on the guardians of the sexes in the harems of the
great. Italy is the only country, perhaps, on the globe
where the abominable custom has prevailed of gratifying the
peculiar fane at the expense of humanity. The Italics pretend to have very severe laws against this inhuman prac-
tice, but even these laws have been employed in the pontifical
chapel to sing the soprano, or treble parts, ever since the
establishment of the See in the beginning of the 17th cen-
tury; till which period the treble parts were sung by
Spaniards in falset, which see. The favour and fortune
which some of the castrati have obtained by their voice,
taste, and talents in singing, have stimulated for idol and un-
natural parents to have their children mutilated in expecta-
tion of their advancement, though the horrid operation does not give or improve a voice, but only preserves it from
change at the time of puberty; and as not one boy in a
100 has a fine voice, though all boys have a shrill and
cavernous voice previous to manhood; yet of all the un-
happy children thus mangled, the number is very small of
those who have voices fit for the theatre. And even when
there is a voice, the want of genius, diligence, figure, and
intelligence, will prevent their ever acquiring the favour or
the pity of the public; and though they merit the utmost
commination for the inhumanity of their barbarous parents,
they are always treated with scorn and derision by the gros
and vulgar part of society. See Eunuch; where we
shall
nearly resume the subject, and detail the history and use of

econocks from the most remote antiquity to the establishment

of the musical drama in Italy.

CASTRODE D'Alora, in Geography, a town of Portugal, in

the province of Tras los Montes, on the Douro; 4 leagues S.E. of Elvas.

CASTREL, or rather Kerstrel, in Ornithology, faldo

timidissimi, a Linnaeus, which fer.

CASTRENSIAN, or Castrensia, in Antiquity, an order of

servants in the Greek emperor's household, to whom belonged the care and service of what related to his table and

cooking. They were thus called either on account of their

attending the emperor, when in camp, or because they observed a sort of camp-discipline in the court; or rather because they were considered as folders, were paid as such, and had the privileges belonging to the military body.

The castrensi were also called "caufenos minorit," and

"ministerianit;" to this order belonged the bakers, butlers, waiters, fuller, tailors, &c. They had a head, or superior, who was called "comes castrensi," which was a palatine dignity under the chamberlain.

CASTRES, in Geography, a city of France, and principal

place of a district, in the department of the Tarn; before the revolution, the see of a bishop, suffragan of Alby.

In the reign of Louis XIII. the inhabitants were chiefly

Protestants, and formed within themselves a kind of repub-

lic, but since that time the walls have been demolished, and the place laid open. It is a town of good trade, containing

15,380 inhabitants; those of the canton amount to 17,260:

the territory comprehends 14,285 kilometres, and 75 communes. Turpentine fumes have been found in its neighbourhood. It is distant 32 miles from Toulouse. N. lat. 43° 40'. E. long. 2°. Also, a town of France, in the department of the Girond, and district of Cadillac; 12 miles S.E. of Boucaux.

CASTREZZATO, a town of Italy, in the Brfian; 11 miles W. of Brescia.

CASTRI, a town of European Turkey, in Livadia, built on the site of the ancient Delphos, but has little remains of its former splendour. It contains about 200 houses, and the inhabitants are miserably poor; 14 miles N.W. of Livadia.

CASTRIES, a town in the department of the Hérault, and chief place of a canton, in the district of Montpellier; 2 leagues N.E. of Montpellier. The place contains 550, and the canton 4534 inhabitants: the territory includes 1050 kilometres, and 20 communes.

CASTRIES, Bay of, so called by Perouse, is situated in

the North Pacific ocean, at the top of a gulf about 200 leagues from the Strait of Sangaar, on the coast of Tartary; it affords deep water, and a safe commodious anchorage. N. lat. 51° 32'. E. long. 145° 26'. In this bay the furthest winds are more leesy, more constant, and more Lizable than in the seas of China, from which they proceed; because, being confined between two lands, their greatest variation cannot exceed two points to the eastward or westward. With a fresh breath the sea rife to an alarming and dangerous height. The bay of Callcras alone, says Perouse, of all those we visited on the coast of Tartary, deserves that name. It affords a secure asylum against bad weather, and it would even be possible to winter there. The bottom is muddy, and shoals gradually from 12 to 3 fathoms, in approaching the shore, from which the breakers extend to three cables' length, so that it is very difficult to land, even in a boat, when the tide is low. No sea abounds more with weeds and different species of fish; and among the winds
call quantities of salmon are caught, to the number of 2000

in a day, which are found in a rivulet that discharges itself at the top of the bay. The inhabitants of this coast are described as a very worthy and hospitable people. Their chief subsistence is salmon, prepared on the fire with a small grain, which is their most valued food. This grain is brought to them from the country of the Mantchous, who dwell several or eight days' journey from them, up the river Segæne, and who have a direct communication with the Chinese.

Besides this grain they also bring from their country man-

korns, both which they probably receive in exchange for oil, dried fish, and perhaps for some flocks of lambs or eels, which, together with dogs and squirrels, were the only quadrupeds whose exuviae were observed. The Tartar village of the Orotchys, for to a nation of this name they belong, was composed of four huts, strongly built of the trunks of fir-trees throughout their length, and properly notched to fit each other at the corners. A frame supported the roof, which was composed of the bark of trees, and the fire was situated in the middle, under an aperture sufficiently large to give vent to the smoke. These four huts were inhabited by four different families, who seemed to live in the closest union, and the most perfect mutual confidence. Such were the inviolable fidelity of these people and their respect for property, that the French navigators left in the middle of their huts, and under the seal of their probity, their bags full of manufactures, beads, iron utensils, and, in short, all the articles exchanged with them; nor was their confidence in any instance abused. Each hut was surrounded by a piece for drying salmon, which was exposed by the women, to whom the operation is committed, on poles to the heat of the sun, after having been smacked two or three days round the fire in the middle of their houses. The people of this bay, as well as those of Segaleen, wear on their thumbs a thick ring of lead or bone, against which they cut in flitting the salmon with a sharp knife, worn by each of them at his waist. Their village stood on a neck of low and marshy land, exposed to the north, and appeared uninhabitable during the winter. But on the opposite side of the gulf, on a more elevated spot open to the south, and near a wood, was another village, consisting of eight huts, larger and better con-

structed than the former. Above thee, and near them, were subterraneous huts, like those of Kamitschata, described in the 3d volume of Cook's late voyage. They were large enough to contain, during the rigour of winter, the inhab-

itants of eight huts. At one extremity of this village were several tombs, better constructed, and equally extensive with the houses; each of which contained four or five biers, properly framed and adorned with Chinese manufactures. Bows, arrows, nets, and, in general, the most valuable articles, were deposited within these monuments, of which the wooden doors were secured by a bar supported at each extreme. Their houses were also filled with their effects in the same manner. Their clothes, furrs, snow-floes, bows and arrows, and pikes, remained in this deserted village, which they inhabit only during the winter. They pass the summer on the other side of the gulf. In their interment of the dead, they proportion the expense of their maufoles to their respective wealth. Whil"st a relative kind of magniti-

dence is manifested in the monuments of the more affluent, those of the poorer classes are exposed on a bar, which is placed on a flage supported by laces four feet high. All have their bows, their arrows, their nets, and 6 me pieces of cloth round their tombs, and we may well conceive, from the veneration which these people pay to their ancestors, that it would be deemed sacrilege to rob their tombs. Thefe
These people, like the inhabitants of Segalien, seem to acknowledge no chief, and to submit to no government. Nevertheless, the gentleness of their manners, and their respect for old age, may give this apparent anarchy a character of mildness. We never witnessed, say the French navigators, the slightest quarrel; and their mutual affection and parental tenderness afforded an interesting spectacle. However, these people are filthy and offensive to a disgusting degree; and there is not, perhaps, a race of perfons more heedfully constituted, and whose constenance is more in-confident with all our ideas of beauty. Their average height is under 4 feet 15 inches, French measure; their form is slender, and their voice weak and shrill, like that of children. They have prominent cheek-bones, and small blue eyes in diagonal directions. Their mouth is large, nose flat, short chin, almost without beard, and skin olive, varnished, as it were, with oil and smoke. They let their hair grow, and braid it in tresses, somewhat in the European manner. That of the women falls loose upon their shoulders, and they have the same call of countenance with the men. It would not be easy to distinguish them, if they were not for a flint or difference in their drefs, and in their leaving their necks entirely open. All the ears of the female sex are limited to cutting and sewing their clothes, disposing the fish for drying, and nursing their children, whom they fuckle till they are three or four years old. Females seem to be much respected in this part of the globe. The men never conclude any bargain without the consent of their wives. The silver ear-rings and copper jewels which adorned their drefs, are entirely reserved for women and little girls. The men and little boys are drest in jackets of nankeen, dog's skin, and fish skin, in the form of carters' frocks. If these extend below the knees, they wear no drawers; otherwife they have such as are used by the Chinese, and which extend to the calf of the leg. They have all boots of seal skin, which they reserve for winter; and they wear at all times, and at all ages, a leathern girdle, to which are fuppended a knife and flint, a flint, fcel, a little bag for tobacco, and a pipe. The women are covered with a large nankeen gown, or one of salmon-fkin, which they have the art of taming, and of rendering extremely flexible. This drefs extends to the ankle, and is sometimes adorned with a fringe of small copper ornaments, which make a noife like little balls. As to their religion, they feem to have neither temple nor priests; but they appear to have fome idols—a rough sculpture, fuppended from the roots of their cocoanuts. These images, however, may only serve as memorials of fome child devoured by the bears, or fome hunter whom these animals may have wounded. They are represented as a people whose delicacy and refinement of manners indicate a degree of civilization, not exceeded by any who have neither flocks nor agriculture. Dogs are their most valuable property. These they harness to fmall flegdes, very light, and extremely well made, and exactly similar to thofe of Kamtchatka. These dogs are of the wolf kind; and though small in size, are very strong, docile, and gentle, and seem to possess the character of their masters; while thofe of Port des Franfois, which are much smaller and of the fame breed, are wild and ferocious. The bay of Caftrions abounds with iflands; the fould of which confifts of lava and other volcanic fubfances. Among the latter, the eruption of which appeared more ancient, were discovered various cryffallisations; but no craters of volcanoes could be perceived. Vegetation in the month of July was nearly fuch as it is in the environs of Paris in the middle of May. Strawberrics and raspberries were still in bloom; gooseberries began to redden, and celery and water-creffes were very scarce. Several fine foliated oyster-shells of a vinous and black colour, were found strongly attached to the rock, and separated from it with difficulty; and their valves were so thin that it was very difficult to preserve them entire. With the drefs were taken up some wifles of a fine colour, some piffes, fimall muscles of the common kind, and fome varieties of the cockle. Several species of birds, such as palfets, wild ducks, cormorants, plover, white and black wag-tails, and a small blue fly-catcher, were thinly scattered. The beach and the woods echo with the croaking of frogs, and afford refuge to bold eagles and other birds of prey. The martin and land-martin alone appeared to be in their natural cliff. The earth feems to continue in a frozen state throughout the fummer, as the water taken into the ship was only 1 3/4 above the freezing point, and that of the dreams never above four degrees. The mercers, however, was confantly at 5°, even in the open air. The momentary heat penetrates but a little way; it only quickens vegetation, which begins and ends in the short interval of three months, and infinitely multiplies grats, mixl-toes, and other troublesome insects. No plants are cultivated by the natives; and yet they are fond of vegetable fubfances. The grain of the Mantinou, which is probably a small fheeted millet, is their greatest luxury. They gather with great care some fonipontaneous roots, which they dry for their winter provifion; among others the yellow lily, or faranana, which is a species of onion. They are unaccustomed to the use of the fhillte, and are only drest in the moft ordinary of the Chinese manufactorys, or the exuviae of some teretifal animals and fcafs. Voyage of La Pérouse, vol. 11 Engl. Tranl.

CASTRIMONIUM, in Ancient Geography, a fmall town of Italy, in Campania, rendered municipal by a law of Sylla.

CASTRIOT, George, in Biography, Sec SCANDERBEG.

CASTRO, Pietro di, an eminent painter of those subjcets that are comprehended under the denomination of still life, fuch as vases, vefles, musical instruments, gems, vesfels of gold, silver, and cryflal, books, and rich bemarkc. He was well acquainted with all the true principles of perspective, and the chiaro-fcreto; and none of his contemporaries were inferior to him in transparency and truth. His colouring was peculiarly excellent, and he manifefled peculiar judgment in grouping a variety of objects, fo as to give union and harmony to the whole. This artist died in 1603. Pilkington.

CASTRO, Alphonso de, a Francifcan friar, was a native of Zamora, in Spain, celebrated as a preacher, and much esteemed by the emperor Charles V. and his fon, Philip II. He accompanied the latter into England, when he came hither to marry queen Mary. His principal refidence was in the Low Countries; and though nominated to the archbifhopric of Compofella, he never took posifion of it, but died at Brussels in 1558, at the age of 63 years. As a writer he is principally known by his work "Against Heretics," containing 14 books, partly historical and partly polemical. An enlarged edition of this work by Feuardent, a Francifcan, was published at Paris, in 1570. Castro was also the author of a commentary on the 12 minor prophet and of several homilies. Du Pin's Eccl. Hist.

CASTRO, John de, an eminent Portuguese commander, was born at Lisbon, in 1500, and ferved at Tangier. He then accompanied Stephen de Gama to the iftrails of the Red Sea, which he accurately decribed. On his return to Portugal, he was appointed to the command of a squadron for guarding the coast; and he soon afterwards attended Charles
Charles V. in his expedition to Tunisia. He strengthened the fortifications of Durr, the siege of which the Turks, after great loss, had been obliged to abandon; and then took a number of towns: but in 1548, he expired in the arms of St. Francis Xavier, after having been very recently advanced to the viceregency of the Indies. His description of all the coasts from Goa to Durr is preserved in the Jesuits' college, at Evora. His life was written in Portuguese by Hyacinth Freyre d'Andrade, and has been translated into Latin.

Castro Paulus, a celebrated lawyer of the 15th century, was born at the place from which he took his name, in the kingdom of Naples, and received his education in part from Christopher da Cagiglione. From an obscure origin, he rose, by indefatigable application, to several stations of eminence, and distinguished himself as a professor of jurisprudence at Avignon. Florence, Sienna, Bologna, and Padua. At the latter place, where he was teacher of the law for 45 years, he died about the year 1456. His reputation was such, that it was proverbially said, "If there had been no Bartolus, Paul would have held his place;" and Cujacius said, "He who has not Paul de Castro, let him tell his cost, and buy him." His works are principally commentaries on the code and digest, and have been printed at Venice, Francefort, and other places. Gen. Biev.

Castro in Geographia, a town of Spain in Aragon; 70 miles N.E. of Balbaitro.

Castro, a strong town of South America, in the island of Cufi, near the coast of Cufi, in the South Pacific ocean; 180 miles S. of Baldivia, and subject to Spain. S. lat. 43° 14'. E. long. 82°.

Castro, anciently called Mitilene, a sea-port town of the island of Metelin, and the capital, situated on the north-east coast, facing the Gulf of Adriatic, with two harbours; one of which is capable of receiving large vessels. It was formerly a place distinguished by its grandeur and magnificence, of which some vestiges still remain. It has two castles, one ancient and another modern, each of which is furnished with a Turkish garrison and commander. The inhabitants are chiefly Greeks, among whom are some Armenians: the former have four churches and a metropolis. The chief trade is ship-building. It is 30 miles S.W. of Adriatic N. lat. 39° 14'. E. long. 66° 26'.

Castro, a duchy of Italy, in the state of the church, bounded on the north by the Orvietan, on the east by the Patrimonio, on the south by the sea, and on the west by the Sienefe; 25 miles long, and from 8 to 13 wide. The duchy of Castro, together with the earldom of Rome, was conferred by Pope Paul III. on his natural son, Peter Alofino Farne, who afterwards became duke of Parma and Placentia: it was mortgaged by one of his descendants to the Monte di Pieta at Rome; but upon his paying neither principal nor interest, it was forfeited by Pope Urban VIII. and in the year 1661 was annexed to the papal dominions. The town of Castro, from which it derives its name, which was formerly a bishop's see, was demobilised by Pope Innocent X. and the see removed to Aquapendente, because the inhabitants had murdered a bishop whom he had sent to them.

Castro, a town of Naples, in the province of Otranto, the see of a bishop, suffragan of Otranto; which has been frequently plundered by theCorsairs; four miles S.S.W. of Otranto.

Castro de Calduzio, a town of Spain, in the province of Galicia; 9 leagues N.E. of Orense.

Castro de Dayro, a town of Portugal, in the province of Beira; 5 leagues S.S.W. of Lamego.
hand, was superceded for Corelli, who was appointed leader. In 1731, a concert was advertised at Hickford's room, for the benefit of Signor Corelli, first violin of the opera, who was to play the first and eighth concertos of his mother, the famous Corelli, and several pieces of his own composition, particularly a solo, in which he engaged to execute "twenty-four notes with one bow." This advertisement was burlesqued, the next day, and a solo promised by the first violin of Goodman's Fields' playhouse, in which he would perform "twenty-four notes with one bow."

In 1732 Handel composed, in his opera of Sforzas, an Aira parlante, 'cor di madre, on purpose to display the talents of Castrucci in the accompaniment; and from this period to the year 1777, he seems to have led at all concerts, giving way only to the two boys, Cleg and Dubourg, in the solo, in which, from their youth as well as talents, they were highly favoured by the public. This year Castrucci, in advertising a benefit concert, wrote himself first violin of the opera; promising a particular concerto, with an echo, adding, that "as he has for the space of so many years had the honour to serve the English nobility, he hopes they will favour him this last time, being to return the ensuing summer to Rome, his native city."

About the year 1777, poor Castrucci, Hogarth's caricured musician, was superceded at the opera, in favour of Pletting, for whom he had such an antipathy, that in his most lucid intervals, he infantly lost his temper, if not his reason, on hearing it pronounced. It was a common and irritating practice with some of his young waggish acquaintance, who had no respect for age and talents, to adduce him in conversation by the name of Mr. Pletting, as if he were a fool. I beg your pardon,—Mr. Castrucci I mean," which put him in as great a rage as Hogarth's street musicians could do on May-day.

After his dismissed from the opera, oppressed with years, infirmities, and poverty, he was obliged to supplicate for a benefit at the opera-houses, which on the merit of his past services was, with due benevolence, granted him at the age of 83, when he performed a solo for the last time, and died soon after.

He was a voluminous composer for his own instrument. Two books of solos, and 12 concertos for violins, though never much known, seem to have more fire and variety than most violin music of his time, till Veracini, still more inflamed, surpased him in genius, hand, knowledge, and capacity.

He had a brother, Prospero Castrucci, who for several years led at the Cattle concert, and played concertos with his brother, a parti eguali; but though inferior to Pietro, he was not devoid of merit.

Castrum, in Ancient Geography, a term which, in combination with others, gives name to several fortified places; of which some were towns, and others mere forts. They are too numerous, and of little importance, to be here recited.

Castrum Dolora, in Middle Ages Writers, denotes a castella, or lofty tomb of flate, erected in honour of some person of eminence, usually in the church where his body is interred; and decorated with arms, emblems, lights, and the like.

Ecclesiastical writers speak of a ceremony of consecrating a castellum dolora; the edifice was to be made to represent the body of the deposed, and the priest an angel was to give them off, and say the prayers after the same manner as if the corpse were actually present.

Castrum, in Geography, a town of Germany, in the circle of Welfphalia, and bishopric of Munster; 5 miles S.S.E. of Cleopinburg.

CASTS. See Cast, Casting, and Impressions from Medals.

Castulo, or Castulum, in Ancient Geography, Castalia, a considerable town of Spain, towards the eastern part of Batia, belonging to the Carthaginian. It had the title of "Conventus" when the Romans made themselves masters of the country, but before this time the Carthagians had contended for the possession of it with the Romans to whom it naturally belonged. It was the native place of Invidia, the wife of Hannibal. This town was situated in a mountainous country; and some have derived its name from "Castulo," an orontial term, signifying the noise of a fall of water; and we learn from Strabo, that there were rocks near the place which gave rise to the river that passed to Castulo. The town itself, placed on a mountain, at least very vear it, seems to have some relation, by its name and situation, to Castalo, famous for its fountain "Castalia;" and hence some have been led to imagine that it was founded by the Phocaean, to whom belonged, in Greece, the fountains of Callalica and Parthenius. Silvia Rubens has not omitted this allusion. Julius Cesar, having purchased the lands in the territory of Castulo, established a college in it. There were defiles in the vicinity of Castulo, mentioned by Livy, and called "Saltus Castalensium."

Casul Consistory, in Laze, a writ of entry, where a tenant by courtesy, for life, or for life in fee or in tail, or for another's life it takes its name hence, that authority being given by that. Writ 2. 13 Edw. I. c. 24, to the clarks in chancery to make new forms, as often as any new case should arise, not under any of the old forms; they framed this writ to the likeness of the other called Casulo pro vincia.

Casul Preces, a writ of entry, given by the statute of Gledscott, 6 Edw. I. c. 7, in case where a tenant in dower aliens in fee, or for term of life, in tail, and lies for him in reversion against the alien.

Causal, something that happens fortuitously, or without any design, or measures taken to bring it to pass.

Casual death. See Deedband.


Casual remission, those which arise from foritures, absolutions, deaths, attainders, &c.

Case of 27, a denomination given by some to what is more frequently called cadaver. See Caseist.

At m Quincher, chancellor of the university of Tubingen, has published a system of casuistic theology, containing the solution of dubious questions, and caules of conscience. Theologia Casuistica, 6 vols. 1to. Tubingen. 1802.

Casualty, in the Biblia, a word used to denote the earth and clay matter which is by washing in the flattering-meals, &c. separated from the timber, before it is dried and goes to the crazing mill.

Causali, in Ancient Geography, a people of Upper Germany, according to Thucydides, who dwelt near the Naix.

Causaria, a place of Gaul, in the division called the "Greek Alps" which was situated at a small distance to the north of Naix.

Le père, preceptor of Lewis XIII. called the books of the catusiis the art of quilling with God; which does not seem far from the truth; by reason of the multitudes of distinctions and subtilities with which they abound.

CASULAE CARIANENSIS, in Ancient Geography, an episcopal see of Africa, in the Byzacene territory.

CASURGIS, a town placed by Ptolemy in Germania Major, supposed to be the present Caruzim, in Bohemia.

CASUS AMISSIONIS, in Status Law. In actions proving the tenor of obligations inseparable from the debtor’s retiring or canceling them, it is necessary for the purveyor, before he is allowed a proof of the tenor, to condescend upon such a “Catus amissiones,” or accident by which the writing was destroyed, as shews it was left while in the writer’s possession.

CASWELL, in Geography, a county of America, in the district of Hillborough and state of North Carolina, containing 1,006 inhabitants, of whom 2,736 are slaves. The chief town is Leeburg.

CASYRUS, or CHASIRUS, in Ancient Geography, a mountain of Asia, in Safiana; near which Pliny places the town of Sofrates.

CASYSTES, a port of Asia Minor, in Ionia, placed by Strabo at the foot of mount Corica.

CAT, Claude Nicholas le, in Biography, was born at Blerancourt, in Picardy, September 6, 1700. His father, Claude Le Cat, who was a surgeon of eminence, would have educated him to his business, but finding him disposed to theological studies, he encouraged him in that pursuit, and he performed the duties of an ecclesiastic several years. Being well versed in geometry, he, for a time, employed himself in acquiring a knowledge of military architecture, and made some drawings in that line which gained him credit; but his friends not approving that project, and requiring him to fix on the object he now purposed following, he determined on studying medicine, some knowledge in which he had acquired early, under the tuition of his father. He was now sent to Paris, and as he was of an ardent disposition, he soon, by his intense application to his studies, attracted the notice of the professors. Though anatomy was the part to which he seemed particularly attached, yet he soon showed himself to be of meaner proficiency in surgery and medicine, infomuch, that in the year 1729, M. Trelain, archbishop of Rouen, appointed him his physician and surgeon, though he did not take his degree of doctor in medicine, until the year 1732, when that honour was conferred upon him at Rheims. He had the preceding year been chosen surgeon major to the Hotel Dieu, at Rouen. For this honour, and for the attachment his countrymen constantly showed him, he was not ungrateful. In the year 1733, having now completed his studies, he went and resided among them, and in the same year he began his course of lectures in anatomy and surgery, which soon became so numerous that, the rooms in which they had been accustomed to be given would not contain the course of pupils, who required admission. He therefore proposed building a theatre for the lectures, and founding a college, or school for the study of anatomy and surgery,
CAT

which he had the pleasure of seeing carried into execution. He also formed a literary society, which was afterwards erected into a royal academy, to which, as one of the most zealous and active members, he was appointed secretary, which post he held to the time of his death. In 1759, an addition of 200 livres was made to his salary as principal surgeon to the Hotel Dieu, and in January, 1762, the king gave him letters of nobility. In the mean while he had made himself known to most of the philosophical, and medical societies in Europe, by his communications on the subjects of anatomy and surgery; he was also a frequent correspondent with the editors of the Journal des Savans, Mercure de France, and other literary and medical journals. The subjects of his communications were sometimes such as rather showed his ingenuity than his judgment, and tended more to amuse than to improve the mind; as, of the nature and properties of the serum fluid, on the causes of the colour of the skin in negroes, &c. Many of them, however, were of a higher kind, and in the opinion of Haller, whom he occasionally opposed, and who was therefore, perhaps, no just appreciator of his merits, he made some improvements both in anatomy, and surgery. But the same veracity of observation, which made it difficult for him to fix on a profession, might prevent his being a correct experimenter, to which an almost unerring attention is necessary. He died in full possession of the esteem and estimation of his fellow citizens, August 22, 1765.

Of his works, which are numerous, Haller has given complete lists, with occasional remarks, in his Bib. Anat. & Chirurg. The following are the titles of some of the principal of them. "Traité des Sens, Rouen, 1740. Éve avec figures." It has been several times reprinted. Haller finds some of the figures faulty. "Recueil de Pieces concernant l'Opération de la Taille," Rouen, 1752. 80. Some of the plates in this work are also corrected by Haller. He also wrote on silvants of the bone, on the causes of the menes. "La Théorie de l'Oeuf, Supplement à cette Article du Traité des Sens." Paris 1767. 80. The most finished, Haller says, of his works. Éloq. D. Hist.

CAT, in Geography, a like of North America. N. lat. 52° 30'. W. long. 91° 49'.

CAT Island, or Guanabani, one of the Bahama islands. It was the first land discovered by Columbus, to which he gave the name of St. Salvador, Oct. 11, 1492. It lies on a particular bank to the east of the great Bahama Bank, from which it is parted by a narrow channel called Exuma Sound. N. lat. 24° 50'. W. long. 74° 30'.—Also, an island near the gulf of Mexico, and the coast of West Florida. N. lat. 29° 56'. W. long. 89°.

CAT, in Geo. language, denotes a ship formed on the Norwegian model, used by the northern nations of Europe, and sometimes employed in the English coal trade. It has three masts and a bowsprit, rigged like an English ship; having, however, pole-masts, and to top yellow ware. The mizen is with a gaff. These vessels usually carry from four to six hundred tns.

CAT, in a ship. See CAT-blocks.

CAT as a horse. See Anchor and Catching.


CAT HEAD, or CAT-scythe, in Ornithology, MUSCIPULA CAROLINENSIS, which it.

CAT's eye, in Mineralogy, a silicious gem, called by the Latin, occlusa, and sometimes onyxopus, as having white zones or rings like the onyx, and belonging to the division of chatoyant stones, or such as vary their colour according to the position of the light and the eye of the observer, which M. Chapital considers as varieties of the opal. Near the middle it has a point, from which proceed, in a circle, greenish traces of a very lovely colour. Its colour is generally of a greenish or yellowish grey, or light, or dark-yellowish brown, or reddish brown, or striped with these colours; and in certain positions, particularly when polished, emitting a silvery or yellowish moveable effulgence. Klaproth mentions two varieties of this mineral; the one whitish or yellow, from Ceylon, which, says Kirwan, is found in bunt or rounded fragments; its lustre 2, and tranparency, 3; 2; its fracture imperfectly conchoidal, sometimes approaching to the pimienty; fragments, 3; hardness, 10; sp. gr. from 2 50 to 2 60. Klaproth says, that the species from Ceylon had 1 50% of specific gravity; and was found to contain of alinum 95 per cent. of alumina 1 3, of lime 1 25, and of oxyd of iron 4. The other species is reddisht, and is procured from the Malabar coast. This, or others, says Klaproth, was composed of 54 4 per cent. of alinum, 14 of lime, and 3 of oxyd of iron. Its specific gravity was 2 52. This is the sandstone of the Turks, called gneis. The belt of these stones are very scarce. One of them, an inch in thickness, was in the cabinet of the dukes of Tuscany. See Asteria and Chalcedony.

CAT-fish, in Ichthyology; one of the shark tribe are known by this title. The leather cat-fish, Catulus minor, and Squana cachette of Linnaeus, is called also the leather dog-fish. —Great cat-fish of Edward, Catulus maximus of Willughby and Ray, is the Linnaeum Squana essaria See Squalus.

CAT-gut, a denomination given to small strings for fiddles, and other instruments, made of the intestines of sheep or hogs dried and twisted, either singly or several together. These are sometimes coloured red, some times blue, but are commonly left whitish or brownish; the natural colour of the gut. They are used also by watch-makers, cutlers, turners, and other artificers. Great quantities are imported into England, and other northern countries, from Lyons and Italy.

CAT-harings, in Sea Language, are small ropes running in little blocks from one side of the ship's bows, on each side of the bowspirt, being like two radii which extend from a centre, taken in the direction of the bow spirit. That part of the cat-head, which rests upon the fore-cable, is securely bolted to the beams; the other part projects like a crane, as above described, and carries in its extremity two or three small wheels, or sheaves of brass, or strong wood, about which a rope, called the cat-fall paffes, and communi cales with the cat-block, which also contains three sheaves. The machine formed by this combination of pulleys is called the cat, which serves to pull the anchor up to the cat-head, without tearing the ship's side with its chains. The cat-head serves also to suspend the anchor clear of the bow, when it is necessary to let it go; it is supported by a foot of knee which is generally ornamented with sculpture. The cat-block is hitted with a large and strong hook, which catches
catches the ring of the anchor when it is to be drawn up.

Cat's head, in Mineralogy, a denomination given to a fort of white flinty humps, not inflammable, found in coal-mines. In these there are frequently impressions of ferns. Phil. Trans. No 366. p. 970.

Cat-holes, two small holes above the gun-room ports, to bring in a cable or hauller through to them the capitan, when it becomes necessary to heave the ship a-tern.

Cat-mint, in Botany. See Catmint.

Cat of Mountain, in Zoology. See Catbus purdis.

Cat's paw, a light air of wind perceived at a distance in a calm, by the impression made on the surface of the sea, which it sweeps very lightly and then decays.

Cat-salt, a name given by our salt-workers to a very beautifully granulated kind of common salt. It is formed out of the brine or leach brine, which runs from the salt when taken out of the pan. When they draw out the common salt from the boiling-pan they put it into long wooden troughs, with holes bored at the bottom for the brine to drain out; under the troughs are placed veflets to receive this brine, and across them are placed certain small flicks, to which the cat-salt affixes itself in very large and beautiful crytals. This salt contains some portion of the bitter purging salt, and is very sharp and pungent, and is white when powdered, though pellicled in the mafs. It is used by some for the table, but the greatest part of what is made is used by the manufacturers of hard soap.

Cat-silver, and Cat gold, names given to certain soluble substances, usually called also glimmer, and in Latin, micas. They are various species of the bractearia, or folioaceous talcs, in finall spangles. The fragments of mica, denominated as above, according to their colour, are employed as a fund for drying ink up a paper. See Mica.

Cat's-tail-grafs, in Botany, different species of Phleum; which ic.

Catabanes, in Ancient Geography, a people of Arabia Dicerta, who inhabited the parts between the town of Pelusium and the Red Sea, according to Pliny.

Catabani, a people placed by Pliny in Arabia Felix, towards the frant of the Arabian gulf.

Catabapti, a perfon averse from baptism; particularly from that of infants.

The word is compounded of the preposition κατα, which, in composition, signifies again, and βάπτω, I wafh. See ABASTISTS and Baptiists.

Catabasion, in the Greek Church, a place under the altar, wherein the relics are kept. The word is formed from καταβαςω, I defend; because they went down into it.

Catabathmos, or Catabathmus, in Ancient Geography, a valley below the steep declivity of a mountain, whence its name, from καταβαςω, to defend, on account of the precipitation of its descent; extending to Egypt, over-against the spot where stood the temple of Jupiter Ammon, and repelling Egypt from Cyrenaica. It is also called "Carto Sappiras;" and the Arab pilgrims, who pass through it in their way to Mecca, denominate it in their language, "Hafachiri," or the ruined places. Steph. Byz. makes it a place of Libya, between Ammon and Patara; and Pliny reckons 86 miles from this last place to Catabathmos. Trolency mentions two places under this appellation; one the greater Catabathmos, which he makes a sea-port of Libya; and the other, the lesser Catabathmos, which he says was a mountain.

Catabaw, in Geography, a river of North Ameri-
CAT

268) in describing the angel Raphael's descent from heaven, says: he

"Sails between worlds and worlds!"

where the novelty of the word enlivens the image more than if he had said, this. This trope, however, is sometimes found in the graved authors, and even in the sacred writings. Thus, we read of the "blood of the grape," and Solomon, (Prov. xxx. 15.) says, "the horned-bee hath two daughters." In all these instances the trope is a metaphor: but when St. John says in the Revelation, ch. 12, "I turned to see the voice that spake to me," it is here a metonymy of the adjunct; the word voice being put for the person who uttered it. St. Matthew, (ch. xxvi. 6,) mentions "Simon the leper," not that he was then a leper, but had been so, and was cured; which is a synecdoche of the part. And when a criminal is said "to have had his reward," that is, his punishment, it is an irony. Ward's Oratory, vol. ii. p. 23.

CATACLASIS, from καταλλαζω, I diffurt, in Surgery, denotes a disorder of the eye, wherein the eye-lid is inverted by a convulsion of the muscles that clothe it; called also campylyon.

CATACLYSMUS, from καταλισμος, I diluge, a Greek name for a deluge, or inundation of waters.

CATACOMBS, in Antiquity. This word, derived from the Greek καταλω, κατω, a hollow or cavity, is used to denote grottoes or subterraneous excavations for the burial of the dead.

There are monuments of great curiosity, and considerable both in size and number. Of the remarkable excavations existing, there are various kinds. Some are temples, like those of India, in the mountains of Ellora; some have been originally executed for the purposes of sculpture; others have owed their origin to the operations of quarrying for building materials, and have been subsequently converted to other purposes: of this nature are the catacombs of Rome, and the quarries, or Latomiae of Syracuse, which served for public prisons.

The religious ideas of various nations led them to honour the dead with extraordinary solicitude, and tombs and mausoleums are among the most eminent remains of antiquity; where rocks afforded a convenient opportunity, it was an idea at once natural, and of peculiar propriety, to excavate in these silent retreats the habitations of the dead.

In Egypt the honours paid to the dead partook of the nature of a religious homage. By the process of embalming they endeavoured to preserve the body from the common laws of nature, by which every fabulace is decomposed, and returns to its original elements. They also provided magnificent and durable habitations for the dead, proud tombs, the astonishment of all succeeding nations, which have not preferred but buried the memory of their founders. But by a singular facility, the well adapted punishment of pride, the extraordinary precautions by which it seems in a manner to triumph over death, have only led to a more humiliating disappointment. The splendour of the tomb has but attracted the violence of rapine; the sarcophagus has been violated; and while other bodies have quickly returned to their native dust in the bosom of their mother earth, the Egyptian, converted to a mummy, has been preferred only to the infults of curiosity, or avance, or barbarism.

The date of the construction of not one of these monuments is known; indeed, most of them must have been executed progressively during a considerable time; it is, therefore, impossible to follow any chronological order in describing them: we shall, however, begin with those of Egypt, which, while they are in many respects the finest and most remarkable, are, in all probability, more ancient than any European influences.

The catacombs of Alexandria begin at the place where the ruins of the old city terminate, and extend along the sea-shore for a considerable distance. They consist in general of long galleries, with apartments on each side, excavated in the rock: in the side of these rooms there are three tiers of holes, or niches, in which the bodies were deposited; but they have been all violated, and nothing is found in them at present. The galleries sometimes run parallel to one another, and sometimes crofs at right angles; others are carried one above the other, according to the situation of the ground. Many have been washed away by the sea, and others are rendered inaccessible by the drifting sand. The apartments in general but little exceed the length of a man, but some which were probably the tombs of considerable persons, may, according to Dr. Pococke, "be reckoned among the finest that have been discovered, being beautiful rooms cut out of the rock, and niches in many of them, so as to deposit the bodies in, adorned with a sort of Doric pilasters on each side." Norden gives a fection of the front of these, vol. i. page 16, which is an apartment of a circular form, and terminated by a dome. There are four doors opposite one another, ornamented with pillars and an entablature, and pediments terminated with a crescent. One of these doorways serves as the entrance to the apartment, the other three lead to large square receptacles, each of which contains a kind of chest or sarcophagus of the fabulance of the rock, and sufficiently large to contain a body. From the style of the decorations observed in this subterranean chamber, one would be led to date its construction much later than the antiquity of the catacombs.

Near the pyramids of Secara, which are at a short distance from Cairo on the opposite side of the Nile, there is a difject to a circular plain which has a rising in the middle. Domes and skulls are scattered over this spot; under which are the catacombs of the mummies, extending about half a mile, the whole country being a rocky foil, covered over with sand five or six feet deep. At some distance from these are the catacombs of the birds.

The catacombs of the mummies are entered by various wells about four feet wide, and 20 or 30 feet deep, cut through the rock, the upper part being sand, which is often moved by the wind and fills up the cavity. Some of these wells Dr. Pococke observed to be eaved with unburnt bricks at the top as far as the depth of the sand, which from the size he imagined to be very ancient. The wells have holes on each side to descend by, but too much worn away to be of any use. Having descended the well, a passage succeeds, about 50 feet long, and five feet wide, which leads to another gallery of the same size, and about six feet high. On one side of this gallery there are apartments with platforms about two feet high, on which it is probable the mummies were laid during part of the process of preparation, and on the other side there are narrow cells just big enough to receive a large coffin. To this gallery there succeed one much narrower, with niches on each side, which seem designed to let coffins in upright. From these passages there are cut oblong square apartments, which are full of the remains of mummies, and probably here the inferior person of a family were deposited, piled up one another, as we may suppose the heads of the family were let upright in the niches, which appear to have been walled up as well as all the other apartments.

This is the description given by Pococke of the catacomb which he examined; and it seems likely that the sepulchre referred
The catacombs of the birds are similar to those last described, but more magnificent. These sepulchres were opened while the French were in possession of Egypt, and more than five hundred mummies of the ibis discovered.

Sint is a large well-peopled town, apparently built on the site of the ancient Lycopolis, or the city of the wolf. No antiquities are found in this town; but the Lybian chain of mountains at the foot of which it stands, exhibits proofs of the ancient proximity of some grand and flourishing city. These rocks are about half a league from Sint, and are excavated by a vast number of tombs of various dimensions, and decorated with more or less magnificence. Denon has given a view and plan of one of the largest of these catacombs. The outer porch is a large vaulted excavation, with a doorway leading into the interior of the tomb, which confids of several chambers one within the other, of various sizes and perfect regularity. All the inner porches are covered with a profusion of hieroglyphics, and the most delicate and elegant ornaments. M. Denon observes, that "if one of these excavations was a single operation, as the uniform regularity of the plan of each would seem to indicate, it must be an immense labour to construct a tomb; but we may suppose that such a one when once finished, would serve for ever for the sepulture of a whole family, or even race, and that some religious worship was regularly paid to the dead; else where would have been the use of such finished ornaments, of inscriptions never read, and of a ruinous, secret, and buried splendour? At different periods, or annual festivals, or when some new inhabitant was added to the tomb, funeral rites were doubtless performed, in which the pomp of ceremony might vie with the magnificence of the place; which is the more probable, as the richness of decoration in the interior part forms a most striking contrast with the outer walls, which are only the rough native rock. I found one of these caves with a single tallow, in which were an innumerable quantity of graves cut in the rock in regular order; they had been ransacked in order to procure the mummies, and I found several fragments of their contents, such as linen, hands, feet, and looe bones."

Besides these principal grottoes, there is such a countless number of smaller excavations, that the whole rock is cavernous, and riddled under the foot.

At Gebel Silsils, on the banks of the Nile, between Edfu and Ombos, the site of the principal quarries of Egypt, there are various chapels consisting of porics with columns and entablatures, covered with hieroglyphics, all cut out of the solid rock, and likewise a large number of tombs also hollowed out of the mountain. These tombs are very curious, though they are disfigured with trenches and rubbish.

In several of these tombs small private chambers are found, many of which contain large festoon figures; these chambers are adorned with hieroglyphics traced on the rock, and terminated with coloured tawo representing constantly offerings of bread, fruit, liquors, fowls, &c. The ceilings, also tawo, are ornamented with painted scrolls in an exquisite taste; the floor is inlaid with a number of tombs of the same dimensions and forms as are given to the cases of mummies, and equal in number to the sculptured figures; those that represent men have small square boards with a head-dress hanging behind on the shoulders; the women have the same draperies, but falling down in front over their naked necks. These latter are commonly represented with one arm falling within the arm of the figure beside them, and the other holding a lotus flower, a plant of Acheron, the emblem of death. Some of these sepulchral chambers contain but a single figure, and may probably be the tombs of men who have died in celibacy. Others contain three or more figures, and seem to be family monuments.

At Montosalte there are also quarries, the grottoes of which still remain: they resemble those of Sint, and seem to have served as tombs to the ancient Egyptians, and as places of retreat to the first solitaries.

The catacombs of Thebes are, among all these monuments, the most extraordinary and magnificent; these consist of the Necropolis or city of the dead, on the west bank of the Nile, which was the common burial place of the inhabitants, and the tomb of the kings.

The Necropolis of Thebes is situated on the north-west of this city, on a slope of the lower part of the Lybian chain, an arid and declivitous spot, which seems to be devoted by nature to silence and death. The rock cut down on an inclined plane presents three sides of a square, in which double galleries have been excavated, and behind them specular coves. These excavations are almost innumerable, and occupy a space of nearly a mile and a half square. At present they afford a lodging to the inhabitants of Kurru and their numerous flocks, who, strong in these retreats, maintained themselves against the French in their late invasion of Egypt with singular obstinacy, and were only reduced by a regular siege. M. Denon, who accompanied this expedition, has given a lively and interesting description, which we shall transcribe.

"I now began my researches accompanied by some volunteers. I examined the grottoes which we had taken by assault: they were constructed without magnificence, consisting of a regular double gallery supported by pillars, behind which was a row of chambers often double, and tolerably regular. If we had not observed tombs, and even some remains of mummies, we might be tempted to believe that there were the dwellings of the primitive inhabitants of Egypt, or rather that after having first served for this purpose, these subterranean caves had become the abode of the dead, and had at last been restored by the people of Kurru to their original definition.

In proportion as the height of these grottoes increases, they become more richly decorated, and I was soon convinced by the magnificence both of the paintings and sculptures, and of the subjects which they represented, that I was among the tombs of great men or heroes. The sculpture in all is incomparably more laboured, and higher finished than any that I had seen in the temples; and I found in astonishment at the high perfection of the art, and its singular delicacy to be fixed in places devoted to silence and obscurity. In the working of these galleries, beds of a very fine grained calcareous clay have occasionally been crossed, and here the lines of the hieroglyphics have been cut with a firmness of touch, and a precision, of which marble offers but few examples; the figures have an elegance and correctness of contour, of which I never thought Egyptian sculpture susceptible. Here too I could judge of the style of this people in subjects which were neither hieroglyphic nor historical, nor scientific; for there were representations of small scenes taken from nature, in which the stiff profile outlines, so common with the Egyptian artists, were exchanged for supple and natural attitudes; groups of persons were given in perspective, and cut in deeper relief than I should have supposed any thing but metal could have been worked. One cannot help being struck with the little analogy which the greater number of these subjects have with the feet wherein they are immersed; it requires the presence of
of mummies to perish, one's first that these excavations are
tombs. I have found here bas-reliefs representing games, such as
rope dancing; and after taught to play tricks and to
rear on their hind legs, which are sculptured with all the na-
ture and simplicity which B. Smith has shown in representing
the four animals on the can Auschwitz.
The plan of these excavations is not less singular; there
are some which are fronted and complicated, that one would
have taken them for labyrinths or subterranean temples. After
passing the apartments described in the account that I have
first described, we entered long and gloomy galleries, which
wind backwards and forwards in numerous angles, and seem to
occupy a great extent of ground; they are melancholy, repul-i
tive, and without any decoration; but from time to time open in other chambers covered with hieroglyphics, and branch out into narrow paths that lead to deep perpendicu-
larly; which we defended by erecting our arms against the
side and fixing our feet into steps that are cut in the
rock. At the bottom of these pits we found other adorned
chambers, and lower still are vaults of perpendicular pits and horizontal chambers, and at half ascending a long flight
of steps, we arrived at an upper space which we found be-
on a level with the chambers that we first entered."

M. Denon made many references among these tombs, in
hopes of finding one that had not been rifaced, that he
might light upon a perfect mummy and find out the man-
ner in which they were laid within the tombs, a secret which
the inhabitants obstinately concealed, as the situation of
their village had given them almost an exclusive trade in this
singular article of commerce. During their search, M. De-
non and his companions arrived at a narrow hole, before
which were scattered numerous fragments of mummies. After
some hesitation, they proceeded, and having crawled along near a hundred paces over a heap of dead and half
decayed bodies, the vault became looser, more spacious, and
decorated with a considerable degree of care. They now
found that this tomb had already been searched, that those
who first entered it not having torches, had used bushes to
give them light, and that these had set fire to the linen and
rein of the mummies which had caused such a combustion as to
split some of the bones, melt the gums and reins, and
blacken all the sides of the cave. They could observe how-
er, that this vault had been intended for the burial-place of
two could noble persons, whose figures were sculptured
in relief seven feet in height, holding each other by the
hand. Above their heads was a bas-relief representing two
dogs in a leash lying on the altar; and two figures kneeling,
had the appearance of worshipping, which makes it prob-
able that two friends were buried here who were unwilling
to part even in death. Besides this, there were lateral chambers ornamented and filled with cupids that had been
enraged with more or less care, showing that through the
years had been conducted and decorated by persons of con-
sequence, they received not only the cupids of the founders, but of their children, friends, relations, and perhaps
all the servants of their house. M. Denon found se-
veral bodies lying on the ground covered up, and besides
without any coffin, and others that were not tattooed; and observed
various particulars concerning these.
The sepulchres of the kings of Thebes are mentioned by
Diodorus Siculus as a wonderful works, and such as could
never be excelled by any thing afterwards executed in this
kind. He says that 47 of them were mentioned in their
history, that only 17 remained to the time of Ptolemy La-
gus, and adds, that most of them were destroyed in his
time. It seems probable that most of these sepulchres were
built and not excavated in the rock, as it is not easy to de-
fer such fort of monuments. Strabo, however, says, that
above the Memnonium were the sepulchres of the kings of
Thebes, in grotttes cut out of the rock, being about 40 in
number, wonderfully executed and worthy to be seen. In
these, he says, were obelisks with inscriptions on them set-
ing forth the riches, power, and empire of these kings as
far as Syene, Babia, India, and India, their great re-
tainer, and the army consisting of a million of men.
The magnificent catacombs, called the tombs of the
kings, lie to the north-west of Thebes, at some distance in
the desert. Having passed the Necropolis, the traveller
enters a narrow and rugged valley flanked with perpendicu-
lar rocks, and ascending a narrow steep passage about 12
feet high, which seems to have been broken down through
the rock, the ancient passage being probably from the
Memnonium under the hills, he comes to a kind of em-
pyramide about 150 yards wide, which is called Elab-
thin. This is, the gate or court of the kings, being the
sepulchres of the kings of Thebes. In this court there are
four of about 15 excavations, but only nine can be entered;
the hills on each side are high steep rocks, and the whole
plain is covered with rough stones that seem to have rolled
from them.
The grottoes present externally no other ornaments than
a door in a square frame, with an oval in the centre of the
upper part, on which are inscribed the hieroglyphic figures
of a beehive, a man with a hawk's head, and beyond the
circle two figures on their knees in the act of adoration.
Having passed the first gate, long arched galleries are disco-
veryed of about 12 feet wide, and 20 in height, caved with
hieroglyphics and painted; the vaults, of an elegant ellipti-
qual figure, are covered with innumerable hieroglyphics, dis-
posed with so much taste, that notwithstanding the singular
grotesques of the forms and the total absence of dem-tint
or aerial perspective, the ceilings make an agreeable whole,
rich and harmonious association of colours. Four or five of
these galleries, one within the other, generally lead to a
spacious room containing the sarcophagus of the king, com-
pofed of a single block of granite about 14 feet long by 4
in breadth, ornamented with hieroglyphics both within and
without; they are square at one end, and round at the
other, like the splendid sarcophagus deposited in the British
Museum, and supposed by Dr. Clarke, to have contained
the body of Alexander. They are covered by a lid of
the same material, and of enormous thickness, shitting with a
groove; but neither this precaution, nor these vast blocks of
stone, brought from such a distance with such immense la-
bour, have been able to preserve the relics of the sovereigns
from the attempts of vassals; all the tombs are violated.
The figure of the king appears to have been sculptured and
painted at full length on the lid of each sarcophagus.
The paintings and in these sepulchres are among the
most curious and interesting remain of Egyptian art, and
in wonderful preservation, the colours being as fresh as when
first executed. Some of these figures were copied by Bruce;
and Denon who in a short time observed every thing with
the eye of an artist, has published a most valuable collection
which have all the appearance of spirited and characteristic
reminiscences. We shall extract part of his relation. "I
discovered some little chambers, on the walls of which were
represented all kinds of arms, such as panoplies, coats of
mail, tigers' flanks, bows, arrows, quivers, pikes, jacks, sab-
fers, helmets, and whips; in another was a collection of
household utensils, such as cauldrons, chairs of drawers, clairs,
solas, and beds, all of exquisite forms, and such as might
well grace the apartments of modern luxury. As these
were probably accurate representations of the objects them-
seves,
CATACOMBS.

fellows, it is almost a proof that the ancient Egyptians employed for their furniture Indian woods carved and girt, which they covered with embroidery. Besides these, were represented various smaller articles, as vases, coffee-pots, ewers with their basins, a tea-pot, and basket. Another chamber was consecrated to agriculture, in which were represented all its various instruments, a fledge similar to that in life and present; a man hoeing grain by the side of a canal, from the borders of which the inundation is beginning to retire, a field of corn reaped with a sickle, fields of rice with men watching them. ‘In a fourth chamber was a figure clothed in white playing on a richly ornamented harp with eleven strings.’ — M. Denon. Also observed figures with the heads cut off, which represented black men while their executioners were coloured red. (Pococke and Denon.)

Quitting Egypt, the European examples of catacombs come next to be described, and we shall begin with those of Rome, which though by no means the most considerable for size or beauty, are, however, the most generally known.

The catacombs of Rome are a vast collection of subterranean labyrinths, excavated sometimes in stone or tufa, but more commonly in beds of pizzollana, which run sometimes to 80 feet below the surface of the earth. Thus it seems probable, that these excavations were originally dug for the purpose of procuring this useful sublance, and afterwards appropriated as a burial place. In many places the sinking of the earth has suddenly afforded an access similar to those caves which have been filled up others, so that the extent of it is subterranean city is unknown. The principal entrances are those of San Sebastiano, San Lorenzo, and Porta Porfcre. These galleries are in general three or four feet wide, and fix or even in height. Some, however, are so low that it is necessary to floup greatly to pass along them. There is no mastony or vault, the earth supports itself. In the two sides of these alleys, the sarcophagi containing dead bodies were placed lengthways, in recesses three or four tiers over one another, and closed with very thick tiles, or sometimes slabs of marble, cemented in a manner which would be very difficult to imitate at present. Some tombs are placed on the floor. There are also found a large number of urns containing bones, which, upon access of air, are reduced to powder. Sometimes, though rarely, the name of the deceased is found on the tile or urn, and frequently a palm is seen painted or engraved, with the cypher X. P. These are supposed to be the graves of the early Christians, and their contents are regarded by the Romans as sacred relics. The sarcophagi are for the most part quite plain, and the small sculpture, painting, or ornament, that has been found in the catacombs, is of the lower ages of the empire, and very indifferent. Almost all the galleries and chambers which have been discovered are of a size enough for a human being to pass through. The catacombs of Naples are much larger and finer than those last described. These caverns do not extend under the city like those of Rome; they are situated in a mountain to the north of Naples, and dug one over the other partly in a stone used for building, and partly in beds of compacted pizzollana. There are three tiers of galleries, but earthquakes have closed the greater part.

From the entrance of the catacombs a straight street, 16 feet wide, and about 14 in height to the top of the vault, continues to a considerable length. It then becomes irregular, and seems to have been pierced at random in the mountain, as well as several other slots of various dimensions, with which it communicates on all sides. These ca-

vernous cellars, in their distribution, the excavations of a fome quarry with various large chambers, in which pillars have been left to support the ceiling. Among these subterranean halls, there are some which may have served as chapels, with altars of rough stone, and some fresco paintings, representing the virgin and saints, which seem to be of the 10th century.

The walls on both sides, through their whole length, are pierced with an infinite number of recesses; there are in some places five, six, and even seven rows one above the other. These recesses are large enough to receive a human body horizontally, but not a sarcophagus: they are of various sizes, and seem to have been calculated for the individual tenant. When the body was deposited in these recesses, they were closed with a long, flat stone, or with brickwork well cemented. In some places there were niches in which the bodies were placed upright; these perhaps are the sepulchres of particular families. Some of the tombs are ornamented with Mosaic paintings of the lower ages; and there were found marble monuments with Greek and Latin inscriptions, but these have been faved to form the pavement of the church della Sanita. All the niches have been opened and the remains removed.

There are also considerable catacombs at Civita Turchino, near Carneo.

Sicily possesses many monuments of this kind; for that the ancient gentiles of Catana, Palermo, Agrigentum, and Syracuse, are satisfied by extraordinary excavations. The catacombs of Syracuse are the most ample and magnificent of any in Europe. These form a kind of subterranean town, with its greater and smaller streets, squares, and places, all cut in the rock on several levels, and evidently originally designed for a place of sepulture, differing in that respect from the other remarkable excavations of that town, the Latomie and Dionysius’s cave, which were at first stone quarries, while the catacombs are not at all adapted for that purpose, their entrances being neither spacious nor convenient.

The catacombs are entered from the church of St. John, one of the oldest Christian churches in Sicily. They consist of various streets crossing one another in many directions, and are hewn with great care and regularity. The principal street continues to a very great distance, but its whole length cannot be estimated, as the sinking of the ground has filled it up in one part. On each side the walls are occupied by large tombs inclosed in the rock. At flatted distances large excavations branch off, which sometimes contain near 60 coffins hollowed out of the rock. In other places there are private sepulchral chambers with doors which appear formerly to have been fastened with locks; in the middle of these chambers there are large inhabited tombs, doubtless intended for the heads of families. The intersec-

tions of the streets form large openings, and there are various considerable circular halls with domes, and pierced at top with an opening to the outer air; these halls are fluced, and there are tombs placed symmetrically in them of the same kind as those in the streets.

In exploring these caverns the traveller is surprized to find himself returned to the same spot whence he set out, but upon a lower story. Though it is only possible to visit a part of these vast excavations, the extent of what is seen excites the utmost admiration of the energetic industry of the nation that could construct such noble sepulchres. They are undoubtedly the greatest monument of the ancient Syracusans. The only ornaments found in these catacombs, have been added at a later period, and consist of some indifferent Greek paintings of the last age of the empire, executed upon a stucco applied to the rock. Among the coffins of all ages which are excavated in the floors of the sepulchral
pulchral chambers, there are some so small as to be fit for nothing but the reception of a cat or lap-dog.

The entrances of Syracuse have not the salutary appearance of those of Naples and Rome, but a curious tranquillity pervades in them perfectly. Aptok, the sanctuary of Apollo, was a magnificent building with two temples dedicated to Apollo, and a columned portico. The temples were adorned with columns and statues. The entrance to the temple was through a large court, which was surrounded by colonnades. The court was paved with marble slabs, and the steps leading up to the temple were flanked by a colonnade. The temple was dedicated to Apollo, and was considered a place of pilgrimage.

CATADUPI, in Ancient Geography, an appellation given by the ancients to the inhabitants about the cataracts of the Nile. The cataracts are represented as all deat; being made to by the continual drip of the falling waters.

CATALCA, on the coast of the Persian gulf, was a city of Carmania, according to the chronicle of Nepos, and was inhabited by the Persians. It was a city of great importance, and was the seat of a viceroy of Persia. The city was fortified with walls and towers, and was a place of refuge for the Persians in time of war.

CATALONIUM, a promontory of Africa, placed by Ptolemy in Marrrum.

CATAFALCO, an Italian term literally signifying fest. It is chiefly used for a decoration of architecture, sculpture, and painting; raised on a timber scaffold, to show a coffin, or tomb, in a funeral service.

CATAGOGION, in Ancient Geography, a town of Sicily, according to the scholiast of Aristophanes.

CATAGRAMATICA, in the Materia Medica, medicines proper to unite broken bones; by promoting the formation of a callus. The term comes from κατα, against, and γραμμα, to record. But as this is a power which is not certainly known to exist in any medicine whatever, the term, says Dr. Cullen, is falsely employed. See Consolidation.

CATAGOGION, a heathen festival at Ephesus, celebrated on the twenty-second of January, in which the devotees ran about the streets decked in divers attire and unbecoming manner, with huge cudgels in their hands, and carrying with them the images of their gods; in which case they ravished the women they met with, abused, and often killed the men, and committed many other disorders, to which the religion of the day gave a sanction. Dura-Cage.

CATAGPHIA, in Ancient Geography, denote ohique figures, or views of men's faces; answering to what the moderns call profiles. Cataphraga are said to be the invention of Simon Clorus, who first taught painters to vary the looks of their figures, and sometimes direct them upwards, sometimes downwards, and sometimes sideways, or backwards. Pin. Hist. Nat. lib. xxxv. cap. 8. cum Nat. Hardouin.

CATALONIUM, in Ancient Geography, now Calatonia, a town of Gaul, in Belgica Secunda; called also “Duro Cataluni,” in the Itinerary of Antonine. It was before this place that the emperor Aurelian vanquished Tetricus, the president of Aquitania, who had been proclaimed emperor by the troops, according to Vopieus and Eutropius.

CATALECTIC, a term in poetry, derived from καταλεκται, to pass over, or to pass over the head, wherein the Roman knights used to expel themselves in running and fighting on horse-back.

But the most natural meaning is that of a rope, fastened at one end to the top of the theatre, and at the other to the bottom, to walk or run down, which was the highest glory of the ancient scholabontes, or funambuli. Elephants were also taught to run down the catadromus. Socrates speaks of the exploit of a Roman knight, who passed down the catadromus mounted on an elephant's back, in Ner. cap. xi. p. 5.

CATADUPA, in Hydrography, a cataract, or water-fall. See Cataract.

The term comes from κατα, downwards, and di, to make a move by falling.

The appellation catadupa seems to have been peculiarly given to a place in Ethiopia joining on Egypt, where the Nile, which here first assumes that name, rushed down a steep rock into the subjacent plain, with a noise so impetuons, that the inhabitants are said to have lost all sense of hearing. Plin. Hist. Nat. lib. v. cap. 9. Ammian. Marc. lib. xxii. cap. 34. &c. Socra. Nat. Quod. lib. iv. cap. 49

CATACLYSM, in Scripture, a term applied to any sudden alteration in the state of things, or to any extraordinary event which has had a powerful effect on the human race. It is often used in the Bible to denote the destruction of the world by a flood, and the submersion of the whole earth by a universal conflagration.

CATARACT, in Antiquity, an appellation given by the ancients to the inhabitants about the cataracts of the Nile. The cataracts are represented as all deat; being made to by the continual drip of the falling waters.

With respect to the nature of this singular disease, which is aptly enough compared by Van Swieten to that condition of the body, which was produced, according to the

2
CATALEPSY.

The symptoms of the poet, by the sight of Medusa's head, much difference of opinion has existed among physicians, and various denominations have been given to it. By the ancient writers it does not appear to have been accurately distinguished from other febroile discharges. According to Galen, those affected with it were originally called *stupor*, and the disease itself *estoebe* or *catathexis*; but the catachex of Galen bears a greater resemblance to apoplexy or tetanus, and the term, perhaps, included the cataplectic, together with their discharges. Celsius Aurelianus, who confiders the cataplectic as bearing an affinity chiefly to lathargy and apoplexy, has enumerated the symptoms, which his predecessors had employed to distinguish it. By Praxagoras and others it was included, he says, with the coma toto affections, under the general terms, coma, lethargy, &c. By others some prominent symptom was alluded as a name for the disease, implying that its nature or affinity with other diseases was not understood; thus it was called *anaolia* by Antigenes, from the loss of hearing which accompanied it, and *aphonia* by Diocles, from the loss of voice; circumstances by which, however, it is obvious, it could not be distinguished from *seizures*, epilepsy, and many disimilar disorders. Aplegeades itself denominated it catalepsia; but he has not left any distinct description of the disease, such as it is now considered. (See Cels. Aurelian. de Tar. Paffion. lib. ii. cap. 5.) It is not quite clear whether Celsius was acquainted with the catalepsy, or not. The learned Van Swieten is of opinion, and in this he is followed by Morgagni, that this disease is meant by Celsius, when he speaks of pernomia, as it were, thunderdruck, *atonii*; (De Medicin. lib. iii. cap. 26.) for although he confounds the disorder of the *atonii* with the apoplexy of the Greeks, yet he describes it as a rare disease; while in the subsequent chapter he speaks of apoplexy again, as a palsy of the whole body, and a common disease; meaning the complaint commonly understood by that term. (See Van Swieten. Com. 51067.) In short, the accounts to be collected from the ancient writers respecting the catalepsy are confused and imperfect, and appear to refer to various lethargic or coma toto affections; and even to some epispasic discharges, such as tetanus. Nor do we find all difference of opinion done away, if we defer to the modern records of medicine; in which several histories are related under the title of cataleptic affections, which obviously belong to other genera of disease. This confusion, together with the extreme rarity of the true disease, and the wonderful histories of cataleptics, which have been detailed by authors, have induced some physicians of eminence, (and among these Dr. Cullen must be particularly mentioned,) to doubt of the existence of such a disease. In his Synopsis de Nofology, Dr. Cullen has mentioned this complaint as a species of apoplexy, under the title of *Apoplexia Cataleptica*; having believed that the cases of catalepsy described by authors were either varieties of apoplexy, or altogether feigned. He had seen no instance of cataleptic symptoms, but what was obviously a deception. The number of well authenticated examples on record, however, in which no cause of an attempt to deceive appears, and which are related by physicians of character and fagacity, render the existence of catalepsy inadmissible. Its symptoms are the following:

The patient is suddenly seized, sometimes after feeling a head ache, or stiffness of the neck, or exhibiting obvious signs of torpor of the mind or body, but generally without any previous symptom, with a rigidity of all the limbs; or in other words, the senses and the power of voluntary motion are suddenly suspended, so that the patient remains fixed in the attitude peculiar to his work, and the countenance retains the expression characteristic of the mental condition. "Sec manus erecta non delabitur; faciei musculi ad ritem, ad horum continuamen, ritem vel exitum conflatans exprimunt." Yet such is the state of equal, though involuntary action in the antagonistic muscles, that the limbs are laid common to retain any position into which they are put by exterior force. During the paroxysm the sensations are in general suspended; the patient neither receives any impression from external objects, nor retains any recollection of what happened during the fit. The vital functions continue to be performed, but more feebly; the pulse and respiration are regular, but the former is smaller than in health; the colour of the countenance usually undergoing little or no change. After a duration, which is various in different inclinations, commonly after a few minutes, sometimes after the lapse of a few hours, and occasionally, though rarely, after a continuance of three or four days, the paroxysm suddenly declines. The patient awakes as it were from sleep, generally with deep sighing, and all the functions of the body are restored.

The congeries of symptoms just enumerated constitute what has been called by systematic writers, the perfect paroxysm, *catalepsia vera*, in which the abolition of the senses, both internal and external, is complete. But more frequently the lout of sense is only partial; and in some instances the senses all remain undiminished, while the voluntary motions are altogether suspended; so that, although the patient is conscious of every thing that is passing around him, he is unable to speak or move, or in any way to make known his feelings or wishes. An interesting example of this kind is on record, (see Duncan's Med. Comment. vol. x. p. 242.) in which a female lay in complete possession of her mental faculties, but deprived of the power of moving a muscle of the body. She was in the diffurbing condition of finding herself given up by the attendants as dead, of being laid out, with her toes tied together, and her chin tied up, and of hearing certain arrangements for her funeral talked of, yet she was unable to make the slightest sign of her possession of senses, feeling, and life. In other cases there is a certain degree of sense and consciousness during the fit, and of recollection of the circumstances of it afterwards; and the limbs, if bent, do not retain firmly the position into which they are moved, but return gradually to their original position. Some patients are able to move one hand or limb, while the others remain rigid; and some, though apparently lifeless in all other respects, yet retain the power of swallowing whatever is put into their mouths. These are said to be examples of imperfect paroxysmatic catalepsy. See Sauvages's Nofol. Method. cl. vi. ord. 5. Vogel, de Morb. Cognosc., et Curand. § 572. Burlet. Inflit. Med. Pract. tom. iii. cap. 5.

There is also another variety of the furious catalepsy, which is described by the title of *Euphias,* by some writers, in the paroxysm of which the imagination of the patient has pictured dreams of an extraordinary nature, which left a vivid impression upon the memory; and after the termination of the fit, (for it appears to have happened generally with females,) has related accounts of surprising celestial visions, with which she had been favoured during the trance. Many of the histories of trances which are on record, are, however, beyond a doubt, altogether fabulous; and in many instances they have been pure deceptions, feigned with a
view of furthering some political or religious design, or of serving some private purpose—deceptions such as were practiced by diviners of old, and as have been resorted to by fanatics in all ages. Sometimes these 

  ephelias have been among the extravagancies of maniacs.

The particular condition of the body, or of the nervous system, which constitutes the cataleptic state, has been attempted to be explained in various ways. Dr. Cullen considered it as depending upon the same condition of the brain, by which the modification of palsy and apoplexy are produced, and there are some cases on record, which accord with this opinion. Such are two cases related by Henry ab Heera, (Observ. med. Obf. 3.) which are obviously of an apoplectic nature. One of the patients was a Capuchin friar, who was attacked with the fit, when fasting, and remained in an upright posture. The fit went slowly off, but he was fezied a second time, and died. Vogel believes that the source of the cataleptic symptoms is rather to be traced to the phrenic or abdomen than to the head, which seems to imply a notion that they were of an hyllerical nature. The speculation of Boerhaave, Home, and others, respecting the interrupition, superabundance, or deficiency of the nervous fluid in the voluntary muscles of the patient, merit little attention: they are either altogether gratuitous, or consist of a mere consideration of the facts in other and more ambiguous terms. We know very little in regard to the connection of many of the irregular actions of the nervous system, with the physical condition of the nerves, or of their common source, the brain; and we must content ourselves, for practical purposes, with endeavouring to trace, in the case of uncommon diseases, some analogy with those more common affections, with the treatment of which we are already acquainted.

  Epilepsy appears to assume occasionally a cataleptic form; i.e. the paroxysms, which were in the beginning epileptic, become ultimately cataleptic; or vice versa; or the two forms alternate with each other. In these cases in which the patients have died apoletic, the apoplexy must be considered as partaking of the nature of epilepsy, or, perhaps, enlogging to the epileptic state; for the symptoms of catate, as they generally appear, are incompatible with the condition of pure apoplexy. In the latter, the nervous communication from the brain to the muscles is lost, and the limbs are consequently deprived of all power of action; in the catalepsy, on the contrary, a considerable degree of action exists in all the antagonist muscles, at the same time, and in an equal degree, so as to retain the limbs in any position, in which they may be placed. The pulse, it may be also added, continues its usual beats, and is smaller than in health; and the complexity of the countenance is unaltered; nor do any of the ill effects of apoplexy remain after the termination of the paroxysm. In by far the most numerous well-authenticated instances on record, catalepsy obviously bears the closest analogy to, or rather appears to be a modification of, hylleria. This conclusion will be drawn, whether we consider the nature of the symptoms, the fey and constitution of the patient, the accidental complication and conversion of the disease, or the remedies which have been successfully employed in its cure.

As a proof of the intimate connection of the cataleptic with the hyllerical paroxysm, we shall relate an account of one defended by Dr. Jebb, which is similar to several others that have been recorded. The young lady, who was the subject of the disorder, was fezied with the fit, when Dr. Jebb was announced on his visit. "She was employed," he says, "in netting, and was piling the needle through the mesh; in which position she immediately became rigid, exhibiting, in a very pleasing form, a figure of death-like sleep, beyond the power of art to imitate, or the imagination to conceive. Her forehead was serene, her features perfectly composed. The paleness of her colour, her breathing at a distance being also scarcely perceptible, operated in rendering the similitude to marble more exact and striking. The position of her fingers, hands, and arms, was altered with difficulty; but preferred every form of flexure they acquired; nor were the muscles of the neck exempted from this law; her head maintaining every position in which the hand could place it, as firmly as her limbs."

"Upon gently raising the eye-lids, they immediately closed with a degree of spasm. The iris contracted upon the approach of a candle, as in a state of vigilance; the eye-ball itself was slightly agitated with a tremulous motion, not discernible when the eye-lid had defended itself."

"About half an hour after my arrival, the rigidity of her limbs and flute-like appearance being yet unaltered, she sang three plaintive songs, in a tone of voice so elegantly expressive, and with such affecting modulation, as evidently pointed out how much the most powerful passion of the mind was concerned in the production of her disorder, as indeed her history confirmed. In a few minutes afterwards she sighed deeply, and the spasm in her limbs was immediately relaxed. She complained that she could not open her ears, her hands grew cold, a general tremor followed; but in a few seconds, recovering entirely her recollection and powers of motion, she entered into a detail of her symptoms, and the history of her complaints. After she had discoursed for some time with apparent calmness, the universal spasm suddenly returned. Her features now assumed a different form, denoting a mind strongly impressed with anxiety and apprehension. At times she uttered short and vehement exclamations, in a piercing tone of voice, expressive of the passions that agitated her mind; her hands being strongly locked in each other, and all her muscles, those subjacent to speech excepted, being affected with the same rigidity as before." (See Select Cases of Paralysis of the Lower Extrem. by Dr. Jebb, Appendix.) These paroxysms obviously participate of the character of hylleria. The appearances, indeed, are not common; but the varying forms of hyllerie diseases are a subject of general observation. Sydenham long ago remarked, that "a day would scarce suffice to enumerate all the symptoms of hylleric complaints, so various they are, and so contrary to one another, that Proteus did not assume more shapes, nor the chameleon a greater variety of colours." A very large proportion of the decided cases of catalepsy, which have been distinctly recorded, occurred in the female sex, or in hypochondriacal constitutions. Sauvages has related the histories of several cataleptic patients, all of whom were females, and of hypochondriacal habits; and several modern and well-authenticated examples are of the same nature. (Sauv. loc. cit. Jebb, loc. cit. Hil. Acad. Roy. de Sciences, Paris, 1738, &c. British Magazine, 1800. Edin. Med. & Surger Journ. vol. i. p. 61, 185. Mem. Roy. Acad. Scien. of Sweden, 1778.) The last reference is to the case of a melancholic or hypochondriacal man, in whom the catalepsy was accompanied with tremors, or locked jaw. Incidences are related by other authors in which the catalepsy was joined, or alternated, as well with melancholy, fromambulim, convulsions, &c. as with proper hylleric symptoms; or readily passed into these maladies.

The remote or occasional \emph{causes} of catalepsy are various. In the majority of instances they appear to have been the same which, in constitutions naturally predisposed to diseases of mobility, excite all the varieties of hylleric and other nervous symptoms; such are all circumstances which powerfully...
powerfully influence the mind, or debilitate the body, and thus induce a degree of morbid sensibility and irritability throughout the system. Hence, among the more frequent causes of catalepsy enumerated by authors, are grief, terror, anxiety, love, intense studies, indigestion, cold, strong liquors, acute fevers, &c. Where the disease has been a modification of epilepsy or of apoplexy, if this ever happen, the causes were such as produce other forms of those complaints. See Epilepsy, &c.

If we consider the nature of the cataleptic disease, in its more common form of catalepsy hystericus, it will be obvious by what means the cure is to be attempted. In the various cases which are recorded, it has been often successfully treated by the same remedies to which other nervous and somnambolic diseases commonly yield. Where it occurs in florid and plethoric habits, as in the same with that solely following from the apoplexy of the jugular vein has been practiced with advantage, especially during the paroxysm; this, however, is very rarely requisite. Gentle laxatives have been found useful; and in this, probably, as in other nervous complaints, the regular evacuation of the bowels is of the utmost importance. The whole tribe of stimulants and tonics have been resorted to, especially in the modern infinances, the former with a view of counteracting the inordinate actions of the nervous system, and the latter in order to restore the strength, and obviate the morbid irritability of the patient. In the fit, opium, ether, volatile alkali, and various fixed antipathodics, have been administered; erethines have been applied to the nostrils; narcotic or acrid and stimulating gyfflers injected into the bowels; and friction with mustard, or strong spirits, also employed on the limbs, and surface of the body. In the intervals between the paroxysms, bitter medicines have been given, the cold bath has been preferred, and exercise in various ways resorted to successfully in different infinances. The principle, in short, upon which the disease has been treated, appears to be this; that upon which all other diseases of nervous mobility have been successfully combated. If the lethargic, apoplectic, or epileptic disorders assume the cataleptic form, which must be determined by the concomitant circumstances, the remedies adapted to the cure of these disorders respectively will of course be indicated.

Before we conclude this article, we cannot forbear to mention an extraordinary account of a woman, labouring under catalepsy hystericus, which has been lately published by an old and most respectable physician, Dr. Petetin, of Lyons, president of the Medical Society of that place. The title of his work is "Electricité Animale, pronouee par la découverte des phénomènes physiques et moraux de la catalepie hystérique, &c." The cafe which is here related occurred some years ago, and another similar one now exists at Lyons. The history, we must acknowledge, excites our scepticism, but, on the other hand, the respectability of Dr. Petetin, supported by a letter, which we have perused, from a young physician of character at Lyons, who went to see the patient, doubtless of a healthy mind, but, notwithstanding, the truth of its truth, is entitled to attention. In these cases, it is affirmed, that the fingers were transferred to the pit of the stomach, and to the ends of the fingers and toes; i.e., that the patients, in a state of insensibility to all external impressions upon the proper organs of sense, were, nevertheless, capable of hearing, feeling, smelling, and tasting whatever was approached to the pit of the stomach, or to the ends of the fingers and toes. Dr. Petetin attributes these extraordinary phenomena to the influence of animal electricity or galvanism; and affirms, that if the objects were not applied to the pit of the stomach, but made to communicate with it by an electric conductor, the sensations were still excited; but that if the communication was interrupted, as by a piece of silk, or other non-conductor, the effect was altogether prevented. The patients are said to have answered questions propted to the pit of the stomach, to have told the hour by a watch placed there, to have tasted food, and smelt the fragrance of apricots touching the part, &c. &c. Dr. Petetin concludes that hystericat catalepsy should be thus defined: "Abolition reile des sens, et apparente de la connaissance et du mouvement, avec transport, des premiers ou de quelques-uns d'entre eux dans l'egyptage, à l'extremité des doigts et des orteils; et pour l'ordinaire disposition de la part des membres à recevoir et à conférer les attitudes qu'on leur donne," p. 140.

The physician whole letter on the subject we have perused, observes, that Dr. Petetin's pamphlet has been and is still confounded by many "comme une fable comme le rêve d'une imagination exaltée," but he avers, that it is nevertheless true. "I can assure you," he concludes, "that I have observed this cataleptic patient with the most scrupulous attention; that my experiments have been made with every caution, not for the purpose of publication, but solely with a view of satisfying myself as to the reality of a disease of which I had long doubted; and that the result has been a perfect conviction that all I have seen is true. If it be not, my fenes have strangely deceived me." Until we obtain further evidence upon the subject, we leave our readers to balance these authorities against the extraordinary nature of the facts which they promulgate.

Catalina harbour, in geography, a bay on the east coast of Newfoundland. N. lat. 45° 38'. W. long. 53° 45'.

CataliStis capis nemine distriptionis, in Lavo, an ancient writ that lay where a house was within a borough, for rent aufling out of the name; and which warranted the taking of doors, windows, &c. by way of dillets for rent. Old Nat. Br., p. 66. This writer says of the house.

Catalis redendus, an ancient writ which lay, where goods, being delivered to persons to keep till a certain day, are not, upon demand, delivered on that day. It may be otherwise called a "writ of detinue," and corresponds to "actio depositis" in the civil law. Reg. Orig. 139. Old Nat. Brev. 63.

Catalogue, a lift or enumeration of the names of several books, men, or other things; disposed according to a certain order.

George Willer, sometimes improperly called Viller, and Waier, a bookseller at Augsburg, who frequented the Frackfort fairs, first adopted the plan of caufing to be printed for every fair a catalogue of all the new books, in which the fize and the names of the printers were marked. Le Mire, better known under the name of Mirus, a catholi c clergyman, who was born 1798, and died in 1830, in his work "De Scrip toribus Ecclesiasticis fecundi xvi," printed in the "Bibliotheca Ecclesiastica" of Fabricius, Hamb. 1682, fol., informs us, that catalogues were first printed in the year 1554; but Labbe (Bibliotheca Bibliothecarum, Lipt. 1682, 12mo, p. 119.), Reimann (Einleitung in die Historiam Literarum, l. p. 203.), and Hunmann (Confectus Reip. Liter. c. vi. § 5. p. 315.), who took their information from Le Mire, erroneously make the year to be 1564, which error is copied by Fabricius. Willer's catalogues were printed till the year 1592 by Nicol. Baffius, printer at Frackfort. Other booksellers, however, must soon have published catalogues of the like kind, though that of Willer continued a long time to be the principal. Among the many curious and rare articles in the library of professor Baldinger, three
A collection of old catalogues, the earliest of which are the following: Catalogus novus mundinarum autumnalium, Francof. ad Morn. anno 1586, celebratatur. Plerique apud Joan. Georg. Portenbachium et Th. Lutz. bibliopolam Aug- guitanam venales habentur; A catalogue of all the new books — printed at Franckfort, by Peter Schmid. This catalogue was published by book-sellers of Augsburg; but not by Wilier, of whom we have, Catalogus novus mundinarum autum- nalium, Francof. ad Morn. anno 1585.—Plerique in zedibus Georgii Willeri, bibilopolae Auggutan, venales habentur. A catalogue of almost all the books which have been published be- tween last Easter and the present September fair. Franckfort on the Main, printed by Nicolas Ballens. To all these cata- logues, printed in 300. and not pagod, the following order is offered. The Latin books occupy the first place, begin- ning with the Protestant theological works, probably because Willer was a Lutheran; then the Catholic; and after these the books of jurisprudence, medicine, philosophy, poetry, and music. The second place is assigned to German books, which are arranged in the same manner. The last Euler catalogue of Wilier, that is found in Balding's library, is dated 1603, with the following title: "Plerique libri in zedibus Elis et Georgii Willeri, fratrum bibliopolarum Aug- guitanorum, habentur;" printed by Baffleus at Franckfort. In 1604, the general Euler catalogue was printed with a permision from government, as appears by the following title: "Catalogus universalis pro mundinis Francof. de anno 1604;" Francof. permiltu superiorior exudebat Joh. Saur. After this the Leipic book-sellers began not only to reprint the Franckfort catalogues, but to enlarge them with many books which had not been brought to the fairs in that city. Accordingly Balding's library has "Catalogus universalis pro mundinis Frandofurtenhibus vernalbus de anno 1601," printed at Leipic by Abraham Lamberg. An imperial privilege appears, for the first time, in the Franckfort Sep- tember catalogue of 1616; "cum gratia et privilegio spe- ciali S. Caf. Maj. Proflat apud J. Kruigerum Auggutanum." Some imperial permissions, however, may be of an earlier date. Reimann (ubi supra) says, that, after Wilier's death, the cata- logue was published by the Leipic book-seller,Henning Groffle, and by his son and grandson. The council of Franck- fort caused several regulations to be issued replacing cata- logues; of which an account may be seen in "D'Orth's Treatise on the Imperial Fairs at Franckfort." After the business of book-selling was drawn from Franckfort to Leip- ice, occasioned principally by the restrictions to which it was subjected at the former place by the censors, no more cata- logues were printed there; and the shops in Book-street were gradually converted into taverns. See Bookseller.

In perusing these old catalogues, the sudden and great in- crease of books may well excite astonishment; and when we reflect that a great, perhaps the greater, part of them no longer exist, this perihableness of human labours will pro- duce the same emotions with those which arise in the mind, when we read in a church-yard the names and titles of per- sons long since moulder'd into dust. In the 16th century there were few libraries; and these, which did not contain many books, were in monasteries, and confined principally of theological, philosophical, and historial works, with a few; however, on jurisprudence and medicine; while those which treated of agriculture, manufactures, and trade, were thought unworthy of the notice of the learned, and of being restored in large collections. The number of these works was, nevertheless, far from being inconsiderable; and, at any rate, many of them would have been of great use, as they would have served to illustrate the instructive history of the arts. Catalogues which might have occasioned inquiries after books that may be still somewhere preferred, have suffered the fate of tombstones, which, being wafted and crumbled to pieces, by the destroying hand of time, become no longer legible. A complete series of them is no where to be found. The loss, however, might in some measure be supplied by two works, that are now exceedingly scarce; viz. those of Clefs and Daudius; who, by the desire of some book-sellers, collected together, as Georg did at a later pe- riod, all the catalogues published at the different fairs, in dif- ferent years. The work of Clefs has the following title: "Unius fascil ejusque virorum litteratorum monumentis tum florentissimi, tum fertillissimi, ab anno 1550 ad 1632 mundinarum autumnalium..." and is divided into five parts. The first catalogue, partam ex bibliotheca, was first published in 1602. The work of Daudius, printed in several 4to. volumes, for the first time in 1611, and afterwards in 1625, is much larger, more complete, and more methodical. The first part is entitled "Bibliotheca clasica, five catalogus officialis, in quo singul- iarum facultatum ac professionum libros, quin in quavis fere lingua extant—recententer;" which is the annual publication of the authors, is called "Bibliotheca clasica, five catalogus officialis, in quo philophici artiumque ad humanorum, poetici et maius libri, quin ad annum 1624 continentur." This part contains Latin books, with an index of all the authors that are mentioned. A small volume, without an index, is entitled, "Bibliotheca clasica, five catalogus officialis librorum peregrinis linguis usufulibus scriptorum;" and a third part, containing an index of the authors, is called "Bibliotheca librorum Germanic- rum clasica;" 1625. This work of Daudius, though it mentions many books which were never printed, and though many titles, names, and dates are given incorrectly, well de- serves the attention of those who wish to acquaint themselves with the history of literature; and it was undoubtedly of use to Hailer, when he composed his Bibliotheca. See on this subject Beckmann's Hill of Inventions, vol. iii.

Catalogues of books are digested in different manners; some according to the order of the times when the books were printed, as that of Maitaire; others according to their form and size, as the common book-sellers' catalogues; others according to the alphabetical order of the authors' names, as Hyde's catalogue of the Bodleian library; others according to the alphabetical order of subjects or books which are called real or classical catalogues, as those of Lipenius and Daudius; lastly, others are digested in a mixed method, partaking of several of the former, as de Seine's catalogue of cardinal Sluis' library, which is first divided according to the subjects or sciences, and afterwards the books in each are reckoned alphabetically.

The most applauded of all catalogues is that of Thuanus's library, in which are included the advantages of all the rest. It was first drawn up by the two Puteani in the alphabetical order, then digested according to the sciences and subjects, by Libri Bulialdus, and published by P. Questin at Paris in 1679, and reprinted, though incorrectly, at Hamburgh in 1704. The books are here ranged with judicious under their several sciences and subjects, regard being still had to the nation, secta, age, &c. of each writer. And, in- deed, that only the best and choicest books in every subject are found here, and the most valuable editions. Yet the catalogue of M. le Tellier, archbishop of Rheims' library, made by M. Clement, is not inferior to any published in our age, either on account of the number and choice of the books or the method of its disposition.
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One advantage, peculiar to this catalogue, is the multitude of anonymous or pseudonymous authors detected in it, scarcely to be met with elsewhere. Some even prefer it to Thumma's catalogue, as containing a greater variety of classes and books on particular subjects. Bibliotheca Thummat. Par. 1679, Svo. 2 vols. and Hamb. 1704, fol. and 8vo.

The conditions required in a catalogue are, that it indicate at the same time the order of the authors and of the matters, the form of the book, the number of volumes, the chronological order of the editions, the language in which it is written, and its place in the library; so that all these circumstances may appear at once, in the shortest, clearest, and exactest manner possible. In this view, all the catalogues yet made will be found to be defective.

An anonymous French writer has hit down a new plan of a catalogue, which shall unite all the advantages, and avoid all the inconveniences of the old. Let. à l'Abbé * * *, sur un Nouveau Projet de Catalogue de Bibliothèque. Par 1712.

The Jefuits of Antwerp have given us a catalogue of the popes; which makes what they call their Propylæum.

Catalogue of the stars, is a list of the fixed stars, disposed according to some order in their several constellations; with the longitudes, latitudes, right ascensions, &c. of each.

Catalogues of the stars have been usually restricted to two forms: in the first and most ancient, the stars were clasped in their respective constellations; in the latter, they followed one another, in a continued series, according to their right ascensions, or the order in which they transfix the meridian. All the catalogues, from the most ancient to that of Flamsteed inclusively, were of the first of these forms; but most of those which have been since constructed are of the latter form, as being much more convenient for the greatest variety of useful purposes. Another catalogue of a third kind has lately been formed, in which the stars are disposed in classes according to zones, or their degrees of polar distance.

The first who undertook to reduce the fixed stars into a catalogue, was Hipparchus Rhodes, about one hundred and twenty-eight years before Christ; in which he made use of the observations of Timocharis and Ariffinus, for about 180 years before him. Pliny informs us (N. H. lib. n. c. 207) that he upon the appearance of a new star, began to doubt whether there might not be changes among the fixed stars, and therefore made a catalogue of them, setting down the place and magnitude of each star, so that if, in future time, any new stars should appear, or any of those already observed by him should increase or be diminished in magnitude, or should totally disappear, such changes might be known to succeeding ages. Ptolemy retained Hipparchus's catalogue, containing 1022 stars, with some few alterations; though he himself made many observations, with a view to a new catalogue, A. D. 149. Ptolemy tells us, that he added 2° 40' to the longitudes of Hipparchus, in order to reduce them, from the beginning of the 12th year B.C. (the epoch for which Hipparchus had given them), to the beginning of the year 137 after Christ, or the 5th of Antoninus Pius. This allowance is after the rate of one degree in 100 years, the quantity of the precension which was found by Hipparchus, from comparing his own observations of Spica Virginis with those which had been made of the same star by Timocharis, about 140 years before; and hence it is manifest that Ptolemy depended on no observations made by himself in this business, but reflected wholly on such as had been made by those two excellent astronomers, three centuries before his time. If he had made any observations himself, he must have found that the quantity which he allowed was too small, by a whole degree at the least; the true quantity of the precension for 245 years (the difference of the epochs being 3° 42' 22''), and then allow for the precension from that time to this. This catalogue, as we have it in Ptolemy, contains 1026 stars, in 45 constellations; but, according to Pliny (N. H. c. 47) it contained 1650 stars, in 72 constellations. This author, however, is so subject to error, that little attention has been paid to what he has on the subject; and it has generally been concluded that the catalogue never contained more stars than are to be found in Ptolemy; especially as none of the copies, which the Arabs have left us, contain more. About the year of Christ 885, Albotegni, a Syrian, brought down this catalogue to his time. The most ancient catalogue which the Chinese now have was made in the year of Christ 1560. The Arabians are the first who, after Ptolemy, observed the stars, and noted down their places. The learned Dr. Hyde mentions several of their catalogues; and he published the most considerable of them, with a Latin translation and notes, at Paris in 1662.

This catalogue was made by Ubigh Beig, a prince of Tartary, and grandson of the famous Tamerlane, from his own observations at Samarkand; it contains the places of 1022, or according to some, 1166 stars, adapted to the beginning of the 81st year of the Hegira, or the year 1437 after Christ. The third person who made a catalogue of the stars from his own observations was Tycho Brahe; who determined the places of 777 stars, for the year 1600. His Progymnasmata, published in 1604, contained only this number, and his Opera omnia, printed in 1648, contain no more. However the places of 223 more stars had then been deduced from his own observations by Kepler, and published with those of the former 777, at the end of the Rudolphine tables, in 1627. The places of the stars, in this catalogue, are adjusted to the end of the year 1600. Kepler added to the 1000 stars observed by Tycho those of Ptolemy's catalogue, which he had omitted, together with those of the new southern constellations, from other authors; so that his whole catalogue amounts to about 1165; their places being computed for the year 1600. About the same time with Tycho, William, landgrave of Hesse, with the aid of his mathematicians, Christopher Rothmannus and Julius Burgius, determined at Samarcand 450 fixed stars, by his own observations, with their places rectified for the year 1593; which Hevelius prefers to those of Tycho. This catalogue was first published by Willebrand Stellhus in 1618, and is said to have contained the places of 490 stars; but the copy of it which we have in the third volume of Flandrean's "Historia Cynclus," contains no more than 578. Ricciolus, in his "Alrtronomia Reformata," determined the place of 101 stars for the year 1700, from his own observations; for the rest he followed Tycho's catalogue, altering it where he thought fit. In the year 1607, Dr. Halley, in the island of St. Helena, observed 350 southern stars, not visible in our horizon. The same labour was also repeated by P. Noel in 1716, who published a new catalogue of the same stars constructed for the year 1687.

In 1603, John Bayer, in his "Uranometria," published a catalogue of 1150 stars, at Augsburg in Germany; and here the situations of the stars, with respect to the constellations in which they are placed, are expressed in words; but their longitudes and latitudes are exhibited by means of maps, in which the figures of the constellations are drawn, and their stars put down in their proper places, and of their respective...
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In the catalogue, however, of the publication, as well as the authors having marked every star with a number, the brightest or largest star in each constellation being always denoted by the first letter in the Greek alphabet, the next in degree of brightness, by the second letter, and so on: and when the same number is denoted for the number of stars in that constellation, then the same letter is marked by Roman letters; the third brightness of the stars being still expressed by the order of the letters. By these means, we are enabled not only to refer to every star in the heavens, with great readiness and precision, but to express, likewise, its relative brightness to other stars in the same constellation and, in the same degree, its magnitude also. This invention is so useful, that Flamsteed, in his catalogue, adapted Bayes's letters, as far as he went; Bode has also done the same upon his globes of the largest size, and also upon his pendulums; and it is followed by most astronomers since his time. Bayer cannot be supposed to have formed this catalogue from his own observations. The places of such stars as are visible in Europe were taken from the catalogues of Ptolemy and Tycho Brahe; and with respect to those which are about the south pole, he tells us, that they are partly taken from the observations of Americo Vespucci, partly from those of Andrew Cornall, and partly from those of Peter de Medina; and that Peter Theodore, a most infantil mariner, first formed them into catalogues, and published them. In 1677, John Hevelius of Dantzig, published his "Machina Celesitis," which, among other curious and valuable articles, contains a catalogue of the fixed stars. This work is very rare; as the greatest part of the impression was burned with his observatory and instruments, on the 20th of September, 1679. The catalogue is said to have contained the places of 1683 stars, of which 1553 were observed by himself; but as it stands in the "Historia Celesitis" of Flamsteed (1725), it contains only 1520 stars. Their places are rectified to the end of the year 1696. The most complete catalogue that ever was given from the labours of one man is the British catalogue, deduced from the observations of the Rev. John Flamsteed, the first royal astronomer at Greenwich; who for many years devoted himself wholly to that business. As there was nothing wanting either in the observer or the apparatus, we may consider this as a perfect work, so far as it extends. It is, however, to be regretted that the impression did not pass through his own hands; that now extant was published by authority, but without the author's consent. We have two editions of this catalogue; the first in 1712, which is generally called Dr. Halley's edition, because he was employed as the editor by Prince George of Denmark, at whose expense it was printed. This edition contains only 2680 stars: owing, possibly, to its having been published without the consent, and, it is apprehended, contrary to the wishes of Mr. Flamsteed, who might not, on that account, contribute all the materials for it, which he could have done. It is, however, more correct in some instances, than that which was published in 1725, by Mr. Flamsteed's executors, in pursuance of his will; but this latter contains the places of 2934 stars, and is that to which astronomers generally refer. The stars in both are adapted to the beginning of the year 1690. They are distinguished into seven degrees of magnitude (of which those of the 7th degree are telecopic) in their proper constellations. To the left is added Mr. Sharp's catalogue of the southern stars not visible in our hemisphere, adapted to the year 1726. See vol. iii. of the "Historia Celesitis," in which are printed the catalogues of Ptolemy, Ulugh Brigh, Tycho, the prince of H. s., and Hevelius; together with an account of each of them in the "Prolegomena." In 1752, M. de l'Academy of Sciences at Berlin, published a very extensive catalogue of the fixed stars, collected from the observatories of Flamsteed, Bradley, Hevelius, Tohino Mayer, de la Caille, Meiner, La Monnier, D'Arquen, and other astronomers; in which the places of the stars, amounting in number to 5638, are given for the beginning of the year 1750. This catalogue, which is a very valuable work, though there is reason to apprehend that the individual stars are more than once, is accompanied by a celestial atlas, or set of maps of the constellations, engraved in a very delicate and beautiful manner.

In all the catalogues already enumerated, the stars are classified in constellations. In the following catalogues they succeed each other according to the order in which they transect the meridian, without any regard to the constellation to which they belong; the name of the constellation being given with a description of the star's situation in it. The first catalogue of the stars, as we conceive, that was printed in this form, or in the order of their right ascensions, is that of M. de la Caille, given at the beginning of his Ephemerides, for the 10 years between 1755 and 1765; and printed in 1756. It contains the right ascensions and declinations of 567 stars, adapted to the beginning of the year 1756. In 1757 he published his "Alcironomia Fundamenta," in which is a catalogue of the right ascensions and declinations of 598 stars, adapted likewise to the beginning of 1756. In 1763, the year immediately succeeding that of his death, the "Calum Aulfrak Stelliferum" of the same author was published; and this contains a catalogue of the places of 1942 stars, all situated to the southward of the tropic of Capricorn, and observed by the same indefatigable astronomer while he was at the Cape of Good Hope in 1751 and 1752. The places of these are given for the beginning of the year 1750. In the same year, the Ephemerides for the 10 years between 1756 and 1775 were published; in the introduction to which the places of 515 zodiacal stars are given, all deduced from his own observations. The stars in this catalogue are rectified to the beginning of the year 1755. The nautical almanac for 1773 contains a catalogue of 388 stars, in right ascension, declination, longitude, and latitude, derived from the observations of the late Rev. Dr. Bradley, and adjusted to the beginning of the year 1750. It has been since, viz. in 1798, republished with corrections by Dr. Hornsby, in the first volume of Bradley's observations. These make but a small part of what might have been deduced from the labours of that great man, if his representatives had not withheld the reft from the public. Mr. Wollaston, (ubi infra) informs us, that Dr. Bradley had the whole British catalogue calculated to the year 1744; and that traces may be observed in it of his having examined almost every star in it. He adds, from satisfactory information, that Dr. Bradley observed the British catalogue twice through: first with the old instruments of the royal observatory, previous to 1750, and afterwards with the new ones. The 598 stars above-mentioned were carefully rectified for the year 1750 by Mr. G. Gilpin. For a brief account of the state of Dr. Bradley's papers, see the article Bradley. In 1775, a thin volume, containing several papers of the late celebrated Tobias Mayer, of Gotingen, was published, under the title of "Opera Inedita," and among the rest, a catalogue of the right ascension and declination of 498 stars, which may be occulted by the moon and planets. It is adapted to the beginning of the year 1756; and, from the known
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fill and accuracy of its author, is much valued. At the end of the first volume of "Astronomical Observations made at the Royal Observatory at Greenwich," published in 1776, Dr. Maskelyne, the present astronomer royal, has given a catalogue of the places of 34 principal stars, in right ascension and north polar distance, adapted to the beginning of the year 1770; and which, being the result of several years' repeated observations, made with the utmost care, and the best instruments, may be presumed to be exceedingly accurate. In 1776, a work was published at Berlin, entitled "Receuil de Tables Astronomiques," in which is contained a very large catalogue of stars from Hevelius, Flamsteed, M. de la Caille, and Dr. Bradley, with their latitudes and longitudes, for the beginning of 1800; with a catalogue of the southern stars of M. de la Caille, of double stars, of changeful stars, and of nebulous stars: a work very useful for the practical astronomer. To these may be added Dr. Herschel's catalogue of double stars, printed in the Philosophical Transactions for 1782 and 1783; M. Meffier's nebulae and clusters of stars, published in the "Connoissance des Temps" for 1784; and Dr. Herschel's catalogue of the same kind, given in the Philosophical Transactions for 1786. In 1789, Mr. Francis Wollaston published in folio a "Specimen of a general astronomical Catalogue, arranged in Zones of north-polar Dillance, and adapted to January 1, 1790." In forming this catalogue, Mr. Wollaston has not made any use of those which precede Flamsteed, except in a small part that of Hevelius; but all the stars in the British catalogue of 1725 are infected, as well as those which are in the third catalogue of M. de la Caille, those of Dr. Bradley in the Nautical Almanac for 1773, of M. Mayer, of Dr. Maskelyne, the double stars of Dr. Herschel, M. Meffier's nebulae, and all those of Dr. Herschel, excepting his 2d and 3d classes, that is, all those which are capable of being discerned with any telescopes inferior to his own. This work contains five distinct catalogues; viz. Dr. Maskelyne's new catalogue of 36 principal fixed stars; a general catalogue of all the stars, in zones of north-polar distance; an index to the general catalogue; a catalogue of all the stars in the order in which they pass the meridian; and a catalogue of zodiacal stars, in longitude and latitude.

The first catalogue contains the right ascensions in time, the annual precession of right ascension in time, and the annual proper motion, both in time and in degrees, for 1725, and also the zone to which it belongs in the second catalogue. These circumstances are deduced from a multitude of observations, recently made, with the utmost care and circumpection, by the astronomer royal, for the purpose of determining, when compared with his former settlement of the same stars in 1770, whether those stars have any motion of their own, and what it is. That the fixed stars, as they are usually called, have a proper motion of their own, has long been suspected; and it was supposed that it had even been detected in Arcturus: but this motion is certainly so small, that no observations, made before Dr. Bradley's time, were sufficient to exhibit it; and the series of twenty years, which our present ingenious and indefatigable astronomer royal has yet been able to obtain, seems much too short to determine it with any great degree of accuracy, even in the present improved state of astronomical instruments. The observations, however, sufficiently indicate such a motion in all the stars, and one which is very considerable in Arcturus.

The second catalogue, or that in zones, as its disposition is entirely new, will require some explanation. All the stars which are situated within 10 degrees of the north pole are collected together, and inserted in a catalogue by themselves, according to the order in which they pass the meridian; and this is called the first zone. The second zone contains all the stars which are situated at a greater distance from the north pole than 10 degrees, and at a less distance than 15 degrees, disposed in the same manner. The third zone contains all the stars which are distant between 15 and 20 degrees from the north pole; but hence, till the author comes within 20 degrees of the north pole, the zones are but one degree in breadth, that is, the fourth zone contains all the stars which are at the distance of more than 20 degrees from the north pole, and less than 21 degrees, disposed in the order in which they pass the meridian, and so on. The stars which are at a less distance from the north pole than 20 degrees, are disposed, like those which are at the same distance from the north pole, into two zones, each 5 degrees broad, and into one which is 10 degrees broad: so that the whole number of the stars is distributed into 145 distinct catalogues, or zones; and in each of these the stars follow one another in the order in which they pass the meridian.

Each of these catalogues employs nine columns: the first contains the right ascension of the stars, in degrees, for the 1st of January 1790; the second, the precession of right ascension, in the same manner; the third, their right ascensions in time; and the fourth, the precession in time. The fifth contains the star's distance from the north pole; the sixth, its precession in north-polar distance. In the seventh, the magnitude is expressed; the eighth contains the number, name, or character of the star, together with the name of the observer by whom its position was ascertained; and the ninth column contains short notes, intended to call the attention of observers to certain circumstances there mentioned, in order that they may either be disproved or verified by future observations. Where the situation of a star has been given by different observers, as is the case in most, each of their situations is given, reduced to the same time, (January the 1st, 1790,) and set down in the order in which their observations were made. By these means, it is readily seen how far different observers agree with each other, and wherein they disagree.

Mr. Wollaston's reason for thinking that a catalogue of the fixed stars would be more useful in this form than in any other, is stated in the Phil. Trans. vol. lxxiv. p. 181, and vol. lxxv. p. 346; where the author proposes frequent examinations of the heavens, as the means of detecting any alterations which may happen among the fixed stars. In this business, every astronomer was invited to take a part, and to examine a certain number of zones, (each one degree in breadth,) with a telescope of a large field, mounted on a polar axis, and furnished with a fylam of wires in its focus. This telescope being directed to the proper parallel of declination, and fixed there, the business of the observer would be, to take the transit of all the stars which passed the field of the telescope, at the several wires in its focus; which were disposed as to give both the difference of right ascension and declination between them; and for such a purpose, this catalogue is evidently well adapted.

The third catalogue is called, an index to the stars in the British catalogue, referring to the zone of north-polar distance, in which each star is to be found. This catalogue contains only the stars in the British catalogue of 1725, arranged in constellations; and the stars in each constellation follow one another in the same order as in that catalogue; but the constellations are disposed alphabetically. The catalogue employs three columns: the first containing the number of the star, as it stands in the British catalogue; the second,
Second, Bayer's letter of reference, where the star has one; and the third, the number of the zone to which the star belongs in the second catalogue, reckoning from the north pole: but the reader must take care that he is not misled with regard to the import of this last column: the author does not mean, by the number there put down, the number of the zones as they stand in his catalogue, but the number of the zones in which it would have been, if every one of his zones had been no more than one degree in breadth; so that his first zone, (as described above) is to be considered as containing 10 of the zones in the second catalogue; and the second and third zones must be considered as each containing five.

The fourth catalogue contains the stars of the British catalogue, of de la Caille's southern catalogue, and about eighty stars from Hevelius's catalogue, which were omitted by Flamsteed, all arranged in one continued series, according to the order in which they are on the meridian. This catalogue employs five columns: the first containing the star's right ascension in time, for the 1st of January 1752; the second, the star's distance from the north pole, for the same time; the third, the magnitude of the star; and the fourth, the number, name, or character of the star, and the constellation in which it is placed.

The fifth catalogue gives the longitudes and latitudes of such stars as are situated within nine degrees of the ecliptic, arranged in the order of their longitudes. It contains all the stars which are to be found within these limits, in the catalogues of Flamsteed, Bradley, Mayer, and the small catalogue of de la Caille, at page 28 of his "Almanach Fundamental." This catalogue employs three columns: the longitude of the star, reduced to the beginning of 1750; latitudes in the first column; the second contains the latitudes of such stars as are on the north side of the ecliptic; and the third gives the latitudes of such as are on the south side of it. The fourth column exhibits the magnitude of the star; and the fifth, the number, name, or character of it, and the name of the observer who assigned its situation. Where any star has been observed by two or more persons, the result of each of their observations, (reduced to the same epocha,) is inserted, in the order in which their observations were made.

In 1792, Dr. Francisco de Zach published at Gotha, "Tabulæ Motuum Soles," to which is annexed a new catalogue of the principal fixed stars from his own observations, made in the years 1787, 1788, 1789, 1790, 1792. This catalogue contains the right ascension and declination, with the magnitudes and annual variations in right ascension of 351 principal stars, adapted to the beginning of the year 1800. The catalogues of the places of Dr. Bradley's, 55 fixed stars, adapted to the beginning of the year 1793; of those of M. de la Caille, 51 stellar stars, adapted to the beginning of the year 1765, of the same author's, 87 principal stars in the heavens, adapted to the year 1750; of Zach's 381 principal fixed stars, adapted to the beginning of the year 1800; of the same author's declinations of 163 principal fixed stars, with their annual variations, adapted to the beginning of the year 1800; and of Mayer's 902 principal fixed stars, adapted to the year 1792; are published by prof. Vincent in the 2d volume of his Astronomie. M. de la Lande has published a new catalogue of more than 12,000 stars in the volumes of the "Connoissance des Temps," from the year 7 (1790) to the year 12. Almost all these are stars which had not been before observed. M. C. Vidal has lately communicated to the lyceum of Tonlouse a catalogue of 889 auroral stars, from the 5th to the 7th magnitude inclusively. Every star has been observed three times, and all are reduced to a mean position, regard being had to the effect of refraction, the aberration of light, and the rotation of the earth's axis. The mean position of all these stars has been calculated to a common period, viz. Jan. 1, 1798; the equation and precession of the equinoxes being previously allowed for. The place of M. Vidal's observation was Mersoupi; a situation admirably suited to his purpose, by the fertility of its atmosphere and the excellence of the instruments with which its observatory is furnished, and commanding nearly fix degrees of the heavens northwards more than Paris. On this account C. Lalande, and his nephew C. François Lalande, in their grand work of completing a catalogue of 38,000 stars, have engaged M. Vidal to form a catalogue of the auroral stars, which he has executed with great success and admirable precision. From the history of astronomy for 1800, by Jerome de Lalande, it appears that M. F. Lalande has terminated the labour, commenced August 5, 1789, and determined the places of 50,000 stars from the pole to two or three degrees below the tropic of Capricorn. The examination of the heavens is still vigorously prosecuted by the European astronomers, comformably to the plan and wishes of Mr. Wallaston; and from the industry and accuracy with which their observations are conducted, we may expect the happiest result with regard to our knowledge of the stars and other celestial bodies.

CATALOGUES OF THE BIBLE. See BIBLE, CANON, AND TESTAMENT.

CATALONGAY, in Botany, the name given by some authors to the plant which produces the faba fontani Ignati, or St. Ignatius's beans of the shops.

CATALONIA, in Geography, a province of Spain, bounded on the north by France, from which it is separated by the Pyreneé, on the east and south-east by the Mediterranean, on the south-west by the province of Valencia, and on the west by Arragon. Its form is nearly that of a triangle; the base towards the Mediterranean being about 100 miles in length, the side towards France 125, and that towards Arragon 140 miles. Catalonia, towards the shores of the Mediterranean, has many convenient sea-ports; the inland country is in general mountainous, particularly in the northern part towards France, but intermixed with a variety of spacious plain and fertile valleys. The mountains are covered with large forests of tall trees, such as the oak, the ever-green oak, the beech, the pine, the fir, the chestnut, and many others, besides cork trees, shrubs, and medicinal plants. The soil is rendered productive by the industry of the inhabitants, so that Catalonia is reckoned one of the best cultivated provinces in Spain; and it yields a plentiful supply of corn, wine, oil, flax, hemp, licorice, and many other gourmandies. Of grapes, wines, nuts, almonds, raisins, and cork are shipped annually in vast quantities on the coast, for the merchants who reside in Barcelona. The wines are Mataro, Villanova, Sitges, Valls, and Granatcche. The price varies according to the season; but when it is highest, we may reckon Mataro at 20 dollars, or 480l., the hoghead, including the Spanish duties; Villanova, 15 dollars; Granatcche, 40. All these are red. The following white wines are, Sitges, 54; Valls, 20 dollars; but the common price is 12 1/2 dollars per hoghead for both the Mataro and Villanova. When brandy is dearer, it is sold, duty free, at 57 dollars, or 8l. 11s. the four cargos or pipe of 124 gallons English, Hollands proof, or 12 43l. per gallon; but it is sometimes sold at 100. Catalonia furnishes 35,000 pipes of brandy, and 2000 of wine, besides 50,000
50,000 bags of nuts, containing three bushels each, at 20s. the bag. Of the above about 4000 pipes of brandy, and some silk, go to Guernsey and Alderney, and the rest to France, all to be smuggled into England. The merchants also export wrought wools, printed cottons, woollen goods, small arms, and spicce; the last article, however, is contraband. Their imports are, corn, fish, woollen goods, hardware, and oil of vitriol. The articles prohibited are, beer, cider, lead, hogs, haberdashery, muslins, and cottons; but of the two last, immense quantities are smuggled into this province. The mountainous districts have quarries of marble of all colours, crystal, balabos, amethysts, and lapis lazuli. Gold dust has been found among the sands of one or two miles inland, and there are arroyos, copper, lead, tin, iron, silver, one of gold, alum, vitriol, and salt, and many of coal. On the eastern coast they likewise fish for coral. Provisions of every kind are excellent. The climate is mild in the plains, the cold on the mountains is supportable, and the air is pure. It is neither so hot as Andalusia, nor so cold as Alturas, and the northern part of Spain; being sheltered on the north by the Pyrenees, and on the east by the sea. This temperature, joined to the many streams and rivers with which the country abounds, renders it very fertile and delightful. The inhabitants are hardy, courageous, industrious, active, vigorous, and good soldiers, but apt to be discontented. The miquelets are a sort of soldiers, whose province it is to guard the pales of the mountains and to protect travellers; but they are often extortionate in their demands of recompense.

In Catalonia, as in France, with which province this was formerly connected, accounts are kept in livers, lols, and deniers; 12 deniers making a sol, and 20 sols a livre. But in reckoning by the money of the province, nominal and real, there is great perplexity. If we reckon the peso or current dollar at 30½ florins, the hard dollar will be four, the current pils ge 12; and the pils of gold, 15½. See Coins. As to the measures in Catalonia, 12 carots make one quarter, which is two bushels, English measure. Sixteen carots make a carga of wine or brandy, which is about 30 gallons English, and is reckoned to be 12 arrobas. 100 quarters make one menubo. In estimating the weights of this province, eight ounces make a marc, being ½ heavier than in Catalonia; 12 ounces make a pound; 20 pounds one arroba; four arrobas one quintal, which is 93 pounds English, or 91 pounds Catalan; 155 pounds make 122 pounds English.

In the beginning of the last century they reckoned in Catalonia 1059,866 houses, and only 38,1490 inhabitants; but the province had then been ravaged by civil war. In 1763 the bishops, in their account of the population, made the following return: viz. men, 189,571; women, 182,753; boxes, 3,157; girls, 22,661; clergy, regular and secular, 14,435; in all, one million and thirty thousand two hundred and forty-five. Since that time the population has not decreased; and yet, in the returns to government, A.D. 1787, the number of inhabitants is fixed at only 80,610. Of these 953 are under vassals, and 12,966 are knights. These accounts, so different from one another, without any assignable cause of deficiency in the latter, show, that, notwithstanding the most vigilant attention on the part of government, they always fall short of the actual population, because it is the interest of every family, parish, and district, to conceal their numbers, in order to avoid the taxation. Catalonia enjoys the privilege of exemption from the taxes called alcavals, cintes, and millones; in lieu of which the inhabitants pay 10 per cent. on all rents, belonging to individuals or communities, and on the suppoised gains of merchants and mechanics. They are subject also to some other charges on labour and manufacture, and on cattle. The whole amount of the taxes collected in Catalonia was, A.D. 1721, 488,567½ florins. But as the revenue of Spain is more than doubled since that period, if we allow the same increase for Catalonia, we may fix the revenue arising from this province at least less than a million florins; which, according to the computed population, is 205, annually for each person; whereas, taking the whole province together, the Spaniards pay no more than 108, each per annum. Considering the rapid circulation of money in this province, and the universal affluence resulting from it, with the peculiar advantages and resources of the Catalans, this contribution, though relatively heavy, is comparatively light; for being freed from the flagrating influence of the alcavals, cintes, and millones, they enjoy a decided superiority over provinces which have never claimed the fame indulgence. Unfettered by these impolite restraints, and permitted to set their own value on their commodities exposed to sale; their industry is free, and not like that of less-favoured provinces, crippled in all its operations. In addition to these immunities, the great number of troops, quartered in Catalonia, not only gives to the farmers and manufacturers a ready market for their commodities, but contributes much to maintain good order in the province. For near two centuries previous to the accession of the present family, Catalonia was infested with banditti, who, by robbing and plundering passers, interrupted the safe and easy communication of the cities with each other, and prevented, in a great measure, the interior commerce of the country. But Philip II. stationed a considerable detachment of his troops in this doubtful part of his dominions; and these not only restored good order, but revived commerce by a quick and certain demand for all the productions of industry. Besides, the popular prejudice in Catalonia is favourable to commerce; for here arts and manufacturers are as much honoured and respected as in other provinces they are defiled. In conference of this their trade is brisk; the vessels employed to carry it on are more than 1000; and government can always depend upon 18,000 seamen, who are registered and always ready to obey the summons in cases of emergency.

Moreover, what contributes most to the wealth and prosperity of Catalonia is the power, which gentlemen of landed property have over their estates to grant a particular species of lease, called "Establishment by enfeetive contracts." By this kind of contract, the great proprietor, inheriting more land than he can cultivate in profit, has power to grant any given quantity for a term of years, either absolute or conditional, either for lives or in perpetuity, always reserving a quit rent, like our copy-holds, with a relief on every succession, a fine on the alienation of the land, and other feignid rights dependent on the cultum of the district, such as tithes, mills, public-houses, the obligation to plough his land, to furnish him with teams, and to pay hearth-money, with other contributions, by way of commutation for ancient lettered services. The tenure in Catalonia is evidently feudal. All property in land is traced up to the king, and is held by knights' service from the crown, subject to relief, to fines, and to escheat. Under the royal grant, the great lords claim, not merely tithes of all lands not being freehold, with quit-rents and fines, mills, and public-houses, but the right of appointing magistrates and receiving tolls on the pillage of cattle over their estates. To the power retained by them of making enfeetive contracts has been, in reason, been attributed the cultivation of such waste lands as are inestimable of tillage, and the consequent increase of population. Industry has been promoted, new families have been
CATALONIA, in Botany, the Indian name of a North American plant, referred to Linnæus to the genus bigno-

nia, (see BIGNONIA CATALPA); but as the plants included in

this genus differ considerably from each other, it has been

divided by Julliff and Ventenat into four, jucaranda, ca-
taluca, tecoma, and bignonia. Of calatalpa, the French

naturalists give the following character. Cal. two-cleft. Cor.

bell-shaped; tube divided; border four-lobed, unequal.

Stam. two, fertile, three, barren. Stigma bilobellate. Capsule

resembling a bilque, long, cylindrical, two-valved; part

tion opposite to the valves. Seeds with a membranous

appendage at the tip and base. Trees, withimple, ternate,

whorled leaves and pinched flowers. Julliff refers to it, bi-

gnonia catalpa of Linnæus, and bignonia longiflora of Jacquin.

CATALAS, Catalla, denote good or chaste's.

CATAMARAN, in Sea Language, is also called Dalza, or Balfa, for an account of which see the article Boat.

CATAMENIA, from αερ and μη, month, in Medicine, women's monthly purgations, called also menstru, which see.

CATAMITE, a boy kept for fodomitical practices.

CATAANA, in Ancient Geography, a town of Asia, in Syria, situate, according to Ptolemy, in Commagena.

CATAMARAN, or CATAMORAN, in Sea Language, is also called Dalza, or Balfa, for an account of which see the article Boat.

CATERAMENIA, from αερ and μη, month, in Medicine, women's monthly purgations, called also menstru, which see.

CATERINITE, a boy kept for sodomitical practices.

CATANA, in Ancient Geography, a town of Sicily, on the eastern coast of the island, in a gulf of the same name. Thucydides says, that this city was founded seven years after Syracuse, by the Chalcidians, from Naxus. Strabo also mentions it, and says, that it was repaired by Augustus, and became a Roman colony. Pliny and Ptolemy give it this title. Strabo reports that this city lost its first inhabitants; but that Hiero, tyrant of Syracuse, placed others in it, and changed its name into that of Catana; assuming the glory of being its founder. It still bore this name; when Dionysius, to revenge himself for the successes which it had given to the revolted inhabitants of Syracuse, levelled its walls, and bestowed its territory on the Campanians; and immediately after the decease of Hiero, the Catanea expelled those whom he had established there, and demolished the tomb of the tyrant, and the city regained its ancient name. It fell into the hands of the Romans among their earliest acquisitions in Sicily, and became the residence of a praetor. To make it worthy of such an honour, it was adorned with sumptuous buildings, and every convenience was procured to supply the natural and artificial wants of life. It was destroyed by Pompey's son, but rebuilt, with superior magnificence, by Augustus. The reign of Deceass is famous, in the history of this city, for the martyrdom of its patrons, St. Agatha, whose intercession is implored on every emergency. She is piously believed, says Swinburne, to have preserved Catana from being overwhelmed by torrents of lava, or shaken to pieces by earthquakes; yet its ancient edifices are covered by repeated streams of volcanic matter, and almost every edifice, even her own church, has been thrown to the ground. In the reign of William the Good, 20,000 Catamians, with their pastor at their head, were destryed before the sacred veil could be properly placed to check the flames. In the 17th century Catana was twice demolished. Cecco, speaking of the riches and beauty of this city, adds, that it had a temple dedicated to
CAT

Ceres, in which was preserved an image of this goddess; but that only women were allowed admission, and that it was guarded by young females. See CATANIA.

CATANANDROMI, in Leibnitz, a term of the same significiation with the more common word anadromi, the distinctive term of a set of fishes, which at times leave the fresh water for the salt, and afterwards return to the fresh water again. See ANADROMOUS.


Gen. Ch. Cat. common, imbricate, top-shaped; scales numerous, long, egg-shaped, acute, concave, fan-shaped, thinning, permanent. Cat. common, uniform; florets all with lamens and a pill, numerous ligulate, linear, torch-shaped, five-toothed. Stamin. filaments five, cavernous, very short; anthers forming a hollow cylinder. Pili. germ oblong; style filiform, the length of the filaments; stigma bifid, reflexed. Peric. the permanent calyx. Screw solitary, egg-shaped, crowned with a five-leafed, chaffy, appressed pappus or calyce. Recap. chaffy. Eff. Ch. Receptacle chaffy. Calyx imbricate. Pappus consisting of five chaffy awned leaves.


Propagation and Culture. The first species may be propagated by slips planted in pots filled with light sandy soil, or in warm borders, under the shelter of walls, palis, or hedges. But it succeeds better when raised from seeds sown in March, in a border of good warm earth, and afterwards transplanted into pots or borders where it is to remain for flowering. The third species may also be readily raised from seeds; but, as it has little beauty, it is not often kept in gardens. Mill.


CATANADAMES, or CANTADIUS, in Geography, a province of the island of Luzon or Manilla, consisting of a small island to the most south-easterly part of Luzon; its southern point being almost parallel with Siurian. Its shape is triangular, about 30 leagues in compass, and 10 in length.

As it is exposed to the north wind, it is always stormy; and it lies so near the Entuacadero, or mouth of the channel of St. Bernard, that some pilots mistaking it, and apprehending that they were entering the mouth of the Strait, have found themselves among dangerous flats, which encumber the island about a mulecot-shot from the shore, and suffered shipwreck. This island abounds in rice, oil of palms, cocaos, honey, and wax. It has several rivers that are dangerous to crofs, in the channel of which is found gold, brought down from the mountains by the floods. The largest of these is called Catandangan, and by the Spaniards Catanduanes, whence the island took its name. The chief employment of the natives is the carrying of wood, and the making of light boats, which they sell at Mindora, Caleleya, Balayan, and other places. They still make one very large, without any deck, and not nailed, but fewed together with Indian canes, and then others lefs and lefs, one within another, and thus they transport them to league. The people paint themfelves; they are warlike, and excellent sailors; and if a boat be overft, they leap into the water and immediately turn it. Appreheending fluch accidents, they carry their provisions in the following manner: they clap their hands and tied to the fides of the boats. Their habitation is only a half-way, which reaches down to the knees. The women are of a manueline size, and apply themselves as much as the men to tillage and fishing. They are modestly clad in a coat or jerkin, and a long mantle. Their hair is tied on the crown of the head, forming a knot like a rope. On the forehead they wear a plate of gold two fingers' broad, lined with taffeta; in their ears three gold pendants. On their ankles they have rings, which make a tinkling noise as they move.

CATANGIUS SINUS, in Ancient Geography, a gulf of Asia Minor, in the Thracian Dorphorun.

CATANHEDE, in Geography, a town of Portugal, in the province of Beira.

CATANI, in Ancient Geography, a people of Asia, in the vicinity of the Cappin Sea, according to Pliny.

CATANIA, or CATANEA, a town of Sicily, in the valley of Noto, near the foot of mount Aetna. This city has frequently suffered in ancient and modern times, from the eruptions of this mountain. See AETNA and CATANA. The materials of which the modern city is built are such as might be expected in a volcanized country, where laves of any other than a volcanic nature are not to be found, but at a considerable distance. The edifices, both public and private, and even the walls of the city, are principally of lava; which has furnished materials not only for the modern Catania, but also for the more ancient city, which was entirely destroyed by an earthquake in the year 1693; at least its ruins, when dug up, have all been found to consist of lava. Those who have taken a view of the surface of the territory of Catana have every where met with immense accumulations of lava; among which the most conspicuous are the remains of that torrent which, burrying from one of the fides of Aetna in 1669, inundated a space 14 miles in length, and nearly four in breadth, rofe over the walls of Catania, burrying under it a part of the city, and at length precipitated itself into the sea. The prince of Bicolor has employed great labour and expense in digging down to the ruins. We defend, says Mr. Swinburne, into baths, tepidures, an amphitheatre, and a theatre, all much injured by the cataclysms that have befallen them. They were erected on old beds of lava, and even built with square pieces of the same substance, which in no inulence appears to have been fitted by the contact of new lavas. The fciara, or laves of cold lava.
lava, have constantly proved as strong a barrier against the
flowing torrent of fire, as any other stone could have been,
though some authors are of opinion, that the hot matter
would melt the old maf, and incorporate with it. Nothing
less than the fertility of its territory could have inspired
the inhabitants with the courage, or rather the obstinacy,
to build and rebuild in a situation which derives no advantage
from the sea; which is without a river and without fortifi-
cations; exposed to all sorts of natural misfortunes, and
continually threatened with the dreadul calamities which
have already proved so destructive. And yet in the course
of the last century it has revived with great splendour, and
when all the houses are finished, it will be a very handsome
city. In the progress of its improvement it has acquired
more the features of a metropolis and royal residence than
Palermo. Its principal streets are long, straight, and wide,
and well paved with lava; but they are so divided, that in
the middle of the day this burning town is totally without
shade, and almost impassable. If its wealthy inhabitants had
possessed a greater degree of taste; if, instead of huge pa-
laces, and large churches of an oblong and fan形 archi-
tecture the buildings had been erected in a simple and noble
style, Catania might have been one of the most magnificent
cities in the kingdom of Naples. The market-place, how-
ever, is without beauty; it is a square cut off at the
angles, and decorated with arches supported by marble
columns. In the centre of the great square formed by the
town-hall, seminary, and cathedral, are two antique frag-
ments, very happily grouped: they consist in a part of an
Egyptian obelisk of granite, with hieroglyphic characters;
placed on the back of an elephant formed of lava, the an-
cient symbol of Catania. The cathedral erected by the
abbot Angerus in 1694, and endowed by earl Roger with
the territories of Catania and Atina, has suffered so much
by earthquakes, that little of the original structure remains,
and the modern parts have hardly any thing, except their
materials, to recommend them. The other religious edifices
of the city are profusely ornamented, but in a bad taste.
The Benedictine convent of St. Nicholas is the largest be-
longing to that or any other religious order. Every part
has been rebuilt since the earthquake of 1697. The church
is a noble fabric, though it has many defects in the design
and execution; and is accounted the largest in Sicily. The
organ, constructed by a Neapolitan priest, is much esteemed
by connoisseurs in musical instruments. The tones of all
sorts of wind and strung instruments are imitated by it with
the most perfect illusion. One wing of the monastery is ap-
propriated to a considerable museum of antiquity and natural
history. This museum is magnificent, and amidst a variety
of trailing objects it contains some statues in bronze, of as
perfect purity and beauty as those of the cabinet of Pariti,
carved vases of most elegant form, and very curious lamps.
The prince of Biscario, to whom the modern Catania is in-
debted for many of its improvements, has also formed a very
magnificent museum. His collection consists of specimens
of the most curious subjects in antiquity which Catania and
Sicily produce: such as the remains of architecture, Minoan
ornaments, Roman and Grecian materials for building; sculp-
ture, among which, a single colossal Torso, found at Catana,
may be ranked with the most beautiful pieces of antiquity;
a collection of carthen vases, peculiarly valuable for the
number, the forms, and preservation of the figures repre-
sented on them: another of antique bronzes; the natural
history of marine productions, plants, fishes, and fishes; and
the productions of the earth, such as minerals, vegetables,
volcanic matters, marbles, precious stones, and animals:—
the whole arranged in an order which exhibits fience,
taste, and industry. You see likewise in this museum a
series of arms, armour, and singular columns. In this city
there is also a third museum, the pavior and founder of
which is the chevalier Genet: the valuable contents of
which are enumerated by Spallanezzi. One of the greatest
curiosities at Catania is the Villa Scarra, belonging to the
prince of Biscario. Upon the black impenetrable surface
of the lava, which isosued from 37°E in 1694, this prince has
laid the plan of a garden, built houses, planted trees in foil
brought hither from other places, and formed two large
ponds of fresh water. Supplied by springs that ooze through
the lava. The pools of the Villa are llocked with fish and
water-fowl, and are preferred from the fury of the neigh-
bouring sea by a strong pier, which is the only separation
between the salt and fresh water.

The number of public edifices that are crowded together
in so small a space, has left little room for the houses of
individuals; and from this circumstance it has been inferred,
that Catania has been embellished at different periods, or
that the private houses were extremely small in comparison
with the public buildings; or that the ancient city was more
ornamented than extensive, and, consequently, more rich
than populous. The modern town is somewhat of the same
kind. Although its population be estimated at 20 or
30,000, and by the Catamians themselves at double this
number, yet nothing is seen in the streets but convents,
churches, and palaces, separated by a few private houses.
Catania is the see of a bishop, suffragan of Monreal, whose
revenues are very considerable; 1200l. sterling per annum
being derived, as it is laid, from the sale of snow collected
on mount Etna. This city has also an university, the only
one in the island, and the nursery of all the lawyers. N.
l. lat. 37°30', E. long. 15°19', Swinburne's Travels,
vol. iv. Brydone's Travels, vol. i. Spallanezzi's Travels,
vol. i. De non's Travels.

CATANIDIS PRONONTORIUM, in Ancient Geography, a
province of Africa Minor, in the vicinity of the isle of
Lebos, toward the Arginae islands, according to Di Dorous
Siculus.

CATANII, a people of Arabia Deserta.
CATANITAE, a people placed by Ptolemy in Arabia
Felix.

CATANZARO, in Geography, a town of Naples, in
the province of Calabria Ultra, the seat of a governor and
tribune of justice, the see of a bishop, suffragan of Reggio.
It is built on a mountain, and has manufactures of silk
velvets and cottons. This town was built in 961 by order
of the emperor Nicephorus Phocas, as a post of strength
against the Saracens, to which its situation on an eminence,
in the pass between the mountains and sea, adapted it. In
1551 it attained to the dignity of capital, formerly the right
of Reggio. It contains 12,000 inhabitants, who live by the
law, and the trade of corn, wine, and oil. The college of the
late John is a handsome building, and possesses a good statue
of St. Ignatius, by Forzza, and a very fine picture repre-
senting St. Domenico distinguishing bread to the poor, 9 miles
N.E. of Squillace. N. lat. 37° 9', E. long. 18° 16'.

CATAO, a town of Aia, in Tiburt; 15 miles W.S.W.
of Y sbo:

CATANOIA, in Ancient Geography, a province of Asia,
in Armenia Minor, between Tauris and Antiochus. Strabo
places it in a province in Cappadocia, because Armenia Minor
once made a part of Cappadocia; and he says that Antares
the 1. king of Cappadocia joined Catanoia to Cappadocia.
It is situated to the north of Cilicia Cappadocia, and traversed
from the N.E. to the S.W. by the Rarus. Two principal
towns were Tatara and Comana Cappadocias. The
Pyramus
Pyramus had its source in the mountains of the eastern part.

CATAPAN, or CATIFAN, a name the later Greeks, about the twelfth century, gave the governor of their dominions in Italy.

Ugellinus and others say, catapan was the name with capitateus; formed from it by metathesis, or transposition: others derive it from κατα, justa, and σαπο, onum; in which sense, catapan was a governor-general, or magirstrate, who had the direction of all: others will have it derived from καταωμενη, that is, next after the emperor. In which sense, catapan was a second mailler, feconlus dominus. Du-Cange derives it from κατετεμον, captain, which the Greeks applied to every governor, and every man of quality.

CATAPELTA, an instrument of punishment, in use among the ancients. It consisted of a kind of planks, composed of planks, between which the criminal was crushed to death.

CATAPELTA, in Ancient Writers, more frequently written catapulca, which fee.

CATAPHORONICUS, in Music, synonymous with cataphorica, which fee.

CATAPHORA, in a theme of the heavens, an appellation given to the houses falling from the third, sixth, ninth, and twelfth angles. In which sense the word stands opposed to anaephora.

CATAPHORA, in Medicine, a term formerly used to denote a variety of lethargy, or coma, with which it may be confounded as nearly synonymous. It signifies a lesser degree of sopor than the term Carus (which fee), or a lesser approach to the state of complete apoplexy. But these distinctions are now discarded as useless, since the nature, causes, and treatment of all must be similar; they are not different diseases, but only different degrees of the same disease. Sauvages defines the cataphora, "Status somnolentus facile excitabilis, sine febre, delirio, et oblivione." Nofol, Meth. clafs vii. ord. v.

CATAPHRACTA, from κατα, and φαρακτος, I fortify, or arm, in the Ancient Military Art, a cuirass, or heavy defensive armour, composed of plates or links of iron, so curiously fastened and arranged on strong cloth or leather, like plumes, that they preferred the same appearance in all motions, and left no part of the body exposed. It was formerly used sometimes both by infantry and cavalry, and when by the latter, it was generally made to cover the horse as well as his rider. It was anciently used by the Persians, Sarmatians, and others. It was frequently made to cover only the breast. The Romans adopted it early for their foot, and, according to Vegetius, retained the use of it till the time of Gratian, when the Roman discipline becoming greatly relaxed, and military exercises with laborious duty being chiefly discontinued, their foot thought the cataphracta, as well as the helmet, too great a load for them to carry, and therefore threw both aside. But he tells us, that by thus leaving their breasts and heads exposed and unprotected, they were, when fighting against the Goths, frequently destroyed by the multitude of the archers of those barbarians. He very emphatically observes, that whilst they declined military fatigue, and the trouble of carrying armour sufficient for their protection, they were in a most disgraceful manner killed like sheep. Hence it would appear, that the Romans were overcome chiefly by the bow, after they had laid aside their defensive armour. His words are the following: "Licet exemplum Gotthorum et Alanorum, Humororumque equitum arma praeceptor pedes tamen confitat esse nudatos. Ab urbe enim condita uique ad tempus D. Gratiani, et cataphractis et galcis muniabant pedestri exercitus. Sed cum campellis exercitatio, interventi neugentilia deindeque essaire, gravia videri arma copernunt, quae raro utique milites inducant. Itaque ab imperatore potius, primo cataphractas, deinde caifides depone; ine detectis pectoribus et capitibus, condedit contra Gotthos milites nofri, multitudine fagittariorum fape deleti sunt; nec poll tot clades, quae ut ifte ad tantarum urbamar excedia pervenerunt, cuipiam cura fuit, vel cataphractas vel galcas pedetribus reddere. Ita fit, ut non de pagno, fed de fugis cognit, qui in acie audt exporantur ad vulnera. Quod enim pedes fagittarius fine cataphracta, fine gales, qui cum arcu feutum tenere non potest, fatisfiat? Quod ipsis diacumen atque figniferi, qui finitima manu holidak gubernant, in procell facient, quo et capita nulla efficent, et pedes? Sed gravis pedes loricæ videtur, et gales fortes, rario medianti arma raro tractanti. Ceterum quotidianus usus non laborat, etiam fit onerola gecluverit. Sed illi qui laborem in portandis veteribus munimentis armorum, ferro non pollunt, detectis corporibus et vulnera fulminare coguntur et mortes; et, quot ctit gravis (et turpis) aut capi, aut certa fuga remplicantur prodere. Sic dum exercitum laboromque declinant, cum maximò dededere trucidandur ut preces."

In this passage Vegetius ascribes the success of the Goths against the Romans without their defensive armour chiefly to the great multitude of their archers. Even in the defence of modern fortifications there are situations in which we are convinced the bow and the arrow would have greatly the advantage of the musquet and bayonet, as in casedem galleries, in the counterscarps of ditches, &c. where musquetry often becomes ufeles on account of the smoke. And were it necessary to defend such a very inclosed country as this, many occurrences might arise, in which a certain number of good archers might be of more real ufe for the purpose of defence than the number of our belt musquetry. Tacitus, Hist. lib. i. cap. 79. Veget. de Re Mil. lib. i. cap. 25.

CATAPHRAXTI, among Surgeons, denotes a bandage of the thorax; thus denominated from its resemblance to a Roman tablet-blase, called cataphracta. See BANDAGE.

CATAPHRAXTIÆ NAXES, vessels armed and covered in fight, so that they could not be easily damaged by the enemy. They were covered over with boards or planks, on which the folders were placed to defend them: the rowsers sitting underneath, thus screened from the enemies' weapons.

CATAPHRACTI, or CATAPHRACTARII, perfons fitted with cataphracta. The term, however, is most commonly employed to denote an ancient species of cuirassiers, or horsemen, covered completely, as well as their horses, with such armour as is described in the article Cataphracta, which fee. The Persians made ufe of such cavalry: after them the Greeks; and then the Latins. Antichus had 3000 of them when he marched against Scipio Africanus. And as the Romans copied after the Greeks, notwithstanding their hatred of them, in things they thought useful and advantageous, there is every reason to suppose that they borrowed from them that institution. The same meaning is affixed to the term Crespellarii.

CATAPHRACIUS, in Zoology. See DASYPUS.

CATAPHRACCIUS Pegge, in Ichthiologist. See COTTUS Cataphractus.

CATAPHRYGIANUS, in Ecclesiastical History, a sect in the second century, so called as being of the country of Phyrgia. They were orthodox in every thing, setting aside this, that they took Montanus for a prophet, and Pricilla and...
C A T

And Maximilla for true prophetesses, to be confuted in every thing relating to religion; as supposing the Holy Spirit had abandoned the church. See MONTANIST.

CATAPLASM, in Surgery, a poultice, or external application of a pulpy consistence, more or less composed of substances possessing a medicinal quality, and thence denominated antiseptic, emollient, diffusive, anodyne, alfringent, stimulating, maturing, repellant, &c. Cataplasms have their name from κατα, "illining," to spread or belmear; and are therefore always supposed to be somewhat coherent or tenacious.

They usually consist of farinaceous ingredients or mucilaginous vegetable matters, which are mingled with gums, balsams, resins, eggs, honey, &c., and stiffened by the addition of vinegar, water, or milk, and generally applied warm. Ignorance and caprice, however, have introduced a vast Farrago of substances into compositions of this class; but judicious and experienced surgeons have limited them very considerably, and much simplified the form of their cataplasms.

The practitioner who keeps in mind the particular object he has in view, whether to communicate heat, cold, moisture, or some peculiar medicinal virtue, will not be at a loss to find appropriate materials for his purpose; in the Pharmacopoeia of the Chirurgics of Mr. Houillon are contained many formulae of this nature, adapted to various occasions.

CATAPOTIA, from καταποτία, "I pass, dry medicines, in a form fit to be swallowed whole; otherwise called pills.

CATAPPA, in Botany, Rumph. Gert. See TERMINALIA.

CATAPTEA, in Ancient Geography, a town of Asia Minor, in Bithynia, seated on the Euxine sea.

CATAPULTA, from καταποτίς and πέλης, in Ancient Military Language. Much diversity of opinion has existed among modern writers, in regard to the catapulta and ballista; some representing the former as having been employed to throw stones and bulks, and the latter to throw arrows, darts, javelins, pointed poles, &c.; others revering these applications of them; whilst some contend that each of them was made use of for both purposes. The chevalier de Foldard, whom many of the French writers have followed on this subject, in his "Traité de l'Attaque et de la Défense des Places des Anciens" speaks of these machines in the following words.

"Polybe dit formellement par tout, où il parle de ces deux machines (la baliste et la catapulta) que la baliste jettoit des durds, et la catapulta des pierres."

"La catapulta, comme la baliste, avait différents noms. Les Grecs ont appelée d'une façon, et les Romains d'une autre, chaque nation comme il lui a plu; César l'appelle tantôt catapulta, tantôt onager, onagre. Les Grecs de la moindre antiquité appellent tantot l'un tantot l'autre, jamais machine n'a fourbu tant de différents noms. J'aurais peur de compter une douzaine tout au moins, qui ont côtoyé toutes les nations. Je confies qu'on les a adoptés tous, mais du moins ont-ils eu le fer de prendre dans la description de la machine, car le nom n'y fait rien, et ne change rien à la chose, des que nous en concevons la structure et le principe du mouvement."" 

"Le scorpion ne fut jamais la catapulta, comme une infinité de commentateurs l'ont cru; ce n'est que la baliste; car quel rapport peut avoir la catapulta avec cet animal?"

"Végèce dit qu'on nommait autrefois l'scorpion, ce que de fon temps on appelle manubilia; c'est l'arbalète dont on commence a fe servir du temps de nos pers, et que nous avons abandonné depuis l'invention de nos fusils, ou de nos mousquets, quoique cette arme, toute prevention a part, fut infaillible plus meurtriere et plus avantagée, que ne le font nos fusils, ses coups plus courts et plus affuré, et la force au moins égale. Végèce prouve affez, que le scorpion etoit la baliste des anciens. Cela se voit dans César en plusieurs endroits de ses commentaires, car il emploie indifferemment ces deux termes pour signifier la meme machine; mais il distingue toujours collect de la catapulta: César in cafbris, dit Hirtius, scorpionum catapultarum magnam num habebat."

"Avant que d'entrer dans l'explication de notre catapulta, ou pour mieux dire de celle des anciens, je crois, que le lecteur ne fera pas faché de voir le celle d'Ammian Macellin, Liv. xxiii, en éclaircissant ce que nous paroit obscur et embarrassé dans le texte de cet historien. Cette hardiesse nous doit etre permise, lorsqu'elle ne va pas au delà des bornes raisonnables." His translation follows.

"La catapulta est comporte de deux poutres carrées, d'ici cet historien, qui se joignent à leurs extrémités par deux travers. Aux deux cotés et vers le milieu de leur courbure, on pratique deux trous arrondis opposés l'un à l'autre, et larges à proportion du poids qu'on veut jeter; c'est dans ces deux trous que l'on fait passer un cordage repiqué en plusieurs tiges qui passent défis et cœliaux deux chevilles de fer qui portent cette espèce d'écheveau de cordes. Au milieu de ce cordage filé et partagé par les deux chevilles de fer, on introduit à leur centre le bout d'une piece de bois ou bras fait en manière d'axe de charrette. Lorsqu'il est question de s'en servir, l'on entortille et l'on bande les cordes également des deux cotés; et de pur que la force du bande et des cordes entortillées ne lâche, on tient fixées les deux chevilles par un ancré: alors on balance le bras par le bout d'en haut par le moien d'un moulinet, et ce bout est retenu par une dentée; on met alors la pierre à l'extremité de ce bras qui forme un cuilleron (bowl or spoon). Un homme lâche alors la dentée d'un coupe de mailette, et fait partir le bras qui pousse la pierre d'une force extraordinaire, parce qu'il va donner et choquer dans le plus fort de son mouvement contre un montant, au milieu duquel il y a un couffinet rampl de paille hachée."

"And he complements that, who have written before him on the subject, in the following manner.

"S'il nous est permis de dire librement ce que nous pensons, ceux qui nous ont donné de la catapulta, entre autres Lipsic, Choul, Fabreç, Perrault, n'ont rien produit que d'imageraire.

"We far agree in opinion with Foldard that the real and original use of the catapulta was to throw stones, and that of the ballista to throw darts, &c. But we cannot help observing, that he mitiques Polybus in asserting that that historian constantly makes this distinction between these two machines whenever he mentions them. For at the siege of Thebes of Phthisis by Philip, where he makes Polybus say there were 150 catapulta and 25 ballista, that writer does not mention ballista at all. His words are these. ""]

"That is, 150 catapults and 25 stone-throwing machines being collected or brought together, &c. (Philip) advanced towards Thebes. Now the catapulta and ballista, as distinguished from the catapulta, was not the balista, but the onager, which threw stones by means of a woodenulus pole, or beam, and a chamfr or flyng pendred at the end thereof for receiving the stones. This machine might have been so constructed as to throw stones of any size. The καταποτία καταποτία τοπ ραβιολα, and the multitude of projectiles, which Mr. Hampton has translated, "darts etchargéd without interruption," might lead an inexperienced reader to suppose that there were ballista there, from which they were thrown. But this could not have been the case even
even according to his own translation of the Greek words denoting the machines, of which there were 25 distinguished from the 150 catapults, and which he expressly calls machines for throwing stones. Tolaed's assertion, then, on this point is altogether unfounded.

In like manner the words "εκ των ἀποκαλύφθησεν συντελετέων λεγόντων," and there were three places, stations, or batteries, for stone-throwers, used by Polybius, when speaking of the siege of Eginthus by Philip, are without any reason assigned by Cato by "et erant ibi tres flatti arboris locandis habilitis," and by Mr. Hampson, "and in these (trenches) there were three batteries of balista."

Folard also roundly and unreservedly affirms that Julius Cesar calls the same machine for times catapulta and sometimes onager. The truth, however, is, that Cesar does not make any mention at all of the onager. But his authority may be considered as decisive in regard to the use that was made both of the balista and the catapulta, and the distinction, in this respect, between the two machines. He mentions the balista only once, viz. in the second chart, or section of his second book, "De Bello civili," when speaking of the siege of Marseilles, by his lieutenant, C. Trbonius. His words are these: "Sim tamen antiquus in oppido omnium rerum ad bellum armamenta, tantaque multitudine armamenta, et ex eo in multa contextus minime vi minime fullimentum proficit. Allores cum pedum xii cubitalium praefixi, atque ibi maxima balistica meliorque quattuor ordinis erat dispositio in seletturum."

From this passage it is evident that even the largest balista were employed to throw long pointed poles, &c. and such like missiles. Of the catapulta he also makes mention only once, which he does in these words: "antiqua ex catapulta latericio differtur," which clearly shew, that the catapulta were in contradistinction to the balista employed for throwing stones.

Vegetius does not mention the catapulta; but he expressly tells us, that the scorpiones were called manubalista, or hand-balista, in his time. They were so called, no doubt, from such a machine's being manageable by one person.

And, besides him, Vitruvius informs us, that the scorpio and onager were different machines, though it appears from Ammianus Marcellinus, that the name of scorpion was also given to the onager.

Folard taking it for granted, that the catapulta and the onager were the same machine with different names, has translated as above a passage on the onager in the twenty-third book of that author, in such a manner as to make it serve for this supposition. What he calls his catapulta is neither the catapulta nor the onager of the ancients. It has a large wooden flasus, pole, or beam, with a lade or spout at the end of it for holding a fluid. This flasus is then let loose and throws a stone, which is violently turned on the ends of the beam at the top, and must from this either hit or itself in pieces, and so shake the other parts of the machine as to render the whole useless.

It has no string or cord, which that writer expressly says the onager had, in these words: "Summariaque ejus habet (ubi levis) quinque ferreti copulatam, et quibus pendet flasus vel ferrea finita." It is only necessary indeed to turn to the passage in A. Marcellinus to be satisfied, that the chevalier has translated it very carelessly.

The following extract respecting the frame of the machine is from Heron of Ctesiphon Telefacta.

"Due ligne accordant quadrata et equilata, quae scutorum depugnamentis, id est, transferuntur, idem atque eis consociato, ex quibus dene in extremitatibus cardine insitent, qui in lineas quadratas immitti in exteriorum partem pertingent, ut ait in ipsorum centinatarum foraminibus cuccoli adiacet p piam totum fortiolium continent. Extrematibus vero quadratorum lignorum faculce, quae transferuntur motum

lubent, septentrion, in quibus sunt foraminis, per quae vetusti trajectancar, five ad extrematibus, five in medio, per quos vericentur. Superant autem quadrata lignae ipsa depugnament ad superiorem patern." This author represents it as a machine of the cross-bow kind with two straight arms, one end of each of which is fastened in the upright cordage, and the other ends are joined by a cord or some other substance, answering the same purpose as the firing of a bow.

The catapulta was certainly of the large cross-bow kind, and when used acted like a pellet bow. The flasus was rectangular and consisted of two beams placed longitudinally, and connected together with cross-beams. On or near the middle of each of the side pieces there was an upright post erected. These two poles were mortised, or let into a strong cross-beam at top, parallel to, and directly below which there was also a cross-beam for upright cordage, which was framed both above and below by means of crowns put into the holes of the circular iron capitals, which had strong iron cross-pieces, smooth at top, to prevent their chafing the same, of which there were two sets or coils separate and distinct from each other, equally distant from the centres of the said cross-beams, and passing through the upper one, and either round pieces of iron fastened to the beam below, and cross-pieces of iron in moveable capitals as in the beam above. The two arms forming the bow lay horizontally. The inner ends of them were inserted in the upright cordage; and the outer ends were united by a bow-string which was drawn back by a windlass or capstan at the hinder end of the machine. When the cord or other substance forming the bow-string was drawn sufficiently back, it was held by a catch and iron pin, from which, when the machine was going to be discharged, it was disengaged by the stroke of a hammer or mallet. Under the bow there was a table or platform on a foot of universal joint, by which it was elevated in front when necessary and also moved a little to the right or left between the upright cordage.

There is now at Gibraltar a catapult, which was con- structed at the desire of the late Lord Heathfield under the direction of that very eminent military antiquarian, the present General Melville. It was for throwing stones a very little way over the edge of the rock in a particular place, where the Spaniards used to refer to the foot of it, and where shells thrown from mortars could not injure or annoy them. See the drawing of the said machine. Artillery, Plate II.

The catapulta and balista were both of them machines of the cross-bow kind and resembled each other in their general construction and moving powers, but were differently mounted for the different purposes to which they were applied or made use of. With the bow-string of the catapulta there was a cord or string farther or net-work for receiving the stones or bullets, that were to be thrown by it; and the table under it was plain or smooth; whereas in the balista, the table had a groove or channel in it for the arrows, darts, poles, &c. that were to be propelled or thrown forward. Their general form being almost similar, it is most probable the frame of the in long often confounded with each other even by some of the later Roman authors.

CATAPUTIA, in the Materia Medica. See EUPHRASIA LANTERIS.

CATAPUTIA NISIS, in Ancient Geography, an episcopal see of Africa in Numidia.

CATARA, in Geography, a town of Arabia, 76 miles S.E. of El Carif.

CATARA, in Ancient Geography, an episcopal town of Asia Minor, in 1162.

CATARABON, a river of Upper Germany, which, ac-
CATARACT, in Hydrography, a fall or precipice in the channel, or bed of a river, caused by rocks, or other obstructions, stopping the course of its stream: from whence the water falls with an increas'd noise and impetuosity. The word comes from *acies*, a tumble down with violence; compounded of *ac-, aque*, water, and *tenere*, to throw down. Such are the cataracts of the Nile, the Tanabue, Bacone, &c.

Of the various cataracts of the Nile, two of the most remarkable are formed by the fall of the water between two mountains, which descends with such rapidity and noise, that the inhabitants within the sound of them are said to be deafened. Mr. Bruce (Travels in Abyssinia, vol. iii. p. 425) particularly describes the cataract of the Nile near the village of Alatta on the borders of the kingdom of Begemder, S.E. of the lake Tzana or Demeba. The Nile, he says, is here confined between two rocks, and runs in a deep trough, with great roaring and impetuous violence. The height of this cataract has been somewhat exaggerated by the missionaries who report the fall to be about fifty feet; but Bruce states it at about forty feet. The river, increased by rains, when he observed it, fell in one sheet of water, without any interval, about half an English mile in breadth, with a force and noise that were truly terrible, and which illumined him and for a time made him perfectly dizzy. A thick foam, or haze, covered the fall all around, and hung over the course of the stream both above and below, marking its track though the water was not seen. For an account of the cataract of Syene; see Syene. For the cataract of Assar; see Assar.

The most extraordinary cataract of the Rhine is that near Schaffhausen, the height of which is estimated by Mr. Coxe at only 50 feet: but M. Ramond, his elegant French translator, observes, that the quantity of water, which varies according to the season, has some influence upon the height, and a considerable effect upon the aspects of this fall. Those who have seen it at the periods when the snows disolve will admit the exactness of that description, which this ingenious traveller thinks exaggerated, and only true of remote times. M. Ramond has been assured that the height of the cataract, in these circumstances, is not less than 80 feet. About three or four Italian miles east of Terni in Italy, there is a famous waterfall in the river Velino, near the place where it flows out of the Lago delle Marmore. The mountain on which it takes its course before its fall is very high, and environed on both sides by much higher mountains. The falling of the river's bed, as soon as it comes out of the lake, causes a very rapid stream, that collects itself into three successive cascades, the last and loftiest of which seems to be 200 feet high. The noise of this cataract cannot be heard without alarm; and from the bottom a white mist rises and fills the air to a considerable height. When the river clears itself of the rocks, between which these cascades are formed, it falls into the Nera about 100 paces distant. The grand waterfall is called the "Calcata delle Marmore." In the Wologda, in Muscovy, there are two cataracts near Ladoga, which see. The Zaire, an African river in Congo, commences with a large cataract, which falls from the top of a mountain. In Japan, which is very mountainous, many rivulets form by their junction considerable rivers, in which are large and surprising cataracts. The most remarkable is that of the lake Togitz, or Iacon, which, being surrounded on all sides by high mountains, has no outlet for its waters excepting three different apertures, from which they fall down in cataracts, with a dreadful violence and noise; thence the three streams, running, run down with a prodigious impetuosity, by a narrow channel through a deep valley, over rocks and precipices into the sea. The greatest natural curiosities of the known world are the cataracts of Lower Canada, at the distance of 15 miles from the town of Niagara." Mr. Weld, in his "Travels through Lower Canada (vol. ii.)" has presented to his readers four engraved views of these falls, taken from different points of observation. The most stupendous of these is that on the north-western or British side of the Niagara river, commonly called the "Great or Horse-shoe Fall," from its bearing some resemblance to the shape of a horse-shoe. The height of this is only 122 feet, whereas the two others (the river being divided by islands into three distinct collateral falls) are each 170 feet high: but to its inferior height it is principally indebted for its grandeur; the precipice, and of course the bed of the river above it, being so much lower at one side than at the other, by far the greater part of the water of the river finds its way to the low side, and rushes down with greater velocity at that side than it does at the other, as the rapids above the precipice are strongest there. From the centre of the Horse-shoe Fall, arises a prodigious cloud or mist, that may be seen at the distance of several miles, and that exhibits, when the sun shines above it, a beautiful rainbow. The extent of this fall, ascertained by the eye, is estimated at no less than 600 yards in circumference. The island which separates it from the next fall is supposed to be about 350 yards wide; the second fall is about 50 yards wide; the next island about 30 yards; and the third, commonly called the "Fort Schloper Fall," from its being situated towards the side of the river on which that fort stands, is computed at the same measure with the large island. The whole extent of the precipice, therefore, including the islands, is, according to these estimates, 1335 yards. Some have supposed, that the line of the falls altogether exceeds an English mile. The quantity of water, carried down the falls, is prodigious; being found by a moderate calculation to be 670,255 tons per minute. The Fort Schloper Fall is skirted at bottom by milk-white foam, which ascends in thick volumes from the rocks; but it is not seen to rise above the fall like a cloud of smoke, as is the case at the Horse-shoe Fall; nevertheless, the spray is so considerable that it descends on the opposite side of the river like rain. Below these falls the whirlpools and commotions of the waters are so tremendous, as to render navigation impracticable for miles; and immediately above them the river is much narrower than it is higher up. The river, however, runs even, and is navigable with safety for batteaux; nor, as far as Fort Chippeewa, which is about three miles above the falls, but upon a nearer access the waters are so much agitated, that, unless a boat keep in the middle of the river and is dexterously managed, it must be dashed to pieces; however, with such management it may pass down to an island which divides the river at the falls. Since the falls of Niagara were first discovered, they have very much receded, on account of the disintegrity of the rocks which form the precipice. Within the memory of many of the present inhabitants of the country, the falls have receded several yards. It is not an improbable conjecture, that they were originally situated at Queenstown. Tradition reports that the great fall, instead of having been in the form of a horse-shoe, once projected in the middle; but for a century past it has remained nearly in the present form. The falls of Niagara are much less difficult of access now than they were some years ago. The most favourable season for visiting them is about the middle of September; for then the woods are seen in all their glory, beautifully variegated with the rich tints of autumn, and the spectator is not then annoyed with vermin. In the summer season you meet with rattle
At the valley of the lakes of Cumberland there are several considerable cataracts or cascades; that called "Sourmilk Force," near the bottom of Buttermere lake, is supposed to fall upwards of 300 yards. These cataracts are also rivalled by a remarkable fall of the Teco, on the west of the county of Durham, over which is a bridge supplied by chains, seldom passed but by the adventurous miners; and in this connection we might mention Aigarth Force in Yorkshire. The principality of Wales abounds with falls of water, cascades, or cataracts, as they may be severally called, which afford amusement to the curious traveller. In the vale of Neath, the scenery of which is very romantic, there are several cascades, that are worthy of notice; but those of the river Hepsey claim particular attention. In the most considerable of these, near the junction of the rivers Hepsey and Melta, a broad sheet of water projects over an abrupt ledge of rock to the depth of 50 feet. Four others occur within an eighth part of a mile from the first. The principal of these is about 25 feet in height, and the smallest about ten. These four are all seen at once; but a bend of the river prevents a view of the great cascade. If the eye were visible at one point of view, they would nearly rival the great fall of the Mynach in Cardiganshire, below the Devil's bridge; for though they would still be very inferior in point of height, the Hepsey is much broader than the Mynach, and in that respect would have the advantage with regard to grandeur. At a small distance the brink of a precipice disdoses the great fall of the river Melta, which is broader than that of the Hepsey, and 70 feet high. This project as suddenly as the others, and, carrying a larger body of water, with greater violence. It is, therefore, more awful and tremendous, but unaccompanied with those circumstances of variety and beauty which adorn and enlighten its rival cataract. In the vicinity of Neath, at a place called Melin court, there is a magnificent fall of the Cledagh from the height of 80 feet. With the exception of the Mynach fall, this is the largest in South Wales, and unrivalled in its accompaniments, considered as an enclosed scene. The cascade at Llado in Cardiganshire, which has a continued fall of about 100 feet, is an interesting object in the scenery of that spot, which has been justly celebrated on account of the improvements introduced and still carried on by Thomas Johnes, esq., its proprietor. The fall of the Mynach, at the Devil's bridge, has already been mentioned. This stream forms its furious passage through masses and fragments of opposing rocks, hollowing out deep cavities, which are filled with unfathomed waters, and which contribute to increase the gloom of a recess, impervious to sunshine. The depth, from the precipit bridge to the head of the river, is 144 feet. This cascade comprehends four different falls, each of which is received into a deep and agitated pool at the bottom, but is diminished to the eye of the observer as to melt the four into one continued cascade. The first fall takes place about 40 yards south-west of the bridge, where the river is confined to narrow limits by the rocks; it is carried about six feet over the ridge, and projected into a basin at the depth of 18 feet. Its next leap is 60 feet, and the third is again diminished to 20, when it encounters rocks of prodigious size, through which it struggles to the edge of the largest cataract, and pours in one unbroken torrent down a precipice of 110 feet. The mer, therefore, falls 208 perpendicular feet, without allowing for the declivity of the valley. The river, in addition to this 144 feet, the perpendicular depth from the bridge to the junction of the Mynach and Ryddle is 322 feet or upwards. At a small distance, in a recess seldom frequented, is the fall of the Ryddle. The most remarkable cataract in North Wales are the following: In Merionethshire, at Dol-y-Menylllyn, near Llanfylltyd, is "Rhaiadr-du," or the black cataract, which is a double fall of about 60 feet high, where the water foams with a thundering noise down some black rocks, giving to the scene a singular appearance; which is increased by being covered in many places with a pure white lichen. The torrent falls into a small deep basin, from whence it dashes itself along its rugged channel. About one mile from this is another cataract, called "Rhaiadr-a-Mawddach," situated in a river of that name, where the stream forces itself down a rock, about 60 feet high, in which the stream is three times broken in its fall to the basin round which the rocks and trees form a kind of amphitheatre. Near the latter is "Pityll y Cain," which is by far the highest and most magnificent of the three: it consists of a narrow stream, which rushes down a vast rock of the height at least of 150 feet, whose horizontal frate run into irregular feet through its whole breadth, forming a mural front; but its picturesque beauty is much injured by its regularity. The immense fragments of broken rocks, scattered round in every direction at the foot of the fall, communicate a pleasing effect, which is further heightened by the agreeable tints of oaks and beech foliage, and, upon the whole, possesses much local beauty and romantic scenery. The most remarkable cataract in Wales is that called "Pityll-Rhaiadr," in the extremity of the vale that lies about four miles from the village of Llanrhiaid ya Mochnant, on the borders of the counties of Montgomery and Denbigh. This cataract is formed by the river Rhiaid, which falls from almost a perpendicular crag 210 feet high, and pales foaming through a natural arch or open basin, between two prominent sides, into a small basin at the bottom; whence it rolls over small rocks, though a woody vale, into the Severn or Tanad, a branch of the former. Some have estimated its whole height at 240 feet. The upper part of the cataract, when the sun shines upon it, is visible to a great distance; while its silver appearance gives a degree of singularity to many of the views. Dr. Worthington, formerly vicar of Llanrhiaid, erected a small room near the foot of the rock, for the use of visitors, who bring their own refreshments with them: this is frequently praised for its convenience and great utility in these sequestered and
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Strabo tells us that a cataract, which we call a cataracta, and what we call a cataract, the ancient Greeks called a cataracta. Herophilus has a theory that the cataracta is a species of fluid and vitreous humor, which he uses the word to mean a fluid; signifying, by cataract, a vitreous motion of the element.

Cataracta, from catarrh, catarrh, to cataract, in Surgery, is a term, obstinate, or considerable fluid, produced by an eye, and situated behind the pupil, which, upon the repulsion of the eye, moves, and is expelled through the aperture of the iris. The fluid of this opacity is called the cataracta, and its cavity it is generally said, and as we suspect by false glasses; and it is usually appears in a very high degree. At full impulsion it is made into the cornea, if all the objects are removed, and its length entirely uncovered; at the same time the cavity behind the pupil is increased by the effects of light and vision.

According to the different fates of the cataract, it is distinguished into several species. When the eye is exposed to the cataracta, it is termed cataracta; when it is not, it is termed cataracta; in which case it may occupy the whole cornea, or only the anterior or posterior membranes. Sometimes both the capture and the lens are opaque, when it is termed a mixed cataracta. Sometimes there is a preternatural accumulation of Morgagni's fluid, which becomes milk-white and opaque. All these species refer to the cataracta, or its cavity, and are therefore comprehended under the term of the cataracta; but when the opacity is found in other parts of the eye, it is termed the cataracta of the eye, which is divided into four species. The first species is, when pus or some other opaque substance is collected in the anterior chamber of the eye, or a mass, which fills up the pupil, or fixes itself upon the anterior membrane of the capsule of the lens. In the second, the hyaloid membrane becomes opaque. In the third species, a brown membrane is found in the eye, which lies upon the anterior part of the capsule, and is termed oborial cataracta by those who consider it an elongation of the choroid membrane; though it is probably produced only by the pigment. The fourth species is that in which occurs with infants who are born with a cataract, and is named cataracta papillaris; but it would more properly be called papillai cataracta.

In the cataracta, the lens is sometimes converted into a fluid which resembles milk or jellies. Sometimes the capsule becomes opaque and thickened, and separates from the neighboring parts so that, when extracted, it appears like a round sack filled with milk. In this case the cataract is termed opaque; it is sometimes seen in the fetus among the infant, and if it occurs perfectly movable in the eye, and tremble upon the slightest motion of the eye, or of the substance behind the pupil. Sometimes the lens presents its natural shape, and that its surface becomes flint and pupil; sometimes it is firm, like a bone and hard, and the harder it becomes the thinner and flatter it is. In this case, the cataract as generally an ad. yellow, or brown, colour. Sometimes the cataracta has the appearance of a thick jelly, congealed in milk or new-made cheese. Not unfrequently the lens partakes at the same time of all these different degrees of confidence.

In the cataracta, the lens generally becomes also opaque; the posterior membrane of the capsule is rarely, but most frequently the anterior alone, opaque. When the opacity behind the pupil appears white and milky, when white and yellow points or specks are observed in it; when the opacity is placed in the redness or the eye, and black rings seen around the circumference; when the opacity arises suddenly; or when only a portion of the pupil becomes opaque, we may suspect the disease to have its seat in the capsule. When the opacity, according to the place, is opaque, it is probably situated in the anterior membrane of the capsule; but when it arises behind the pupil, it may be considered as partaking of the cataracta. In these cases, we may expect that the capsule is away opaque.

The boundary cataracta is a cataracta opaque, produced after the operation of retacking on the eyelids, or when the eye is in a state of inflammation, or when there is a state of ulceration of the eye. Sometimes the opacity, which occurs at the operation of retaking, or which occurs after a cataract, produced by the operation of retaking, is cut from the lens and drawn out into a transparent mass. Sometimes also the white point produced after the operation of retaking has been performed in consequence of the capsule, which has been left behind, becoming opaque.

Cataracta is always of the cataracta, either in parts or with an opacity of the cataracta fluid, and in this the capsule has always some preternatural adhesions with the surrounding parts. These adhesions may be produced in a thousand manners. The cataracta, for example, differs from the lens, or it has formed adhesions at its posterior part with the hyaloid membrane, or at its anterior part with the iris. The cataracta, which is produced merely by a preternatural accumulation of the fluid of Morgagni, is rare; as in this case the capsule and the lens are generally at the same time both opaque, though, in some cases, the accumulation of the fluid is the sole cause of the opacity of the lens as well as its capsule being transparent. The different species of opaque cataracta are upon the whole but rarely observed.

Before these principal species of cataracta, which require particular attention in the operation, there are also other varieties which demand less attention. To these belong, for example, the diversities of the colour of the cataracta, which sometimes is milky, sometimes of a pearl colour, always, brown, yellow, greenish, or even black. It was formerly also imagined, that the cataracta, in the progress of its becoming opaque, was first tinted to a certain degree, and then again gradually hardened. In its soft state it was termed white, and after it had acquired a certain degree of hardness it was called mature. In conformity with this theory, a recent cataracta was always supposed to be white, and one of the black, afterwards yellow, but this opinion has been proved to be without foundation. When the opacity does not occupy the whole pupil, but only half, or a portion of it, it is termed partial. Sometimes one only observes a white opaque streak behind the pupil. All these partial opinions have that in the capsule of the cataracta.

More important is the compound cataracta, and it may be combined with the other varieties of the eye, which are partly ed to be discovered, and partly do not impede the cure of the cataracta; the amanra cut excepted, which not only fulfills the attention, but the operation for the cataracta, but for quiescence is also difficult to be discovered. Nevertheless, the knowledge of this latter complication is particularly necessary with respect to the prognosis, for although amanra
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roofs presents no obstacle to the operation for the cataract, the patient cannot, however, expect to have his sight restored by surgical means, says Cattell.

With respect to the causes of the cataract, it is either a local complaint, or a consequence of some constitutional disease of the body. To the causes of cataract belong—external violence, wounds, bruises, concussion, the action of fire, acid vapours, inflammations, metastatic or morbid matter, various diseases of the eye, and too much exertion of the organ, immoderate indulgence in venereal pleasures, excessive dish king; also artificial, scrophulous, scorbutic, and venereal atheroma, hereditary disposition, and age; and in the latter cases the operation is least likely to be productive of benefit than in the first. Finally, there also occurs a congenital cataract, which is commonly fluid; but in other respects equally curable with any other species of cataract. The disease may occur in every constitution, under every mode of living, and at every period of life; but it is more frequent in persons advanced in years, than in young people. When from any cause, internal or external, a cataract is produced in one of the eyes, it generally occurs gradually, within a longer or a shorter period, in the other eye also; in many cases, however, the other eye remains free from disease during the patient's life.

The cure of the cataract depends almost entirely upon chymical affinities; though it has in some cases been known to have been cured, without any operation, merely by internal remedies, or even spontaneously; yea, when the cataract endures, proceeds from internal causes, which can be removed by medicines; for example, when it is of an atheritic, general, scrophulous, &c. origin, and when the cataract depends entirely upon the opacity of the capsule. The crystalline cataract can hardly b: cured by internal remedies; though it is probable that the milky may in some cases be diffused.

When the cataract proceeds from internal causes, such as a venereal, arthritic, &c. taint, such remedies are to be employed as counteract these causes; and when no internal cause can be detected, and the cataract seems to be of a local nature, such remedies are to be employed as are thought to possess a divergent power. Mercury has most frequently been employed with success; perhaps because a venereal taint is one of the most frequent internal causes of cataract. A complete opacity behind the pupil, proceeding from an arthritic taint, has been cured, within the space of four weeks, by the internal exhibition of vit. antm. and sect. tint., and the external application of decoct. cont. med. Cataracts, probably those of a scrophulous origin, have been cured by means of Peruvian bark and cinaet. In one instance a cataract was cured during the administration of an ointment for the itch, when a pioric eruption made its appearance.

Amongst the resolutent remedies, those which blandly recommended by the tell of experience are mercury, various antimonials prepared as tartar, alkalii, ether, and extr. brum. and sect. tint. Electricity has also been used with success. Both millepedes, encaustic, artificial ultrices, and various excaco or lightening mixtures, combined with mercury, are likewise generally recommended.

The operation, which in the majority of cases is the only remedy remaining for us to try, is not always admissible, or its success is more or less to be expected. The surgeon must examine the cataract before him with great attention, in order that he may form a proper prognosis; but even under such favourable circumstances, he ought not to promise his patient any thing with certainty, as even under such circumstances the operation sometimes fails of success.

The operation is altogether inadmissible when the patient is an infant; when he has long been troubled with oblitinate and frequent head-ache; when his face is of a red copper-like colour; his eyes inflamed, painful, and unable to bear the light, and have long continued in this condition; when the patient is actually afflicted with phthismatic or arthritic symptoms; when he is disturbed with cough; when the diseased eye is preternaturally large and dropical, or preternaturally small and atropic; and when the cataract has formed a complete adhesion with the iris at all points.

When an eye is affected with cataract, we ought never to operate, as long as the patient is not almost entirely deprived of sight in that eye, unless it should be rendered necessary by some peculiarly urgent symptoms. It is like to be commonly unavoidable to perform the operation when the patient is blind only in one eye, and the other possesses its perfect p. res of vision.

The operation is attended with difficulty, or its event is doubtful, when the patient, without any symptoms of amaurosis, distingues the light from darknes in an indifferent manner, or not at all: when the cataract arises from external causes, such as a bruise, a blow, or mere y a violent inflammation; when the full appearance of the cataract has been attended with violent head-ache and ophtalmia; when it is membranous, or adhering at any point; when the patient is of a cachectic habit, and the cataract has arisen from some external cause which could only be removed, before the operation.

Mr. Stoll never undertook the extraction of the lens, with persons who were affected with rheumatic or arthritic piles, who laboured under head-ache, or hemiplegia, who were affected with pains in the temples and eyes, with frequent erythrasmas, or oblitinate cough, or eruptions in the face, or where the teeth and gums were in a very diseased condition, or where the corma in either of the eyes began to grow opaque, or were dilated, and varicose vesicles passed through the eye; as in these cases it generally had unfortunate consequences, the facility of vision being either weakened, or entirely destroyed, after the operation.

We may expect that the operation will prove successful, when the patient is in other respects perfectly healthy; when the cataract has not been produced by some permanent internal cause; when the patient can perfectly distinguish between light and darknes; when during the commencement of the disease the patient has not been affected with frequent head aches and inflammations of the eyes; when the motion and form of the pupil are perfectly in their natural state; when the cataract is situated at the proper distance behind the pupil, and eye is in other respects entirely sound and without blemish. But great are the advantages which are both operation produces, it is still all necessary that the want of the crystalline lens should be supplied to the patient by the use of a convex cataract lens; as there are few who are able, after the operation, to read without the aid of such a glass. See Optics.

The tedious and careful preparations which surgeons make in order to prevent the inflammation which is apprehended from the operation, are not only uneccessary, but also very prejudicial. All that the surgeon can do with otherwise healthy patients consists in the following means:

1. He must endeavour to draw off and correct the anxiety and dread of the patient by every possible method; he must not delay the operation long; and even though its success should seem to him to be doubtful, he should endeavour to inspire his patient with hope; he should make him what is as much as possible, and prevent his thoughts from dwelling upon the operation; he should remove every thing that may give too great an air of solemnity to the operation, and not inform his patient long before hand of the hour fixed upon for the purpose; when the patient is time-
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routh, he ought to take, half an hour before the operation, 15 or 20 drops of lindanum in a little wine; and, finally, the operation should be performed without any unnecesary preparation and parade.

2. Only when the patient is very phlethoric, and used to blood-letting, a vein may be opened.

3. For two or three days before the operation, the patient should use a leaf nothing diet than usual, and carefully avoid whatever can produce irritation, colic, or disturbance of the prime vix. The patient should particularly avoid all the occasional causes of rheumatic and catarhal affection.

4. When there is cause to suspect an accumulation of feculent matter in the alimentary canal, a gentle purgative is indeed necessary; and, unless it should be contra-indicated by particular circumstances, some mercurial preparation of this kind is far preferable to the common purgative salts.

But when the patient is troubled with any complaints which might influence the success of the operation, these must be removed, as far as may be done, by means of remedies adapted to their nature and causes. No particular fean of the year is exclusively favourable to the operation, all that is required being that the patient should be kept in a moderate temperature, which may be imparted to the atmosphere about him at any season. But when the patient is rheumatic or gouty, the summer is the most favourable season for the operation.

In this operation, much depends upon the convenient position both of the surgeon and patient. The surgeon, when he operates, must sit upon a high, and the patient upon a low chair, so that the head of the latter may be placed opposite to the shoulders of the former. The legs of the patient must be stretched out under the chair upon which the surgeon sits, and the head of the former must be quite close to the breast of the latter. In order to render his hand more steady, the surgeon must place one foot upon the frame of the chair upon which the patient sits, rest the elbow of the arm with which he operates upon his knee, and press his hand close to the cheek of the patient.

The surgeon ought to fit near to one of the windows of the chamber, and direct the curtains to be drawn before the others. The patient should sit in such a situation that the light may fall obliquely over his nose into his eye. The chair upon which the patient sits should have a high perpendicular back, against which his head should rest perfectly close, in order that he may not be able to flint back with it during the operation.

The eye upon which the operation is not performed, ought, especially if the patient is able to see with it, to be covered with a fillet. An assistant, who stands behind the patient, lays one of his hands, for example the right, if the operation is performed on the left eye, under the chin of the patient, and raises it a little upwards, so that the face of the patient is directed somewhat upwards, and presses his head to the back of the chair, or if he sits upon one that has no back, or only a low one, to his own breast. The assistant applies his other hand to the patient's forehead, and draws the superior eyelid upwards with the fore and middle fingers of the same hand. The inferior eyelid the operator himself draws downwards with the fore and middle finger of the hand with which he does not operate.

When the line of separation between the patient's two eyelids is not sufficiently long, when the patient is very restless, and the dexterity of the assistant cannot be depended upon, it will be best to let the superior eyelid be drawn upwards by means of a broad silver hook. This hook may be formed most conveniently of a double flexible silver wire. Some also draw the inferior eyelid downwards by means of a double hook, applying the superior hook to the eyelid and suspending a moderately heavy weight to the inferior.

Mr. Barth has lately proposed a method of operating, adapted for skilful operators, according to which he omits all the preparations hitherto mentioned. He ufs no chair either for the operator or the patient, neither does he employ an assistant, nor make use of any hook. He directs the patient to lean lading against the wall of the chamber, in such a position that the light may fall obliquely upon the eye on which he is to operate. He then performs the operation in the following manner. After having placed the four fingers of his right hand (supposing the operation to be performed upon the left eye) upon the anterior part of the hairy scalp of the same side of the head, he draws the upper eyelid as much as he can upwards with the thumb of the same hand; he then places the thumb of his left hand upon the lower eyelid, draws it downwards as much as possible, and presses it with the sufficient degree of force upon the inferior margin of the socket; immediately after having done this, he pulls the point of the fore finger of his left hand under the thumb of his right, fixed in the position above-mentioned, as far as the upper eyelid, which he raises still higher up with the finger, and presses it as much as is necessary to the bottom of the socket, more or less outwards or inwards, in proportion to the necessity there for pressing the ball of the eye. All this is done to the external parts of the eye, without touching the ball. The eyelids being secured in this manner, he orders the patient, as usual, to direct his eye in the proper position, and touches the cornea repeatedly with the tip of his lancet, at the same time giving the patient to understand that he is not about to operate. By this means he induces the patient (who generally is mollified with his head and eyes at the time when the first puncture is made, not on account of the pain which it occasions, but from fear of the danger in which he thinks his eye is), to remain quiet whilst this puncture is made, thinking the operator is still only examining the parts. But in order to keep him equally quiet whilst he proceeds to make the incision, he endeavours to throw him into a state of suspension by suddenly menacing him with impending danger. Having thus made the first puncture, he endeavours, with deliberate speed, to push his lancet towards the point at which it is again to be brought out, in such a manner as not to suffer the ball of the eye to slide too far towards the internal canthus, and to render the incision of a just length; though, as is well known, it ought rather to be too long than short. When he has once got hold of the cornea by bringing out the point of his lancet at the proper spot, and the eye remains in its proper situation, he continues the incision till he has completed it. But when the ball of the eye has rolled farther in any direction than it should, he brings it, as he has it now in his command, into the position necessary for completing the incision. But when he cannot reach the point for the outward puncture, without the cornea being some where in a great measure concealed, he is generally able, by a rapid and experienced comparative observation of the direction of the lancet, and the still visible cornea, to arrive at this point, blindfold as it were, and to complete the incision without damaging either the angle of the eye or the iris. For, entirely to withdraw the lancet (especially for those operators who are not able immediately to find again the entrance and exit-puncture, and to complete the incision without injury to the iris), is always a fault, though a melancholy, alternative; which, particularly where it renders it necessary to defer the completion of the operation to another day, frequently disappoints the practitioner of the reputation which he hoped to acquire by it.

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Meffes, Arneman and Conradi also deviate from the common practice, in letting the patient sit during the operation, whilst they perform it standing; as they conceive this posture to be the best and most convenient for the operator. In this manner, Mr. Conradi says he can adapt his own height to that of the patient more accurately and conveniently; and by pressing his arm to the patient's side, and his hand to the cheek of the patient, his hand loses nothing of its readiness.

The operation for the cataract is performed either by depression or extraction. In the first, the operator presses the opaque lens out of its natural situation down to the bottom of the eye-ball, so that it may no longer be opposite to the pupil, and consequently no more obstruct the admission of the rays of light into the eye. In the second, he entirely extracts the lens through an artificial orifice in the membranes of the eye. Each of these methods has its peculiar advantages and disadvantages: some consider the one, and some the other, to deserve the preference. The method by depression is indubitably preferable in all cases in which dangerous symptoms are to be apprehended from the extraction of the lens; as when there is cause to fear a violent inflammation; when the patient is very timorous, and the eye very refractive; when the cornea is very flat, and the pupil very irritable, so as to contract with unusual force; and when not only the lens but the capsule also is opaque. Depression is likewise said to be preferable when mercurial remedies have been previously employed. In cases of cataract proceeding from rachitic metaffase, it has been advised always to employ the method of depression. Moreover, its greatest advantage consists in the circumstance, that even though it should not have succeeded, it may be repeated without danger, without proving an impediment to the operation of extraction being performed, even though various attempts at depression have proved unsuccessful; whilst, on the contrary, when the operation of extraction has been performed, without removing the object of the patient, there remains very little hope that he will ever recover it.

For performing the operation of depression, needles particularly prepared for the purpose, and provided with handles, are necessary. These needles are made of different forms, the principal of which are the round and the two-edged; of these the latter is preferred in all cases the preference. Before the needle is introduced into the eye, it should be dipped in oil, or else moistened with saliva. It must be held, like a pen, between the thumb, fore and middle fingers, quite close to the foremoat end of the handle. The hand must be applied close to the side of the patient's face, which generally renders the eye refractive for a moment, in which case we must take care not to frighten the patient still more by repeated injunctions to keep his eye quiet; but rather let the patient alone for some moments, till his eye again becomes quiet, which it generally does in a very short time. As soon as the eye remains quiet in a position convenient for the operation, the needle is thrust quickly, but cautiously, into the eye, namely into the albuginea, at the external angle of the eye, a line from the margin of the transparent cornea, and rather more than a line under the centre. When a two-edged needle is used, it is thrust forward in such a manner, that one of its flat sides is directed upwards and the other downwards, and one of its sharp edges anteriorly, and the other posteriorly. But lest the point of the needle should hit upon the lens, and pull it, if hard, into the internal canthus, the needle must never be pushed through in a perfectly straight direction, but always directed somewhat towards the posterior part of the eye, so as to bring its point behind the lens, in such a manner that it cannot be seen beyond the pupil. As soon as the needle has been thrust through the membranes of the eye, the operator stops for a moment, till the eye has again become quiet; he then gradually turns the needle, at the same time thrusting it deeper into the eye, in such a manner, that now one of its edges is turned upwards and the other downwards. He pushes the needle obliquely backwards, and so deep into the eye, as to bring its point behind the crystalline lens, and a little beyond its centre. As soon as the needle has been pushed far enough, the surgeon raises its point, and applies it to the upper margin of the crystalline lens, so that one of the flat sides is directed upwards and the other downwards, lying upon the crystalline lens; and in making these turns he is directed by the black Stoke on the handle of his needle. He now presses the lens downwards and backwards, but by no means right perpendicularly. During this operation, he observes the opaque substance sinking down behind the pupil, and the needle following it. It is, however, to be always kept in mind, that the point of the needle cannot be raised within the eye, except by depressing its external handle, and vice versa.

When the surgeon has depressed the lens to a sufficient depth, he waits a moment before he again raises the needle. After having raised it as high as the middle of the pupil, helikewise waits for a few moments, before he draws it out of the eye, in order to see whether the lens again follows the needle; should that be the case, he repeats the operation of depression. Should it not follow the needle, he withdraws this instrument slowly out of the eye, in the same manner as he had introduced it, namely with one of its flat sides directed upwards and the other downwards.

Sometimes the lens penetrates forwards into the pupil, as often as it is pressed upon with the needle, in spite of all the pains that may be taken to pull it backwards and downwards. In this case, our belt method will be, immediately to determine upon another mode of operating which shall be mentioned hereafter. When the requisite caution is not used, the lens sometimes passes through the pupil into the anterior chamber of the eye, in which case it must be extracted. All the methods that have been proposed for drawing back the lens through the pupil, and afterwards depressing it, are inadmissible. Sometimes the lens, after it has been depressed, constantly rises up again with the point of the needle; and in these cases it is to be presumed that the point of the needle may sometimes have been pushed into the lens, so as always to raise it up again when it is elevated. This may probably occur most easily, when the needle has not been pushed far enough into the eye; and when it does occur, the lens will always be observed to rise together with the point of the needle. In order to obviate this trifling difficulty, nothing more is necessary than to draw the needle a little out of the eye, and then repeat the operation.

Mr. Willburg has endeavoured to improve the operation of depressing the cataract, so that the lens may easily be loofened, and depressed without lacerating it, its rising up again prevented, or at least rendered a rare occurrence, and its being injured by the point of the needle, as much as possible guarded against. He directs us rather to turn round than depress the lens, so as to direct its anterior surface upwards, but its posterior straight downwards, and its inferior margin downwards. For this purpose, the point of the needle, after having been introduced into the eye in the above-mentioned manner, is to be raised, moved round the superior margin of the lens, and applied, with one of its flat sides directed towards the iris, and the other towards the lens, to the anterior surface of the crystalline lens, a little above the centre; upon which the whole lens must be pressed gently backwards.
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backwards; in order to loosen it from its adhesions; and then the needle is to be applied a little higher and nearer to the superior margin of the lens, and by a proper part of the lens pressed downwards and backwards; and in this manner the whole lens is to be laid at the bottom of the eye in a horizontal direction. In operating according to this method, we may also use the round needle instead of the two-edged one; only when that is done, we must not insist it so near to the edge of the temporal cornea as we did the flat, but at two lines distance at least, in order that the point of the needle may be able to follow the superior margin of the lens backwards into the eye, during the operation. Or it may be still more advantageously introduced by the operator's flaring the patient's eye, by being placed over and above the lens; and then turning over the upper part of the lens, to push the needle gradually deeper into the eye, that its point may follow the upper part of the lens backwards into the eye.

The surgeon should operate upon the patient's left eye with his right, and upon his right eye with his left hand; since all the proclivities that have been made for operating upon the right eye with the right hand, as for example, by the operator's flogging behind the patient, or giving a crooked needle, tend rather to render the operation more difficult than to facilitate it. At first, it is possible to operate with the common cataract needle upon the right eye, over the patient's nose, and consequently with the right hand, provided that during the operation the eye be turned a good deal outwards; unless the patient's eyes were very deeply seated and his nose very large. However, the power of operating with the left hand also is easily obtained by a little practice.

After the operation, particularly during the first days, but also for some time longer, the patient should cautiously observe two rules; namely, to avoid all violent and quick motion, or concussions of the head, and body, and he must be cautions never to place his head in a low dependent position, and least of all to bend it backwards. Coughing and blowing of the nose are said to hinder the depression of the lens, and must consequently be avoided altogether after the operation. Vomiting, which is frequently a sympathetic consequence of the operation, must be prevented by the use of opium. It is not necessary that the patient should cautiously lie up in a back; but he may either walk, sit, or lie down however, whenever he changes his posture, he ought always to do it gradually and cautiously.

The membraneous cataract, which proceeds from an opacity of the capsule of the crystalline lens, when it is first discovered before opening the operation, is removed in the same manner as in this cataract in which the crystalline lens is turned down; its capsule is always depreessed together with it. The operation itself is this; we may assume it as a rule, wherever the capsule is opaque, always to press the turning down of the lens to every other method of operating. Should the capsule in these instances, even break whilst we are depressing the lens, it must be entirely depressed together with the lens; it may be pressed downwards afterwards by hand. A two-edged needle of such a kind, always to be preferred to a round one, should always hold the capsule.

The secondary cataract seldom occurs after the operation of depression, and when it does take place, we ought not to be too hasty in undertaking a second operation; as it frequently disappears spontaneously, in a gradual manner, and sometimes yields to internal remedies. The secondary cataract is either in consequence of an inflammation of the capsule, in which case it generally comes on soon after the operation, and is attended with violent inflammation of the whole ball of the eye, and sometimes disappears together with that inflammation; or, if it still remains behind, yields to the operation of vitiolocaries, and the internal use of different remedies, especially antimonials, camphor, cinchona, varieties of flux. If, or it is an effect of the continual astringent, vernal, or serpiginous action which caused the first opacity; and then it generally comes on late, say, ever more years after the operation; being sometimes attended with inflammation of the eye, and at other times not. If this case, the internal medicaments, adapted to the particular case of the eye, are now and then of use.

When these remedies produce no advantage, the surgeon may attempt a second method of operating, in which he must divide the capsular membrane; but when this cannot be done, the surgeon must cure it. To cure it, in order to secure an access for the rays of light to enter the eye, for which purpose the two-edged needle is more convenient and sufficient than the round one. The same operation is also necessary in the various species of furious cataracts, especially in the opacity of the crystalline membrane; only, in this case we are not to attempt to divide the membrane, but rather to lacerate and perforate it, in order to form an aperture through which the rays of light may enter.

The secondary cataract is attended with more or less difficulty in the operation, according to its different species. The first species, namely, when the capsule adheres to the lens, is attended with no difficulty at all; nor do we even discover it while we are dividing the lens.

In the second species, when the capsule adheres to the hyaloid membrane, every thing depends upon separating the capsule from the subsistence of the vitreous humour, which is performed by moving the needle several times behind the lens, upwards as far as the superior margin of the lens, and downwards to its inferior margin. By this means it is evident that the separation may be effected, especially if we use a two-edged needle, and direct one of its edges upwards and the other downwards, whilst we are performing the operation.

When, in the third species, the whole anterior surface of the cataract adheres to the iris, we ought rather to omit the operation, as it will scarcely be possible to effect the separation; and should it be possible, it might become inefficient, in consequence of the inflammation that is to be apprehended. But when the cataract adheres to the iris, and a few points only, the operation probably may prove successful; but in this case, it will be best not merely to move the needle up and down behind the lens, according to Warber's method, but also to apply it alternately to the posterior and inferior margin of the lens, and alternately to raise and depress it, in order to loosen its pretentious adherence. Should this measure not be insufficient, all that is left for us to do, is to pass the needle round the superior margin of the lens into the posterior chamber of the eye, and then to press it down, with a view to separate the adhesion of thick parts.

In the last species, we may also operate with the needle. As in most cases, we are immediately deprived of the needle at the centre of the capsule, it will be the best method immediately to open the anterior membrane of the capsule with it, and to effect its division so as to flow into the aqueous humour. We must, however, not merely puncture the crystalline membrane, but also, by moving the needle upwards, downwards, and laterally, form a considerable aperture; and if not entirely, yet in a great measure to lacerate and destroy it, which may likewise be most conveniently performed with a two-edged needle.

The milky or gelatinous subsistence which has found its way out of the capsule into the aqueous humour, generally renders...
renders this turbid, but in general it gradually becomes again clear. However, when there is to large a quantity of the milky fluid as to render the aqueous humour altogether opaque, it seems to be molli advisable to evacuate the watery fluid, together with whatever remains of the opaque substance, by an aperture in the cornea. If we know with certainty beforehand, that the cataract is of a fluid consistence, we may, with a view of entirely avoiding the lesion of the vitreous humour behind the cataract, and shortening the operation, thrust the needle at once into the eye, in such a manner as to make it penetrate straight into the capsule, and then perforate its anterior membrane in the manner before-mentioned. Nay, it has been advised in this case, even to thrust the needle through the transparent cornea and pupil, to open the anterior membrane of the capsule, and let out the fluid.

When the soft cheesy cataract has some degree of consistence, and the capsule is not very thin or easily lacerated, the lens palls downwards to the bottom of the eye together with its capsule, and the operation may be easily and successfully completed according to the ordinary method; though, on account of the greater violence done to the vitreous humour, its event is always doubtful. When the cataract is very soft and the capsule thin, the needle is generally forced behind the pupil, in the middle of the lens; and in this case it will be best, as in the fluid cataract when the needle is forced in the capsule, to perforate the anterior membrane of the capsule with its point, to enlarge the orifice sufficiently to procure a free passage for the aqueous humour into the capsule, in order that it may diffuse the lens, and then to roll the needle round between the fingers, in order to break the lens into several small pieces, and thereby to promote its diffusion and complete absorption. If we see beforehand, with certainty, that the cataract is soft, we ought, in order to prevent the lesion of the vitreous humour, rather immediately to thrust the needle through in such a manner as to make it penetrate into the capsule, and then destroy the lens and open the capsule. Should we, however, observe, after some time has elapsed, that there remain behind more solid portions of the lens, which do not seem likely to be dissolved, we have it still in our power to open the cornea and extract them.

The haemorrhage which occurs either during or after the operation, arises perhaps from injuring a vessel in the tunica conjunctiva or the choroid membrane, or else from a lesion of the iris or ciliary processes. The haemorrhage from the conjunctiva may sometimes be prevented by rubbing the eye, at the external canthus, with the finger, before we introduce the needle. This haemorrhage is, nevertheless, of little consequence, and generally ceases gradually, even when it excites a spreading chymosis. The haemorrhage from the choroidal membrane is, indeed, most easily excited by a two-edged needle, but it is then also least to be dreaded, as the blood is always discharged externally through the small incision in the sclerotics. Moreover, a haemorrhage will seldom occur, even though we use a two-edged needle, provided we introduce it according to the method above directed, namely, with one of its flat sides directed upwards and the other downwards. Though, when the round needle is used, a haemorrhage more rarely occurs; yet, should it occur, it is also more dangerous, as the blood cannot be discharged externally through the small puncture that has been made with the needle. However, a small quantity of extravasated blood is soon re-absorbed under the use of general remedies. When the bleeding proceeds from the iris or ciliary processes, the blood generally penetrates immediately into the anterior and posterior chamber of the eye, and imparts a red tinge, more or less deep, to the aqueous humour. Should the haemorrhage (which, indeed, rarely happens) be very profuse and of long continuance, as may be known from the deep, opaque, and continually augmenting redness of the aqueous humour, we ought to draw the needle as soon as possible out of the eye, open the transparent cornea, and let out the aqueous humour together with the extravasated blood. When the haemorrhage is slight, it is no impediment to the operation, and the extravasation soon disappears under the use of antiphlogistic remedies, though we should always be very attentive to check the violent inflammation which may supervene. The small puncture in the membranes of the eye generally heals up without any difficulty; and when, as sometimes happens, a little fungous excrecence arises, this commonly yields soon to the application of allotropic remedies.

Of extracting the cataract.

The operation by extraction requires the same preparation and position both of the patient, surgeon, and assistant, as have already been directed for the operation of deprevision; the prognosis also depends upon the same circumstances: but with regard to this operation, the following particulars are to be observed. In patients, whose eyes are situated very deep in the head, and the division of the eye-lids is very short, the operation is always attended with some difficulty; whilist, on the contrary, it is always easier in proportion as the eye-lids are more open and the ball of the eye more prominent. In persons whose cornea is uncommonly convex, and consequently the anterior chamber of the eye large, the operation is particularly easy and secure; whilst on the contrary, with those persons whose cornea is flat, it is always attended with the danger of injuring the iris. When the eye is very reftless, it is likewise difficult and dangerous; and in children it is sometimes entirely impracticable. Whatever the consistence of the cataract may be, it may always be extracted, though this can be done more easily when it is firm. The fluid cataract generally discharges itself as soon as the capsule is opened, but frequently a portion of opaque matter remains behind, which must be extracted separately. The work for extracting is the soft or cheesy cataract, which either is protruded at once and entirely, in which case, as it is generally very large, it diftends the pupil to a great degree, and requires a strong and continued pressure to be made upon the eye; or it breaks, and must be extracted piece-meal. When the pupil is wide, open, and moveable, we may, after the conjunctiva, expect an easy and successful operation. When it is very small, but yet moveable, it does not, indeed, hinder the operation, but it renders the paffage of the lens difficult. Alto, when it is small and immovable, the operation may still be performed, provided it does not at the same time adhere to the lens. When it does not dilate itself during the operation, it perhaps admits of being widened with the lancet. When the pupil is large and immovable, provided this does not proceed from amaurosis, there can be no objection against the operation.

With a view to render the operation as accurate as possible, several means have been proposed for fixing the eye in an immovable position. La Faye's method of fixing the eye, by means of the middle finger of the hand with which the inferior eyelid is drawn downwards; Beranger's double hook, and the small forceps which Jac Car employed for laying hold of the conjunctiva; are rough expedients, by which the eye is very much irritated and inflamed. A better mode is Panart's spike, to which Calaumata gave the form of an S, whereby the assistant is enabled to lay the hand in which he holds the instrument upon the cheek of the patient, and moderate the pressure which it gives to the eye. But
As, with this contrivance of the instrument, four hands must always be applied to the check of the patient, which is very inconvenient both to him and to the operator, this spike has been fixed to a thimble or ring, which is put upon the middle finger of the hand with which the lower eyelid is drawn downwards. Even this instrument, however, is still defective: Mr. Demours has lately proposed another, which has great advantages over all that had before been invented. It represents a thimble, with a wide opening before and behind, which, when put upon the finger, covers only both sides of it, leaving the back and inner side of the finger entirely bare. From the superior central point a small hook proceeds, first perpendicularly upwards, and then horizontally sideways.

The advantages of this instrument are, that the finger which draws down the lower eyelid also applies the hook, and consequently no more fingers are required than in the ordinary operation. As the finger is applied close to the patient's cheek, the operator has it in his power to moderate the degree of pressure with which the hook is introduced into the eye more than he can with other instruments of this kind.

And, finally, the inner side of the finger, which touches the lid and ball of the eye is bare, and consequently lies soft upon the eyelid. It likewise always remains in the operator's option, after he has applied the instrument to his finger, whether to introduce the hook or not, as he may think proper. The hook must be inserted at the same place at which Pamart's spike is usually inserted; namely, as Mr. Gleize advises, into the conjunctiva at the side of the superior margin of the cornea in the inner angle of the eye.

However, all these, and several other instruments of the same kind, as perfect and well adapted to this purpose as they may appear, are in most cases productive of far more injury and inconvenience than benefit; and it likewise always is a difficult task for the surgeon to operate at one and the same time with both hands, and pay the necessary attention to each. In fact these instruments are in most cases really superfluous. For the voluntary as well as the involuntary motion of the eye may be checked by other and gentler means, some of which have already been mentioned. In order entirely to obviate the necessity of fixing the eye, for performing the operation for the cataract, Mr. Mina visits his patient twice a day for some time before he undertakes the operation, and places himself with his lancet in his hand before him, just as if he was about to operate. He directs him to turn his eyes in various directions, and endeavours to render him so practised in doing this as to be able to obey him without being terrified. In the space of 12 or 14 days the eye becomes so easy and obedient, as never to require any instrument for fixing it during the operation.

As to the position of the patient and operator, the fame applies here that has been said in speaking of the operation of coughing, and in the same manner also are the eyelids to be opened and secured. The operator holds his lancet like a writing pen, and pressures the hand in which he holds it as close as possible to the patient's cheek. As soon as the eye is in a position convenient for the operation, the lancet must be thrust in suddenly, in the same manner as the needle. The incision into the cornea through which the lens is to be extracted, must be circular; beginning rather above the centre of the cornea towards the external angle of the eye, and extending through its lower half as far as its middle towards the inner canthus, at all points a quarter of a line from the albuginea, and furthering the lower half of the conjunctiva in such a manner as to form a flap of the form of a crescent. In order to form this incision, the lancet is introduced with its edge downwards and its back upwards, at the external canthus of the eye, a quarter of a line from the albuginea, into the transparent cornea; it is then thrust, in the direction of the transverse diameter of the cornea, through the anterior chamber, in such a manner that its point comes out again from the cornea, in the inner angle of the eye, at the same distance from the albuginea. This incision forms an orifice which is as large as the transverse diameter of the cornea, that is, as large as it ought and can be; it is no where opposite to the pupil, and, consequently, if it should have a cicatrix, vision will not thereby be impeded. When we can foresee with certainty that the cataract is hard and small, or fluid or very soft, and consequently that no large orifice will be necessary for its extraction, we may introduce the lancet and bring it out again at the distance of half a line from the margin of the cornea, and thereby greatly diminish the danger of injuring the iris. When the cornea is very flat, its distance from the iris very small, and consequently the anterior chamber of the eye also very small, there is great danger of injuring the iris; on which account the operator is necessitated, in making his incision into the cornea, to keep as far as possible from the iris. When, on the contrary, the cataract is very large, the surgeon must rather be careful to make the incision sufficiently large, than attend too much to the possibility of injuring the iris.

In making this incision, we are particularly to attend to the rule, that the aqueous humour must not be suffered to flow out till after the incision into the cornea has been completed. With the view to prevent this occurrence, only one instrument must be used for the operation, and the lancet or knife with which the incision into the cornea is made, must possess the following properties: the blade, from the point towards the handle, must increase, not abruptly, but gradually and regularly, both in breadth and thickness, in order that as it penetrates deeper into the cornea and the anterior chamber of the eye, the wound of the cornea may not only be gradually lengthened, but at the same time also so accurately filled up as entirely to prevent the aqueous humour from issuing through it; moreover, the blade must be at its widest part as broad as the half of the cornea, that is, three lines. We must be particularly attentive not to suffer the instrument to lose these dimensions in sharpening it. The blade of the lancet must be from 1 to ½ inches in length. For were it longer, the surgeon would not be able to apply the hand in which he holds it close to the cheek of the patient, at the beginning of the operation. The handle must be so long, that when the instrument is held like a pen, it can be firmly upon the back of the hand. Both sides of the blade must be slightly convex, partly in order that the blade may have the requisite degree of strength, and partly that it may accurately fill up the wound of the cornea. When the sides of the blade are flat, the aqueous humour always issues out along them. The back of the lancet must be blunt, but by no means thick and broad; it must also be rectilinear, not curved and bending.

The operator holding the knife in the manner already described, and applying his hand to the cheek of the patient, thrusts in the point of the instrument, as soon as the eye is directed straight forwards, but at the same time a little upwards and outwards. The lancet is first directed straight forwards, with its point towards the iris; so as to form a right angle with that part of the cornea into which it is inserted. As soon as the point of the lancet has arrived at the chamber of the eye (of which, however, the operator ought to be perfectly certain, for if it has not, he pushes the point between the lamelle of the cornea in turning the lancet), he changes the direction of the lancet, so as to turn its point directly towards that place in the cornea at which it is to be brought out again at the internal angle of the eye. In this direction
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direction the lancet is thrust slowly, and without turning it any more, straight through the anterior chamber of the eye. The lancet, after it has once been pushed into the eye, must on no account be retracted, though ever so little, as this can never be done without letting out the aqueous humour. It must always be thrust with an uninterrupted course through the anterior chamber of the eye. The knife must be put into the cornea in such a manner that its back is directed a little towards the iris, and its edge from off it. Should the operator by mistake have thrust in the lancet in a faulty direction, this must immediately be corrected before he proceeds to pull it further. Only he must take care not to turn the lancet too suddenly, or else the aqueous humour will certainly flow out too soon; he should therefore rectify the direction of his lancet gradually, whilst he is thrusting it deeper into the eye.

Though all these rules should be observed, the incision sometimes happens to be too small, which is owing either to the motion of the eye towards the inner canthus, or to the iris coming before the edge of the lancet. The latter very embarrassing circumstance may be prevented, by removing all unnecessary pressure or irritation from the eye, according to the rules before mentioned, by thrusting in the lancet at a proper distance from the margin of the cornea, and by preventing the too early discharge of the aqueous humour. Should the iris nevertheless come to be situated opposite to the point of the lancet, it must not be retracted, as this would occasion a discharge of the aqueous humour, and a still greater protrusion of the iris; but it ought also not to be thrust in further, as in that case the iris would be injured. If the surgeon is not able, in this case, to bring the point of his lancet over the iris, by moving it a little forwards towards the cornea, his best method will be, to prefix the lancet straight downwards, without moving it either forwards or backwards, and in this manner to complete only half of the incision, that is, to make an incision resembling only a quarter of a circle, and afterwards to enlarge this with the scissors.

When the iris comes under the edge of the lancet, the back of it should be turned strongly towards the iris, and the edge forwards towards the cornea, in order to remove the edge from the iris, and complete the incision. In this case, indeed, the incision never goes so far downwards as it ought; however, it may afterwards be enlarged if it be too short, and we may full hope that it will not leave behind any opaque cicatrix, which would certainly be some impediment to vision.

If, after the lancet has been thrust through the anterior chamber, the eye should turn towards the inner canthus, the incision cannot be completed in the proper manner; in which case one of three expedients may be adopted. As soon as the operator perceives that the eye begins to turn, he may immediately apply the instrument for fixing it; or he may endeavour to draw back the eye from the canthus with the lancet inserted in it, and then complete the incision; or he may dill from the attempt to complete the incision with the lancet, prefers the lancet straight downwards, so as to separate only a quarter of the cornea, and afterwards enlarge the incision with the scissors.

The incision in the cornea may be too small in three different ways. It may either be only a quarter of a circle, with its beginning externally at the middle, and its termination downwards at the middle of the cornea; or the incision may approach more or less towards a rectilinear direction, that is, with its middle too far distant from the lower margin and too near to the pupil; or, finally, the termination of the incision at the inner angle, though in the middle of the cornea, may be too far from its margin, and too near to the pupil. In the first case, which is the most favourable, the enlargement is performed by a double incision, that is, by an incision first in a horizontal direction, and afterwards directed obliquely upwards and outwards. The two latter cases are most embarrassing. In the second case, to bring the incision as near as possible to its proper length and form, its two ends must be lengthened straight upwards. In the third case, the best practice is to enlarge the inner end of the wound obliquely upwards. When the incision is so mulbenep that it is impracticable to enlarge it, the best method will be to detach from the operation for the present, and after having suffered the wound to heal, to repeat it again in some days time.

Each of these cases the wound may best be enlarged with the scissors, the handle of which ought to be short, in order that the surgeon may apply the hand in which he holds them close to the cheek of the patient. Their points should be smooth and round, in order to avoid injuring the iris, when they are introduced into the anterior chamber of the eye.

As soon as the incision into the cornea has been completed, the capsule must be opened by means of some cutting instrument, for which purpose La Faye's Cystitome seems to be very well adapted. The blade, as well as the sheath in which it is concealed, must be thin and narrow, in order that they may be easily introduced into the pupil without injuring the iris. Two rings are attached to the two sides of the instrument. In using it the fore-finger is put into one and the middle finger into the other ring, whilst the thumb is applied below to the knob, and in this manner it may be held steady and secure. It is held in the right hand, which is applied to the patient's cheek; the flap of the cornea is raised by means of the sheath, introduced into the pupil, upon which the blade is repeatedly pushed out of the sheath, and whilst this is done, the instrument is moved backwards, and forwards, upwards and downwards. This being done, the blade is suffered to draw back completely into the sheath, and the cystitome is withdrawn from the eye. Only we must take care, in applying this instrument, not to press it too forcibly against the lens. In order that the blade may be prevented from being thrust too far out of the sheath, a director is adapted to it, which enables the operator, by screwing it higher or lower, to determine with accuracy how far the blade can be protruded out of the sheath.

However, as this part of the operation, even though we use the instrument just described, is always attended with much difficulty and danger, Mr. Siegerilh has invented a new instrument for performing it. This is a knife with a straight back, and with a blade gradually increasing in breadth, both of the sides of which are gently convex; but which differs from all others in this circumstance, that its point terminates in a thin two-edged needle, full half an inch in length, and of equal thickness and breadth from its point to the blade of the knife. At the place where the needle terminates, and the blade of the instrument begins, it is very sharp, and does not form an abrupt angle, but the needle gradually extends and lofts itself in the blade; it this construction be not observed, the instrument cannot be pushed forwards without much difficulty, after it has penetrated into the cornea as far as the abovementioned point.

This knife is thrust, according to the ordinary method, into the outer chamber of the eye, till its point is opposite to the pupil. The point is then pressed down into the operation for the present, and the capsule opened, after which the knife is drawn back a little, the point again raised up, and the pupil, and then the incision in the eye is completed according to the usual method. Thus, with a single instrument, and with the same operation, both the cornea and the capsule
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capsule are opened, and the operator is spared the trouble and danger of having to open the capsule with another instrument and by another operation, after having completed the incision in the cornea. Only in case the crystalline membrane is opaque, or the pupil contracts strongly during the passage of the knife through it, or when any obstacle prevents the capsule from being opened during the incision of the cornea, it will be advisable to defer the opening of it till after the incision has been completed.

As soon as the crystalline membrane is cut through, the lens is protruded into the pupil, and dilated it forcibly, and by a small pressure with the finger, applied to the lower part of the ball of the eye, it is forced through the pupil and out of the eye. We shall, however, take great care to apply this pressure in a gradual manner, otherwise as the lens is suddenly forced out of the eye, it dilates the pupil so suddenly as to lacerate or render it paralytic; in the latter case the pupil loses its power of motion, or its form is changed, and both are generally attended with injury to the fune of vision. Hence much depends upon our moderating the pressure applied to the eye, and increasing it in a gentle and gradual manner.

It is a very embarrassing circumstance, when, after the incision has been made into the cornea, the pupil is violently contracted, and does not dilate, even though a strong pressure is applied to the eye. As in this case we can seldom obtain our purpose by using force, which indeed it will not be advisable to attempt; our best method will be to close the patient’s eyelids for some moments, as the pupil sometimes dilates spontaneously after a short time, or upon the application of gentle pressure. Should it still remain obstinately contracted, we may apply externally to the eyelids a cataplasm with saffron, camphor, milk, etc. hydrastis, albu. cit. papav. alba or extr. belladonn.; but if the contraction still continues after several hours have elapsed, and cannot be removed by the application of moderate pressure, it will be better either to deprest the lens, or to enlarge the pupil at both sides by two small cuts with the scissors than to incur a greater danger by applying more violent pressure to the eye.

Whilst we are pressure the lens out of the eye, it may not be amiss to darken the chamber a little; but as soon as it has been extracted, it ought to be as light as possible, in order that we may be able accurately to examine whether the pupil be completely clean, as sometimes some opaque substancc remains behind, which, if not extracted, will subsequently be more or less an impediment to vision. Whilst we are making this examination, the light should fall obliquely upon the eye, left the reflection from the pupil might prevent the surgeon from observing any opaque substance that may exist there, particularly as even after the most careful examination some opaque substance may still remain undiscovered in the eye.

Any thing of this kind that may be found still remaining in the eye, must be extracted by means of David’s spoon. This spoon must be wide and curved, every where smooth and even, and made either of silver or gold. When the spoon is introduced, a gentle pressure must be applied to the eye, below the cornea (but with great caution), so as to let the vitreous humour in; the instrument should be directed towards the pupil and facilitate the introduction of the flask. During its introduction the concave face of the spoon must be directed towards the cornea, and the convexity backward towards the capsule. When we have brought the opaque substance into the hollow of the corneum, we should let the anterior and superior margin of the instrument slide downwards, along the internal surface of the cornea, and out of the eye. Sometimes it is not necessary that the spoon should be introduced into the eye; as, by gently stroking the cornea with the convex side of the corneum from above downwards, and at the same time applying a gentle pressure with the fingers below the cornea, all the remaining opaque particles may be brought out of the eye without irritation. This operation must, however, be performed with great care, lest a prolapsus of the vitreous humour should be produced.

When the eye is so reflexed that the spoon cannot be introduced without injuring the internal parts of the eye; when repeated experiments to lay hold of and extract the remaining opaque particles with the spoon have miscarried; when the operation has already been introduced several times, and the extraction has generally been attended with irritation and difficulty, and only a very small quantity of opaque matter remains behind; it is better to suffer what is left of the cataract to continue in the eye, than by repeated introductions of the corneum and to expose the patient to the danger of a violent inflammation and insinuation of this eye.

Sometimes also this happens without any particular accidental cause, in which case the vitreous humour is generally found to be preternaturally thin and dissolv. It is also frequently protruded, when the capsule of the crystalline lens has not been opened by means of a cutting instrument, but burst by the accidental or intentional pressure of the finger. And even after the operation has been completed, we cannot be secure against this accident, as it sometimes occurs, from various causes, several hours, may, or often, days, after the operation. Many methods have indeed been proposed for preventing this occurrence, but they are all inadequate, as most depends upon shunning the occasional causes, which for the greater part are of that nature that they may very well be avoided. When the eye is in a spasmodic state after the operation, quieting and sedative remedies should be applied to the eye, and also exhibited internally; during the first days after the operation, the patient should be directed not to open his eyes without necessity, and should it be necessary for him to open them, to do it as cautiously as possible, and finally, during the first nights after the operation, he ought to have some person to attend him, in order to prevent him from rubbing, or in any way pressuring his eyes.

But though the greatest skill and caution should be employed, we are not always secure against this accident; however it is frequently unattended with any bad consequence, may even sometimes it is productive of advantage, and may commonly be soon removed. Moreover the loss of a small portion of the vitreous humour is generally restored in the space of a few days; nay, influences have even been known in which half of it has been lost, and yet the eye has after some time recovered its natural size, and the patient his perfect fovea.
CATARACT.

Some indeed recommend immediately to cut off the part of the vitreous humour that is protruded during the operation, with the scissors, near to the cornea; but this practice is very much to be reprehended: on the contrary our bell method will be, as soon as we see it protruded, immediately to let the patient shut his eyes, and without mind of the protrusion, to bind up the eye. The wound of the cornea gradually contracts, and recovers the protruded portion of the vitreous humour, as if by means of a ligature. The wound of the cornea, at the place where it has been kept open longer than elsewhere by the protruded portion of the vitreous humour, generally remains for some time opaque, white, thick and misapen; but these irregularities generally disappear sooner or later under the external use of a lotion containing vitriolated zinc, or acetated ceru.

When the vitreous humour is not protruded till after the operation, and the eye has been bandaged, it is frequently not discovered till the eye is again opened, on the 8th or 10th day. But it is seldom of any consequence that we are able to discover the protrusion earlier, since even though we should discover it, we can do nothing to remedy it, but must leave the whole to nature.

When the cataract has formed such extensive adhesions with the iris, that the patient cannot direct the light from darkness; when the cataract is situated immediately behind the pupil, and this is angular, preternaturally small, and quite immovable, the probability of the operation not succeeding is so great, that we had better not undertake it. But when the patient's eye is still sensible to the impression of light at one side or the other; when the cataract on that side is not quite close to the pupil, and the pupil has lost some degree of mobility at this point; and while it moves becomes oblique, angular and wrinkled; the adhesion of the cataract with the iris is not so considerable as to deprive us of all hopes of succeeding with the operation: only in giving our prognosis we must not forget the difficulties with which it is likely to be attended.

In order to separate the cataract from the iris, we introduce a flat probe, pretty much curved towards the point, into the anterior chamber of the eye, between the cataract and the iris; and then endeavour, partly by turning the probe round its axis, and partly by pressing against it the cataract, as to push it back from the iris, to separate these two parts at the points where they adhere.

The adhesion of the lens with its capsule cannot be discovered before the operation; and should it ever be discovered, it would be impossible to separate the parts. Sometimes the lens is protruded, together with its capsule, upon the application of slight pressure, and then this species of cataract requires no particularity of operation. The third species of the adhering cataract, in which the lens has formed adhesions not only with its capsule, but also with the hyaloid membrane, may be suspected to exist; if, after the incision into the cornea has been judiciously made, and we are convinced that the capsule has been properly opened by means of La Faye's Cyph tome, the lens shews no disposition to be protruded upon pressure applied first gently and gradually increased, even though the pupil be dilatable, and presents no obstacle to the passage of the lens.

The best method of separating this species of cataract is, to introduce a round cataract needle through the pupil into the posterior chamber of the eye, and giving it a rotary motion with the fingers, to push it into the centre of the lens; then to move the lens by means of the needle, at first gently, but, by degrees, somewhat more firmly, in every direction, upwards and downwards, right and left; after which the needle is again to be withdrawn from the eye, and the eye pressed with the finger, in the usual manner, to promote the passage of the lens through the pupil. Frequently the lens protrudes readily; and when it does not, the former manœuvre is to be repeated; and should it still remain immovable, it will be advisable to defit from the operation.

When, in the membranous cataract, the anterior membrane of the capsule is opaque, no deviation from the ordinary mode of operating is required; or, if any, it is only that in opening the capsule, the crystalline membrane should be cut a little more open than usual. As soon as this has been done, the lens falls into the pupil, and must be extracted whether it be opaque or not. When, after the extraction of the crystalline lens, the orifice in the opaque membrane of the capsule is not sufficiently large, and its opaque edges can be distinctly seen in the pupil, we may, perhaps, attempt to seize and extract them by means of a very small forceps. If we know with certainty before the operation, that the anterior membrane is opaque, we may also, after opening the cornea, introduce a small pair of forceps into the pupil, lay hold of and extract the anterior membrane of the capsule with it, and then project the lens.

When, after the lens has been extracted, the pupil remains equally opaque, and this opacity is situated farther behind the pupil than before; when the preternatural colour of the pupil is not exactly the same after the operation as it was before; when the opacity resembles a convex surface anteriorly; or when the crystalline lens that has been extracted is transparent, and the pupil remains still equally opaque as it was before the operation, there is reason to believe, that the posterior membrane of the capsule, or the hyaloid membrane, is opaque: only we must be well assured that the opacity of the pupil does not proceed from any thick mucus remaining behind the capsule. And this will probably be the best practice, to perforate the posterior membrane of the capsule, with the syringe or some other instrument, repeatedly, and as completely as possible; at the same time gently pressing the finger upon the eye below the cornea, in order to bring the opaque membrane nearer to the pupil, to dilate the pupil, to expose the greater part of the opaque membrane, and thus to be able to make a larger orifice in it. When, in performing this operation, the vitreous humour protrudes, it is not only advantageous, but some surgeons think it is even advisable to promote this protrusion by a gentle and cautious pressure upon the eye.

The secondary cataract, which takes place soon after the operation, sometimes within a few days, always supervenes during a violent inflammation, and frequently also disappears together with it. Every thing which tends to prevent the inflammation of the eye after the operation, as also what tends most powerfully to remove it after it has come on, tends equally to prevent and remove the secondary cataract. As long as the eye still appears red, there is always ground to hope that the secondary cataract will disappear, together with the inflammation, under the use of cold lumbar lotions, and other antiphlogistic remedies. And should it even remain behind the inflammation, we may still hope that it will gradually vanish, with the use of internal diuretic means, especially sulph. aurat. antimon. mercury, cutant, etc. But when the secondary cataract comes on later, frequently months or even years after the operation, it is an effect of some internal cause; and this cause, which is generally of an arthritic kind, then requires remedies particularly adapted to counteract it. When these means produce no benefit, the cornea might be opened a second time, and the opaque capsule extracted the more easily and successfully, as in this case there has been no previous inflammation; and, consequently,
consequently, adhesions of the capsule with the neighbouring part are not so much to be apprehended as in the former case.

As the symptoms of the membranous cataract are frequently very uncertain, and as the opacity of the posterior membrane of the capsule cannot possibly be discovered before the operation, if the lens be likewise opaque; and, consequently, however favourable the circumstances may appear, the event of the operation is always precarious; the bell practice will be always to extract the capsule at the same time with the lens. For this purpose, nothing more is necessary than to omit the opening of the capsule, and after the incision into the cornea has been made, immediately to press out gradually both lens and capsule by a cautious application of pressure. Sometimes the capsule, after having been entirely protruded, together with the lens, out of the orifice in the cornea, still remains adhering a little to the vitreous humour. In this case, it must be carefully separated by means of Daviel’s spoon, and at the same time we must be cautious not to draw forwards the vitreous humour. But though this operation may frequently be performed with great facility and success, it is, nevertheless, often combined with so many difficulties, that it will scarcely be generally adopted.

The iris always protrudes more or less forwards during the operation, approaching nearer to the cornea; and sometimes it becomes diffusely convex. The more this takes place, the greater is the danger of injuring the iris, for sometimes, in spite of all the caution that may be used, it gets before the point and under the edge of the instrument, especially when part of the aqueous humour is lost. When the latter circumstance is observed to take place, the edge of the lancet must immediately be turned a little upwards, and thus the incision completed; which, in this case, does not become altogether of the form of a crescent, but, however, is generally still sufficiently large for the extraction of the lens. When the iris gets before the point of a knife, the point need only to be inclined a little backwards towards the cornea, in order to remove it from the iris, and as soon as this is done, it may be pulled a little farther forwards, but afterwards again moved downwards, and thrust completely through in the common direction. When this cannot well be accomplished, the lancet ought to be pricked straight downwards, without pulling it forwards, and thus half of the incision completed, which may afterwards be finished with the scissors. Otherwise, the lesion of the iris is seldom attended with very bad consequences, as experience has shewn that it may be injured in various ways without producing violent inflammation.

Of the symptoms particularly to be apprehended after the operation, inflammation is the chief, on which account it will be far more safe for us to endeavour to prevent it, than to rely upon the remedies usually recommended for diminishing it. In order to prevent it, the following rules are principally to be observed, besides those preparatory to the operation:

As soon as the lens has been got out of the eye, and the pupil is clean, the eye must be dried, and all attempts, particularly repeated ones, to investigate the power of vision which the eye has acquired, are to be wholly omitted. Should the flap that has been cut out of the cornea be re-verted, it must be reduced by means of Daviel’s spoon into its natural situation, so as to make it fit close at every point. When any part, for example the lower part of the iris, projects a little out of the wound, it must be gently pressed back by means of Daviel’s spoon, in order that the lips of the wound may fit close together. But when the eye is suffered to close, the upper eyelid must first be permitted to fall down as low as possible, in order that it may cover the whole cornea, before we allow the lower eyelid to rise upwards; for otherwise the latter sometimes gets under the flap of the cornea and produces violent irritation.

The dressings ought properly not to press the eye in the smallest degree, nor leave any access for the air or light to the eye. For this purpose, a very thin compress is applied, which must be long, and broad enough to reach at the bottom, as far as the check, at the side, as far as the nose, and at the superior extremity to the eye-brows. This compress is generally secured by means of the monocular bandage. When we have no other end in view in applying the dressings, than to close the eye, the upper eyelid may be fastened to the lower by means of two narrow slips of adhesive plaster.

Besides these, we may also, with a view to keep the rays of light from the eye, apply an eye-bandage that occasions but little pressure, and which consists of a roller to which a compress is attached, to hang down loose over the eye upon which the operation has been performed.

The patient may choose his posture as he finds most convenient, after the operation; that is, he may either lie down in bed, or sit upon the chair; only he must avoid all confusions or violent motions of the head and body, and not suffer his head to fall forwards. But it is indispensible necessarily, during the first nights after the operation, that the patient should have some peron to watch before him, in order to prevent his lying in his sleep upon the wounded eye, or applying his hands to it either to rub or press it.

When the patient experiences no disagreeable sensation at all in his eye after the operation, it will be best to abatin entirely from the use of external remedies, and merely to apply dry bandages. If, on the contrary, he experiences various symptoms that require attention, some external applications are, indeed, necessary, but they ought always to be adapted to the particular state of the eye; consequently, they are not to be exclusively emollient, as some recommend, or spirituous, as is recommended by others. The same applies also to the use of internal remedies, the choice of which is like wise to be directed according to the peculiar state of the symptoms that supervene upon the operation; and consequently, none can be recommended indiscriminately.

When no troublesome symptoms are observed, and the patient feels himself in all respects well, no internal remedies are required; and all that can and ought to be done, with a view to prevent inflammation and other symptoms, is to recommend repose to the patient, to remove all accidental causes or irritation, to direct a strictly antiphlogistic regimen, and daily to administer one or two gently opening injections.

The wound of the cornea generally unites within the space of 48 hours, during which the aqueous humour flows out. Should this discharge continue longer, we may suppose some preternatural cause of it to exist in the eye, and examine it in order to find it out. When the aqueous humour ceases to be dischargd at the proper time, and the patient experiences no pain or other troublesome symptom about his eye, the eye ought not to be opened before the eighth day; at farthest, it may be opened on the tenth day, even though no bad symptoms be present; and afterwards it must be opened daily, and gradually accustomed to the air and light.

However it is not always in our power, by the observance of these general rules, to prevent the inflammation and other troublesome symptoms; and it is always necessary to pay the greatest attention to the particular state of the patient. Sometimes he experiences, soon after the operation, tension, and pain; sometimes he is very languish and debilitated; sometimes he is deprested and low-spirited without any apparent cause; sometimes he is affected with great anxiety or vomiting, or colic pains, or obstruction and
an inflamed state of the abdominal visera; and sometimes he is attacked with spasmodic horrors. Whilst these spasmodic symptoms continue, most patients complain that the eye is very red, and moves backwards and forwards. Some imagine they see light or other appearances before the eye upon which the operation has been performed, notwithstanding that it is covered with the bandages. Sometimes the eyelids open themselves against the will of the patient. In this spasmodic state, external and internal feeding and antispasmodic remedies are necessary; such as warm pediluvia, warm fomentations applied to the abdomen, frequent emollient injections; internally, a mixture of ammonial wine and tincture of opium, or extract of hyoscyamus, &c. When the eye is very red, we may apply to it a thin-issued, warm cataplasm of bread-crumbs, elder-flowers, fennuin, &c. or frequently moisten the comfits with a decoction of cap. papav. alb. and flor. malv. &c.

Sometimes, (especially when the eye has suffered much during the operation,) it becomes painful immediately after the operation, and at the same time the palpe is irritated, full, quick, the patient red, heated, &c. in which case we must endeavour to moderate the violence of the impending inflammation by immediately letting blood, and by administering nitrous remedies, cooling laxatives, glycerins, &c. Sometimes there appear symptoms indicative of an effusion of bile, such as a foul tinge, a bitter, disagreeable taste in the mouth, a sense of pain and weight in the forehead, vertigo, &c. in which case the irritating bile must be timely evacuated by means of purgatives and emetics, in order to prevent fever and inflammation.

Should an inflammation of the eye come on in spite of all the caution that we may use to prevent it, it is to be treated according to the manner directed under the article Ophthal-mia. When, after the inflammation has been removed, a languid redness remains for a long time in the eye, whilst the sense of viton is weak, and the cornea dull, and tears are discharged from the eye, these symptoms may be owing to the application of the bandages having been too long continued: and in this case the eye must be opened and washed: with fresh water. Sometimes at the end of the inflammation an acrid watery fluid flows out of the eye, which keeps it for a long time red, painful, and inordinately sensible to the light.

Sometimes, in the cataract, the vessels of the retina and choroida are varicose, in which case, shortly after the operation, a hemorrhage may supervene, which is profuse, but generally ceases spontaneously; however, in these cases the operation is seldom successful. Sometimes a small vehicle full of water, which is transparent, very tenue, and fenible, projects out of the wound of the cornea, some days after the operation; this can only be cut off with the scissors close to the cornea; but sometimes the vehicle returns again.

When the edges, especially the superior edges, of the wound of the cornea become white, thick, and foet, or actually suppurate in a small degree, the external application of fumery remedies is to be recommended. When the cornea is dim after the operation, white vitriol may be employed.

The patient must be very cautious in making use of his newly-recovered power of vision, as the eye is not able immediately to support the action of a strong light. At first, therefore, it will be proper to let him have his eye open for only one hour in the morning and evening, or till he feels that it becomes fatigued, irritable, or even painful. After some days the patient may be suffered to remain during the whole day, with his eyes open, in not too light a chamber; and when at length he goes into the open air, he should for some time have his eyes covered with a piece of black crape.

Finally, we ought to mention the method which Mr. Conradi has proposed, for performing the operation of crouching in a similar manner, which is grounded upon the gradual dissolution of the cataract. According to his method, we are to introduce into the cornea a small, lancelet-like, cataract-needle, (in the same manner as the knife in the operation of extraction, only at a little greater distance from the iris;) then to bring its point into the pupil and open the capsule, after which the needle is to be withdrawn, and flight bandages applied to the eye for two or three days, as in that space of time the small wound of the cornea in general disappears entirely. After this, we are to await the gradual dissolution of the lens. The needle used for this purpose needs not be quite so long as Richter's cataract knife, and not more than 1½ or two lines in breadth. It ought not to be thicker than is necessary in order to render the blade sufficiently strong, and it ought to be two-edged throughout half of its length.

The advantages of this method of operating are said to consist in the following circumstances: it is much more easily performed than the others; the very small and insignificant wound of the cornea produces none of the troublesome symptoms that are to be apprehended partly during, and partly after, the extraction and depression of the lens. Should the cataract not be dissolved within eight or twelve weeks, any other operation may still be performed upon it equally well as if the former puncture had never been made. Bernhein's Handbuch für Wundartzte, Leip. 1799.

As this article would be extended to a disproportionate length, if we were to subjoin all the observations which relate to cataract, it is our design to offer some further remarks, (chiefly including the practice of English surgeons,) under the two heads of Crouching and Extracting; to which we therefore refer our readers.

CATARACTA, in Ancient Geography, a town of Italy, in the country of the Sammites, according to Diodorus Siculis, who says that it was taken by the Romans.

CATARACTA, in Ornithology; cataractae, Gefn.; cataractae, Aldr. &c.; synonymous names among old naturalists for the flaua gall, Larus cataractae, which bee.

CATARACTE, in Military Language, signifies a wooden grate, lattice, or portcullis, made in the form of a harrow, with several pieces of timber laid lengthwise and crosswise, and strongly fastened together, armed with iron spikes. It is let down by means of a moulinet or roller, to which it is fastened by a rope, to cover any breach or opening that is made by a petard or otherwise. It is not to good, however, for this purpose as an argus, which is composed of several long and thick pieces of timber that are armed with iron at the bottom, are about six inches apart from one another, and are in line manner fastened perpendicularly by a rope, but have no crofs pieces except those that are fastened across them near the top to keep them steady, and in their respective places. For the cataracte may be prevented from coming down by setting a piece of wood upright in one of the grooves, made in the door-cake or gate for it to slide in, or by placing a piece of wood upright, or nearly so, against the gate, or by putting a chevulet under it.

The cataracte goes also by the name of herse or harrow, and sometimes under the denomination of faruisine. Both the besiegers and besieged, for want of chevaux de frise to throw into the ways or roads where cavalry mult pafs, and on the breaches where the infantry enter, make use of them occasionally.
CATARACTES, in Ancient Geography, a river, so called from its impetuous, which seems to have been the same with the Matian. Qu intus Curtius, // ir. ch 1. § 3. Ptol. v. p. c. 16.

CATARACTONIUM, Catarrhonium, or Catarrho, a town of the life of Albion, placed by Ptolemy in the country of the Brigants. In the second route of Antonine's itinerary it is placed between Laritrig (Bows) and Harpham (Nashop). And, without doubt, is the present Catrach near Richmond, in Yorkshire.

CATARACTUM, a river in the island of Crete.

CATARI, a people placed by Ptolemy in Panonia.


See His soppus lophanthos.

Cataria folii cordalos, Hall. hclv. 246. — Herba. Dod. pempe. 99. See Nepeta cataria.


Cataria Montana, Busk. Cent. See Dracoccephalum Si buicium.

CATARINGA, in Geography, a town of the island of Boroco, on a river of the same name.

CATARRH, in Medicine, definor, diffiliato, from καθαρήν, define, I flow down, a disease which consists principally in an unusual discharge of mucus from the membranes lining the nose, throat, or bronchica {the branches of the trachea} or windpipe, leading to the air-cells of the lungs, accompanied generally with fever. From its well known and universal cause, except when epidemic, the disease is commonly denominated a cold.

The attack of catarrh is usually marked by a sense of fulness about the nose and forehead, and of a tightening of the passage of the nostrils, which is either accompanied, or soon followed, by a discharge of a thin, watery, and somewhat acrid fluid, from the Schneiderian membrane lining those passages. There are also a dull pain and a sense of weight in the head, from which the Roman physicians gave their symptoms the appellation of gravido. Hippocrates, probably from the heat and acrimony of the discharge, deformed them under the term of coros, which has been deduced from καθαρός, caput, and γέννα. Ballis. Sometimes cold flourrings, or a sense of chilliness, are among the first symptoms. The eyes are frequently slightly inflamed, with some degree of stiffness in their motion, and an increased and acrimonious secretion from the lacrimal glands. There is a frequent disposition to feeze from the irritation of the rostrils, and the voice becomes more obtuse in consequence of the impediment to the passage of the air through them. The discharge gradually becomes more copious and thicker, sometimes assuming an appearance similar to that of pus; and, after a course of some days, gradually diminishes and disappears. In the mean time a sense of roughness is felt in the throat, and a troublesome irritation about the glottis or entrance of the wind-pipe, which excites a dry and slight cough; some pains are felt about the chest, but especially under the sternum; the neck, back, and limbs are also sometimes affected with pains resembling those of rheumatism; there is a sense of general latitude; the pulse is quickened, especially towards evening; the appetite fails, and some degree of thirst arises, and the palate is depredated. In a short time the febrile symptoms abate, generally after a free perspiration; an exertion of mucus, at first thin and in small quantity, gradually becoming more thick and copious, attends the cough, which becomes less frequent and less laborious, until all the symptoms disappear.

The disease is obvious, consists in an inflammation of the membranes which line the nose and the passages to the lungs; the thickening of the membrane, by which the passages become flattened, being produced by the increased flow of blood to the vessels, which also gives rise to the increased of the mucus secretion. The ancients imagined that this discharge proceeded from the head, and was determined to the membrane of the different passages by circumstances; hence the name of the disease, which, among the Greeks and Romans, termed infusion; and hence Celsus thus begins his account of the different forms of the disease: "Difiillat autem humor de capite interdum in nasos, quod lene eff; interdum in facies, quod peius est; interdum etiam in pulmonem, quod pneumica est." Lib. iv. cap. 4.

The mode of operation of cold on the body, when it gives rise to catarrh, has been variously explained by different writers. It has been most generally said to consist in a suppression of the perspiration, by which the matter that should have been thrown off by the cutaneous vessels is carried back, and determined upon the membranes, subject to this inflammation. This has been particularly stated by Dr. Cullen, upon his favourite notion of a balance of circulation between the external and internal parts, especially between the lungs and the skin. But this mechanical account of the fact is somewhat unsatisfactory. The matter of perspiration, and the mucus produced in the catarrhal state of the membranes of the nostrils and bronchiae, are altogether different in nature, and are elaborated by the vesicles of the skin and of those membranes respectively. There cannot therefore be a transportation of a matter, which should be discharged by the one, back again through the circulating mafs, to be excreted by the other. All that the external application of cold can produce, is a diminution of the action of the cutaneous vessels by which a larger proportion of blood must circulate to the internal parts; but how this should be determined upon the membrane of the nose it is not easy to explain. An application of cold to the skin, indeed, is not necessary to produce catarrh, according to an observation stated by Mr. Mudge; who caution people in health, from trying his "Inhaler" with cold water, as breathing through it for a short time will almost infallibly produce a catarrh. In this case, then, the speculations on the suppression of the cutaneous discharge, and on the balance of circulation, are altogether nugatory.

Dr. John Brown, on the other hand, denied that catarrh was the immediate result of the operation of cold, and affirmed that it was rather the consequence of the subsequent application of heat. As in other epidemic diseases, the excitability of the body having been accumulated or increased by the application of cold, which is but the absence of the stimulus of heat, when that stimulus is again applied, it produces the inflammatory action, which in one case constitutes catarrh in another pleurisy, and so on. This hypothesis, however, is not, we believe, generally true; as many people must have had experience of the commencement of the symptoms of catarrh, even during the exposure to cold, which excited it. It is not easy, in this, as in many other forms of disease, to give any account of its production that may be completely satisfactory.

The immediate number of people, who suffer repeated attacks of catarrh with impunity, is a proof, as Dr. Cullen has observed, that the disease is generally devoid of danger. But this is far from being the case invariably. In any state of constitution,
constitution, if it be neglected, or if cold is repeatedly applied during its course, it may lead to inflammation of the lungs, and all its dangerous consequences. In old people, and those of relaxed and debilitated habits, it thus often goes on to a fatal form of peripneumonia, which has been called peripneumonia notata, in which a rapid effusion takes place into the cells of the lungs, which suddenly depresses the powers of life, and often proves fatal. In those who are predisposed to pulmonary consumption a neglected catarrh frequently lays the first foundation for, or accelerates the approach of the disease; and in others a permanent asthma has been often traced to some cause, or is a constant and troublesome dyspnoea. In the old and infirm, it has been occasionally observed to induce hydrothorax, or dropy of the chest, and sometimes even to bring on a general dropsy. So that, although simple catarrh is a slight complaint, when carefully attended to, great numbers die of its occasional consequences: an observation which strongly points out the necessity of not neglecting it.

In common cases of the disease, when the symptoms are moderate, it is merely necessary to avoid any exposure to cold, to dispense with the use of animal food, and of wine, and fermented liquors, and to drink freely of gruel or some diluting liquor, by which a gentle perspiration may be kept up. Saline diaphoretic medicines may be administered; and to those of weak habits a little thin wine-whiskey may be proper. A few days will generally remove every symptom under this management. When the symptoms are more violent, the disease must be treated as a flight degree of pneumonia, or pulmonary inflammation; the antiphlogistic regimen must be more strictly adhered to; and more active remedies employed. The most useful expedient, especially if there is pain in the chest, is the application of blisters to some part of the thorax. For allaying the cough, which is often troublesome, and produces considerable irritation by the mechanical agitation of the body, mucilaginous medicines are useful; they are less disagreeable to the stomack, in general, than oily medicines, or even permaects. The stimulant expectorants, such as gum ammoniac, fœtis, volatile alkalis, &c. are frequently employed for the same purpose; but their efficacy is doubtful. If the inflammatory symptoms are considerable, they are probably hurtful. When the inflammatory condition is allayed, opium constitutes the most effectual remedy for the cough; but there is little doubt, that the free use of it, from the early stage of a severe catarrh, has contributed to render it extremely obli- nate, and sometimes to extend it to a severe pneumonia. When properly used, opium not only allays the irritation of a frequent cough, but seems to contribute even to render the expectoration more free and easy: by diminishing the feebility of the parts, it produces a temporary suppression of the expectoration, during which the mucus and exhaling fluid of the lungs accumulate, and are then removed with greater facility.

An expedient has been suggested by Mr. Mudge of Plymouth, which he terms "a radical cure for a catarrhal cough;" namely, the inhalation of the vapour of warm water into the lungs, by means of an instrument, which he calls an "Inhaler." He observes, that when the inhaler is used in the very recent and ordinary state of the cough, viz. the evening of the attack, the patient is sure of being prof- fered with an immediate cure; fo sudden, indeed, that it is more than probable he will cough no more than once or twice perhaps the succeeding morning, to discharges a fluid that is drained into the branches of the bronchus, and which, as the thinner parts have during the night evaporated, is easily

and with a very gentle effort, spits off in a concocted state."

p. 179. Mr. Mudge's inhaler is now to be procured in the shops. Where there is a fene of rawness in the trachea, the beam alleviates the uneasiness considerably, and in most cafes relieves the cough; but in some instances it rather aggravates the symptoms and oppresses respiration.

Where the catarrh is violent, the patient must of course avoid every source of irritation which may tend to render the symptoms more inflammatory; such as great heat, exertions of body, stimulating diet, &c.; and the bowels must be kept moderately loose.

The best means of removing the chronic remains of a catarrhal affections is by some exercise of dietetics diligently employed, according to Dr. Cullen; and the best means of securing the patient from a recurrence of the disease after a recovery, is by the use of warm clothing, especially by casing the body in flannel, as the susceptibility of the skin to the impression of cold is sometimes very great, particularly where much perpiration has been excited.

Catarrh chronic, or catarrhus senilis, as it is sometimes denominated, differs so much from simple catarrh in its nature, and requisite mode of treatment, as to render a distinct consideration of it necessary. In old people, of relaxed constitution, catarrh, after being frequently repeated, becomes at length almost habitual, and is much aggravated by cold fefons, or by occasional exposure. The mucous glands of the bronchiae pour out a large quantity of fluid, and this secretion contributes in every way to increase the debility of the patient: not only by a diminution of the circulating mafs, but by clogging up the air cells, and thus preventing a free and regular circulation through the lungs, and a proper change in the blood, and by rendering great exertions necessary, to expel the load of mucus from the lungs, which exhaust his strength. Hence the symptoms of this form of catarrh are, a constant, harassing cough, with a copious ex- pectoration of viscid mucus; great difficulty of breathing; a fene of load, fullness, and constriction in the breast, with much anxiety; a feeble, labouring, and often irregular, pulse; a slightly livid tinge in the lips and cheeks; inability of much exertion; occasional vertige; and loudness of spi- rits, with languor, loss of appetite, &c.

The object of medicine in simple catarrh, in young and strong habits, is to avoid, or to allay any tendency to in- flammation, to support a diaphoresis, and to obviate par- ticular symptoms as they occur: but in the chronic form of the disease, the chief object obviously is to enable the patient to free his lungs from the load of accumulating mucus, to lessen the fetidness, and to support his strength. Ex-pectorants, emetics, blisters, gentler sudorifics and stimulants, are the remedies which seem best adapted for these pur- poses.

Of the expectorant medicines, the active or stimulant ones, such as have been called incidentia, must be employed; as gum ammoniac, afebrile, &c. Where the heat of the body is not much increased, the volatile alkali is extremely beneficial, and when combined with fœtis, or the gum-refine just mentioned, it appears to afford the most effectual alleviation to the expectoration, and also contributes to sup- port the strength. When the mucus becomes hard and difficult to be moved, the inhalation of the beam of warm water is sometimes of material benefit in softening and loosening it. But the most considerable and immediate relief is frequently obtained from emetics, which not only evacuate the contents of the stomack, but also of the bronchial vesicles, and excite a diaphoresis. Blisters too are often productive of relief, especially where there is any particular
pain of the breast: they seem also to promote expectoration. Antimoniales are occasionally useful, but chiefly where some degree of feverishness is present.

While these medicines are administered with a view to relieve the lungs, we should endeavour to support the general strength of the patient. A light and nutritious diet should be taken, such as milk; and the chamber of the invalid should be well supplied with a pure air, by which the important function of respiration may be aided. Rest should be also obtained from the exhausting exertions of conglag; with which view a small quantity of opium may be combined with the volatile alkali, or other expectorants, which will counteract the detrimental effects that might ensue from opium given alone.

CATARRH epidemico. See INFLUENZA.

CATARRHAL. Fever signifies that form of catarrh, in which the symptoms of general fever are considerable, and which requires a strict adherence to the antiphlogistic method of treatment. See CATARRH.

CATARRHUS SUFFOCATIVUS, of some of the older authors, is the more active form of the catarrh of old people, or the peripneumonia nataa which ensues, when this catarrh is aggravated by a fresh application of cold. It was so denominated, because it often terminates speedily by inducing suffocation. See Chronic CATARRH.

CATARRHUS VEFEA, a term used by Lienstaud and other writers to designate a diffuse, which consists in a copious discharge of mucus from the bladder along with the urine. Other authors, especially the neologists, have applied various other denominations to the same complaint. Sauvages, by a word of folicism, has described it under the terms of pyuria mucosa, and P. vesica. (Nofol. Method. clais ix. ord in. genus 28.) Linnaeus denominates it gula, and defines it simply, "Urine viscosa: medicina." (Clas ix. ord. iv.) Dr. Cullen considers it under the genus dyuria, species 6. D. mucosa. And Hoffman has detailed a case at length, under the title of "Rarus vesicæ morbus," in his Commentaries. In the Rev. Med. Cent. II. cas. 93. By some it has been termed cyllibrhea.

The patient is troubled with a frequent desire of making water, which passes with some difficulty, and in a small stream. He feels a painful sensation of fulness about the neck of the bladder, which extends, together with a sense of great heat, along the urethra. The urine has a whitish, milky appearance when emitted, and frequently contains many floating filaments; and after standing some time, a thick, viscous mucus, not unlike the white of eggs, is deposited in the vesicle.

A discharge of mucus from the bladder is frequently a consequence of the existence of a calculus in that organ, and is generally enumerated among the symptoms of that complaint. And other discharges, as of purulent matter, or foams, occasionally occur from the same cause, or from ulcerations and injuries of the substance of the bladder. These disorders can only be removed by curing the original disease, of which they are merely symptoms. But there are several cases on record; and other examples must have occurred to the observation of every experienced practitioner, in which such discharges with the urine appeared to arise from some particular condition of the internal surface of the bladder, which, without any extraordinary or morbid irritation, poured out the unusual secretion. Such cases have continued for some time; and, either by the aid of medicine, or the efforts of the constitution, have at length terminated in perfect health. The remedies recommended for the relief of this discharge, have been chiefly such as are obviously carried in part to the bladder, and probably exert some stimulus there; such are the various balsams, especially balsamum copaiba; the oil of turpentine, &c. Linnaeus affirms that he has seen the disease cured by a copious use of onions in diet. On the same principle the catarrhides might perhaps be usefully administered. Hoffmann recommends two medicines, which he thinks he has found beneficial; these are a compound of essence of canisilla with essence of amber; and amber prepared in the form of a dry powder with delicately kahl, or oil of taster percliquium. Alkaline medicines, as in other irritations of the bladder, have been found to give relief; and the uva ursi has also been recommended. It must be added, however, that, in some cases, a variety of medicines has been successively tried with little benefit; and, after they were altogether relinquished, a spontaneous cure has ensued. Hoffmann suspects the propriety of avoiding great corporeal agitations, particularly on horseback, and of dispelling with the use of strong liquors.

CATARRZENA, in Ancient Geography, a country of Asia, in Greater Armeria, placed by Ptolemy in the vicinity of the Mochic mountains.

CATASARCA, from κατα, under, and σαρκα, flesh, in the Greek Church, denotes the undermost altar-cloth, or that next the altar; which see.

Over the catarrhae is the antimonia; which see.

CATASCOPIUM, from κατασκοπις, I explore, in Antiquity, an exploratory vessel, answering in some measure to a briggante among us. See BRIGANTINE.

We find cataspeum used in this sense by Cicero, ad Attic. lib v. ep. 11.

CATASCOPIUS, in Antiquity, denotes a spy; which see.

In Ecclesiastical Writers, catescupons is said sometimes to denote an archdeacon.

CATASTA from κατατο, I place, in Antiquity, a wooden scaffold, wherein flaves were placed for use, erected, that those deposited to purchase might flee every limb and part. The word was also used for an elevation, on which peracons were executed; and for an engine of torture, otherwise called equeus.

The catasta do not appear to have been the same with the equeus, but rather a kind of frame or scaffold, on which the equeus was mounted, to render the executions more public and visible. Prudentius calls the eratitis, or grid-iron, on which some of the martyrs were broiled, "ignea catasata."

CATASTASIS, in Poetry, the third part of the ancient drama; being that wherein the intrigue or action, set on foot in the epistles, is supported, carried on, and heightened, till it be ripe for the unravelling in the catastrophe. The word comes from κατασταθεν, conflation; this being, as it were, the mean, tenor, flat, or conclusion of the piece.

CATASTROMATA, from καταστρωμα, I cover, in Ancient Military Writers, a fort of scaffolds or buildings, in ships of war, wherein the soldiers were posted for their defence in fight. The catastromata appear to have been chiefly erected over the head and stern of the vessel, it being in these parts that the soldiers were most commonly posted.

CATASTROPHE, from κατασχεί, I finish, in Poetry, the change or revolution of a dramatic poem; or the turn which unravels the intrigue, and terminates the piece. The catastrophe made the fourth and last part in the ancient drama, or that immediately succeeding the catastals; or, its seat in modern tragedy is the fifth act. See Act.

The catastrophe is either simple, or complex; whence also the fable and action are denominated. In the first there is no change in the state of the principal persons, nor any discovery or unravelling; the plot being only a mere paffage out of
of agitation, to quiet and repose. This catastrophe is rather accommodated to the nature of the epopee, than of tragedy. Indeed, we meet with it in some of the ancients; but it is rejected by the moderns. In the fcond, the principal per-
son undergoes a change of fortune; sometimes by means of a discovery, and sometimes without. Mr. Dryden thinks a
catastrophe resulting from a mere change in the sentiments and
refolutions of a person, without any further machinery, may be so managed as to become exceeding beautiful, nay
preferable to any other. The qualifications of this change, or
perpetia, are, that it be probable and necessary: in
order to be probable, it is required to be the natural re-
result or effect of the foregoing actions; i.e. it must
spring from the subject itself, or take its rise from the
incident; and not to be introduced merely to serve a
turn. The discovery in the catastrophe must have the fame
qualifications as the catastrophe itself, of which it is a
principal part: it must be both probable and necessary.
To be probable, it must spring out of the subject itself; nor
be effected by means of marks or tokens, rings, bracelets,
or by mere recollection, as is frequently done, both by
the ancients and moderns. To be necessary, it must never leave
the persons it concerns in the same sentiments they had be-
fore, but always produce either love or hatred. Sometimes
the change confils in the discovery; sometimes it follows
at a distance; and sometimes results immediately from it,
which last is the most beautiful kind.
Boffu divides the catastrophe, at least, with regard to the
epopee, into the unravelling, or denouement, and the achiev-
ment, or finishing; the last of which he makes the result of the
first, and to confit in the hero’s passage out of a state of
trouble and agitation, to quiet and quiet. This period is
but a point without extent or duration; in which it differs
from the first, which comprehends every thing after the
knot, or plot laid. He adds, that there are several unravell-
ings in the piece; because there are several knots, which
beget one another: the finishing is the end of the last un-
ravelling.
The ancients were fond of unravellings, which turned
upon what is called an “Anagnorisis,” or, a discovery of
some person to be different from what he was taken to be.
When such discoveries are artfully conducted, and puced
in critical situations, they are extremely striking; such as
that famous one in Sophocles; which makes the whole sub-
ject of his Oedipus Tyrannus, and which is, undoubtedly,
the fullest of fulfilment, agitation, and terror, that ever was
exhibited on any stage. Among the moderns, two of the
most distinguished Anagogies are those contained in Vol-
taire’s Merope, and Mr. Home’s Douglas; both of which are
great master-pieces of the kind.
Another rule concerning the catastrophe is, that it ought
always to be simple; to depend on few events, and to
include but few persons. Passion never rises so high when it
is divided among many objects, as when it is directed
towards one, or a few. And it is still more checked,
if the incidents be so complex and intricate, that the
understanding is put on the stretch to trace them, when
the heart should be wholly delivered up to emotion. Dr.
Blair observes, that the catastrophe of the Mourning Bride
offends against both the preceding rules. In the last place,
the catastrophe ought to be the reign of pure sentiment and
passion. In proportion as it approaches, every thing should
warm and glow. No long discourses; no cold reasonings;
no parade of genius in the midst of thofe frolic and awful
events, that close fome of the great revolutions of human
fortune. There, if any where, the poet must be fimple,
are excellent. The words, indeed, except those of the canons, which confid of small portions of the Psalms and other parts of Scripture, in Latin (which seems to imply that they were set before the reformation), are, in general, devoid of wit, humour, poetry, and common sense. But our lyric poetry, during the 16th and part of the 17th century, was in a barbarous state, and far inferior to the music of the times. But the compilers seemd so little fulcious about the words they had to set, as frequently to prefer the fillables of omission "Ut re mi fa fol la; hey down down, derry down!" or merely, fa la, to songs of Spencer and Shakespeare.

The second collection of catches, Hilton ventured to publish in 1652, in spite of the Psalm-roaring, and fanatic gloom which then prevailed, under the title of "Cath that Cat can," or a choice collection of catches, round, and canons, for three and four voices. They helped to solace the royalists in private, during the triumphs of their enemies, and suppletion of all public amusements. Though many of these rounds and catches were afterwards reprinted by Playford, and retailed in later collections; the book, which is of a small oblong form, is not only scarce, but valuable; as it contains several canons and ingenious compositions which are not yet common.

The third publication of catches had John Playford for editor, in 1667, under the same title as that of Hilton; "Cath that Cat can," or the musical companion: which was, indeed, but a second edition. However, in a second part to this publication, there appeared dialogues, glee, ayres, and ballads, of two, three, and four voices, wholly different from Hilton's second part, which consists of about 40 hymns and canons.

But we must not terminate this article without an honourable and grateful mention of the round, or glory, or glee, of Purcell, of which the humour, ingenuity, and melody, were so congruent with the national taste, as to render them almost the sole productions of that facetious kind that were in general use for near four-score years. And though the countenance and premiums hallowed of late years upon this species of composition, as well as modern refinements in melody and performance, have given birth to many glee of a more elegant, graceful, and exalted kind, than any which Purcell produced; yet he forms hardly ever to have been equalled in the wit, pleasantry, and contrivance of his catches.

Canons, rounds, and catches were never published in score till after the institution of the Catch-Club, in 1762. This society was first suggested by the then earl of Eglington, Lord March, the present duke of Queenbury, and — Mylne, esq. who soon imbibed their manners the lords Sandwicb, Oxenf, Fortescue, &c. &c. This institution has given birth to many excellent glee, in parer harmony and more polished melody than those of former times could boast; but of catches and canons the stock has not been equally augmented. Purcell's catches are still the bell models of that species of composition; and except Dr. William Haves's pleasant canon, "Let's drink and let's sing together," Bird's "Non nobis Domine" is the only canon that has continued in constant favour and circulation, among all our efforts at similar productions.

Catch, in the Confinution of Canals, is the same with Counter-drain; and sometimes it denotes a fort of levels or feeders for a river.

Catch, in Botany. See Lychnis.

Catch-land, in Agriculture, is a name given to such common field-land as is not certainly known to which parishes it belongs; and, therefore, the minister who first gets the tithes of it enjoys it for the year.

Catchpole, or Catchpole, (one that catches by the pole,) a term now used, by way of reproach, for a bailiff's follower, or attendant. Anciently, it was a term of credit, applied to those we now call sequents of the chase, bailiffs, or any other that use to arrest men on any account.

Catch-word, amon Printers, denotes the last word of a page, which is put also at the top of the succeeding page, in order to show how the leaves and fleets follow each other, and facilitate the foldmg and binding.

The French sometimes only put the catch-words at the end of each fleet, or even quire or gatherings.

Catch, in Hush, is a term made use of in the practice of irrigation, to signify the method of turning the cuts and trenches for throwing the water of springs and small streams over such lands as lie on the fides, slopes, and declivities of hills.

Catch-work meadow, that fort of meadow which is formed by turning the water of a spring or a streamlet along the slope of a hill or declivity, to as to water the lands between the cut or main carriage, and the original water-course, which, in this instance, becomes the main drain. This is sometimes effected in particular cases, partly by making the new-cut level, and stepping it at the end; so that when it is full, the water may run out at the side, and flood the land below it. But, as the water would soon cease to run equally for any great length, and would wash the land out in gutters, it has been found necessary, according to the Agricultural Survey of the county of Wilshire, to cut small parallel trenches or carriages, at distances of 20 or 30 feet, to catch the water again; and each of these being likewise stepped at its end, its the water over its side, and distributes it till it is caught by the next, and so on over all the intermediate beds, to the main drain at the bottom of the meadow, which receives the water, and carries it on to water another meadow below; or, if it can be so contrived, another part of the same meadow, on a lower level. And in order to draw the water out of these parallel trenches or carriages, and lay the intermediate beds dry, a narrow deep drain crosses them at right angles, about every nine or ten poles' length, and leads from the main-carriage at top to the main-drain at the bottom of the meadow. When this meadow is to be watered, the ends of the carriages adjoining the cross-drains are slopped with turf dug on the spot, and the water thrown over as much of the meadow as it will cover well at a time, which the watermen call a pitch of work; and when it is necessary to lay this pitch dry, they take out the turfs and let the water into the drains, and proceed to water another pitch.

This fort of watered meadow is seldom expensive. The stream of water being usually small and easily manageable few hatches are requisite; and the land lying on a declivity much less manual labour is necessary to throw the water over it regularly, and especially to get it off again, than in other forts of watered meadows. The expense of forcing such meadow-lands is, in general, from about three to five pounds the acre; while the improvement is frequently from fifteen to forty fillings the acre, and the usual charge for keeping up the works and watering the lands, which is mostly done by the acre, seldom comes to higher than seven or twinnance. See Irrigation, and Watering of Land.

CATCHER, Crab-Catcher, in Ornithology, the name by which Sloane distinguishes alcedo aegypt, var. Z., Martin- fecheur de la Loufiane de Buffon.
CATCHER, Spider-Catcher, ardea muraria, is so named by Willughby.

CATCHES, in Clock Work, thefe parts of a clock that hold by hooking, and catching hold.

CATCH-OWL, in Geography, one of the Nicobar islands. N. lat. 7° 57'. E. long. 93° 58'.

CATCHWANNA, a town of Hindoostan, in the country of Agimere; 36 miles W.N.W. of Agimere.

CATEAU CAMBRÉSIS, or Le Cateau. a town of France, in the department of the North, and chief place of a canton, in the district of Cambray, belonging, before the revolution, to the archbishop of Cambray, and exempt from imposts. In 1790, a treaty of peace was made here between Henry II. king of France, and Philip II. king of Spain; 15 miles S.E. of Cambray. The place contains 4000, and the canton 17,626 inhabitants; the territory commences 162½ kilometres, and 16 communes. Near this place the French were defeated, in 1794, by the prince of Coburg, with the loss of 5000 killed.

CATECHESIS, from καταγωγή, I teach first principles, in a general sense, denotes an instruction given any person in the first rudiments of an art or science, but more particularly in the principles of the Christian religion.

Those who give such instructions are called catechists, and those who receive them catechumens.

Catechism is also used for a book containing the rudiments of the Christian religion, adapted to the use and instruction of novices. See Catechism.

The catechisms of St. Cyril, are the principal works of that father.

CATECHETIC, or CATECHETICAL, something that relates to oral instruction in the rudiments of Christianity. In the early ages of the church there were catechetical schools, wherein sacred learning and philosophy were taught. There were public auditories, distinct from the church, but probably adjoining to it. In a novel of the emperor Leo, they are called μαθηματικα, and represented as a sort of edifices belonging to the church. St. Ambrose speaks of these auditories as held in the baptistery. *Bingham. Orig. Eclef. lib. iii. cap. 16. § 4."

Catechism, Catechismus, in its primary sense, an instruction or instruction in the principles of the Christian religion, delivered oral, written, and so as to require frequent repetitions from the disciple or hearer of what had been said. Anecdotally, the candidates of baptism were only to be instructed in the secrets of their religion by tradition, oral word, without writing; as had also been the usage among the Egyptian priests, and the British and Gaulish druids, who only communicated the mystery of their theology by word of mouth. *Shaftebury. Charact. vol. iii. p. 241. not.

Catechism is more frequently used in modern times, for an elementary book, wherein the principal articles of religion are summarily delivered in the way of question and answer.

CATECHIST, Catecista, he that catechizes, i.e. instructs novices in the principles of religion.

Catechist more particularly denotes a person appointed by the church to instruct those intended for baptism, by word of mouth, in the fundamental articles of the Christian faith.

The catechists of churches were ministers usually distinct from the bishops and prebys, and had their auditories or catechumenae apart. Their business was to instruct the catechumens, and prepare them for the reception of baptism, but the catechists did not constitute any distinct order of the clergy, but where chosen out of any other order.

CATECHU, in Botany. See ARECA.

Catechu, in Chemistry and the Materia Medica, or Terra Japonica, (improperly so called,) is an extract prepared in several parts of India from a species of Mixtosia, by decoction of the inner wood, evaporation, and infillation in the sun. The tree is called in the Bahar province coira, and the name given to the extract in the country is catechu, cateh, or catechou.

Mr. Kerr gives the following account of its preparation. (Med. Observations, vol. v.) After the trees are felled, all the exterior white part of the wood is cut off and rejected. The inner wood, which is red, is then cut into chips and boiled with water, till half of it is evaporated. This strong decoction is then poured off, without straining, into a shallow earthen vessel, and evaporated to one third by fuel, after which the thorough drying is completed by the heat of the sun, the soft extract being spread on a mat, and exposed to the air.

There are two varieties of catechu brought to this country, that from Bombay and that from Bengal, each differing but slightly from the other in chemical qualities.

Catechu is of a reddish brown colour, sometimes nearly black, shining in its substance, and without smell. When taken in the mouth, it gives an astringent and rather bitter taste, which is far exceeded by a peculiar sweetness, which is very permanent, and by no means disagreeable. It dissolves slowly and totally in the mouth, the foreign impurities excepted.

By the analysis of Mr. Davy. (Phil. Trans, for 1803,) it appears, that there is very little difference between the two species, and they are both very remarkable for containing a larger portion of tan than any other vegetable matter, the gall not at all excepted.

Catechu is almost totally soluble in hot water. This solution is of a deep reddish brown, and slightly reddens litmus. By adding the solution of sinflafs or other animal jelly, a very copious precipitate is formed indicating a large quantity of tan; and the solutions of iron strike a deep black, showing the presence of gallic acid. Besides these two important ingredients, catechu contains a peculiar extract, and also a substance resembling mucilage. The latter is left nearly pure after the action of alcohol, which dissolves all the other ingredients. This mucilage scarcely differs from common gum mucilage, which is also procured from another species of mimosa. The extractive matter of catechu is soluble in water, but less easily than the tan is, and hence, they may be separated almost with accuracy, by repeatedly pouring cold water on the powdered catechu, and allowing it to remain only a short time in digestion. The tan will be known to be exhausted, when the water, the last added, no longer gives any precipitate with solution of sinflafs, after which the red extract is left nearly pure, most of the mucilage being also dissolved by the water. This refractory extract is but slightly astringent, but considerably sweet.

Mr. Davy found that 200 grains of the Bombay catechu contained about 100 of tan, 68 of extract, and 13 of mucilage, with 10 of earthy refuse. The same quantity of the Bengal catechu contained of the above substances, in the same order, 97 grains, 73, 16, and 14.

Catechu is used largely in the East, medicinally, but especially when mixed with the betel-nut, for chewing, a practice almost universal over the Indian continent.

In this country it is employed medicinally in those cases in which a mild unirritating and powerful astringent is required, as in immoderate alvine flux, autumnal diarrhoeas, &c. It is one of the most useful medicines of this kind, and is employed either in watery solution, or tincture.
The former is the mildest form, and is prepared almost im-
mediately by pouring hot water on the powdered catechu.
With this indication it may be usefully joined with the bit-
ter, tincture, and aromatic barks.
It is also used in the form of troches, mixed with gum-
arabic and sugar, to dissolve slowly in the mouth, and in this
form it often much affords the cleanliness of the voice, in per-
sons that have occasion to speak long in public. Catechu is
bodily, applied externally as a topical alligator, to ulcers in
the mouth, and other parts of the body.

CATECHUMEN, composed of κατάφορος and μένων, in
Ecclesiastical History, a candidate for baptism; or, a per-
son who prepares himself for receiving it. Towards the end of
the first century Christians were divided into two orders,
distinguished by the names of believers and catechumens.
The latter, as contradistinguished from the former (see Be-
lievers), were such as had not yet been dedicated to
God and Christ by baptism, and were, therefore, admitted
neither to the public prayers, nor to the holy communion,
nor to the ecclesiastical assemblies. They were distinguished
from the fidelis, or believers, not only by name, but also
by their place in the church: being dispensed with the peni-
tents, in the portico or gallery at the extremity of the
church, opposite to the choir. As they were not allowed
to assist at the celebration of the eucharist, the deacon
discharged them, after sermon, with this formula, proclaimed
three times, "Ite, Catechumeni; mihi eum." Catechumens
formed the lowest order of Christians in the primitive church;
and were admitted into this state by the imposition of hands,
and the sign of the cross. The children of believing pa-
 rents, it is said, were admitted as catechumens, as soon as
they were capable of instruction, but it is not certain at
what age those of heathen parents might be admitted; nor
does the time of their continuance in this state seem to have
been fixed by any general rules. The methods of instructing
the catechumens differed according to their various capacities.
The catechumens, in whom the force of natural reason was small, were
 taught nothing more than the fundamental principles and truths,
which are, as it were, the basis of Christianitv. Those, on
the contrary, whose instructors judged capable of com-
prehending, in some measure, the whole system of divine
truth, were furnished with superior degrees of knowledge;
and nothing was concealed from them, which could have any
tendency to render them firm in their profession, and to assist
them in arriving at Christian perfection. The care of in-
structing such was committed to persons who were distin-
guished by their gravity and wisdom, and also by their
learning and judgment. Hence it was, that the ancient
doctors generally divide their flock into two classes; the
one, comprehending such as were solidity and thoroughly
instructed; the other, those who were acquainted with little
more than the first principles of religion; nor do they deny
that the methods of instruction applied to these two sorts of
persons were extremely different.

There were divers orders or degrees of catechumens in
those churches and ages where the term of catechizing for
two or three years was observed; but ecclesiastical writers
are not agreed as to the precise number and appellations of
these different orders. Some, however, have reckoned four
orders: the first were those that were instructed privately
without the church, and who were kept at a distance for
some time from the privilege of entering the church, in
order to make them more solicitous for obtaining it. Those
of the second degree were the "audientes," or "auditeurs,"
(see AUDIENTS), so called from the being admitted to hear
sermons, and the scriptures read in the church; but not
allowed to join in the prayers. The third and lowest was to have
comprehended the catechumens, denominated "genu-slec-
tentes," because they received imposition of hands kneeling.
Those of the fourth order were the "competentes," (see Com-
petentes) and "clerici," denoting the immediate can-
didates for baptism, or such as were appointed to be bap-
tized at the next approaching festival; before which, they
were strictly examined as to their proficiency in the several
branches of catechetical exercises. After examination they
were exercised for twenty days, and laid under an obliga-
tion of fasting and confession: for some days before baptism
they wore a veil; and it was customary to touch their ears,
saying "ephebae," he opened; and also to anoint their eyes
with clay; both which ceremonies professed to be imitations
of the practice of our Saviour, and intended to shadow out
the catechumens their true condition before and after
their admission into the Christian church.

CATECHUMENUM, a name given to an upper gal-
lerly in the ancient churches. The name catechumen
was also given to a port of school-house near the church,
where the catechumens met to receive the instruction of the
catechist.

CATEGOREMA, from καταγωγήν, I declare, is defined
a noun substantivum, so absolute and independent, that it may
stand at the head of a class apart.

CATEGOREMA properly denotes the name whereby a
category, or class of beings, is represented. See Cate-
Gory.

CATEGORIE, in Literary History. Aristotle has a book
extant under the title of καταγωγήν, which Curio, Tor-
flexus, Vives, and others, deny to be written by him, and
ascribe to Andronicus; but without much foundation, since
that work is cited as Aristotle's by Simplicius, Ammonius,
and Lucianus.

CATEGORIAES, a minister in the Greek church,
whose business is to publish or proclaim the festal days. He
had also the care of the lights, and to see the church kept
clean.

CATEGORICAL, in a general sense, is applied to those
things ranged under a category.

Categorical, also imports a thing to be absolute,
and not restrained to conditions. In which sense it stands
opposed to hypothetical and conditional. A catego-
rical answer denotes an express and pertinent answer, made
to any question or objection proposed.

CATEGORUMENUM, denotes the predicate, or
that part of a proposition which is affirmed of the subjeet.
Some mistakenly call this categoria.

CATEGORY, in Logic, a syllem, or syllembge, of all
the beings contained under any genus, or kind; ranged
in order. The word category was borrowed by the schools
from the forum, or courts of justice; for as, in a trial, the
plaintiff or prosecutor in accusing the criminal, or prisoner,
must charge him expressly, or affirm that he did this or that
in positive terms: whence the word category, viz. from κατα-
γωγήν, to aver, or declare a charge of accusation: so in
the doctrine of categories every higher may be expressly and
absolutely predicated, or affirmed, of every lower.
The school philosophers distribute all beings, all the ob-
jects of our thoughts or ideas, into certain genera, or classes,
in order to get a more distinct and precise notion thereof;
which classes the Greeks call categories, and the Latin pre-
dicaments: and which Mr. Harris has styled in the title of his
work, Philosophical Arrangements.

The ancients, after Aristotle, generally make ten cate-
gories; under the first all substances are comprised; and all
accidents or attributes under the nine last; viz. quantity,
quality,
CATENA, in a general sense, a chain.

CATENA, in Anatomy, a muscle, otherwise called Tibialis anticus.

CATENA, in Ecclesiastical Writers, denotes a sort of commentary on scripture, composed of separate passages or interpretations of the fathers, reduced to the order of chapters and verses of the book. The first who used catena in this sense was Thomas de Aquinas. The reason of the appellation seems to be this: that a chain consists of several links connected together, so do these commentaries consist of a number of different passages, or the sentences and expostulations of different writers, tacked together so as to form one work. Fabr. Bibl. Grac. tom. vii. lib. v. cap. 17.

CATENARIA, in the Higher Geometry, a mechanical curve line, which, a chain, or rope, forms itself into, by its own weight, when hung freely, between two points of suspension, whether those points be horizontal or not. It is otherwise called the Elipolle curve.

The nature of this curve was investigated by Galilei, who opposed it to be the same with the parabola; but though Jungius detected this mistake, its true nature was not discovered till the year 1697, when M. J. Bernoulli published it as a problem in the Acta Eruditorum. Dr. D. Gregory, in 1697, published a method of investigating the properties before discovered by Bernoulli and Leibnitz; (Phil. Trans. ab. vol. i. p. 59, &c.) where he undertakes to show, that an inverted catenaria is the belt figure for an arch. Bernoulli Opera, vol. i. p. 48, &c. and vol. iii. p. 491, &c. Cotes's Harm. Medc. p. 108. To conceive the general nature or character of this curve, suppose a line heavy and flexible (See Plate Geom. III. fig. 49), the two extremes of which, F and D, are firmly fixed in those points; by its weight it is bent into a certain curve FAD, which is called the catenaria.

Let BD and dD be parallel to the horizon, A B, its axis, perpendicular to the horizon and to BD, and D d parallel to A B; and the points B, b infinitely near to each other. From the laws of mechanics, any three powers in equilibrio, are to one another as the lines parallel to the lines of their direction (or inclined in any given angle), and terminated by their mutual concourse: hence, if D d expresses the absolute gravity of the particle D d (as it will, if we allow the chain to be every way uniform), then D d will express that part of the gravity, that acts perpendicularly upon D d; and by the means of which, this particle endeavours to reduce itself into a vertical position: and as it proceeds from the ponderous line DA, it is, ceteris paribus, proportional to the line A D, which is the cause of it. Further, the lineola dD will express the force which acts against that portion of the particle D d, by which it endeavoureth to reduce itself into a position perpendicular to the horizon, and binds it from doing so. This force is constant, being no other than the reitance of the point A; and may therefore be expressed by any given right line a. Supposing the curve FAD, therefore, as before, whose vertex (the lowest point of the catena) is A, axis AB, ordinate BD; &c; it is evident, then, that the forces of nature, that act upon this curve, are the same as those which act upon a straight line; and hence that the curve, if given, may be applied to a straight line.

\[ x : y : z : a, \text{ or } ax = yz \text{ i.e. } y = ax. \]

From this fundamental equation, we may easily deduce by proper analogy, or similar combinations of the terms, this other property; \[ x = \sqrt{a^2 + y^2} \text{ or } z = \sqrt{a^2 + z^2}, \text{ or } a^2 = a^2 + z^2. \]
\[ z^2 = \sqrt{a + z^2}, \text{ or } z = \frac{\sqrt{a} \pm z}{a + 2z} \text{; and the fluents of } \\
\text{these give } x = \sqrt{a + z^2}. \text{ But, at the vertex of the curve, } \\
\text{where } x = a, \text{ and } z = 0, \text{ this becomes } a = \sqrt{a + z} = a; \text{ and, } \\
\text{therefore, by correction, the true equation of the fluents } \\
is x = \sqrt{a + x^2} - a, \text{ or } a + x = \sqrt{a + z^2}; \text{ and hence } \\
\text{also } z = \sqrt{a + x^2} - a = \sqrt{ax + x}, \text{ and } a = \frac{z^2 - a}{x}. \]

Any of these expressions will give the equation of the curve in terms of the arc and its absciss, in which it appears, that \( a + x \) represent the hypotenuse of a right-angled triangle, whose two legs are \( a \) and \( z \). So that if in \( BA \) and \( HI \), parallel to \( BD \), and representing the direction in which the tension at \( A \) acts, produced, there be taken \( AD = a, \text{ and } \angle AHI = \text{ the curve } z \text{ or } \angle ABD \); then will the hypotenuse \( DF = a + x \) or \( DB \); and hence, any two of these three, \( a, x, z \), being given, the third is given also.

Again, from the first simple property, viz. \( \hat{x} : \hat{y} : : z : a, \) or \( a \hat{x} = \hat{z} \); by substituting the value of \( z \) above found, it becomes \( a \hat{x} = \sqrt{2ax + x^2} \), or \( \hat{z} = \frac{\sqrt{2ax + x^2}}{a} \)
and the fluent of this equation is \( y = 2a \times \text{hyp. log. of } \sqrt{x + \sqrt{2ax + x^2}} \).
But, at the vertex of the curve, where \( x = a, \) and \( y = a, \) this becomes \( a = 2a \times \text{hyp. log. of } \sqrt{\frac{x}{a}} \); therefore the correct equation of the fluents is \( y = 2a \times \text{hyp. log. of } \sqrt{\frac{x}{a} + \sqrt{\frac{2ax + x^2}{a}}} \); an equation to the curve also, in terms of \( x \) and \( y \), but not in simple algebraic terms.

This last equation, however, may be brought to much simpler terms in different ways; as, finally, by squaring the logarithmic quantity, and dividing its coefficient by \( z \), then \( y = a \times \text{hyp. log. of } \frac{a + x + \sqrt{2ax + x^2}}{a} = a \times \text{hyp. log. } \frac{a + x + z}{a} \); and secondly, by multiplying both numerator and denominator by \( \sqrt{2a + x} - \sqrt{x} \), then squaring the product, and dividing the coefficient by \( 2z \), which gives \( y = a \times \text{hyp. log. of } \frac{\sqrt{2ax + x^2} + a}{\sqrt{2ax + x^2} - a} = a \times \text{hyp. log. } \frac{z + x}{z - x} \) = \( z \times \text{hyp. log. } \frac{z + a}{a - z} \).

Catenation, in Medicine and Physiology, from catena, a chain, a term employed by Dr. Darwin, and adopted by some other modern writers, to express the connection or association of certain actions of animal bodies. "All animal motions which have occurred at the same time, or in immediate succession, become so connected, that when one of them is reproduced, the other has a tendency to accompany or succeed it." Zoonomia, sect. iv. 7.

This law of the animal economy, which Dr. Darwin has illustrated, is one of important consideration, not only with the physiologist, but with the practical physician. All the mechanical arts of man confind in the acquisition of these catenations, by which the motions of many of his muscles become gradually linked together in trains, tribes, or circles of motion. However difficult the first attempt at these combinations may be, the force of the catenations is pointed out by this circumstance, that when they have been once formed by frequent repetitions, we can exert our attention strongly on other objects, and the concatenated circle of motions will not herelases proceed in due order, as whilst we are thinking on any subject, we use a variety of muscles in walking along the street, or directing a horde on which we ride. This may be most satisfactorily exemplified in the art of playing on a musical instrument; and when we recollect," says the author of Zoonomia, "the variety of mechanic arts which are performed by associated trains of muscular actions extended with the effects they produce, as in knitting, netting, weaving; and the greater variety of associated trains of ideas caused or catenated by volitions or sensations. As in our hourly modes of reasoning, or imagining, or recollecting, we shall gain some idea of the innumerable concatenated trains and circles of action, which form the tenor of our lives, and which began will only cease entirely with them." Sect. xvii. 2.

In beginning to learn music, we first voluntarily apply ourselves to the characters of the music book, and endeavour by many repetitions to catenate them with the proportions of sound of which they are symbols. The ideas excited by the musical characters are directly connected with the keys of the harpsichord, and much effort is necessary to produce every note with the proper finger, and in its due place and time; till at length a train of voluntary exertions becomes concatenated with certain irritations. As the various notes by frequent repetitions become connected in the order in which they are produced, not only the musical symbols of crotchets and quavers, but the auditory notes and tones, at the same time, become to many inceptive or synchronous links in this circle of concatenated actions. At length the motions of the fingers become concatenated with the musical characters, and those no sooner strike the eye, than the finger presses down the key, without any voluntary attention between them; the activity of the hand being connected with the irritation of the figure of the musical symbol on the eye. But not only is this facility acquired, we can even play with great exactness accustomed tunes, and think, and converse, at the same time on other subjects. To the same tendency to catenation of motions, the odd habits and singularities of individuals are to be attributed.

In diseases the catenation of motions is frequently conspicuous, and contributes to prolong their continuance. Thus in typhus fever, even if it commences with violence, the affection of cold water on the body of the patient, or the exhibition of a strong emetic, will often completely interrupt the progress of the disease, if referred to within the first three days; but if the febrile action, however flight, be allowed to continue longer, they become so strongly catenated, that no expedient is sufficient to diffuse the associated trains.

By some extension of the meaning of the term, many other animal actions are said to be catenated with our daily habits of life, or with certain portions of time, or degrees of exhaustion, and. Thus, if the pain of hunger be not relieved by taking food at the usual time, it is liable to cease till the next period of time, or other habits recur. "Our times even of repirauation are not only governed by the stimulus of the blood in the lungs, or our deficit of breath air, but also by our attention to the hourly objects before us. Hence, when a person is carnally contemplating an idea of grief, he forgets to breathe, till the sensibility of his lungs becomes very urgent; and then a high succeeds for the purpose of more forcibly pulling forwards the blood, which is accumulated in the lungs."

Upon the same principle our periods of sleeping and waking, of evacuating the bowels, and, are much regulated; and hence the propriety of Mr. Locke's recommendation for obviating colicnities. The periods of female menstruation are catenated with longer but more regular times. In diseases the
the hectic and quotidion fever obey the intervals of solar or lunar periods; the tertian is connected with a solar interval of 48 hours; the quartan with one of 72. Similar periods are observed in gout, in schila, hemicrania, in hemocephalies, often, and in returns of arterial hemorrhages; and they recur in lunacy, whenever its name has been derived. See Darwin _Zoology_, vol. i. feol. xvi.

**CATTENENSES.** _In Ancient Geography_, a people of Afa, in Pamphylia, who, according to Strabo, inhabited the territory of Selga.

**CATERER.** See Purveyor.

**CATERGI,** the name of the public carriers in the Grand Seignor's dominions, who give credit to the merchants, and others, as a security that they will carry their goods, or not set out with them.

**CATERPILLAR.** _In Botany._ See _Scorpigus._

**CATERPILLAR, in Entomology._ More properly _Larva_, the worm-like plate in which all the lepidopterous, and most other insects appear on quitting the egg. See _Larva_, article _Entomology._

**CATERPILLAR, in Gardening._ A well-known highly destructive insect, that frequently does great injury to various sorts of trees of the fruit and other kinds, by stripping them of their foliage, and preventing the setting of the fruits.

There are several kinds; but those that are most destructive to vegetables and fruits in the garden or field are the yellowish-green, the black, and the dark rough-finned leathery sorts. The first is generated from the eggs of the white butterfly, deposited upon the leaves and other parts of the plants. Those of the second sort mostly thaw themselves in March, when the weather is dry, upon trees of the pear, apple, and other kinds, sometimes contained in large webs: they deposit their eggs on the leaves, and in the crevices of the bark of the trees, from which new insects are generated during the summer months. Mr. Hitchfop sees some of them to remain in these situations during the winter; having found them in nail-holes and under pieces of old bark in February. The last is generated in the middle of the enclosed leaves of different sorts of plants; such as those of the cabbage, broccoli, and other similar kinds. These produce much mischief by eating through the leaves and other parts of the plants. Darwin observes that there are two breeds of these insects in the year, the larve of the first devouring the spring leaves, and those of the second the summer flowers. Various methods have been attempted for destroying the different sorts of caterpillars, both such as are destructive to elegant plants, and to trees of the fruit kinds. With respect to the first, much advantage may be gained by a careful attention in picking them off from the leaves or other parts of the plants on their first appearance. The beds or other places where the vegetables grow should also be carefully examined early in the mornings, in order to destroy them before they retire into the holes and crevices that conceal them during the day-time; and as they are in general the most prevalent when the weather is dry, it seems not improbable that considerable benefit may be obtained by watering the plants frequently, both with common water, and with such liquids as contain ammonia or volatile alkali, either from the effects of such waterings on the caterpillars themselves, or from their promoting the growth of the plants in so vigorous and rapid a manner as to render them incapable of being devoured by them.

Mr. Forsyth advises that during the winter and spring months, every _chrysalis_ that can be discovered, either under the coverings of walls, on gates or palings, and about the eaves, doors, and windows of houseties, should be completely removed and destroyed. Where caterpillars abound, all the leaves that are affected should be removed with care, and swept up in order to be destroyed by fire, or formed into a compost with other substances.

The ten-threaded caterpillar is eagerly sought after by birds, and is capable of being easily destroyed; but when neglected, the _ova_ are deposited in great abundance in the latter part of summer, as about July, on the undersides of the leaves in rows, with little white specks, and quickly hatched on account of the heat of the season, the young caterpillars coming forth in swarms to destroy the autumnal leaves. At this season they may be picked off the infected leaves, and their generation be by that means prevented.

Bushes or plants that are much affected with caterpillars one year, are extremely liable to be attacked with them afterwards.

In the first essay, or with fruit-trees, the bell method of preventing them from being infested is, according to Mr. Forsyth, to scrape the stems with a piece of bone or wood, made in the form of a knife, taking care not to bruise the bark; and afterwards to wash the tree and wall with an equal quantity of soapuds and urine mixed, and a soon as the leaves are off the trees in autumn, they should be raked and swept up; then carried to the melon ground, and mixed up with other leaves and dung for hot-beds;" by this means a great number of eggs of insects that are deposited on the under sides of the leaves may be got rid of. Afterwards all the items of the trees, and all the ends of the boughs, should be washed, taking care not to hurt the buds; in doing this, it is observed, that what falls will destroy the flags that take shelter on the offsets of the walls and in the borders, before they are dug for planting lettuces, endive, &c. This washing should be repeated about the beginning of February, which will destroy any eggs of different insects that may still remain about the trees. A painter's brush may be used for laying the mixture on the trees, and a soft broom or brush made of the ends of garden matting for washing the wall. The matting seems preferable, as being loft and flexible, it will enter the holes and clefts. And the mixture that falls on the borders and offsets of the walls, in this second washing, will destroy those flags and insects that made their appearance early. The items and branches of the trees may be washed two or three times, or oftener, in the spring, before the buds begin to swell; but the branches must not be rubbed after the trees come into flower: they may, however, be sprinkled over with the mixture from a watering pot with a rose just before the buds begin to open, but by no means after they are open; as it would, by its glutinous nature, render the bloom liable to be torched by the sun. These washings, &c. are recommended for all trees, standards as well as those on walls; particularly apple, cherry, and plum-trees. Where any caterpillars remain, they may be discovered by the curling of the leaves; for every curled leaf has one or more caterpillar, or other insect in it; such leaves should therefore be carefully pulled off, and the insects crushed, as when neglected they frequently devour every leaf, leaving the tree quite naked, and of course destroy the fruit for that season at least.

In order to remove the gregarious sorts of caterpillars, which are inclosed in great numbers in nets or bags refracting strong cobwebs, and fixed to the branches of trees or shrubs, the nets should be carefully picked off, and the insects crushed, by which will numbers of them may be destroyed. After the trees have been thus cleared, they should be washed as above, to destroy those TAGRALLERS that may still remain on them. But after the trees come into flower, instead of washing them with urine and soapuds, they should be
CATERPILLAR.

be well watered with clear lime-water, and cleaned with tobacco-water.

It is remarked by Mr. Forfyth, that as there are several forts of moths, that in the caterpillar state are very hurtful to plums and other fruit-trees, it would be a great advantage to destroy them on their first appearance. In clearing trees from insects of other kinds, caterpillars should also be carefully looked for and picked off. They will be found sheltering at the ends of the shoots in the flowers, and at the bottoms of the footstalks of the flowers. It is added, that there are two or three forts that infest fruit-trees, two of a brown and one of a green colour.

The success of this method of clearing and washing has been very evident in the practice of Mr. Forfyth, in different forts of apple-trees, they recovering themselves afterwards in a rapid manner.

It has long been a common opinion that cold and severe frosts have considerable effects in destroying caterpillars as well as the larve and eggs of different insects; but the experiments of Reaumur and Bonnet seem to shew that this is not the case, as on the former subjecting a parcel of young caterpillars to a degree of cold lowered to fifteen degrees below zero on his thermometer, according to Dr. Anderson, they suffered no injury; and the latter found the same thing to be the case with the common cabbage caterpillar, and also the chrysalis of the common butterfly. It seems therefore not improbable but that cold frosty winters produce the good effects that are generally said to be found from them, in destroying these animals, by preventing them from obtaining food in that proportion which is necessary for their existence. The circumstance of long frosts being the most effectual is also favourable to the same supposition.

With respect to the gooseberry caterpillar, a method that has been recommended as successful by Dr. Anderson, is to notice the bushes with care in passing through the garden, towards the beginning of June, and whenever the appearance of a leaf stripped by the caterpillar is perceived, instantly to examine the place with a view to eradicate the disease. It will always be perceived that the first appearance of this malady is towards the bottom of the bushes. If one leaf be eaten up, you may be assured the caterpillar has been there; and if leaves be made with care it will invariably be found. This is a gregarious reptile, and while they are young they herd very close together; so that at this early period, the whole nest will frequently be found upon one leaf, and by picking off that leaf the whole destroyed at once. As they advance in size they grow more hardy, and separate more, and therefore spread upon a number of leaves at once; but before they have attained the size of half an inch in length; they are generally found in large clusters, and may be easily destroyed. Their progress is always from the bottom upwards; and this will generally be found upon those leaves, on the same branch, that are immediately above those that have been already eaten and abandoned, leaving only the hard ribs of the leaf flaying. They always fix on the under side of the leaf, and begin to gnaw off its edges. If they have but newly fixed on the leaf, no indication of them will be perceived there when viewed from above, but if the leaf bit be seen wanting, on one side of a leaf, it may be concluded they are there. These leaves and all others suspected should be pulled off, by pinching away the footstalk, with the thumb gently, so as not to shake them off; though they adhere to it so firmly when thus small, as not to be easily disengaged from it. If there be several leaves in one tuft, they may be all taken off at once; or if the malady appears upon a young shoot of this year (which is very apt with the cafe), the safest and shortest way is to take away the whole branch entirely.

All the leaves, thus picked off, should be either carried away in a basket, or laid in a heap upon the ground at some distance from the bush, and crushed by the foot before they are left, for it is an active reptile, and if left in life, may regain the tree afterwards. If this operation be performed with due attention, at a sufficiently early period, few will escape; nor is it a tedious process, for the most part twenty or thirty large bushes may be thus cleared by one person in the space of an hour, not one of which would perhaps have been left with a single leaf upon it, had previous means been bellowed upon them. But it is not right, says he, to trust to once searching only; for in spite of ever so much attention, it will often happen that a whole loaded leaf will escape unnoticed; and more frequently a few flakes will pass unobserved. It is right, therefore, to look at the bushes afterwards, to see if any more leaves are eaten, and to pick them off after the same manner. This becomes the more necessary, because the eyes do not all hatch at one time, so that a whole broad may be hatched after your first look, which would of course totally escape were it no farther attended to. The task is easy if taken in time, and may thousands may be thus destroyed in the space of an hour; but if they be once suffered to disperse, and have fixed themselves among the middle of the bushes, among the small leaves that sprang out of the old wood, the task then becomes much more difficult. It is advised that those who wish to try the efficacy of this mode of proceeding should never depend upon the efforts of others to ascertain whether it is effectual or not. They may order servants to practise it; but if they wish never to be deceived, let them make choice of one, two, or more bushes, to be picked by themselves only, and they will thus, with little trouble, satisfy themselves whether it is practicable or not, and can check their servants if they attempt to impose on them.

In the third volume of an useful periodical work, the Farmer's Magazine, some observations are offered on the destruction of this caterpillar by the use of tobacco. The writer says, he has tried the effect of tobacco juice, and of quick-vine, both to bushes and cabbages, to destroy these insects, but without accomplishing the end in view; he took every different method that solicitude could suggest or mediate attention could execute; and that smoking with brimstone has been lately recommended. This method he has also attempted, but without success. He applied quicklime in two ways, first by wetting the infected bush or cabbage with a watering can, and then sprinkled on it powdered quicklime; and secondly by putting quick-lime into a watering can, with which the infected bush or plant was sprinkled; but also with little effect. It is further stated that tobacco is noxious to all the insect tribe. Gardeners scatter the flake of it upon their hot beds and on their flower-beds, where delicate plants become in danger of being destroyed by minute vermin, which completely answer the purpose. A pinch of snuff put upon the back of a frog or toad, occasions in these reptiles instant convulsions and death. One might therefore, he says, expect that the application of tobacco, or snuff, to bushes infested with caterpillars, would be attended with a powerful effect. But having applied it to his bushes in both ways, in which he tried the quick-lime, he found it unavailing; for caterpillars, though easily crushed to death, are otherwise wonderfully tenacious of life. Failing in these modes of application of those remedies, he wished
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wished to see what power they had to destroy caterpillars, when applied to them in the clofett possible manner. With this view he put a small quantity of tobacco fmut into one plate, and some quick lime into the other. Into thefe he put a number of caterpillars; but they having crawled off without being hurt, he mixed these articles with water. Out of this folution the insects also crawled, feemingly unhurt; he then prevented them from getting out of the liquor, and they expired. This was fatisfactory evidence to him that caterpillars cannot be destroyed by any ordinary application of tobacco or quick-lime to a bufh on which they fwarm. Afterwards he tried how far the fmoke of brim- ftonle is benefial to these insects, by the following experiment. He put a dozen of them on a plate, over this he inverted a bowl which had in it some burning brimftonle. This did not kill the caterpillars, which made him have recourse to a more effectual method of confining the vapour. He placed a few of these insects in a small bottle, into which, having fhut a bit of paper with inflamed sulphur, he flopped the aperture of the bottle with a cork. The effect of the vapour then became too powerful for any animal life to refill, and the insects died. This experiment, however, convinced him that the fmoke of brimftonle cannot be effectually applied for exterminating caterpillars on bufhes. Defparing of fuc- cess from any mode of general destruction of these vermin, he fet fervants and others to work to pick them off as above, or rather to crefh them on the bufhes. This effectual method at first glance may, he fays, appear an infurmountable labour; but let it be tried, and it will be found by no means fo tedious or laborious as at first imagined. Indeed it is a matter of absolute neceffity, and as such is practifed by fome gardeners, who know well, that if a fwarm of cater- pillars, on any one bufh, are not quickly destroyed, they will go over and ruin every bufh and berry in the garden. Not only will black currant bufhes, which they are not fo fond of, become a prey to their voracity, but he has had experience of the fame vermin adjoining to peach trees, and other fruit trees. Nor is there any tree, though even dif- tant, that they will not rob of its leaves, rather than want food for their voracious appetites. Neither is this all, for if thefe vermin are left to plunder and to live, they infallibly fecure an abundant potterinity to destroy all the small fruit of the enfluing and fecceeding summers." The only effectual means are, he fays, by picking them off as directed above, the labour of which may, it is fuppofed, be somewhat abridged by fhaking well the infected bufh, and craving with the foot thefe caterpillars that fall to the ground. The writer is informed that the Meffirs. Culley, thofe ac- tive and enterprising farmers, on the fame principle, make the caterpillars be hand-picked from their extensive crops of turnips. And it is remarked that cabbages and greens may in general be prevented from caterpillars by plucking off the large under-ground leaves (which may be given to cows) in the month of Angulf, or when the common white butterfly begins to appear in numbers. Thofe butterflies lay their eggs, which produce the cabbage caterpillar, on the under fide of the large leaves of the cabbage and kale plants. There is also said to be another remedy, which he cannot anfwcr for. The learned professor of natural hiftory in the university of Edinburgh has alwears him, that fowing beans among cabbages will greatly prevent the breeding of these worms. It is faid the butterfly has an antipathy to the flavour of beans. And he adds that "the moths (phalaenae grofiflariae of Linnaeus) from which the gooseberry and currant caterpillars (which are the fame) are bred, are fmall, having yellow bodies, with many black spots, and their wings white, with yellow fprays fpotted with black. They appear in the month of July, in the evenings, and ought to be carefally killed by all attentive gardeners. They fly far fom the bufhes on which they deposit their eggs. They live about twenty days, during which (for many of the moth tribe have not even months) they eat little or none. The eggs, which are yellow, are glued below the clefts, and under the larger arms near the bottom, and fometimes on the leaves of the bufhes that are proper for ferving the young progeny for food. One moth produces upwards of one hundred and fifty eggs; the young worms generally appear, he thinks, in spring, but they are frequently hatched in autumn. He has obferved the young in great numbers devouring the leaves of the gooseberry bufh as early as the 14th of Augufi, that is about three weeks after the eggs are laid. They fometimes eat up the embryo of the new leaves and flowers of the bufh in October, which renders any hope of fruit for the ensuing year abfolute. Neither the fruit or snow of winter deftructs them. He has taken particular notice of fome of their remaining on a currant bufh, without being afected with cold or fummer, from November till March. During winter, and the early parts of spring, they lurk in clufters below the cleft, and then is the time they ought to be crefh. At all times, till they are ready to go into the intermediate, or nymph fiate, pre- vious to their being changed into moths, they have, though ordinarily voracious, a vail power of living without food. If put into a box, even in fummer, they will not fecom the worfe for being kept without meat."

Another writer in the fame work has found great advantage from the ufe of sulphur venum in deftructing thefe cater- pillars, after other methods had failed. "It was ufed," fays he, "in the following manner: the bufh was firll light- ly sprinkled with water, fo as to moiften the upper part of the leaves, and immediately after dried with the sulphur, which was put into a tin box, with the lid perforated like a pepper holder. The moiftening of the leaves made the sulphur adhere to them; and the weather continuing dry, it remained upon them. The confequence was, that by next morning not a fingle caterpillar could be feen upon any of the bufhes that had been fo treated, unless in crevices, or upon fome of the grains that it had not reached. Hitherto, he fays, the sulphur does not appear to have been at all hurtful to the foliage, as the bufhes, to which it was ap- plied, were in the fame fate of forwardness, and look equally well as others that were not infected with the vermin. To ensure success, it feems efficient, he fays, that the sulphur fhould be ufed in dry weather, as, if rain fall immediately after the application, it will be washed off and its effect leffened."

It is ingeniously fuggedted by Mr. Forsyth, that by a better and more intimate acquaintance with the habits and economy of thefe animals, we might, probably, be enabled to difcover more certain methods of deftructing them.

**CATERPILLAR Eaters**, in *Entomology*; see ICHNEUMON.

**CATERVA, in Ancient Military Writers**, a term ufed in speaking of the Gaulish or Celtiberian armies, denoting a body of *COCO* armed men.

The word caterva, or catavernus, is also frequently ufed by ancient writers to denote a party or corps of soldiers in disord or disarray: by which it fands distinguished from cohors or turma, which were in good order.

Gen. Ch. Cal. terminal superior, very small, four-toothed, acute, permanent. Cor. monopetalous, funnel-shaped; tube long, tapering, gradually enlarging upwards; border semi-quadrid, broad, erect, flat. Stam. filaments four, within the neck of the tube; anthers oblong, erect, rather longer than the corolla. Pest. germ inferior, roundish; style filiform, the length of the corolla; stigma simple. Peric. berry oval, crowned, one-celled (two-celled, Vahl). Seeds many, angular.

Eff. Ch. Cor. monopetalous, funnel-shaped, very long, superior; stamens within the throat of the corolla. Berry many-seeded, two-celled, Wild.

Sp. 1. C. spinosa, Linn. Sp. Pl. Lam. Illh. Pl. lxvi. fig. 1. Curtis, Bot. Mag. Pl. 131. (C. longiflora, Swartz. Prod. 35. Prunus spinosa, &c. Catley carol. tab. 100.) “Tube of the corolla very long; berries oval.” A shrub. Stem, twelve or fourteen feet high, about four inches thick; bark smooth, of a greenish ruficet colour; wood tough and hard. Leaves small, renfolding of both, growing in clusters, with intervals of about an inch; each cluster accompanied by two sharp plant thorns. Flowers live or fix inches long, yellowish, pendulous, solitary in the axis of the upper leaves. Fruit the size of a pullet's egg; with a smooth yellow skin, and a pulp like that of a ripe apple, which has all grateful tastes and a pleasant smell. Found by Catley near Naffiun, Town, in Providence, one of the Bahama islands, who brought seeds to England. 2. C. parviflora, Willd. Mart. Swartz. Prod. 32. Vahl. fymb. ii. p. 31. Eclog. i. p. 12. Lam. Illh. Pl. lxvi. fig. 2. bad. (Rhamnus foliis buxiceis, &c. Sloane, Jan. 2. tab. 207, fig. 1.) “Tube of the corolla four-corrugated, abbreviated; berries roundish.” A native of Jamaica. Obs. Swartz, though at first he received this species as a catechu, has since made it a distinct genus, which he calls celosanthes, with the following character: Cal. very small, four-clft; Cor. tubular, border curved, four toothed. Stam. four. Pest. germ superior; stile bident. Peric. drupe white, one-celled. A branched, thorny shrub. Leaves opposite, nearly sessile, roundish. Flowers, some solitary; at the extremity of the young pinnas, abortive; others in the axils of the leaves fertile. Bofc. in Nov. Dict. art. Scolofanthe.

Propagation and culture. The first species has been propagated in England both by seeds and cuttings. The seeds succeed best when they are brought over in the entire fruit preferred in sand. They should be sown in small pots filled with light sandy earth, and plunged into a moderate hot-bed of tanner's bark. The plants will appear in about six weeks if the seeds were good, and the pots have been occasionally, but sparingly watered. It will then generally be proper to turn over the tan to the bottom; and if the heat be not sufficient, to increase it by adding a little fresh tan. When the pots are plunged again into the tan-bed, they should be supplied with fresh water every day according to the warmth of the season, and frequently refreshed with water in small quantities; if the weather prove cold, the glasses should be covered with mats every evening. In the autumn the pots should be removed into the house, and plunged into the tan-bed; during the winter the plants should be watered with great caution; and in the spring should be carefully taken up and planted in separate pots which should be plunged into a fresh hot-bed of tanner's bark. In former they should have a good deal of air; but in autumn they must be removed into the house, where they should afterwards constantly remain, and be treated like other tender exotic plants.

The cuttings should be planted during the months of June and July, in small pots filled with light earth, plunged into a moderate hot-bed of bark, and closely covered with small bell-jarfs. In two or three months they will put out roots, when they should be transplanted into separate pots, and treated as the seedling plants. Miller.

CATESBY, Mark, in Biography, an eminent English naturalist, was born about the latter end of 1679, or the beginning of 1680. An early propensity to the study of nature first led him to London, in which he emphatically styles “the centre of science,” and afterwards impelled him to search further scenes of information on this favourite subject in distant parts of the globe. Having some relations in Virginia, he visited that country in 1712, where he remained seven years, industriously employing himself in collecting the various productions of the country, and occasionally transmitting seeds and specimens of plants to his correspondents in England, and particularly to Dr. William Sherard. On his return to England in 1719, he was encouraged by the alliance of several of the nobility, of Sir Hans Sloane, Dr. Sherard, and other naturalists, to return to America, with the professed design of describing, delineating, and painting the more curious objects of nature. He arrived in Carolina, which was selected as the place of his residence, in 1722; and having first examined the lower parts of the country, on occasional excursions from Charleston, he afterwards resided for some time, among the Indians in the mountainous regions at land and Fort Moore; and he also extended his researches through Georgia and Florida. Having spent nearly three years on the continent, he visited the Bahama islands; and residing in the Isle of Providence, he prosecuted his plan, and made various collections of fishes and submarine productions. After his return to England in 1726, being well received by his patrons, he acquired the art of etching; and, retiring to Hoxton, he devoted his time to the completion of his great work, which he published in numbers, of 20 plants each. The figures were etched by himself, from his own paintings; and the coloured copies were done under his own inspection. Although his attention was principally restricted to plants, yet most of his plates exhibit some subject of the animal kingdom. The first number appeared towards the close of the year 1730; and the fifth volume, consisting of 100 plates, was finished in 1732; the second in 1743; and the appendix, of 20 plates, in 1748. Of each number, a regular account, written by Dr. Cromwell Mortimer, secretary of the Royal Society, was laid before the society as it appeared, and printed in the Philosophical Transactions. The whole work is entitled, “The Natural History of Carolina, Florida, and the Bahama Islands, &c.,” and is comprised in two volumes, imperial folio. It contains descriptions of many curious and important articles of food, medicine, domestic economy, and ornamental culture; and has been allowed to be the most splendid work of its kind that had then been published in England, or even on the continent; that of Mad. Merian excepted. The principal defect of the work is the want of a separate delineation of all the parts of the flower, the nectaries and importune of which, however, the plate of botanical science at the time did not suggest. This work has been republished in 1754 and in 1771; and, to the last edition, a Linnaean index has been annexed. Soon after his second return from America, Mr. Catesby was elected a fellow of the Royal Society, and lived in social and friendly intercourse with many of the most respectable members of that body; being "greatly esteemed for his modesty, ingenuity, and upright behaviour." He was the author of a paper, printed in the 44th volume of the Philosophical Transactions, "On Birds
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Birds of Passage," in which he proves the reality of their emigrating in search of proper food, from a variety of observations which he had an opportunity of making during his voyages across the Atlantic. He died in London in 1749, at the age of 79, leaving a widow and two children. His name has been perpetuated by Dr. Gronovius, in the plant called "Catharum." Pulcneyi's Hist. and Biog. Sketches of the Progress of Botany in England, vol. ii. ch. 44.

CATFALL, in Ship-Rigging, denotes the rope that forms the tackle for heaving up the anchor from the water's edge to the bow. It receives through the sheaves at the outer end of the cat-head (which see,) and through the sheaves of the cat-block alternately.

CATFINTHVOE, in Geography, a bay on the north-east coast of the island of Shetland; 10 miles N. of Lerwick.

CATHA, in Botany, Forlk. Arab. See Celastrus edulis, and poniforus.

CATHA, in Ancient Geography, a people of India, mentioned by Arrian, who says, that they feded the most hand- some man among them for their king; that they were valiant, and surpassed their neighbours with regard to their experience in the military art; and that their females had the custom of burning themselves after the death of their husbands. Strabo adds, that they determined, within two months after the birth of a child, whether his form was so perfect as to render him worthy of being preferred; other- wise they destroyed him. They are also said to have tinged their beards with various colours by way of ornament; and their marriages were the result of mutual choice on the part of the contracting parties. See CATHAIA.

CATHA, a town of India, mentioned by Steph. Byz.

CATHERETICS, in Surgery, καθαρισμόν, from καθαρίζω, to remove; corrosive remedies which destroy and eat off superficial flabby, by chemically decomposing its natural texture. Catharetics have been otherwise denominated fumigaciou medicines, q. d. flab-eaters; such as red precipitate of mercury, burnt alum, verdigris, preparations of vitrol, &c. &c. which differ only in degree from cauteries, or ephelatic applications, these latter being much more violent and destructive in their operation. Dr. Cullen observes that, as the operation of the different medicines of this class is not always the same, nor their different operations well explained, the propriety of the general term may be doubtful.

CATHAIA, or CATHA, in Geography, a country in the north-eastern part of Asia, about the precise situation of which authors are not agreed. Some have supposed that it was the country of the Sophites, and that it was called by Curtius Sophites; and they place it between the rivers Hydapse and Aecines, where lay the extensive and rich country of Porus, containing about 300 cities. Others lay that it lay beyond the Aecines and Hydaspes, on the borders of the territory of Porus, a confin of the Porus who was captured by Alexander. Arrian says, that Sangala, which probably lay between Lahore and Moulton, was a city of great strength and importance in the country of the Cathari. Diodorus Siculus calls the same people "Cateth," or "Katheri," and they may very easily be recognized under the name of "Catry," in Thvenet; that is, the "Kutry" tribe, or "Rajpoot." Thvenot, speaking of the people of Moulton, says, "there is a tribe of Gentiles (i. e. Gentoo, or Hindoo,) here, called Catry, or Rajpoot; and this is properly their country, from whence they spread all over the Indies. Diidorus Siculus marks them by the custom of their women burning themselves alive, on the funeral piles of their husbands. From Arrian we learn that the Cathai were confederated with the Malti and Ox- drace, that is, the people of Moulton and Outech, and which lay to the S.W. of the place where Alexander might be appr. to cross the Hydaspes (or Rave) in his way into India: Sangala, therefore, lies to the S.W. of Lahore; and as to its distance, Alexander reached it the third day after crossing the Hydaspes, and for these three marches it will be sufficient to allow 48 road miles or 76 geogra- phical miles in horizontal distance. Although no idea is given in Arrian, Diodorus, or Quintus Curtius, of the distance between Sangala and the Hydaspes; yet we may col- lect from Arrian's manner of speaking, that they were not near each other. Diodorus places the kingdom of Sophites and of Phleges between the Cathari and the Hydaspes; and hence we may infer that there was a considerable space be- tween them. See Sangala. In the name of this country the learned Bryant (Annu. Mythol. vol. iii. p. 552) perceive traces of the Cuthie migration. One of the most considerable colonies, (he says,) which went from Babylonia, was that of the Indi, or Sindi; who had been further distin- guished by the name of the Eastern Ethiopians. They settled between the Indus and Ganges; and one of their principal regions was Cathaia, rendered Cathaia by the Greeks. They traded in linen and other commodities, and carried on an ex- tensive commerce with the provinces to the south. A large body of them pulled inland towards the north, under the name of Sace, or Saccians; who ranged very high and got possession of Sogdiana, and the regions upon the Jaxartes. From thence they extended themselves easterly quite to the ocean. They were (says Bryant) of the Cuthie race, and represented as great archers; and their country was called Saciana and Cathia. The chief city was Saciana. Theie people got possession of the upper part of China, which they denominated Cathia; and this learned writer fuggests, that Japan was in some degree peopled by them.

CATHARA, a town of Asia, in Meopotamia, situated near the Tigris, according to Ptolemy.

CATHARCLIDORUS REGIO, a country placed by Pliny in the mountains which lie to the west of the Indi- ans.

CATHARI, in Ecclesiastical Writers, ancient Chriftians, who made profef$ of greater purity in discipline and sanctity of life than others. The appellation cathari was chief- ly given to the sect of Novatians. In after-times, how- ever, the same was also applied to several other sects, who pretended to extraordinary purity, and particularly to a fanatical sect, who came from Greece into Italy, and were first discovered in the Milanese about the middle of the 16th century. They were called in France, and other countries, Albigenses, Bonshommes, Paterini, and Publicans. See also Paulicians and Puritans.

These Cathari held many tenets of the Manichean heresies, blended with other opinions, common to them and the Vau- dois, against the doctrines, and hierarchy, and fabulous practices of the church of Rome. The Cathari, however, were entirely free from the Manichean errors, and would not have conformed to a public confession of the Roman Cath- olic doctrines, as the true Christian faith, even to their own lives. But the Cathari thought it lawful to dif- femble in these points, and had secret or inward doctrines. It appears that on their examination before the inquisi- torial commissioners at Toulouse, they scrupled to swear to their belief of opinions which they falsely prof$ed; yet, at the end of a written declaration of their faith, they in- fected words which in reality amounted to an oath. But though they adopted many incoherencies and absurdities among
among their articles of belief, the severe inquisition which their undertakers could not discover a single evidence of any criminal act, punishable by the law courts, that could be alleged against them. However, in 1479, the council of Lateran issued a canon, for communicating to the Cathari in the southern parts of France, as audacious heretics, who openly propagated their notions, and likewise all who afforded them protection or harbour in their houses or lands, or carried on traffic with them; declaring, that any persons who should die in that faith should have no benefit from any indulgence granted to them, nor from any oblation made for them, nor be allowed Christian burial. After all, it is certain that many, who held none of the errors of the Cathari, but only joined them in opposing the flagrant corruptions of the church of Rome, were, in the following century, confounded with them, and involved in the massacre, which, under the orders of Simon de Montfort, the general of the pope, deleted all the south of France with innocent blood. See the articles above cited, and particularly Ambiguitas.

Cathari, of Cathari, in Ancient Geography, a people of India. See Catharia.

Catharine of France, in Biography, the youngest child of Charles VI. and Isabella of Bavaria, was born in 1421, and in 1429, by the conditions of the treaty of Troyes, married to Henry V. king of England, then declared successor to the crown of France. In consequence of this marriage she became mother to Henry VI. crowned in his cradle king of both countries. After the death of Henry V. Catharine formed a connection with Sir Owen Tudor, a gentleman of Wales, of small fortune, but descended from the ancient princes of the country. By a clandestine marriage with him, she had two sons, the eldest of whom, Edward earl of Richmond, was father of Henry VII. king of England, the first of the line of Tudors. Catharine died in 1448, and was buried at Westminister. Hume's Hist. vol. iii. Moret.

Catharine of Arragon, the fourth daughter of Ferdinand and Isabella, king and queen of Castile and Arragon, was born in 1453, and married in 1501, in pursuance of a design that had been projected and negotiated for 7 years, to Arthur, prince of Wales, son of Henry VII. At this time the prince was nearly 16 years of age, and the infanta 19. In a few months after this marriage, the young prince fickened and died, much regretted by the nation. Henry, deists of continuing his alliance with Spain, and also unwilling to renounce Catharine's dowry, which was 200,000 ducats, obliged his second son Henry, whom he created prince of Wales, to be contracted to the infanta. The prince, who was then a youth of 12 years of age, refited this intersection to the utmost of his power; but the king was invincible, and the espousals were at length, by means of the pope's dispensation, contructed between the parties. Immediately after the accession of Henry VIII. to the crown, in 1509, the king began to deliberate on his former engagements. The previous marriage of Catharine with his brother, and the inequality of their years, were the chief objections urged against his espousing her; but, on the other hand, the advantages of her known virtue, modesty, and sweetness of disposition were insisted on; the affection which she bore to the king; the large dowry to which she was entitled as princes of Wales; the interest of cementing a close alliance with Spain; the necessity of finding some confederate to counterbalance the power of France; and the expediency of fulfilling the engagements of the late king, were considerations which determined the council, though contrary to the opinion of the primates, to give Henry their advice for celebrating the marriage. Notwithstanding the submissive defence paid to papal authority before the reformation, the principles of the people were in general adverse to a confederacy between such near relations, as Henry and his brother's widow; and the late king, though he had betrothed his son, at the age of 12 years, gave evident proofs of his intention to avail himself of a proper opportunity of nullifying the contract. He ordered the young prince, as soon as he came of age, to enter a protestation against the marriage; and on his death-bed, he charged him, as his last injunction, not to make an alliance with the inconstant, and expose himself to such insufferable objections. In the year 1527 several circumstances occurred which combined to excite scruples in the king's mind concerning the lawfulness of his marriage. The states of Calabria had opposed the emperor Charles's espousals with Mary, Henry's daughter, and, among other objections, had insisted on the legitimate birth of the young prince. And when the negociations were afterwards opened with France, and mention was made of betrothing her to Francis, or the duke of Orleans, the bishop of Trabou, the French ambassador, revived the same objections. These events naturally raised some doubts in Henry's mind, and they concurred, with other causses, which tended much to increase his remorse, and to render his conscience more scrupulous. The queen was fix years older than the king; and the decay of her beauty, together with particular infirmities and defects, had contributed, notwithstanding her blameless character and deportment, to render her person unacceptable to him. Though she had borne him several children, they all died in early infancy; except one daughter, Mary, afterwards queen of England; and he was the more struck with this misfortune, because the curse of being childless is the very threatening, contained in the Mosaic law, against him who espouses his brother's widow. The succession too of the crown was a consideration that occurred to every one, whenever the lawfulness of Henry's marriage was called in question; and it was apprehended, that if doubts of Mary's legitimacy concurred with the weakness of her sex, the king of Scots, the next heir, would advance his pretensions, and might throw the kingdom into confusion. Besides, Anne Boleyn had lately appeared at court, as maid of honour to the queen, and had acquired an entire absence over her affections. The king was thus impelled, both by his private passions, and by motives of public interest, to seek the dissolution of his inauspicious, and, as it was deemed, unlawful marriage with Catharine. The archbishop of Canterbury was consulted, and he was required to advise with his brethren. All the prelates of England, except Fisher, bishop of Rochester, unanimously declared, under their hands and seals, that they deemed the king's marriage unlawful. Wolsey also fortified the king's scruples; partly with a view of promoting a total breach with the emperor, Catharine's nephew; partly disfours of connecting the king more closely with Francis, by marrying him with the duchesses of Alençon, sister to that monarch; and perhaps too somewhat disgraced with the queen herself, who had reproved him for certain freedoms, unbecoming his character and station. Accordingly Henry determined to apply to the pope, Clement VII. for a divorce. He founded his application, not on any general doubt concerning the papal power to permit marriage in the nearer degrees of consanguinity, but on particular grounds of inutility in the bull, which Julius had granted for this particular marriage. It had been made in the preamble, that the bull had been granted upon Henry's application; though, it was known, that at that time he was under 12 years of age. It was also affirmed, as another motive for the bull, that the marriage was requisite in order to preserve peace between the two crowns; though it is certain, that no ground or appearance of quarrel then subsisted between them. That
These late premises in Julins's bull seemed to afford Clement a sufficient reason or pretence for annulling it, and granting Henry a dispensation for a second marriage. Clement, though at first disposed to favour Henry's application, and though he actually concerted measures for its successful issue, was overawed and embarrassed in his proceedings by the interference of the emperor, Charles V, Catharine's nephew; and the negotiation was protracted to such a length as to tire Henry's patience, and to induce him to adopt other measures for accelerating the accomplishment of his wishes.

The pope, imported by the English ministers, put into their hands a commission to Wolsey, as legate, in conjunction with the archbishop of Canterbury, or any other English prelate, to examine the validity of the king's marriage, and of Julius's dispensation. He also granted them a provisional dispensation for the king's marriage with any other person, and promised to issue a declaral bull, annulling the marriage with Catharine; but he enjoined secrecy, and conjured them not to publish these papers, or to make any farther use of them, till his affairs with regard to the emperor were in such a train as to secure his liberty and independence. After considerable hesitation and delay, the legates, Campeggio and Wolsey, to whom the pope had granted a new commission for the trial of the king's marriage, opened their court in London, May 31st, 1729, and cited the king and queen to appear before it. They both professed themselves, and the king answered to his name, when called; but the queen, instead of answering to her's, rote from her seat, and throwing herself at the king's feet, made a very pathetic harangue, which her virtue, her dignity, and her misfortunes rendered the more affecting. She concluded with declaring, that she would not submit her cause to be tried by a court, whose de
dependence on her enemies was too visible, even to allow her any hopes of obtaining from them an equitable or impartial decision. She then rose, and making the king a low reverence, she departed from the court, and never would again appear in it.

After her departure, the king did her the justice to acknowledge, that she had ever been a dutiful and affectionate wife, and that the whole tenor of her behaviour had been conformable to the strictest rules of probity and honour. He only inflected on his own favours with regard to the lawfulness of their marriage; and he explained the origin, the progres,

...
the marriage with queen Anne was established and confirmed. 

Catharine had removed from Dunblane to Kilmarnock castle in the county of Huntingdon, where she was forced with a lingering illness, which at last brought her to her grave. She died on the 6th of January 1556, in the 57th year of her age. A little before she expired, she wrote a very tender letter to the king, in which she addressed him as "her most dear lord, king, and husband," and insinuated upon him counsels of moral and religious prudence; concluding with these words: "I make this vow, that many eyes desire you above all things." The king is said to have shed tears on occasion of receiving this last tender proof of Catharine's affection. In her retreat she is said to have composed some devotional treatises. 

Catharine De Medicis, queen of France, was the only daughter of Lorezo de Medici, duke of Umani, and of Magdalen de la Tour. She was born at Florence in 1544, and by the influence of her uncle, pope Clement VII., was married in 1554 to Henry, duke of Orleans, son of Francis I. 

She contributed, in a high degree, by her personal and mental accomplishments, to adorn the splendid court of her father-in-law, and by her comeliness and discrimination contrived to ingratiate herself with persons of opposite characters and interests. At the death of Francis I., her husband succeeded to the crown under the title of Henry II., and she became queen. Although she had been barren for the first ten years after her marriage, she had afterwards ten children; three of her sons being successively kings of France, and one daughter queen of Navarre. During Henry's life, she devoted herself to the education of her children; and in this employment she gained that ascendancy over them, which enabled her for a long time to maintain supreme authority. Upon the death of her husband, in 1559, her son, Francis II., succeeded to the throne, at the age of 16 years; and during his reign, though she was obliged to concur in some degree with the violent and perfecuting measures of the family of the Guises, they were not irreconcilable to her inclinations, and she manifested her desire of more moderate proceedings, by raising to the pontiff of chancellor, the virtuous Michael de l'Hôpital. In 1562, Henry II. was succeeded by his brother, Charles IX., in his eleventh year. 

Catharine still maintained her authority, and, in order to counteract the power of the Guises, inclined to the party of the king of Navarre and the associated princes. Upon the death of the duke of Guise in 1562, the two contending parties, that had occasioned a civil war, were reconciled; and Catharine, puffed up with pride, began to display in their full extent her difflamatory politics. Whilst she courted the catholics, she laid plots for the total destruction of the Huguenots, the consequence of which was the renewal of civil war; and she pursued such a course of difflamation and treachery, in her attempts to destroy that party which could not be subdued by force of arms, and received such abundance from her execrable son, whom she had initiated in every art of dissimulation, as to prepare the way for that massacre on St. Bartholomew's day, 1572, which has doomed to infamy the name of Catharine de Medecis, one of its chief contrivers. Instead of this compounding the troubles of France, every thing remained in a tumultuous state during the remainder of this reign, which was terminated by the death of Charles in 1574. Upon this event Catharine was declared regent, till the return of her next son, Henry III., from Poland, of which kingdom he had been elected the sovereign. In this high official character, she exerted herself with wisdom and vigour, in preventing those disturbances which the collision of existing parties had a tendency to produce, and thus delivered the kingdom to her son in a condition, which, with prudence and virtue, on his part might have augmented a prosperous reign. But he had derived his principles from her instruction, and his conduct was formed on her example of infidelity and dissimulation. His own character was such, that it warranted no confidence in any measures of which she had the direction. The party of the Guises revived; the league was formed; war was renewed with the protestants, and during the prevalence of public disorders, aggravated by Henry's attachment to his minions on the one hand, and the popularity of the Guises on the other, Catharine lost her authority, and she lived only to lament the misgovernment of her son, as the result of the inhuman policy, which she had laboured to inculcate. Soon after the alienation of the duke of Guise, from the guilt and reproach of which she endeavoured to exculpate herself with strong excrecences, Catharine, having incurred the detestation of all parties, died in January 1589, in her 50th year. Under a dispensation of having been concerned in the duke's murder, notwithstanding all her protestations, the Pantins threatened to throw her body, if it was brought into their city for interment, into the river or common sewer. On her death-bed she is said to have given excellent advice to her son; though little conformable to her former precepts and example. 

"Catharine de Medicis," as one of her biographers eloquently chose to account of her, "is said to have been puffed up, in a degree superior to any woman of her time, of all the arts of simulation and allurement, of all the graces of her sex, and the splendid qualities of her station; she was affable, courteous, magnificent, and a liberal encourager of learning and the polite arts. She was likewise endowed with extraordinary courage and preference of mind, strong judgment, and great fertility in expediency. But she had the common fault of her country, of aiming at excessive refinement of policy; and by alternately caressing and hidng with every party, she in the end lost the confidence of all. With respect to her moral qualities, there is nothing diabolical in the human character with which she has not been charged by her enemies; and even her friends are obliged to make large concessions on this head. Scarcely preserving the decorum of her sex, she was loose and voluptuous in her own conduct, and was continually attended by a train of beauties, whose compliant charms she employed in debauching those minds which she could not gain by the common allurements of interest. Nearly indifferent to modes of religion, she was much addicted to superstitious of the darkest kind; and believed in and employed the delusive practices of magic and judicial astrology. The depth of her dissimulation, and bloody train of her perilous policy, have sufficiently been shown in the fletch of her actions; and many inferences might be brought of the savage pleasure or indifference with which she viewed the cruelties she had dictated. Perhaps the heaviest charge against her is the detestable principles in which she brought up her children, whom she early immured to blood and perfidy, while she weakened their minds by debauchery, that she might the longer maintain her power over them. Accordingly, except Francis, who can fearlessly be said to have displayed any character, her other sons, Charles, Henry, and the duke of Alençon, were compounds of every thing abominable and deplorable. To conclude, the historian Davila, who was peculiarly attached to her service, and favoured by her, terminates a copious eulogy on her personal and mental qualifications, with confessing that she was totally void of faith, and more indifferent to the shedding of human blood than became a woman. Moreri. Nouv. Dict. Hist. Mod. Un. Hist. vol. xx. p. 373; &c. vol. xxi. p. 1. 45. Gen. Blig. 

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Catharine I., empress of Russia, was of obscure origin, being a natural daughter of a country girl at Ringen, a small village upon the lake of Viretche, near Dorpi, in Livonia, and where she was born, according to her own account, on the 6th of April, 1689, but according to other more probable statements, in the year 1685. Count Rofen, a lieutenant-colonel in the Swedish service, and proprietor of the village of Ringen, supported, according to the custom of the country, both the mother and child; and the reason was supposed to be her father. At the age of three years she lost her mother; and, Rofen dying about the same time, she was left in a condition to direct, that she was received by the chief of the parish into his house. Soon afterwards Guick, a Lutheran minister of Masenburgh took her under his protection and employed her in attending his children. In 1701, she married a dignitary of the Swedish garrison of Masenburgh, who, as some few, lived with her eight days after their marriage; but others have alleged, that on the morning of the wedding her husband was sent with a detachment for Riga, so that the marriage was never consummated. At the time, however, when Masenburgh surrendered to the Russians, the dignitary was absent, and Catharine left him as more. On the capture of this place general Bauer saw her among the prisoners, and being smitten with her beauty, took her to his house, where she superseded his domestic affairs, and was supposed to be his mistress. In a little while she passed into the family of Prince Mentchikof, who was no less her admirer than the general, and she lived with him till the year 1704; when she became the mistress of Peter the Great, and gained such an interest in his affections, by her unremitting attention, by the gentleness of her disposition, and by the vivacity of her temper, that the emperor, who was thusfoothed in his occasional intervals of gloom, voluptuous, and even madness, privately married her in 1710 or 1711. From this time she became his constant companion in his journeys into foreign countries, and in all his military expeditions. In 1711, she attended him in his campaign against the Turks; and the peace of Pruth, which released the Russian army from certain destruction, has been ascribed to her powerful interposition. The occasion was this: when the emperor had led his troops into a very dangerous situation, he formed the desperate resolution of cutting his way through the Turkish army in the night; and retiring to his tent in an agony of despair, he gave positive orders that no one should be admitted, under pain of death. In this important juncture, the principal officers, and the vice-chancellor Shafiroot, assembled in the presence of Catharine, and drew up certain preliminaries for the purpose of obtaining a truce from the grand vizir. Pliant petitioners were immediately dispatched, without the knowledge of Peter, to the vizir, and a peace was obtained on more reasonable conditions than could have been expected. With these conditions Catharine, notwithstanding the orders issued by Peter, entered his tent, and obtained his signature. By this conduct she gained great popularity, and the emperor himself specified her behaviour at Pruth, as one of the reasons which induced him to crown her publicly at Moscowa with his own hand. In 1712, her marriage, which had taken place secretly in the preceding year at Lawerof in Poland, was publicly solemnized at Peterburgh. Catharine maintained her influence undiminished until a short time before the death of Peter, when an event occurred, which might have occasioned a total rupture, if death had not intervened. The emperor, probably not unapprized of some of her amours, suspected that she had an illicit connection with Mons, her first chamberlain. Having concerted measures for making a discovery, he surprised Catharine in an arbour of the garden with her favourite; while his father, madame Balke, who was first lady of the bed-chamber, was in company with a page, upon the watch without the arbour. Peter bruck Catharine with a cane, and then retired without uttering a single word. Soon after Mons and his follower were taken into custody. The former was examined, on a charge of bribery, in the presence of major-general Utchakov, and being threatened with the torture, he confessed the corruption had to his charge; and he was beheaded. His father received five strokes of the knout, and was banished too. Soon after, two of her sons, who were chamberlains, were also detached, and sent as common soldiers among the Russian troops, in Rossua. On the day subsequent to the execution of the sentence, Peter conveyed Catharine in a room covered with the green stuff, to which was nailed the head of Mons, and the corpul, without changing colour at this godful object, exclaimed, "What a pity it is, that there is so much corruption among courtiers!" This event happened in the year 1724, when she had been publicly crowned at Moscowa, and had received the imperial insignia from the czar's own hands. As it was followed by his death, and Catharine recalled madame Balke, she was suspected of shortening the days of her husband by poison. But, notwithstanding the critical situation of Catharine at the time of his decease, and her subsequent elevation, this charge is destitute of proof; for the nature of the disorder with which Peter had been long afflicted, and the peculiar symptoms of his last illness, sufficiently account for his death, without recurring to poison. As it had been decreed in 1722, that the reigning sovereign should have the power of appointing his successor, Peter ought to have made provision accordingly; but his last illness, and the circumstances of excruciating torture attending it, prevented the performance of this necessary duty. Amidst the cabals which succeeded his death, Catharine, by means of her friends, claimed the throne in right of her coronation and inauguration at Moscowa; and these recent acts on the part of Peter were interpreted by them as a sufficient proof of his intentions. The art of Catharine, and the activity of Mentchikof, ultimately prevailed against the party, which supported the claims of Peter Alexowitz, the czar's grandson; and, notwithstanding her mean and base origin, she was established on the throne of the czars of Russia, to the prejudice of its linear heirs. The empress, who had neither inclination nor abilities to direct the helm of government, placed implicit confidence in Mentchikof, the original author of her good fortune, and the sole influent of her elevation to the throne; and the reign of Catharine was, in fact, the reign of this confidential favourite. To her humanity and compassion, which were distinguishing features in her character, may be imputed the recall of many exiles from Siberia, as well as the demolition of the wheels and gibbets on which the bodies of criminals had been exposed during the severe reign of her husband. She generally professed in the course of her short administration the plans of Peter for the improvement of his dominions; and in 1725 completed the institution of an order of knighthood for the reward of those who had signalized themselves in the service of their country. See ALEXANDER NEVSKY. Her life, during her short reign, was very irregular; averse from business, she would frequently pass whole nights in the open air, and indulged to excess in the use of Todays's wine and strong liquors. These irregularities, joined to a career and a droop, hastened her end; and she died on the 17th of May, 1727, a little more than two years after her accession to the throne, and in the 39th year of her age. The personal attractions and mental abilities of this empress have been much exaggerated.
aggravated by her pugnacity. In her person she was under the middle size, and in her youth delicate and well-formed, but as she advanced in years inclined to corpulency. She had a fair complexion, dark eyes, and light hair, which she was accustomed to dye black. She could neither read nor write. She is said, however, to have maintained the pomp of majesty united with an air of ease and grandeur; and Peter himself frequently expressed his admiration at the propriety with which she occupied her high station, without forgetting that she was not born to that dignity. Her culpable qualities, after all the abatements of panegyric, were generally acknowledged. She was humane in an exemplary degree, good-natured and obliging in her temper and manners, and duly mindful of the grand offices which had been performed for her in her low condition. She avoided herself of her ascendancy over Peter, in softening the asperity of his passions and restraining their violence; insomuch that a word from her, in behalf of a wretch, who was about to be sacrificed to his anger, would instantaneously disarm him; and if he determined to indulge his resentment, he would give orders for the execution when she was absent, for fear she should plead for the victim. Upon the whole she merited the honourable title, bellowed upon her by the celebrated Metternich, of "the Mediatrix between the monarch and his subjects." Coxe's Travels in Russia, vol. ii. ch. ii.

CATHERINE II. empress of Russia, originally denominated Sophia Augusta Frederica, was the daughter of Christian Augustus, prince of Anhalt-Zerbit-Dornburg, and of the princess of Holstein, a woman eminent for talents and beauty. She was born at Stettin in Prussian Pomerania, May 2, 1729, educated by her mother, and in early life distinguished by her good humour, intelligence, and spirit. During the first 15 years of her life, she lived alternately in Stettin and in Dornburg, or Zerbit, occasionally accompanying her mother in several little journeys, which much contributed to the forming of her mind and manners; and at this period, she devoted her time to reading, reflection, learning, and employment. About the beginning of the year 1744, she visited Berlin, and continued her journey to Russia. Her access to the court of Peterburg was rendered easy by the marriage which had been projected between the empress Elizabeth, and her mother's brother, the prince of Holstein-Lutin, but which the premature death of the latter had prevented; and her mother, fully apprized of the tender remembrance preferred by Elizabeth for her brother, resolved to avail herself of it for securing a throne to her daughter. Accordingly, Elizabeth received the young princes with a partial regard; and determined to accomplish a matrimonial union between her nephew, the grand-duke, afterwards Peter III. and Sophia; who, though instructed, under the tuition of her mother, in the Lutheran doctrines, embraced the religion of the Greek church, and on this occasion changed her name to that of Cartharine Alexienna. As soon as the choice of Elizabeth had been announced to the council and to the foreign ministers, the day was fixed for the nuptials, and preparations were arranged for its celebration in a manner worthy of the heir of the throne of Russia. A circumstance, however, occurred, which retarded this wished-for event. The grand-duke was feizd with the small pox, which, being of a very malignant nature, endangered his life; and to much deformed the comeliness of his face, as to render it for a time disfigured, and almost hideous. This metamorphosis produced a horror in the mind of the young princes at the first interview, which, however, she had sufficient art to disguise, and which proved no impediment in the way of their speedy union. The empress contemplated this alliance with pleasure; the princes of Zerbit was painfully delicious to see it concluded; and the sensations of ambition acting more powerfully on the heart of Catherine than the will of her mother, and that of the empress, did not allow her a moment's reflection. In 1745 the nuptials were accordingly solemnized; but, notwithstanding the attachment which was to unit the grand-duke and the princes from the first moment of their meeting, their love was fated to be of no long duration; nevertheless, they lived for some time with an apparently good understanding, which Catherine supported as long as she conceived it to be necessary. Their dispositions and their accomplishments, however, were very different: whilst Peter blushed at the superiorities of his wife, she often blushed at seeing him so little worthy of her; and, incapable of making each other happy, their mutual dislike was soon visible to those who frequented the court; it every day increased, and became more and more apparent. Whilst the enemies of Peter contrived to excite prejudices against him in the mind of the empress, and he was led by various artifices on their part, and by the jealousy manifested by Elizabeth, to retire from court, and to indulge himself in the vices of drinking and gaming, Catherine was busily employed in gaining partisans from the most powerful perfons of the court. Her violent disposition to pleasure was controlld by views of ambition; and if she did not succeed so far as to captivate the friendship of the empress, she at least extorted her esteem. The princes of Zerbit, at the same time, abused the confidence reposing in her by the empress; and taking advantage of the influence she had acquired, she mixed in the intrigues of the courtiers, made herself the dispencer of imperial favours, and preyed into the secrets of the most important concerns. Her arrogance disfigured the favourites, and her curiosity was vexations to the ministers. At length they united together to rout the jealousy of the empress, and by degrees induced her not only to withdraw her misplaced confidence, but to order those that the princes should quit the empire. Catherine herself regretted her mother's departure; but the hope of the throne which had fortified her against other misfortunes, supported her under this; and love soon became a source of confolations, which heightened those which pride administered. In the number of those who formed the parties of the grand duke, Soltikof, the prince's chamberlain, was particularly distinguished by his taste for the arts, as well as by the graces of his person; and vanity, perhaps, more than love, led him to conceive the nefarious design of captivating the heart of Catherine. His continued attentions at length produced effect; he became master of the affections of the grand duchess; and the pallion which was at first regarded on his part, grew up into a real attachment; their mutual partiality, avowed to each other, became too unguarded to be concealed from the courtiers, who envied the preference that wounded their pride. They therefore determined to communicate to the empress their fulpicion of an amour between the chamberlain and the grand duchess. Elizabeth, though of an amorous disposition herself, declared, in the first bursts of her indignation, that Soltikof should pay for his temerity by an exile into Siberia: the chamberlain contrived to avoid the danger that menaced him by complaining to the grand duke of the calumnies that had been so audaciously spread; and by requesting that, in order to furnish no farther pretence to the jealousy of his enemies, and to calm the mind of the empress, he might obtain permission to retire to Moscow. The credulous prince, thus deluded, ordered him to remain in his station, and in an audience with the empress, vindicated the innocence of Soltikof, with so much vehemence and by such a variety of arguments, that Elizabeth herself was inclined to ascribe to envy the injurious
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rious reports that had been circulated against him. Catharine also pleaded his case, and that of her own honour, with so much eloquence, that her victory over the empress was more complete than that of the grand duke. The interference between Soltikof and the grand-duchess was renewed and continued; and Catharine acquired boldness from her successes, and from the example of Elizabeth, whose manners were becoming daily more and more corrupt, and who, engaging from day to day in some new follies, seemed to afford some excuse for her passion. In 1755, when Soltikof thought himself perfectly secure, the grand chancellor Bethucchef contrived his ruin, and prevailed with the empress to appoint him minister pleni potentiary from the court of Russia to Hamburg, where he was to reside. He also counteracted the influence which the grand duchess was induced to employ for his recall; and her ambition imposed silence on her. For some time they corresponded with each other; but in 1755 the young count Stanilus Poniatowski suppressed Soltikof in the attachment of Catharine, and in the following year they declared to one another their mutual affection, and confided on the means of inducing their inclinations without restraint. The empress Elizabeth was soon informed of this new intrigue of her adoptive niece, and the ordered Poniatowski to quit Russia without delay. The chancellor Bethucchef, in the mean while, was gradually strengthening his party with that of the grand duchess; and in 1756 he engaged count De Bruhl, prime minister of the king of Poland, to procure the nomination of Poniatowski as minister pleni potentiary of the republic and king of Poland to the empress Catharine. This measure having succeeded, the pleni potentiary arrived, and Catharine made so little secret of the intimacy fulfilling between them, that public report was very loud to his prejudice. The grand duke was the only man at court who knew nothing of what was passing. His time was wholly occupied in attending the ufeles manœuvres and painful exercices of his soldiers, and when these were finished, in indulging the exccees of the table, and boasting, in the delirium of intemperance, that he would one day be conqueror of the north, and the rival of the Persian hero. At length, however, the jealousy of Peter was alarmed; and no time was lost in follicrizing the usurps of the husband into proofs of the inidelity of the wife, in her love for the Polander, and the criminal correspondence they mutually entertained. The prince was overwhelmed with grief and conftration; forbade the grand duchess to be seen with Poniatowski; and hastening to the empress, besought her to avenge the affront he had received; informing her, at the same time, that the grand chancellor had not only favoured the misconduct of the grand duchess, but had repeatedly betrayed the confidence of his imperial aunt. Elizabeth, moved at the forrows of her nephew, and incited at the treachery of Bethucchef, gave orders to arrest him; and in the sequel he was deprived of his place, tried, pronounced guilty of high treason, and sentenced to death, which sentence was afterwards commuted for banishment to an exile 120 webs beyond Mol- cow. Catharine, apprehending everything from the resentment of her husband, and forsaken by her courtiers, was reduced to a very diffreited and almost hopeless situation. In the year 1761, the health of Elizabeth began vividly to decline, and the necessity of repolf, added to her natural in- dolence, made her more negligent than ever of the affairs of government. Woroizof was grand chancellor, and on him depended the conduct of the public business; and the empress, hardly able to pursue her ordinary dilifications, amused herself with the idle tales that were brought her of the amorous revels of her nephew Peter with one of the daughters of Woroizof. Catharine renewed his efforts for a reconciliation with the empress; but she would listen to no accommodation, except on the most mortifying conditions. It was afterwards proposed to her by a message from Elizabeth, to confess her guilt, and to submit to the divorce of her husband and the empress. From this moment Catharine fummoned up all her pride. She purposely avoided appearing at court, kept close to her apartments, and asked leave of the empress to retire into Germany: a permission which she knew would not be granted; because, well apprised of the extreme fondness of Elizabeth for the young Paul Petrovitch, she had no reason to apprehend that the princes would consent to the departure of the mother of a child, who would thereby be exposed to the hazard of being hereafter declared illegitimate. The tratagem succeeded, and an accommodation soon ensued. At the very moment when she was thought on the brink of irremediate disgrace, to the great astonishment of the court, she made her appearance at the theatre, by the side of the empress, who carefully drew upon her the notice of the spectators by the particularity of her attentions. The ambition of Catharine was routed by Elizabeth’s approaching dissoluition, and she felt the necessity of conciliating the popular favour by an exterior of piety, which, by those who bel knew her, was suppos’d not to proceed from her heart. However, she was punctual in frequenting the churches at the flated times of public devotion; but more particularly at the prayers that were now daily put up for impairing the re-establishment of the health of the empress. She employed herself also for several days in the form of the procession following the emperor as well as that of the oath to be taken by the troops. At length, on Christmas day, 1761, the empress Elizabeth expired; and Peter III. ascended the throne. In the beginning of his reign his conduct was not only blame- less, but laudable; he appeared to be suddenly transformed into a different being; as grand duke, he had been inconsistent, impetuous, and wild; but as Peter III. he appeared equitable, patient, and enlightened. He was kind to all who had been attached to the late empress; he continued in their posts all the great officers of state; and he pardoned all his enemies. The grand duchesses received from him the most flattering flulations and marks of the greatest confidence. He seemed to forget the wrongs he had suffered in the elegancies of her mind, and the force of her genius. He passed a great part of the day in her apartments, dif- coursed with her in a free and friendly manner, and consulted her on all affairs of delicacy and importance. The courtiers were surprized, and congratulated Catharine on her happy lot. Catharine was almost the only person who was not deceived. She knew that her husband was not capable of govern- ing by himself, and she was too well acquainted with his character to mistake that for benevolence, which was only weakness. The first measures of his government were popu- lar and auspicious. Unsteady and capricious in his temper, his private and public conduct was variable and fluctuating, and indicated that levity of disposition which was the predominant feature in his character. His un- friendly attachment to the king of Prussia gave offence to his subjects, led him to flight all the foreign ministers, excepting the Prussian envoy Mr. Keith, the British ambassador, and occasioned alterations in his plan of conduct and government, which created a great number of enemies, and evinced, that if he had sometimes good intentions, he was deficient in judgment, and especially in that energy of character so ne- cessary for the ruler of a nation. Together with the wifef plans, he often adopted such as were uflefs, and others that were even dangerous. The defe of making improvements induced him impatiently to hazard premature reformation. By converting the wilif politicians of the church
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church into domains of the crown, and assigning to the clergy yearly films, and by other measures of an ecclesiastical nature, he invited a numerous class of men, whose influence was very extensive. His enemies forged a report from one end of the empire to the other, that he had only gone to embrace the Greek communion in order to exalt himself for filling the throne; but that he was still a Lutheran at heart, of which he was every day giving fresh proofs, by showing a profound contempt for the rites, the ceremonies, and the religion of the Russians. It was abundantly proved, that he never spake but with disdain of the Russian empire, and never mentioned the Germans but with contempt. All these reports, circulated with artifice, soon ascended from the prince those hearts which the full measures of his reign had attached to him. To the army, also, he gave great offence, by manifesting a decided preference of the German soldiers to the Russian troops, and by a variety of other measures, which were subjects of general animosity. But still, he disapproved all parties by his declared intent of taking by force of arms the duchy of Schleswick, on which the kings of Denmark had seized to the prejudice of the dukes of Holstein.

Many of his measures were adopted in direct opposition to the court of the king of Prussia, who was well acquainted with the character of Peter and that of Catharine, and who had long foreseen that event which afterwards happened. Moreover, Peter indifferently refused his former habits; frequently palling the whole day in drinking and smoking amidst a company of base courtiers, most of whom were eagerly seeking his ruin, and perfidiously applauding his fantastical humour, and his most dangerous innovations.

His behaviour to the empress was no less inconsistent than other parts of his conduct. Whilst he was paying homage to the superiority of her mind, he would allow to escape from him some intimations of the indignation which had taken possession of his breast on account of the wrongs he had suffered. In the most sacred and pompous ceremonies of the Russian church, in, e.g., as the benediction of the waters (see Construction), he caused her to appear adorned with all the marks of imperial dignity, while he contented himself with following her train in the rank of a simple colonel, as if he intended to show to his people, that she was born to govern, and that it was his province to obey. At court he would often have her to execute the whole of the representation; while he, dressed in the uniform of his regiment, respectfully came and presented to her his officers, whom he called his comrades. But this apparent honour conferred on the empress was of no long duration. As soon as he thought himself well settled on the throne, he no longer concealed his indifference, and he sometimes manifested it in the most humiliating manner.

At the time of the celebration of the peace with the king of Prussia, Peter, who, during the exhibition of the works, was seated by the side of Catharine, on facing the counts Woronzof, his mistress, paiz by, called to her, and made her sit down by his side; upon which Catharine immediately retired, without any endeavours to detain her being vouchsafed on the part of her husband. Other instances of mortification occurred, which Catharine felt to such a degree, that her tears interfered the spectators, while the hauteur of Peter excited their indignation. It was by such treatment, however, that the hopes of the empress revived. She opposed to his flights and rovings great circumspection and regularity of address; and she gained the hearts, which the emperor was losing. Instructed from her infancy in the arts of dissimulation, she affected, in the sight of the multitude, sentiments very foreign to her mind. The pupils of the philosophers affirmed the air of a bigot; the fecondly replied every day to the churches of Peterburg, praying with all the semblance of a sincere and fervent devotion, punctual in the most superfluous practices of the Greek religion, according the poor with beneficence, and treating the pages with reverence; who did not fail afterwards to prove her prof from hour to hour. In the apartments of the prince the mode of life pursued by this married pair was not very distant from that of their public conduct.

While Peter III. was shut up with the counts Woronzof, Mr. Keith, and Prussian officers, and others of his favourites; while he was, to far hence from his rank as to be familiar with buffoons, and to make them at times sit at table with him; the empress kept her court with a mixture of dignity and affability which charmed all who approached her; and she particularly directed her attention to those persons, who, by their reputation, courage, or intrigues, might serve her cause. By such acts of immodesty as we have now related, the ex-Emperor did not only the greater number of the Russians, but almost all the agents from foreign courts. Having concluded a treaty with the king of Prussia, Peter III. caused the peace to be declared with the greatest magnificence; and in the midst of their festivities, he summoned a particular attention to the counts Woronzof, who was always painting a picture of accordance over him, and who found means to induce the ex-Emperor, by flattering at one time, by flattering at another, and sometimes by a degree of daring insolence which led her even to boast him: to renew the promise he had made, while he was only a grand duke, that he would marry her, and place her in the room of Catharine on the throne of Russia. Proud of this hope, she had the imprudence to boast of it; and this imprudence brought on her ruin. Peter III. no less infernal than the counts, did not disguise his intention to repulse Catharine; and to declare the illegitimacy of her son, Paul Petrovitch. He determined, however, to cover this act of delupinism with an appearance of jealouy; fondly imagining, that when he published to the world the proofs of the imbecility of Catharine, his conduct would gain the approbation of all his subjects and the retreat of Europe. Hopeless of an heir, on account of a certain imbecility which was attributed to him, though he lived openly with the counts Woronzof, held frequent audiences with a handsome page-dancer of Peterburg, and had various companions of great fortune; he caused a regular project for supplying the place of Paul Petrovitch. He determined to adopt prince Ivan, who had been deposed by Elizabeth, to declare him his successor, and to unite him in marriage with the young princess of Holstein-Beck, who was then at St. Peterburgh, and whom he cherished as his daughter. But such were the indications of the ex-Emperor, that they revived from day to day the hopes of Catharine; and the designs he had formed against her, for part of which was well known, emboldened her to run all hazards in order to prevent them. Dismayed for Peterhof, and lodged in one of the apartments of the palace that was most retired, she bade for days in meditating the project for precipitating her husband from the throne, and her arrival in the company of a peculiar intimate, whom she had made the most trusted of the conspirators. Gregory Orlof, to that was his name, poiffled neither the advantages of birth nor those of education; but he had received from nature what are often found more useful, courage and beauty. He had a soul in the artillery, while his two brothers were only common soldiers in the infantry of guards; he had also been elected by Count Peter Salavat, grand-master of the artillery, as aide-de-camp; and for his merit he had one of the most illustrious and the handsomest women of the court, the princess Kirakin, who preferred him to his general. The general, however, having furnished them together, threatened to exert his merit for procuring the banishment of Orlof to Siberia. The story of this adventure reached the retreat
in which Catherine was compelled to do penance; and her
capability to feel him being excelled, was gratified by the
con−
currence of Catherine Ivanova, the most ingenuous of con−
fidantes, and the last terpomys of daemons. After repeated
interviews, the empress unveiled to Orlof, of whose hold−
nels and discretion she had previously assured herself, the am−
bitious designs which she had been projecting. Orlof com−
piled with her wishes; entered into a conspiracy with her,
and engaged his brothers, together with several officers,
by whose instrumentality he gained to his party some com−
panies of guards; but without imparting to them his real design.
Catherine was only grand-duches when her connection with
Orlof commenced; and her correspondence with him, as
well as with other officers, was carried on with no less act
than fæces. Some of the courtiers also participated her favours;
but not having sufficient confidence in their tithe to,
the more made them her friends, without dictating to them
her secret. Lieutenant-general Velibons was one of those
whom she particularly distinguished. When she was seated
on the throne, she attached to her interest the remainder of
those conspirators, at the head of whom Doloch and the
Shuvalof had inactively appeared, and of whom the het−
man Kurin Razumofsky, the prince Volkonok, nephew of
the exiled Doloch, and major-general of the guards, and
Count Panin, were the most powerful supporters. She had
also been able to form another conspiracy, contrived by the
young princes Dalhoff, who, at the early age of 16 years,
was singularly active and impetuous. At the sacrifice of
these several actions went without the knowledge of
each other; and Catherine, who directed and animated them
all, seemed to have no share in the plot. Princes Dalhoff
had in her train an adventurous Podmonte, named Odart,
whom penury and the hopes of making his fortune had
brought to St. Petersburg; and by her interest, the empress,
for the sake of him the title of private secretary; in consequence of which appointment, Odart be−
came one of her confidents in her ambitious designs. The
princes Dalhoff and Odart contrived to engage Razu−
mofsky, count Panin, prince Volkonok, and the archbishop
of Novgorod in their party. Gleb, whom the czar had
raised from the lowest forms of chicane to the important
place of procurer-general to the senate, joined this band of
conspirators. The aim of all those who severally contrived
against Peter III. was to dethrone him; but they had dif−
ferent sentiments with regard to the proper mode of re−
commencing their purpose. Panin, Razumofsky, and Orlof
thought it best to begin by feizing his person at Peterhof,
the imperial palace, intuate on the shore of the Cronstadt
gulf, at the conclusion of one of those orgies which could
not fail to take place on his coming thither to celebrate the
anniversary of St. Peter and St. Paul. One of the conspir−
ators, lieutenant Patlick, the most fervent of his country−
men, lured on affixing him with a pegard in the
mild of his court, and actually lay in wait for this purpose;
but he was disappointed in his design. The conspirators,
who differed as to the means of destroying the czar, were
still his agreed on the manner of supplanting his place.
Catherine adored to the pole pollution of the supreme autho−
rit; and this pretention was supported by the princes
Dalhoff and Orlof. Panin, on the other hand, proposed,
that the should govern only in the name of regent; and that
the tute of emperor should devolve on the young grand duke
Paul Petrovitch. And in this opinion the hetman Razu−
mofsky concurred. Those who wanted to confer the su−
preme power on Catherine, vied with each other in their
endeavours to induce count Panin to alter his mind; and if
their efforts had not been aided by the court's passion for
the princes Dalhoff, they would have proved altogether
ineffectual. The conspirators being agreed, proceeded to
deal means for the execution of their plans. While the
friends of Catherine received confiding information of the
movements of the czar, she was ignorant of all their proceed−
ings. Expecting, in indulgent security, the felicities of
Peterhof, to which we have already adverted, her majesty
was gone to pass some days at his country palace of
Oroevanum, whither he was accompanied by some of the
handsomest women of the court, and where he had purposed
to cause the empris to be arrested. In the mean while
some persons, who had perceived the a plot against the czar
was in agitation, advertised him of it; but he disregarded
the information, and could not be prevailed on to seize
the traitors. However, when the conspirators were about to
accomplish their design on the arrival of the czar at Pet−
erhof, their plot was discovered, and Paliakk was arrested;
so that it became necessary to hasten its execution; the time of
action was the silence of the night, without allowing the
emperor an opportunity for forming an inclination to prevent
him, by the troops and the people time arm for his de−
fence. Catherine, under a pretence of leaving the apart−
ments at the palace free for the festival that was to be cele−
brate', in reality with the view of facilitating her own
escape, was lodged in a remote underground, called Mon−
pisa; there, at the extremity of the garden, on the shore
of the Gulf of Finland. Here she had a small boat, which
might occasionally be of service in the secret visits of her fa−
vourites, and the facilitating her own escape into Sweden, if
the conspiracy should be discovered. At the hour of two in
the morning, when the conspirators were in a profound sleep,
she was suddenly roufed by a feller, unknown to her, who
delivered a note from princes Dalhoff, and accompanied it
with a declaration; "Your majesty has not a moment to
lire; get ready to follow me!" upon which he immediately
disappeared. Catherine, astonished and terrified, called
Ivanova; and having disguised themselves by their draps,
so that they could not be known by the females about the
palace, they hastened to a carriage that was waiting for
them at the garden-gate. As soon as the conspirators had fet−
herself in it, Alexey Orlof, one of the conspirators, took
the reins, and set off at full speed. An accident happened
to the horses, which retarded their flight, and threw them
into confusion. Their danger was imminent; and they re−
solved to make the best of their way on foot; but they had
not proceeded far before they met with a light country cart,
which conveyed them with speed and pricity to Petersburg.
Catherine, worn out with fatigue and anxiety, but sufficiently
full-polished to allude a felate and tranquil air, arrived in
the city at 7 in the morning, on the 9th of July, N.S. 1762.
She was received by a small band of fellers with elanorous
flavours of joy; and though their number was small, they
were to be in her defence. Their example was soon fol−
lowed by other fellers, who, with one consent, declared her
hegemon. The oath of the troops was received on a cruci−
fix, fished from the altar by the chaplain of the regiment of
Infanof; and the Simeon'sky and the Probagin sky
guards joined those of Ilushof. In the interval of two
hours the conspirators came surrounded by 2000 warriors,
and a great part of the inhabitants of Petersburg, who me−
chanically followed the motions of the fellers, and were eager to appalid them. The hetman Razumofsky advised
her to repair to the church of Kazan, whether she was at−
tended with a vast concourse of spectators, who mingled
their acclamations with the shouts of the fellers, and
where the archbishop of Novgorod, accompanied by a
great number of priests, let the imperial crown on her head,
proclaimed her with a loud voice foreign of all the Russians, by the name of Catharine the Second, and declared, at the same time, that young grand-duke, Paul Peterovitch, her successor. A Te Deum was then chanted, accorded with the flour of bread, to the Musiz, of the cavity. Thronged then repaired to the palace that had been occupied by Elizabeth, and for several hourscrowds of peelod men, who told on their knees before it, and took the oath of allegiance. Before the end of the day, Catharine had already sent in a few of the troops; the city was in a formidable state of defence; strict order everywhere prevailed; and not one drop of blood was shed. While the empress retained in the palace, the feet for her Paul Peterovitch, and held him in the balcony of the palace to the view of the people, whose acclamations were redoubled at the sight of the child, thinking that in him they beheld the new emperor. The principal nobles, who had taken no share in the conspiracy, as soon as they heard of it in the morning, retired to the palace, and united their lamentation and oaths of fidelity to those which the empress had just been requiring to Catharine. A manifesto was disseminated through the city, and a notification was delivered to the foreign minister of the day that they were to be admitted to present their compliments of congratulation on the event that had taken place. The troops, immediately supplied with beer and brandy, expressed their satisfaction by reiterated vociferations of Acclamation and by toiling up their hats and caps; but one regiment of cavalry, of which Peter III. had been colonel while he was grand-duke, and which he had incorporated with the guards on his accession to the throne, took no participation in this tumultuous joy. The officers having refused obedience to Catharine, were put under arrest, and replaced by the officers of other regiments. Peerless of this regiment, the ruling party began to march the troops from the city, to proceed against the czar. Peter III. had yet no suspicion of the important event that had occurred. Such and so unaccountable was his security, that he set out, after having received some intimations of the conspiracy, from Oranienbaum in a calash, with his mistresses, his favourites, and the women of his court, for Peterhof, to be present at the grand festivities already mentioned. In the way, Gudovitch, the general aide-de-camp, met one of the chamberlains of the empress, by whom he was informed of her escape, and of the perplexity that had, in consequence of it, filled the whole palace of Peterhof; and upon communicating the intelligence to Peter, he turned pale, and appeared much agitated. On his arrival at Peterhof, his agitation and confusion increased, when he found that the empress had actually left the palace; he was afraid to ask any questions, and his attendants could not summon resolution to give him any information. At length he received the certain and unacceptable tidings of the revolution that had been accomplished; and the chamberlain Woronzof offered his services to hasten to Petersburg, engaging to bring the empress back. The chancellor, entering the palace, found Catharine surrounded by a multitude of people in the act of doing homage; and forgetting his duty, he took the oath with the rest. He was permitted, however, at his earnest request, to return to his house, under the guard of some trusted officers; and thus secured himself from the vindictive spirit of the patriots of Catharine, and from the suspicions of the czar. After the departure of the chancellor, Peter became a prey to the most distressing anxieties, and he every instant received from fresh intelligence of the progress of the revolution. He was increas'd and irrefutably with regard to the meditations that were proper to be purposed at this interesting crisis. Although his Holiness the guards were firmly attached to him, and the veteran marshal Munich offered to dik everything for his service, he remained hesitating and undecided; and after a fruitless attempts to gain possession of the fortresses of Cronstadt, and adopting from other measures, equally unavailing, for concluding the escape, he found it not only expedient, but absolutely necessary to accede unconditionally to her will. The empress deputed count Pahlen to announce to him her purpose; and he was compelled to sign a most humiliating act of abdication, in which he declared his conviction of his inability to govern the state, either as a sovereign, or in any other capacity, and of the defects in which his continuance as the head of affairs would inevitably involve it. While the nature to this fatal act was obtained, Count Pahlen hastened to Peterhof, and Peter seemed to enjoy a greater composure of mind. In the evening, however, an officer with a letter in his hand came and conveyed him prisoner to Rospcha, a small imperial palace, at the distance of about 20 versts from Peterhof.

This was effected in one day and without shedding a single drop of blood, a revolution of immense importance. The unfortunate emperor enjoyed the power of which he made improper use, no longer than six months. Upon his removal from Peterhof, he was blind to the fate that awaited him. He sent a message to Catharine, requesting that he might retain in his service the negro, who had been attached to him, and who argued him with his irregularities, together with a dog, of which he was fond, his violin, a bible, and a few romances; offering her that, disgusted at the wickedness of mankind, he would henceforward devote himself to a philosophical life. Not one of these requells was granted. After he had been at Rospcha six days without the knowledge of any persons besides the chieftains of the conspirators, and the soldiers by whom he was guarded, Alexius Orlof, accompanied by Teplof, came to him with the news of his speedy deliverance, and asked permission to dine with him. While the officer amused the czar with some trifling discourse, his chief filled the wine-glasses, which are usually brought in the northern countries before dinner, and poured a poisonous mixture into that which he intended for the prince. The czar, without distruction, swallowed the potion; on which he was seized with the most excruciating pains; and on being offered a second glass, on pretence of its giving him relief, he refused it with reproaches on him that offered it. Being prevailed to take another glass, when he called for milk, a French valet-de-chambre, who was greatly attached to him, ran in; and throwing himself into his arms, he said, in a faint tone of voice, "It was not enough then to prevent me from reigning in Sweden, and to deprive me of the crown of Ruffia! I must also be put to death." The valet-de-chambre interceded in his behalf; but the two ministers forced him out of the room, and continued their ill treatment of him. In the midst of the tumult, the younger of the princes Baratinsky, who commanded the guard, entered; Orlof, who, in a struggle, had thrown down the emperor, was pressing upon his breast with both his knees, and firmly gripping his throat with his hand. In this situation the two other affairless threw a napkin with a running knot round his neck, and put an end to his life by strangulation, July 17th, just one week after the revolution. These particulars are confirmed by the account of one who was in the confidence of prince Petropkin, who is erroneously said to have been present on the occasion. It was, however, announced to the nation, that Peter had died of an hiliaroidal cancer. When Catharine received the news of Peter's death, she appeared at court, whether he was going, with a tranquil air; and afterwards
Catharine.

Afterwards shut herself up with Orloff, Panin, Razumovsky, Golenis, and some other confidential persons, to deliberate whether the senate and people should be immediately acquainted with the death of the emperor, or whether it might not be more advisable to wait for that purpose till the ensuing day; the latter alternative was adopted. When the news of this event was communicated to the public at large, the empress rode from her seat with her eyes fulfilled with tears; she dismissed the courtiers and foreign ministers, that herself up in her apartment, and for several days exhibited tokens of real and profound grief. The body of the unfortunate exar was brought to Peterburg, and exposd for three days in the church of the monastery of St. Alexander Nevsky, and buried before the relics of the altar. The Holstein soldiers, were, on the day following that of the interment, embarked for their own country; prince George, whom Peter III. had constituted duke of Courland, was obliged to renounce that title; but he was compensated by the empress with the administration of Holstein, where he settled, and ever after served Catharine with fidelity and zeal. The chancellor Belutschef, the most invertebrate enemy of Peter, was recalled from exile, and restored to his rank of field marshal, and to his place in the council, with an annual pension of 20,000 rubles. Several other exiles and prisoners were on this occasion set free; but neither Ivan nor any of his family. Biren, who had been recalled by Peter, was reinstated by Catharine in his dukedom of Courland, where he favoured, to the utmost of his power, the views which the empress had already formed on Poland. Catharine, with a magnanimity which did her honour, wisely manifested no resentment against the few who had preferred their attachment to Peter, and received to favour marshal Munich, who readily transferred his fidelity from the dead to the living. She even pardoned her rival, countess Woronzof, and allowed her to retain the fruits of her lover's munificence.

Although none of the sovereigns of Europe were ignorant of the steps by which Catharine had mounted the throne, they made no hesitation in acknowledging her title. Whilst she was endeavouring to secure peace with the kings of Europe, she neglected no measure that was likely to preserve it within her own empire. In the month of September she took a journey to Moscow, for the purpose of celebrating her coronation in that ancient capital of the empire. Her numerous cavalcade made a pompous entrance into the city; but she was received in a manner that showed she was far from possessing the hearts of all her subjects. As soon as she was crowned in the presence of the follietry and the people of the court, she hastened her departure, though she indulgiously concealed her chagrin, and re-took the road to Peterburg. The precepts and promotions which were made on occasion of the coronation, fell mostly to the share of her adherents in the late revolution. The revolts and conspiracies that disquieted the commencement of her reign were suppressed without much difficulty; and the only fearful that were exercised on the occasion were a few banishments to Siberia. To foreign courts Catharine displayed all the greatness of her character; and at home, combining policy with firmness, she found means to soothe the most dangerous of the priests, and to put a stop to the cabals of the monks. She recalled to court priests Dafiikov, whom she had ordered to Moscow; and the Senate the Piedmontese Oliart, who had incurred the hatred of the whole court. The health of the young grand duke was established; and the flattering expectations that were justly raised by the good conduct of that prince drew off the public attention from the unfortunate Ivan; and the Rollans accommodated themselves to a yoke, which they had in vain attempted to shake off. Ambition, however, did not extinguish in the breast of Catharine the love of pleasure. By the latter she gained the increasing attachment of her courtiers; nevertheless, she could surrender pleasure when the more ardent concerns of government demanded her attention. She alluded at all the deliberations of the council, read the dispatches from her ambassadors, either dictated or dictated with her own hand the answers that were sent to them, and afterwards attended to all the particulars of their execution. Jealous, says one of her biographers, of old renown, she felt before her the example of those illustrious monarchs who effaced their weaknesses by the grandeur of their exploits; and, with the infirmities of men, merited and obtained the grateful acknowledgments of all succeeding times, as the friends and benefactors of the human race. She followed the maxims which she frequently quoted: "We should be conform in our plans. It is better to do amiss than to alter our purpose. None but fools are irrefolent."

Catharine ratified the peace, which her husband had negotiated, with Prussia, and also with Denmark. As soon as she was securely established on the throne, she meditated a variety of enterprises and plans of improvement, which would serve to divert the attention of her subjects from the measures by which the late revolution had been effected, and which, in the refult, would redound to her own glory and the benefit of her country. She applied with unremitting affability and care to the administration of her large estates, the advancement of commerce, the augmentation of the marine, and especially to the means of recovering the finances, without being reduced to the necessity of obviating a parn ominous economy. After engaging in buffets with her ministers, she would frequently converse, in private, with Belutschef and Munich. With one she found politics and the resources of the several courts of Europe, and the other communicatd to her the plan he had been meditating, during his exile in Siberia, for driving the Turks from Constantinople; a plan, the object of which was singularly gratifying to the aspiring mind of Catharine, and which, about 37 years after, seemed to have been on the point of being effected. In many of her manifestoes and ukases, she adopted a style that admirably expressed a regard to justice and to the actual interest of her subjects. When she banished to Siberia for life an officer of the government-chancery of Novgorod, on account of his having taken money for administering the oath of allegiance, she at the same time imposed a severe degree against bribery and extortion. By an ukase, dated Moscow, Oct. 13, 1762, she confirmed the abolition of the secret-inquisition-chancery; rightly judging that she could obtain the love and attachment of the people by better means than by the encouragement of spies and informers; and, therefore, she was no sooner seated on the throne, but she put a complete end to the political inquisition. At the abolition of this inquisition, the objects of which were at first the capital crimes of high treason, attempts against religion, and treason against the state, but which afterwards extended its jurisdiction, Catharine settled the practice to be pursued in future, in the ordinary tribunal, under charges of state crimes, and so plainly and distinctly determined the particular cases of delinquency against the person of the sovereign, and against the welfare of the state, that there remained no room for malicious and unfather interpretations. The crimes denominated religious were entirely suppressed. Catharine further ordained that the truth should be investigated entirely without torture; and, with Frederic of Prussia,
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Prussia, the like wise exhibited, in this reign, a model for the rest of Europe. Her criminal laws have, throughout a mild and gentle spirit; and though the laws were, like Elizabeth, only a maw to punish no one with death yet, during her long reign, a fortune of death was extremely rare. Catharine, in order to meet her instead of life in her country, declined, by a masquer, that called herself welcome and fragrant in the Russian empire; and so under her accession she restored to life. She marked out the districts that were most coveted, and specified, by particular notices, which were to be, and which not. All land, &c. and what all the lands that she should include, and what the Flows might yield. Besides, she encouraged persons to come and settle for a new purpose in the Russian empire, in whatever country they would. Such a man came, artisans, and the like persons. In order to increase the population, or more properly to eradicate a physical and moral ends of deportation, the conduct of the foundling and beggar hospital at Moscow, and afterwards of another at St. Petersburg. She also founded the medical college of the empire in the latter city. In the year 1770, when Catharine was alarmedit with various plots against her person and the state, she was bailed in all the leading and useful measures of government with as much calmness and solidity as if her reign was to be everlasting. She founded colleges and hospitals in every part of her empire. She encouraged commerce and industry; and ordered new ships of war to be put upon the flocks. The beneficial consequence of the spirit she manifested, and of the regulations she adopted, have been since manifested in a variety of instances. Courland, on the Baltic, with its havens, was subjected by her to the Russian sceptre; and on the opposite side of Europe the Euxine laves her extensive conquests; Ochakov, the Cerchio, the Cram, and the Cuban, bear witness to the force of her arms. The failure of her fleet of commerce and of war are spread even in the Mediterranean. On the Greek side the Russian banners are displayed. Her troops opened a road into Egypt, and thence, in 1772, fought in support of Ali Bey, against the Turks. The free inhabitants of the extreme north-eastern point of Asia, the Tchiechsians, were at length obliged to submit; and a channel of no great width (the Strait of the Bering) there only divides the empire from America. A multitude of Russian vessels, in the northern part of the Southern ocean, the Kurile, and five additional acquisitions, connect it with other states, and even with the continent of the fourth quarter of the world; and even upon that the Russians have got a firm footing. The increase of navigation by these acquisitions, and the very lucrative commerce of the furs here procured, the costly skins of the sea otter, and other animals, is of the usual consequence. The differences that arose with China in 1778, were at length composed, and no carriage go from Moscow to Pekin, yet the merchants of these two great empires perceive their trade together, and perhaps better, in the frontier towns of Kiachta and Manchuria. Orenburg, in Asiatic Russia, is excellently situated for commercial intercourse with the East Indies; the caravans require only three months for the whole journey; accordingly, at the half-way thither, at Bak, a town in Extrastia, or Khorasan, Russian and East-Indian caravans already meet together. From this detail we perceive, in part, the benefits resulting to Russia from the commercial spirit of the empress, and from the commercial regulations she established. Towards the end of the year 1763, Catharine gave a proper form to the supreme college of the empire, the healing senate, which had been instituted by Peter I. She divided it into six departments, of which the four former had their seat in St. Petersburg, and the two latter in Moscoy.

With a view to the introduction and diffusion of science and literature among her subjects, she established several useful institutions: the catalogue of persons in various departments of science, and endeavored to give their future employment or own country; she caused herself in numerous instances of letters, which they communicated for the benefit of emigration. When on the throne of Poland had become vacant by the death of Augustus II., in the beginning of the present century, Catharine despised the arts and talents and wealth, which she had in her native country to her advantage. At the turn he made a tour through Lithuania, Poland, and Russia; but, during her residence in the northern kingdom, she was informed that the Flows had been invaded by a great body of troops, which she was not able to resist. Her son, who had been placed on the throne, the minister-general was the king of Poland, his mother, and his whole family, was confined in the fortress of Schillenburg; from this place he was transported together with his family, to the fortress of Riga; from Riga they were conveyed to Danemanda, and afterwards to Oranienburg, a town built by Montefich, in the cold province of Voronech. There he was separated from his family, and being arrested at Smolensk, in his way to Germany, under the conduct of a monk who released him from prison, he was for some time confined in a monastery in the Valdai, near the road that leads from St. Petersburg to Moscow; and, in 1756, by order of the empress Elizabeth, who wished to see him, was removed to Schillenburg, where he had been placed immediately on his dethronement. Here he was so closely confined, that he never was allowed access to the open air, or to the light of day; a lamp was kept constantly burning in his cell; and, as no clock was to be seen or heard, he knew no difference between night and day. His interior guard, a captain and a lieutenant, were shut up in the same cell, but were not permitted to hold any intercourse with him. It is no wonder, therefore, that his ignorance much be burdened on his eye. Elizabeth indeed had caused him once to be brought in a coach over to Peterburgh, and there saw and conversed with him. Peter II., when he proposed to restore him to the throne, accompanied Catharine too. Just after the commencement of her reign, had a conversation with him, in order, as stated in her manifesto of the 28th of August, 1764, to make a judgment of his understanding and talents, in both which respects he found him extremely deficient. At the period to which we now refer, he was arrived at the age of 24 years; and, whatever might have been his incapacity, he was at the moment for exciting dangerous commotions; and from the depth of his dungeon, he afforded hopes to those who held the present usurpation in abhorrence. Accordingly, whilst the regiment of Smolensk was in garrison, in the town of Schillenburg, a sub-lieutenant, of the family of Mironech, formed the bold plan of setting him at liberty, and raising him to the empire. But the two officers, who slept with him in his cell, had a disinterested order signed by the empress, enjoining them to put the unhappy prince to death, whenever any instruction should be made
made in his favour, provided that it could not otherwise be quelled. Mirovitch, having gained the concurrence of a few associats, pointed a piece of artillery at the door of the dungeon, where the prince was confined, and prepared to batter the place; but at that instant the door opened, and he entered, un molested with his whole forces. In the meanwhile the officers who guarded Ivan, after previous consolatation, determined to affililate the unfortunate captive, who, though asked, defended himself for a considerable time. Although his hand had been pierced through, and his body was covered with wounds, he seized the sword from one of the monitors, and broke it; but while he was struggling to get the piece out of his hand, the other flabbbed him from behind, and threw him down. He who had his sword broken, now plunged his bayonet into his body, and several times repeating his blow, the unhappy prince expired: they then opened the door, and presented to Mirovitch the bleeding body of the murdered prince, and also the order by which they were authorized to put him to death, if any attempt should be made to convey him away. Mirovitch, struck with horror, started back some paces; and after expressing his grief for the event that had occurred, surrendered himself to the governor, who confined him and his accomplices. Mirovitch was afterwards condemned to death, and publicly executed in pursuance of his sentence. The inferior actors, on this occasion, being 50 in number, did not suffer death, but were subjected to other punishments, perhaps not less severe. The officers, who afflictiated the prince, were amply rewarded for their fidelity, in consideration of their good intentions with respect to the tranquility of the state. Some have asserted that Mirovitch had been secretly instigated to this attempt for the rescue of the prince by the court, and thus to justify the execution of the orders that had been previously given to the guard; but the punishment of Mirovitch, and the confession which he is said to have made, that the scheme was wholly his own contrivance, seem to acquit the empress of this horrid crime. On the other hand, it has been alleged that his behaviour during his trial, and the composure with which he walked to the scaffold, on which his sentence was to be executed, manifested a kind of assurance, that he should obtain a pardon, which, report says, had been actually promised. But if he entertained this hope, he was cruelly deceived; the time of his execution was accelerated, and the unhappy wretch, if he had before been the instrument, was now the victim of a barbarous policy. Tho'who was charged in the former point of view were atonified that the empress should suffer him to be put to death. But how could she have screened him from punishment without manifestly drawing upon herself the charge of having prompted his crime? And if she were really concerned in it, can it be thought that she would hesitate a moment in getting rid of a witness who would have exposed her to everlasting vexation? Soon after this shocking event, Catharine, whose throne was now established, returned to Petersburg from her journey through the conquered provinces; and, on her entry into the city, she was surrounded by an immense concourse of people, who endeavored to find out by her countenance what was passing in her heart; but always mitem of herself, the face of that princes was ever covered with smiles. Her step was as firm, and her front as serene as those of persons who feel no inward reproaches usually are. The beneficial effects of the empress's regulations and establishments, for the internal administration of government, were every day becoming more apparent in all parts of Russia: she exerted herself to the utmost in giving new spirit to the commerce of her country, in augmenting her navy, and above all, in softening the manners of the people, who were not yet far advanced in civilization; but the progress of her institutions was at first slow, and it was much retarded by want of zeal on the part of the great personages of the empire, and by the spirit of division that continued to reign in Petersburg. What most afflicted the empress was the misunderstanding that prevailed between her favourite Orloff, and her chief minister Panin. In order to silence murmurs of a political nature, and to divert the disaffected, she displayed her table for splendour and magnificence, by a species of entertainment called a "carnival," consisting of tilts and tournaments, sumptuous entertainments, repeated with considerable variations for several days, and vying in pomp and pageantry with any of the feats of ancient chivalry. But Catharine knew also to employ more worthy means for establishing her authority. She skillfully conducted herself in making reforms, and in the establishment of useful institutions. She corrected the tribunals, founded schools, built hospitals, and planted colonies. She endeavored to infuse into her people a love for the laws, and to soften their manners by instruction. Jealous of a power that knew no bounds, greedy of every species of glory, she was determined to be at once both conqueror and legislator. Amidst conspiracies formed for overturning her throne, occupied with preparations for war, which seemed sufficient to arrest her whole attention, and yet finding time for attachments of gravity, she was unmindful of nothing that could attract the reverence of mankind, and captivate their admiration. The perplexed and uncertain jurisprudence of Russia engaged her particular attention; and she resolved to apply a remedy to the various disorders that occurred in this department of the state. Although the success of her patriotic attempt has not yet been complete, yet, in consequence of it, the laws of the Russian empire have been much simplified, and the administration of justice is become much milder and more impartial. Having formed the senate and the colleges into separate departments, and having augmented the emoluments of the judges, in order to deprive them of all pretext or excuse for either negligence or prevarication; she set herself to work on a new code of laws. With this view she summoned deputies to Moscow from all parts of her vast empire, that she might obtain their ideas on the laws that were fitted for their peculiar exigencies; and the herself repaired to that ancient capital. When they were assembled, she wished to leave them in possession of uncontrolled liberty, and therefore, though she attended in the hall where they met, and could see and hear all that passed, the herself was not perceived. The instructions, which she had previously composed, with the assistance of Mathonius and Rozetsky, and which had been chiefly taken from the writings of Montefiquieu and some others of the French philosophers, were translated into the Russian language from the original French, and the business of the assembly was begun by the perusal of them. The original copy, almost entirely in the handwriting of Catharine, has since been deposited, enclosed in a magnificent cage of silver gilt, in an apartment of the Imperial Academy of Sciences at St. Petersburg. Copies of these instructions were afterwards dispatched to the sovereigns, whose approbation Catharine most coveted. They complimented her on her laborious enterprise, and made no hesitation in pronouncing that it would be an eternal monument to her glory. It unequivocally redounds much to the praise of the empress, that these institutions are founded on the principles of an enlightened humanity; and that, though autocratix, and possessing unlimited power, she recognizes no legitimate authority but that which is founded on justice; and that every particular in her laws.
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laws has a tendency to enervate despotic, and to render a just authority respectable. Her purpose was to form a field, and not an arbitrary legislation. Her whole plan was directed to prevent all those who governed her from exercising a capricious and cruel authority, by subduing them to inviolable laws, which no authority should be able to infringe. The empress, proceeding in other respects on the same enlarged and enlightened plan, continued to cultivate and encourage the arts and sciences; to make her empire an asylum to the learned and ingenuous; and to reform the manners and instruct the minds of the people, through the extent of its most distant provinces. The transit of Venus, which happened in 1769, afforded an opportunity of exhibiting as well the munificence of Catherine as the attention she paid to astronomy. It may seem surprising, however, that the empress was not driven to build her fame upon a solid basis, she made it a matter of much importance to obtain from all the powers of Europe the title of imperial majesty, which some of them had refused her. About the middle of the year 1767, the empress conceived the useful project of sending several learned men to travel into the interior of her immense territories, for the purpose of determining the geographical position of the principal places, of marking their temperature, and of examining into the nature of their soil, their productions, their wealth, as well as the manners and characters of the several people by whom they are inhabited. The felicity of the learned travellers defined for this expedition, the helps that were granted them, and the excellent instructions that were given them, will be a lasting honour to the Academy of Sciences, by which they were appointed. About this time, viz. in 1768, the court of Catherine became the asylum of the sciences, to which she invited learned men from every part of Europe. She encouraged artists and scholars of all denominations; she granted new privileges to the Academy of Sciences, and exhorted the members to add the names of several celebrated foreigners to those which already conferred a lustre on their society. Nor was she less attentive to the Academy of Arts, by increasing the number of its pupils, and adding such regulations as tended more than ever to the attainment of the end for which it was endowed. See Academy. For the further encouragement of the fine arts in her dominions, the empress assigned an annual sum of 5000 rubles for the translation of foreign works into the Russian language. The improvement of the state of physic was another important object of her concern; and in order to give the highest possible function to the salutary practice of inoculating for the small pox, the hercelf submitted to the operation under the care of an English practitioner, and the perfuaded the grand duke to follow her example. In 1768, Dr. T. Dimoldile, of Hertford, was invited to Russia for the purpose of introducing inoculation: upon the recovery of the grand duke, Catherine rewarded his services by creating him a baron of the Russian empire, and appointing him counsellor of state and physician to her imperial majesty, with a pension of 5000 roubles a year. To be paid him in England; besides 10,000 roubles, which he immediately received; and she also presented him with a miniature picture of herself, and another of the grand duke as a memorial of his services. Her majesty likewise expressed her approbation of the conduct of his son, by conferring on him the same title, and ordering him to be presented with a superb gold snuff-box, richly set with diamonds. On December the 3d, 1768, a thanksgiving service was performed in the chapel of the palace on account of her majesty's recovery and that of the grand duke from the small-pox: and the senate decreed, that this event should be folemned by an anniver- sary festival, which has been regularly observed ever since.

With regard to her foreign relations, whilst she was giving law to Poland, amusing Austria, conciliating the friendship of Prussia, and treating with England, she was also tampering with the other courts of Europe, and labouring efficaciously towards very soon making herself dreaded by them.

Her schemes of foreign grandeur, which compose so great a part of her history, commenced with her violent and arbitrary interference in the affairs of Poland, which in 1768 caused the Ottoman Porte to declare war against her; but he was not unequal to the contest, which in its progress brought on a series of disorders to the Turks. They lost several battles on the Pruth, Dniester, and Danube, with the towns of Bender and Ackerman, the capital of Bessarabia. The news of these signal successes augmented the pride and strengthened the security of Catherine. The disaffected, who surrounded her throne, dared no longer to conspire against a princess, who was triumphing at such a distance over her most formidable enemies. The provinces of Walachia, Moldavia, and Bessarabia, submitting to the Russian arms, sent deputies to Peterbourg to do homage to the empress; who received them with magnificence, and loaded them with benefits. Whille the Turks were thus harassed by land, and the fleets of the empress were triumphing on the Euxine, she resolved to attack them even in the isles of Greece. With this view, in September 1769, two squadrons of Russian men of war sailed from Archangel and Revel, which were soon followed by others from the Baltic, and entered their hitherto unattempted course for the Mediterranean. The fleet now consisting of 20 sail of the line, 6 frigates, several transports, a number of bomb-ketches, galleys, and vessels with troops for land-service, left the Baltic, crossed the North sea, passed the straits of Gibraltar, and after having been dispersed by a tempest, collected again, and displayed in the Archipelago its victorious flag. This fleet was commanded by admiral Spiridof, but that admiral himself was under the orders of Alexey Orlof, whose share in the Russian revolution had advanced him all at once from the low condition of a simple soldier to the rank of general, and whose audacity served him instead of experience and talents. This naval expedition of Russia forms a remarkable era in the history of marine tactics. Before the arrival of this fleet, some secret agents had been disposing the Greeks to rise up in arms. They were led to expect the Russians as their deliverers; and at the instant when their squadron had gained the height of Cape Matapan (formerly the promontory of Tenaros), the whole Archipelago thought itself free. The Maimots, descendants of the ancient Lacedemonians, were the first that took up arms; their example was soon followed by their neighbours; and the Turks were massacred in several of the isles. But the latter cruelly revenge themselves for the insurrection of the Greeks. Some thousands of these miserable people were exterminated by the fabre of the Janizaries.

The squadron of Spiridof was soon joined by that of Elphinston, a native of England, vice-admiral in the Russian service, and far more capable of commanding than the officer under whose orders he served. To this double squadron was opposed that of the captain-pacha Haffan, surnamed Gazi, or the victorious, by the sultan on account of the courage he displayed in the engagement with Spiridof. This Turkish admiral first forced the Russians to retire from Lemnos; but the two fleets afterwards met in the channel that separates the isle of Scio from Natolia; and a very furious engagement ensued. The Turks, though possessing a superior navy, were compelled to shelter themselves in the narrow bay of Tchurfene, near Lemnos, where some of them ran aground, and the others were so pressed for room, that it
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was impossible for them to act. The Russians, perceiving their disadvantageous situation, sent among them some fire-ships, under the conduct of the admirals Elphinston and Greig; and commanded by lieutenant Dagdale, all British officers, and destroyed their whole fleet. After the total destruction of the Turkish squadron, the Russian fleets of Paros; whence they might easily command all the Grecian shores, where no single vessel was suffered to appear without lowering its topsails. This great success, however, was not improved as might have been expected by Alexius Orlof, the emperor's hero and supreme commander in the Mediterranean; for though a new squadron was fitted out to reinforce that which was already in the Archipelago, the Dardanelles, which were the keys of Conflantinople, remained secure; for, as the winter season came on, the Russians were obliged to quit their flation in these seas, and the trade through the straits was of course again opened. Crim Tartary, however, was entirely conquered by the Russians, whose fleets rode triumphant on the Black Sea; and the grand vizir was attacked in his camp, and routed with great slaughter. A terrible plague at Moscow, and other domestic disaffairs, counterbalanced in the estimate of true policy these foreign advantages. In 1772, the most iniquitous measure, the division of a large part of Poland between the three bordering powers, Russia, Prussia, and Austria, which had been long projected, and for which preparations were made by the advances of their several armies into the country, avowedly took place in the face of Europe, which was shamefully passive to fo great a violation of all public faith and equity. While Catherine was acquiring by negotiations a part of the provinces of Poland, her armies continued to ravage the frontiers of Turkey; and the war was not terminated till the year 1774, when the grand vizir, being inviolated on all sides by the Russian armies, was reduced to the necessity of signing a peace; of which the principal conditions were, the independence of the Crimea, the free navigation of the Russians on the Euxine and through the Dardanelles, with the stipulation that they should never have more than one armed vessel in the seas of Conflantinople, and a cession to them of that tract of land that lies on the Euxine between the Dog and the Danube. Russia, retaining Azof, Toganok, Kerchef, and Kinhurn, restored the rest of her conquests. Russia also obtained a large sum of money to defray the expenses of the war, and the title of "peditah," or empress, was no longer refined to the Russian monarch. Nothing could exceed the joy and felicity which prevailed at Peterburg upon the confirmation of this happy peace. The empress ordered eight days to be devoted to public feasts and rejoicing; liberal rewards to be distributed as usual; the prison doors to be opened for the release of all, who were not charged with high treason; and the return of all exiles from Siberia, who had been banished since the year 1746. But, notwithstanding the external prosperity of the Russian empire, many circumstances combined to produce internal distresses. The finances of the country were in a disordered state; succours from England were procured by granting immense advantages to its commerce; the pillar had made dreadful ravages at Moscow and in the adjacent countries, and had extended its fatal influence to the army and navy; the provinces of Kazan, Astrachan, and Orenburg, were a prey to revolt, which menaced even Moscow; and a remarkable emigration was charging countries that were flourishing with commerce into woe and deflected tracts. All these circumstances rendered an accommodation with the Turks peculiarly acceptable. But besides these grievances which must induce the empress to rejoice in the establishment of peace, an open rebellion, and its attendant, a civil war, distracted the Russian empire. This calamity originated in Asia, and extended to Moscow; the author of it was Pugatschef, a Cossack, born at Simoveife, a village on the borders of the Don. He had served as a common soldier in the army in 1756; he made the campaign of 1769 against the Turks, and fought under general Panin at the siege of Bender; and the treachery that town he applied for his dismission, which was refused; umpiring that Pugatschef had fled to Poland and obtained concealment and an asylum among some hermits of the Greek confession. These hermits, perceiving or assigning some resemblance to Peter III., encouraged him to assume his name and character. The imposture was carried on for some time in Little Russia, and a number of followers attached themselves to this deceiver, who had combined professions of fanaticity and self-denial with his delusion. Among the inhabitants of the banks of the Yaik, since called Ural, he formed a strong party of Cossacks, whom he engaged to accompany him into the mountains of Caucasus, with the assurance that they would there find powerful succours. Being arreted for inciting the people to sedition and committed to prison, he was frequently visited by the popes, who furnished him with money, and thus enabled him to corrupt his guards, and to make his escape. Having by various arts of imposture collected a formidable party, he publicly declared that he was the emperor Peter III., delivered by a miracle from the hands of his adversaries. This revolt was a favourable diversion to the Turks, and in 1773 wrought powerfully in their behalf. Pugatschef, besides assuming the name and character of Peter III., had sufficient deficiency to perceive, that it would much favour his design to blend religious pretences or prejudices with the political motives which might operate towards bringing on a revolution. Other circumstances concurred to crowisure, his imposture, and to inculcate the number of his adherents. The rebellion, intrigued by this impostor obtained a general spread; and at length Catherine was much alarmed, and seriously set about checking its progress. She published manifestos and ukases, and Pugatschef did the fame, affixing to these the name of Peter III. By one of these he reaffirmed all the boors; and he caused rubies to be struck with his effigy, and this inscription: Peter III., emperor, and autocrat of all the Russias; and on the reverse, Redivivus et ulor. This revolt, the particulars of which we cannot detail at length, after causing great devastations, and the loss of many lives, was finally terminated by the capture of Pugatschef at the close of the year 1774, and his subsequent decapitation. It has been jutting alleged, as a proof of the mildness of Catherine's administration, that this atrocious rebel was executed without torture. Five of his principal accomplices were likewise beheaded; three others were hanged; and 18 more underwent the knout, and were banished to Siberia. Catherine, during the tumultuous state of the empire, employed herself in promoting its internal welfare, by encouraging the sciences and the arts of peace; and soon after the punishment of Pugatschef, she had a fresh opportunity of displaying her clemency, by granting a pardon to men, who were justly defearing of capital punishment; they were the treasurers of the empire, who had embezzled the public money. She had overcome what was naturally irascible and violent in her temper, and had learnt patience and lenity from the efforts of philosophy. Notwithstanding the heavy burdens incurred by her foreign and domestic wars, she took off most of the taxes that were laid for their support; and, as if the strength and riches of government in her country increased with its expense, she also abolished a number of the ancient taxes, which were considered either as discouraging to ari-
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culture, or oppressive to particular provinces or orders of the people. She allotted large sums of money, free of interest, and for a specified term of years, to those provinces which were ruined by the late rebellion. She likewise established a number of other regulations, that tended to the security, advantage, and happiness of her subjects; abolishing pernicious distinctions, destroying numerous monopolies, reforming the cruelty of punishment, removing oppressive or inopportune restrictions or prohibitions; and restoring mankind to a more equitable degree of equality, in the different ranks in which they occupy in society. Imprisoned debtors were, under certain circumstances, released from confinement; and all the heirs of the debtors to the crown were discharged from their bonds and obligations. The insurgents every where returned to their duty; nor were the victims to justice numerous. As a general famine prevailed in the defeated countries, government was at great expense and trouble in supplying them with corn and meal from the magazines at Moscow and other places; and various methods were devised for preventing the progress of famine. The comprehensive mind of the empress, which had been occupied in the extension and establishment of its external force, in laying the foundations of a philosophical system of legislation, in the improvement of education, in the diffusion of illumination and taste, and in the reformation of numerous abuses, directed its views to the important object of forming a constitution for Russia. See Petersburg and Russia.

In the year 1775, when peace was established abroad, and every thing was quiet at home, Catherine employed herself in cultivating the arts of peace, in the improvement of the country, and in opening the minds of her subjects; and in the prosecution of those objects she found Potemkin useful, that he soon acquired an attendant that was almost abode. To him all persons looked as the dispenser of all bounty, and the source of all honours. Every day he acquired some new dignity or some accession of revenue; he attained the most important post in the Russian empire; and he politicled an authority scarcely compatible with that of a superior. Catherine was not unappreived of his ambition and love of power; and, therefore, the wished to retain Gregory Orlof, her former favourite, though he requelled permission to retire from the court, as a check on the petulance and audacity of his rival. After having long opposed Panin to Orlof, she now thought of opposing Orlof to Potemkin.

The independence of Crim Tartary soon produced an open rupture between the Turkish and Ruffian parties; and in 1778 it produced a declaration of war. From the measures that were pursued it sufficiently appeared, that the ambition of the empress would not be satisfied till she had gained entire possession of that peninsula. Her intrigues in the neighbouring courts of Denmark and Sweden tended to render these powers little more than dependencies on her crown; however in 1780 her influence over them was employed in establishing the famous "armed neutrality," the purpose of which was to protect the commercial rights of neutral states, then continually violated by the belligerent powers, and particularly by England, which availed itself of its superiority at its, in preventing France and Spain from receiving naval forces from the Baltic. In this year Catherine had an interview at Mohilow with the emperor of Germany, Joseph II., and they travelled together in familiar intercourse into Russia; the prince of Prussia (afterwards Frederic William II.) also visited her court; and it was customary for the neighbouring princes to make visits of policy or curiosity to Petersburg, where they were always treated with a magnificence not paralleled in any other part of Europe. In 1781, Catherine, with a view of affording an asylum to the persecuted order of Jesuits, and probably imagining that all the Jesuits of Europe and America would bring into White Russia their treasures and their industry, erected a Roman Catholic archbishopric at Mohilow, for the spiritual government of her subjects of that persuasion, and also gave him a Jesuit coadjutor. But whatever might be her expectations, the foils of Paraguay never found their way to Mohilow. This establishment, however, evinced a mind, like that of the king of Prussia, superior to religious prejudices; and, considered merely with a view to the exercise of religion, it was laudable. This year was marked by an event which indicated Catherine's respect for the memory of Peter the Great, whom the affected to imitate: it was the erection at Peterburg of his famous equestrian statue, which was executed by Stephen Falconet of Paris. This artist conceived the design of having for the pedestal of his statue a huge and rugged rock, in order to indicate to posterity, whence the heroic legislator had set out and what obstacles he surmounted. This rock, the height of which from the horizon line was 21 feet by 43 in length, and 34 in breadth, was conveyed, with great labour, from a bay on the gulf of Finland to Peterburg, through the distance of 11 versts, or about 41,250 English feet. On the side next the senate it has this Latin inscription, which is in a style of sublime and proud simplicity: "Petro primo, Catharina secunda, " Catherine the second to Peter the first."

In the following year, 1783, Catherine augmented the splendour of her court, by instituting the new order of St. Volodymir, or Vladimir. This year gratified the ambition of Catherine with regard to the Crimea. Having acquired, without a war, the sovereignty of the Crimea, the isle of Taman, and a great part of the Kuban, she called the former of these countries Taurida, and the other Caucasian. Thus Catherine gained a point of much importance towards the main object of her own ambition, as well as that of her prime minister Potemkin, i.e. the defraction of the Turkish empire in Europe; in the view of which she had named the grand-duke's second son Constantine, and had put him into the hands of Greek nurses, that he might be thoroughly acquainted with the language of his future subjects. Indulged by Potemkin, the empress formed a design, in 1787, of being splendidly crowned in her new dominions "queen of Taurida;" but the expense being objected to by some of her courtiers, she contented herself with making a grand progress through them. At her new city of Cherson, she had a second interview with the emperor Joseph. She then traversed the Crimea, and returned to Moscow, having left traces in her progress of her munificence and condescension. This oscillations tour was probably one cause of the new rupture with the Turkish court, which imprisoned the Russian minister in the Seven Towers, and commenced the war. In this bloody contest the emperor of Germany engaged as ally to Russia, and the king of Sweden as ally to the Porte. The latter prevented the empress from sending a fleet into the Meditarranean; and even endangered Peterburg itself by a sudden incursion into Finland. The danger, however, was averted by the empress's own vigorous exertions, by the defeat of some of Guitavus's troops, who would not fight against the Russians, and by an attack of Sweden, on the part of the prince of Denmark, who proceeded as far as Gottenburgh. The Turkish army, though superior to that of the emperor, could not resist the efforts of the Russian generals. Potemkin at the head of a numerous army, and a large train of artillery, laid siege to Odchakof, and it was at length taken by force, with the loss of 25,000 Turks and
CATHARINE.

and 12,000 Ruffians. Catharine regarded the capture of this strong town an event of much importance, that she liberally rewarded Potemkin, and conferred honorary distinctions on prince Repnin and general Suwarof, and the other commanders concerned in reducing it. During the progress of this war, the Turks lost many important places, and their naval force on the Enixine was almost annihilated.

In the conflicts between the Russian and Swedish fleets in the Baltic, the former were generally victorious; but they terminated in 1790 in a separate peace. The war with the Turks was prolonged; the strong fortresses of Ismail was stormed by Suwarof and taken with the loss of 15,000 Ruffians; and the armies of Catharine obtained, though with the expenditure of many lives, several decisive victories.

The empress, however, perceived that even her conquests were ruinous, and that peace was defirable; but she had too much pride to sue for it, and therefore she chose to continue fighting. At length she determined to close the war, and engaged Count Berndorf, the Danish minister, to negotiate the preliminaries of peace with the cabinets of Berlin, of London, and of the Hague. By his mediation, an accommodation was settled between these three powers and Russia; and they agreed to propose to the Ottoman Porte the terms offered by the empress, declaring, that if the Turks would not accept of these conditions, they would abandon their cause, and leave them to prosecute the war alone against Russia. A congress was assembled at Shitilova; and the negotiators having removed to Galatich, the preliminaries of peace were signed, on the 9th of January 1792, by prince Repnin and the grand vizir. The definitive treaty, concluded at Yally, soon after followed. In the war, this happily terminated, it has been calculated, that Austria lost 100,000 soldiers, and expended 300 millions of florins. Russia lost 200,000 men, 5 ships of the line, 7 frigates, and 80 smaller vessels, and expended 200 millions of rubles.

The Turks lost 330,000 men, 6 ships of the line, 4 frigates, with several other vessels, and expended 250 millions of piastras. Sweden had expended 70 millions of rix-dollars, and lost 12 ships of the line, 3 frigates, and 40 smaller vessels of war. After signing the treaty, Bezborodko declared, that the empress gave up her claim to the 14 millions of piastras which the Porte had stipulated to pay her as an indemnity for the expenses of the war; and the Ottoman plenipotentiaries justly felt the admiration of an act of generosity in so truly imperial. By this treaty of peace, the Porte declared that it was to be for the future the limit of the two empires. The English prime-minister manifested a strong desire to compel Russia to restore Otchakov to the Turks, but not being supported by the nation, this point was conceded, and Russia retained that important place and its territory.

Before the conclusion of this treaty, Catharine offered her prime-minister, prince Potemkin, who died the 15th of October 1791, at the age of 52, in the vicinity of Yally, and was buried at Cherion. In consequence of this loss, the empress employed herself with singular activity in the administration of the empire; devoting to public business 15 hours together, and dividing among her ministers the direction of the affairs which had belonged to Potemkin. When the revolution in France began to agitate the crowned heads of Europe, the empress, and the king of Sweden, seem to have been the first who formed a resolution of opposing it by force of arms. But when Catharine perceived that the hazard and difficulty of this enterprise were encountered by the nearer powers of Prussia and Austria, she directed her attention to Poland, and exerted herself in checking and subduing the new spirit of liberty which was rising in that country. For this purpose she marched an army thither, overcame all resistance, annulled the new constitution, and finally broke the spirit of the Poles by the dreadful massacre made on the inhabitants of the suburbs of Warsaw under the obdurate Suwarof. A new division of the country between the three former pillagers ensued, which at length totally blotted out Poland from the map of Europe. See Poland.

Catharine, having conquered, either by her arms or by her intrigues, almost one half of Poland, the Crimea, the Kuban, and a part of the frontiers of Turkey, had no occasion for recurring to armaments and battles in order to usurp another rich and well-peopled country. Her intrigues were sufficient to gain possession of Courland and Semigalia. Whilst she was thus extending her territories, she was not remiss in manifesting her adherence to the new principles propagated in France, by ostentatious attention to the forms of religion, and by a cordial reception of noble emigrants from that country, and by sending a squadron of men of war to co-operate with the British fleet. Insured to conquer, she turned her arms against Persia; and under pretence of defending Loff-Ali-khan, an offspring of the race of the Shahs, the want of which was to be avenged on Aga-Mahmud, and to gain possession of the provinces which border on the Caspian. With this view, her general Zuhow, at the head of a numerous army, penetrated into the province of Daghestan, and, after a short siege, made himself master of Derbent. Her success in this quarter inspired her with the hopes of obtaining a greater triumph. Having concluded a treaty with Great Britain and Austria, called the triple alliance, and signed in February 1795, she thus secured the assistance of these two powers against Turkey, and flattered herself with the full accomplishment of her darling project, which was that of driving the Ottomans out of Europe, and of reigning in Constantinople. In this case the immense empire of Catharine would have had for its frontiers the Thracian Bosphorus to the south, the gulf of Bothnia to the north, the Vistula to the west, and the sea of Japan to the east. But death disappointed her hopes, and put a flop to that career of her ambition which nothing else could restrain.

In the course of her life, she had seldom experienced any illness, which was probably owing to her even and cheerful temper. On the morning of the 6th of November 1796, she was in good spirits, and having taken her coffee as usual, she retired to her closet; but not returning so soon as her attendants expected, they began to be alarmed; and on entering the outer room where she was, they found her fainted on the parquet, with her feet against the door, and speechless. Her majesty's chief physician, Dr. Roperfon, being sent for, he pronounced her attack to be a fit of apoplexy; and having ordered her to be twice bled, she obtained temporary relief; but she was unable to utter a single word, and at 10 o'clock in the evening of the following day she expired. She was succeeded by the grand duke, her son, who was immediately proclaimed emperor, by the name of Paul I. Her remains were deposited in the tomb of the unfortunate Peter III. in the church of the monastery of St. Alexander Neufky. On the coffin of that prince the emperor cauful to be placed the imperial crown, which was fetched from Moscow for this purpose; the coffin was then laid in state by the side of that of the empress, with a true-love knot reaching from one to the other, on which was inscribed in Russian characters: "Divided in life—United in death." Alexis Orlof and prince Baratinly, the two assassins of Peter III. were ordered to stand, one on each side of his coffin, as chief inquirers. The former betrayed no signs of emotion; but the latter seemed to be overwhelmed with grief, and could scarcely be prevented from falling into a swoon.
Catherine.

a frown. When this act of punishment was concluded, Orlof received permission to travel, and Baturinsky was ordered never more to appear at court.

Catherine II. had been handsome in her youth; and at the age of 25 years she preserved some remains of beauty, connected with a peculiar gracefulness and majesty. Her stature was of the middle size, somewhat corpulent, but well proportioned; and as she carried her head very high and raised her neck, she appeared very tall; she had an open face, an aquiline nose, an agreeable mouth, and her chin, though large, was not square. Her hair was auburn, her eye-brows black (brown, says Rulhier); and rather thick; and her blue eyes (animated hazel eyes, says Rulhier, discovering shades of blue), indicated a genialness which was often affected, but more frequently a mixture of pride. Hautifulness, says Rulhier, was the true character of her physiognomy. The grace and kindness, which she was likewise visible in, seemed, to the penetrating observer, only the effect of an extreme degree of pleasing; and these seducing expressions manifested too perceptibly even the design of seducing. A painter, deformed of expressing this character by an allegory, proposed to represent her under the figure of a charming nymph, who, with one hand extended, presents wreaths of flowers, and in the other, which she holds behind her, conceals a lighted torch. The empress was usually dressed in the Russian manner. She wore a green gown (green being the favourite colour with the Russians), somewhat short, forming in front a kind of vest, and with close sleeves reaching to the wrist. Her hair, slightly powdered, flowed upon her shoulders, topped with a small cap covered with diamonds. In the latter years of her life she used much rouge; for was still deformed of preventing the impression of time from being visible in her countenance; and the always practised the frivolted temperance, making a light breakfast and a moderate dinner, and never eating any supper. In her private life, the good humour and confidence with which she inspired all about her, seemed to keep her in perpetual youth, playfulness, and gaiety. Her engaging conversation and familiar manners placed all those who had constant access to her, or affiliated at her toilet, perfectly at their ease; but the moment when she had put on her gloves to make her appearance in the neighboring apartments, she assumed a sedate demeanour, and a very different countenance. From being an agreeable and facetious woman, she appeared all at once the revered and majestical empress. A person, who then saw her, would spontaneously pronounce, "This is indeed the Semiramis of the north." Her mode of faluting was dignified and graceful; by a slight inclination of the body, not without grace, but with a smile at command, that came and vanished with the bow.

As to the character of Catherine, it may be sufficiently estimated by the history of her actions. Her reign, for herself and her court, had been brilliant and happy; but the last years of it were particularly disfarrising for the people and the empire. She governed too much by her favourites; and these, with their dependents and subordinate officers, became petty despots. The two most celebrated of these favourites were count Gregory Orlof and prince Potemkin; the former was a coarse vulgar man, of surprising, muscular strength and brutal manners; the other, more refined, was introduced in Russia that fort of fame which is attached to conquests and military exploits. Let the reader judge from the following statements, what honors and emoluments these favourites and others of a similar description possessed, and how they must have abused the confidence of the emperors, and pillaged the country in order to acquire them. The dignities and titles conferred by Catherine on prince Potemkin may be seen in the annexed summary: "Knight of the principal orders of Poland, of Sweden, Poland, and of all the orders of Russia; field marshal, commander in chief of all the Russian armies; chief general of the cavalry; chief admiral of the fleets of the Black Sea, of the Sea of Azof, and of the Caspian; senator, and president of the college of war; governor-general of Ekatariino-zavodoff and of Taurida; adjutant-general, and actual chamberlain of the empress; inspector-general of the armies; colonel of the Preobrazhenky guards; chef-du-corps of the horseguards; colonel of the regiment of cuirassiers of that name, of the dragoons of Peterburg, and the grenadiers of Ekaterinopol; chief of all the workshpops of arms and foundries of common; grand hetman of the Cossacks," &c. &c. &c.

Thesubjoined statement exhibits the sums of money which the favourites of Catherine received from her during her reign, or rather which they wrested in various ways from the poor peafantry, her subjects:

<table>
<thead>
<tr>
<th>Family</th>
<th>Sums of Money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orlof</td>
<td>17,000,000 rubles</td>
</tr>
<tr>
<td>Vlasschikofy</td>
<td>3,000,000 rubles</td>
</tr>
<tr>
<td>Potemkin</td>
<td>1,100,000 rubles</td>
</tr>
<tr>
<td>Taurida</td>
<td>3,000,000 rubles</td>
</tr>
<tr>
<td>Zavodoffky</td>
<td>1,300,000 rubles</td>
</tr>
<tr>
<td>Kosokoff</td>
<td>1,120,000 rubles</td>
</tr>
<tr>
<td>Lanjoski</td>
<td>920,000 rubles</td>
</tr>
<tr>
<td>Termolof</td>
<td>3,120,000 rubles</td>
</tr>
<tr>
<td>Momonoff</td>
<td>3,550,000 rubles</td>
</tr>
<tr>
<td>Zaitzer, brother</td>
<td>3,600,000 rubles</td>
</tr>
</tbody>
</table>

Further, an annual sum of 250,000 rubles for the expenses of the favourite, which for a term of 34 years makes — 8,500,000 rubles

Total sum 88,820,000 rubles.

To each estate were attached thousands of boors and their families. It is generally computed that of these there were:

<table>
<thead>
<tr>
<th>Family</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orlof</td>
<td>45,000</td>
</tr>
<tr>
<td>Vlasschikofy</td>
<td>1,000</td>
</tr>
<tr>
<td>Zavodoffky</td>
<td>6,800</td>
</tr>
<tr>
<td>Kosokoff</td>
<td>4,000</td>
</tr>
<tr>
<td>Termolof</td>
<td>3,000</td>
</tr>
</tbody>
</table>

Total of boors 68,800

This statement does not include those given to Potemkin, to Lanjoski, nor to Zavodoff, three favourites beloved by Catherine, and to whom, of course, she gave the moll.

During this reign, almost all the people in office and authority were fortunate adventurers. If we except the Solikoffs, we shall find at this period no family of distinction in favour.

With respect to the government of Catherine, it was as mild and moderate, within the immediate circle of her influence, as it was arbitrary and terrible at a distance. Whoever, directly or indirectly, enjoyed the protection of the favourite, exercised, wherever he was situated, the most undisguised tyranny. He inflicted his superior, trampled on his inferiors, and violated justice, order, and the "ukafes," with impunity. The emperors having usurped a throne, which they were debarred of retaining, was under the necessity of treating their accomplices with kindness. Being a foreigner in the empire over which she reigned, she endeavoured
to identify herself with the natives by adopting and even
flattering its tastes and its prejudices. She often knew how
to reward, but never could resolve to punish, and it was
futile by suffering her power to be abused, that she succeed-
ed in preventing it.

The spirit of toleration that animated the whole of Ca-
tharine's administration exhibits a very remarkable and al-
most singular phenomenon in a despotic government. Not-
withstanding all opposition, the emperors adhered to the refo-
lution they had formed at the commencement of her reign;
and, from that moment to the day of her death, not one in-
stance occurred, of a human being suffering, in any respect
whatever, on account of his religious opinions. Towards
heretics she always evinced great bounty of disposition.

"Poor wretches," she once said, smiling, "since we know that
they are to suffer so much and so long in the world to come, it
is but reasonable that we should endeavour, by all means, to
make their situation here as comfortable to them as we can."

Not only the conquered provinces were protected in the free
exercice of their religion, but Lutherans, Calvinists, Mor-
avian brethren, Papists, Mahometans, Heathens, and people
of all countries and persuasions, might aspire to any post un-
der government, and hold any civil or military employment
or dignity, if they were but worthy, or deemed worthy of
it. The intolerant of more polished nations might go to the
provinces of Lithuania, Livonia, Finland, and Russia, to take
leaves of moderation and Christian forbearance. But
at Peterburg the general and peculiar feature in the public
character is toleration; and this virtue has there acquired so
general and extensive a sway that it is not easy to find a spot
of earth upon the globe, where, in this respect, a man may
more quietly pass his days than at St. Peterburg.

The emperors, not satisfied (as we have already observed)
with having appointed a catholic archbishop, and established
a seminary of Jefuits at Mohilow, and with having supported
toleration in the Crimea, gave to her people almost every
year some solemn inculcation of the protection they granted to
the liberty of worship. On the day of the beneficent of the
waters, her confessor, by her orders, invited to his house
the ecclesiastics of all communions, and gave them a grand
entertainment, which Catharine called "the dinner of tolera-
tion."

It has been calculated, that the offices of religion
are performed in Peterburg in 14 different languages.

Catharine had two passions which never left her but with
her last breath; the love of the other sex, which degenerated
into licentiousness, and the love of glory, which linked to
vanity. B. the former of these passions she was never so far
governed as to become a Medallina; but she often disgraced
both her rank and sex, and continued to her by habit what
she had been from constitution. By the second, she was led
to undertake many laudable projects, which were seldom
completed; and to engage in unjust wars, from which she
declared that kind of fame which is the usual result of success.

The generosity of Catharine, the splendour of her reign,
the magnificence of her court, her institutions, her monu-
ments, and her wars, were precisely to Russia what the age
of Louis XIV. was to Europe; but considered individually,
Catharine was greater than that prince. The French formed
the glory of Louis; Catharine formed that of the Russians.
She had not, like him, the advantage of reigning over a po-
lished people; nor was she surrounded from infancy by great
and accomplished characters. She had some subtle ambas-
dadors, not unskilled in the diplomatic art, and some fortu-
nate generals; but Romanzof, Panin, and Potemkin except-
ed, the could not boast a single man of genius; for the wit,
cunning, and dexterity of some of her ministers, the feicio-
cious valour of Suvarof, the dastile capacity of a Repnin,
the favour of a Zubof, the readines of a Bebendrofko, and the
affability of a Nicholas Soltikof, fearlessly defer ce to be ad-
mitted as excellencies. It was not that Russia did not pro-
duce men of merit; but Catharine feared such men, and
they kept at a distance from her. We may conclude, there-
fore, that all her measures were her own, and particularly all
the good she did. It should be recollected that in her pri-
ivate character, notwithstanding all the misfortunes and
abuses that call a shade over her brilliant reign, she appeared
to be thoroughly humane and generous, as all who ap-
proached her experienced; all who were admitted to her in-
timacy were delighted with the good humoured fallacies of her
wit: all who lived with her were happy. Her manners
were gay and licentious, but she still preferred an exterior de-
corum, and even her favourites always treated her with re-
spect. Her love never excited disgust, nor her familiarity con-
tempt. She might be deceived, won, seduced; but she
would never suffer herself to be governed. Her active and
regular life, her moderation, firmness, fortitude, and even her
temperance, are moral qualities which it would be highly unju-
sal to sacrifice to popularity. Her greatest might the not have been,
if her heart had been as well governed as her mind.It
she reigned over the Russians less despotic though her self;
but she was never hurried away by anger; never a prey to dejection,
and never indulged int rantours of immoderate joy. Ca-
price, ill-humour, and petulance, as they formed no part of her
character, were never perceived in her conduet. "I will
not decide," says the writer who has thus sketched the out-
lines of her character, "whether the she was truly great, but
she was certainly beloved." Her crimes, it is said, were the
crimes of her nation, not of her heart: the terrible butcheries
of Imaill and of Praga appeared, to her court, to be huma-
nity itself. If she had known misfortune she might probably
have possessed the purest virtues; but she was spoiled by the
unvaried prosperity of her arms. Vanity, that fatal rock to
women, was jo to Catharine; and her reign will ever bear
the distinguing characteristic of her sex. But, in what-
ever light she is considered, she will ever be placed in the
first rank among those who by their genius, their talents,
and especially, by their success, have attracted the admira-
tion of mankind. Her sex, giving a holder relief to the
great qualities displayed by her on the throne, will place her
above all comparison in history; and we must recur to the
fabulous ages of an Isis and a Semiramis, to find a woman
who has executed, or rather undertaken such daring projects.
Whilom none forsook her in noble and useful influtions,
in the patronage of science and of the arts, and in the promo-
tion of the arts by which a nation is civilized and excated;
and whilst by the travels of Plato, Socrates, and other
philosophers and naturalists, she obtained an extensive ac-
quaintance with the various parts and productions of her
vast empire; she seems to have been too much seduced by
splendid novelties, and by her affinuity and zeal in the pur-
chase of expensive rarities throughout Europe, she merely
sacrificed to her vanity, and sunk the wife and benefi-
cent sovereign into the collector of toys and trinkets, Mifled
by an extravagant confidence in her own abilities, and jea-
ious of every kind of fame, she was desirous of acquiring
the reputation of an author, and of thus sharing in the ho-
our which Frederic of Prussia had obtained by his writings.
She accordingly wrote her celebrated "Instructions for a
Code of Laws;" several moral tales and allegories, for the
education of her grand-children; and a number of dramatic
pieces and proverbs, which were acted and admired at the
Hemitage. Her grand and futile undertaking of collect-ing
ing a number of words from 300 different languages, and forming them into a dictionary, was never executed. Of all her writings, her letters to Voltaire are certainly the best. They are more interesting than those of the old philosophical courtier himself, who repeats in his letters the same ideas and compliments in a hundred different forms, and excites her continually to drive the Turks out of Europe, instead of advising her to render her own subjects free and happy. Catharine was neither fond of poetry nor of music; and she often confounded it. She could not even endure the noise of the orchestra between the acts of a play, and therefore commonly silenced it. At her Taurian palace the concerts constantly dined with the two pictures of the sackings of Otehakof and Hissain before her eyes, in which Cazanova has represented, with hideous accuracy, the blood flowing in streams, the limbs torn from the bodies, and all palpitating, the demoralized fury of the slaughterers, and the convulsive agonies of the slaughtered. It was upon these scenes of horror that her attention and imagination were fixed, while Gaiaparni and Mandini were displaying their vocal powers, or Sarti was conducting a concert in her presence.

Previous to the death of Catharine the monuments of her reign resembled already so many wrecks and dilapidations: colleges, colonies, education, establishments, manufactories, hospitals, canals, towns, fortresses, every thing had been begun, and every thing given up before it was finished. As soon as a project entered her head, all preceding ones gave place, and her thoughts were fixed on that alone, till some new idea was started and drew off her attention. She abandoned her code, to drive the Turks out of Europe. After the glorious peace of Kaimardgi, she feemed for a time to attend to the interior administration of her affairs; but the whole was presently forgotten, that she might be queen of Tauris. Her next project was the re-establishment of the throne of Confinante; to which succeeded that of stabbing and punishing the king of Sweden. Afterwards the invasion of Poland became her ruling passion; and then a second Pogarinf might have arrived at the gates of Petersburg without forcing her to relinquish her hold. She died, again meditating the destruction of Sweden, the ruin of Prussia, and mortifying at the faceleafs of France and republicanize. Thus was the incessantly led away by some new passion still stronger in its influence than the preceding, so as to neglect her government, both in its whole and in its parts. This mania of Catharine, of planning every thing and completing nothing, drew from Joseph II. a very threat and satirical remark. During his travels in Taurida, he was invited by the emperors to place the second throne of the land of Ekatarinofal, of which she had herself, with great parade, laid the first. On his return, he said, "I have finished in a single day a very important business with the emperors of Russia; she has laid the first stone of a city, and I have laid the last."

We shall close this sketch of the character of Catharine with observing, that with all her varied and contradictory qualities, she seems to have obtained the love as well as the reverence of her subjects in general; who forgot her private crimes and the evils of her bloody wars, in her greatness and apparent regard to the public good. Coxe's Travels, vol. i. and ii. Tooke's Life of Catherine II. in 3 vols. Ruliere, Hist. des Ancêtres sur la Régence de Ruliere, &c. Paris, 1797. Segur, Vie de Catherine II. Imperatrice de Russie, &c. 2 vols. Svo. Paris, of which an enlarged translation in English was printed in three vols. Svo. 1798. Secret Memoirs of the Court of Petersburg, &c. translated from the French.

Catharine of Sienna, St. was born in the city, whence her name was derived, in 1347; and having vowed virginity at eight years of age, affronted the Dominican habit. Pretending to extraordinary revelations, and disdaining by her piety and charity, she obtained considerable influence; so that she succeeded in effecting a reconciliation between the Florentines and pope Gregory XI., by whom they had been excommunicated, and in persuading this pontiff to restore the papal seat to Rome, after it had subsisted 72 years at Avignon. During the tetch of that afterwards took place, Catharine adhered to Urban VI. She died in 1380, and in 1464, was canonized by pope Pius II. Of her works there are extant a volume of "Italian Letters," written to popes, princes, cardinals, &c. first printed at Venice in 1506, and translated into French in 1644; "Six Treatises on the Providence of God;" "A Discourse on the Annunciation of the Blessed Virgin;" and a treatise entitled "The Divine Doctrine delivered by the Eternal Father speaking to the Spirit," with some other devotional pieces. Du Pin. Ecl. Hist. vol. v. p. 73. See Fraternity of St. Catharine.

Catharine of Bologna, St. a nun of the order of St. Clare, was born at Bologna in 1413, and became, in consequence of her reputation for sanctity, inferior of the monastery of the order to which she belonged, in her native city, and which was completed before her death, in 1453. Besides other writings in Latin and Italian, her own "Revelations" were left, sealed, to her confessor. She was canonized by Clement VII. Du Pin. Ecl. Hist. vol. v. p. 84.

Catharine, Fraternity of St., at Sienna, a fort of religious society instituted in that city, in honour of St. Catharine, a saint famous for her revelations, and for her marriage with John Chriß, whose wedding-ring is still preserved as a valuable relic. This fraternity yearly endows a certain number of destitute virgins, and has the privilege of redeeming annually two criminals condemned for murder, and the same number of debtors, by paying their debts.

Catharine, Knights of St., of Mount Sinai, an ancient military order, erected for the assistance and protection of pilgrims going to pay their devotions to the body of St. Catharine, a virgin of Alexandria, distinguished for her learning, and said to have suffered martyrdom under Maximin.

The body of the martyr having been discovered on mount Sinai, caused a great concourse of pilgrims; and travelling being very dangerous, by reason of the Arabs, an order of knighthood was erected in 4067, on the model of that of the Holy Sepulchre, and under the patronage of St. Catharine: the knights of which obliged themselves by oath to guard the body of the saint, to keep the roads secure, observe the rule of St. Basil, and obey their grand master. Their habit was white, and on it were represented the instruments of martyrdom whereby the saint had suffered; viz., a half wheel armed with spikes, and traversed with a sword stained with blood.

Catharine, order of St., in Modern History, belongs to ladies of the first quality in the Russian court. It was instituted in 1714, by Catharine wife of Peter the Great, in memory of his signal escape from the Turks in 1711, or as others lay, by Peter, in honour of his wife Catharine, on account of the assistance which she gave him in the camp on the Truth.

The emblem of this order is a medal of gold, enriched with diamonds, having on one side the image of St. Catherine, and on the other a cross pattée, enamelled. This is worn pendant to a broad white ribbon resting on the right shoulder, and brought under the left arm. On the left breast
a company at Lisbon. This company has, upon the coast, three considerable establishments, where they take about 400 whales every year, the produce of which, both in oil and spermaceti, is sent to Lisbon by way of Rio-Janeiro. The approach of ships to this island is very easy; as at 18 leagues in the offing there are 66 fathoms of water, over a bottom of soft mud, gradually sloping till within four cables' length of the shore, where there are full four fathoms of water. The ordinary channel is between the island of Álvaredo and the north point of St. Catharine; but there is another between the islands of Gal and Álvaredo, which, however, has not yet been sufficiently explored. The best anchorage is half a league from Porto-I'll, in 6 x fathoms, and oozzy bottom; the citadel bearing S. 3° W., the fort on the larger point S. 6° E. There are several watering places both on the island and the continent; and that creek may be chosen where the wind renders the landing most easy. The navigation of boats is very difficult in this harbour, which is two leagues wide as far as the bright where the town islands; and there is a violent surf always breaking on the lee-shore. The tides are very irregular; and the flood comes in between the two channels lying north and south. Up to this height it rises but three feet. In this harbour provisions of every kind may be easily and cheaply procured, as they are very plentiful. A large ox cooks eight piasters, a hog of 150 lb. weight costs four, and turkeys are sold for a piaster the pair. Fish may be obtained in abundance by merely throwing the net. Oranges are sold at the rate of 500 for less than half a piaster, and vegetables of every kind are reasonable. The inhabitants are very hospitable, and their manners are gentle and obliging; but they are very superstitious, and jealous of their wives, who never appear in public. The government is in this island, as it is in all the Portuguese colonies, purely military. It has three forts, which form nearly an equilateral triangle, the bale of which is to the northward, and the vertex towards the south. That to the east is upon the N.E. point of St. Catharine, about 1/4 of a league from the Perroquet island; that to the west, which is the most considerable, is on an islet near the continent of America, and the third is upon the largest of the two islands called "Les Ratones." The road, which is open only to the N.E. winds, is sheltered to the east by the island of St. Catharine, and on the west by the continent; on the south by the land both of the island and the continent, which approach so near, that they leave between them only a strait of less than 300 toises wide. Its entrance cannot by any means be shut against ships of war of any rate or construction. It is so extensive that although the forts are mounted with guns of a great calibre, ships may anchor there very commodiously and securely, out of the reach of those guns. The principal fort, which is in fact only a large enclosed battery, is situated on a little island, of moderate elevation above the level of the sea, at about 300 toises from the terra firma, and opposite a ridge much higher than itself, is capable of making a regular defence; yet this fort is the butt of honour, where the general officer, who commands the whole settlement, would fix his quarters in case of an attack; but in time of peace he resides at "Nossa Senhora del Defeito," a town that is absolutely open, and only defended by a small battery, 3 barbette, on the island of St. Catharine, and on the extreme-west point of the little strait above-mentioned, behind which the town is built. The garrison of the principal fort was, in 1755, composed of 50 men, badly clothed and ill paid, under the command of a captain. Traffic's Voyage, vol. i. and ii.

CATHARINENBURGH, or ECHETERINBURG, N. a province.
CATHARTIC

a province of Asiatic Russia, formerly included in the government of Tobolik, and since constituting one of the two provinces of the government of Perm. This is also the name of one of the seven districts of the province, seated on the river Iset, not far from its origin. Near Catharinem- 
burch are gold mines; the ore is very marial, commonly of a cubic form in a quartz matrix; and the gold is extracted by washing. The annual produce of pure gold never exceeded 300 pounds, and was commonly much less; in 1772 it was only 100 pounds. The gold is obtained at the rate of 40 guineas per pound; when coined, it produces 68l. 5s. so that the profit is not very considerable. At Catharinem- 
burch the crown has established a mint for coining the copper, produced from the imperial and private foundries, into that species of money which is current throughout Russia, and is transported by water to Moscow, Petersburg, and other parts. The value of copper money, annually coined, is 400,000L. The crown receives a pood of this metal upon an average at 1l. 2s. 6d. and influxes it, when fruck, at 3l. 4s.; so that government gains upon the copper coinage 257,625L. The town is seated upon the river Iset, which runs through it, and is regularly built in the German manner. It was begun by Peter I. in 1723, and finished in 1726 by his comfort the czarina Catharine, from whom it derived its name. This town may be reckoned the centre of all the Siberian mine 
works belonging to the crown; and on this account it is the residence of the director of the Siberian mines, who issues out his instructions to the sub-directors, and pays their accounts.

CATHARINESLAF, CATHARINOSLAV, or ECAT- 
TERINOSLAF, a government of Russia, which contains the greatest part of that territory which was wrested by the late empress Catharine II. from the Turks, and comprises New Russia, the former government of Azof, and Crimea Tartary. It is divided into two provinces, viz. Catharinesla, including New Russia and Azof, and comprehending 14 districts, and Taurida or Crime Tartary. It is also the name of one of the districts of the province, seated on the Dnieper.

CATHARINESLAF, CATHARINOSLAV, or the "glory of Catharine," the capital of the province built by the late em 
press, and seated near the spot where the small river Kiltzin falls into the Samara. It is colonized by many Greeks and Armenians from Crime Tartary, and by others who served in the preceding war against the Turks; 78 miles N.E. of Cherfon. N. lat. 47°23'E. long. 35°15'.

CATHARMA, from καθαρμός, I expiate, in Antiquity, some miserable or flagitious wretch, sacrificed to the gods, as an expiation for the plague, or other calamity. Such was the prophet Jonas, cast into the sea; and such, as some have suppos'd, does St. Paul with himself to be. See Accu-

cursed.

CATHARMA, καθάρμος, from καθάρω, to purge, in Medicine, imports the excrements purged from any part of the body; as the stomach, intestines, or bladder.

CATHARMOS, in Medicine, of the same derivation, implicts purgation by medicines, or the cure of a disorder by superfluous ceremonies or sacrifices. The cure of the king's evil, by the royal touch, if such a thing had been effected, might be said to be performed by a catharmos.

CATHarpins, in the Rigging of a Ship. See Cat-
harpins.

CATHARTIC Extract. See Extractum cathar-
ticum.

Cathartic salt, ful catharticum amarum, a denomination given to what we improperly call Epsom salt.

Cathartic medicines, are those substances which quicken and increase the evacuation from the intestines by fluid. Medicines of this class have been employed by physicians since the first dawn of physic; and have been administered with various views and intentions, according to the prevalent theories of the time, or the favourite doctrines of individuals. Those who were tainted with the sects of judicial astro-
logy, preferred purgatives at certain times and feasts; conceiving that they would prove more beneficial or hurtful, according to the conjunction or opposition of the planets, or the age of the moon. Those again, who were partial to the doctrines of the humoral pathology, employed cathartics with the intention of expelling peccant matter which had been lepamed from the mafs of fluids by an appropriate fer-
mentation. The same pathologists taught that different cathartics possessed distinct powers, and moved different fluids by a specific action. Hence they have denominated some of these substances ebolagogues, others phlegmagogues, hydragogues, and melanosogues, as they were supposed to expel more particularly bile, phlegm, water, &c.; and they have displayed much apparent fagacity, in selecting the cat-
arthic adapted to the expulsion of the fluid prevalent at the time. But these doctrines are now exploded, and the specific operation is not confirmed by subsequent expe-
rience.

Modern physicians have two objects in view in the admi-
istration of cathartic medicines; the one is to empty the bowels simply, or to bring off their contents, which are out of the course of the circulation, and therefore, already, in a manner, extraneous to the body; the other is to excite an increased secretion of fluids into the cavity of the intestines, or, in other words, to induce purging. The medicines thus employed have generally been allotted into two classes; those which produce the former effect, being denominated laxatives, and those conducting to the latter, purgatives.

The operation of a purgative medicine on the intestinal canal may be considered as three-fold. In the first place, it stimulates the muscular fibres of the intestines, quickens their action, and therefore augments the natural peristaltic motion of the bowels, by which means their present contents are more quickly propelled and discharged. Secondly, it stimulates the exhalent vessels, which terminate in the inner coat of the intestines, and excites them to pour out a more copious discharge of fluids; and also the mouths of the excretory ducts of the mucous glands, by which the natural mucus of the intestines is much increased; and hence the evacuations by foalre are not only quicker, but the faecal matter is thinner and more abundant. And, thirdly, the foals are rendered still more copious, by an additional portion of the fluids furnished by the neighbouring vifera, the liver, pancreas, &c. to which the stimulus of a purgative, especially of the more active ones, extends. These effects are probably communicated to the whole range of the intestinal canal, from the upper orifice of the stomach to the lower extremity of the rectum, or anus.

From this view of the immediate effects of cathartic medicines upon the intestines, their utility in some diseases, and their injurious tendency in others, as well as the necessity of varying their degree of activity under different circumstances, will be readily understood.

If we consider the great length of the alimentary canal, and the number of vessels and mucous follicles, as well as the larger ducts from the liver and pancreas, which open upon its inner surface, it will be obvious that purgatives, even of a moderate stimulating power, by opening at once all these outlets, may occasion a great general evaporation and diminu-
tion of the fluids of the body. Hence, in acute inflammatory diseases, where over-dilution of the vessels is to be avoided, and the preternatural increase of the active powers of the system is to be restrained, the evacuation of the intestines by purging is (next to blood-letting) the most powerful expe-
di
dine, and generally makes an important part of what is called the cooling or anti-phlogistic plan of treatment. When purgatives are given with this intention, however, the principle must be pursued with some limitation, and those of the mott acid and drastic nature must be avoided; because the diminution of general titillus produced by the depletion of the vessels, and the expulsion of the faces, would be counteracted by the extraordinary irritation of an acid purge.

Another circumstance apparently results from the evacuation by purging, which renders it of considerable importance in particular diseases; namely, a change in the distribution of the blood to the different parts of the system. It seems to follow, of necessity, that if an evacuation be made from one set of vessels, the afflux of fluids to these will be increased in order to supply it, and, consequently, the afflux to other parts of the system will be diminished. 

Upon this principle, Dr. Cullen explains the utility of purgatives in disorders of the head, which arise from over-tumors or over-activity of the vessels of the brain; such as apoplexy, and other comatose affectations, mania, phreny, head-ach, &c. The afflux of fluids in the vessels of the abdomen, which supply the intestine, being increased by purging, the afflux will be proportionally diminished in the vessels which carry blood to the head, and both the quantity and impetus of the blood in the head will thus be lessened. (Cullen, Mater. Med. vol. ii.)

In the same way he partly explains the good effects of cathartics in the small pox, and other cutaneous diseases, from the balance of the distribution of the fluids between the internal parts and the external surface. But it is probable that they are more useful by removing the local irritation of the faces, and occasioning a considerable depletion, and a consequent diminution of fever in the system at large. For in diseases of the skin, unconnected with fever, their good effects are very inconsiderable.

Whenever the contents of the intestines are morbidly retained, whether in consequence of a flowness of the peritonic motion, from a torpor of the moving fibres; or from a laxity of the intestines, which permits the faces to accumulate; or from a deficiency of bile; or from habitual neglect of regular evacuation; (see Constipation,) the use of cathartics of one kind or the other is indicated, in order to prevent the accretion of more serious complaints, which will ultimately result from the colitivencs. The nature of the caufe, or the concomitant circumstances will point out the particular sort of medicine, which may be most appropriately employed. If the colitivencs, for instance, be accompanied with a flaccid habit, or with symptoms of nervous mobility, or much flatulence, and irregular distention of the bowels, some of the warmer aromatic laxatives should be administered. If the secretion of bile appear to be deficient, mercurial and aloetic medicines, the latter of which tend to supply the deficiency, and the former to relieve the bilious secretion, should be preferred.

In those cases, however, in which the morbid retention of faces is not habitual, but accidental, and accompanied with some more acute symptoms;—as with violent pain, constricting the colic;—with pain, tenesmus, and filmy or bloody floof, as in dysenteric;—or with pain and acute fever, as in inflammation of the bowels—cathartics, though absolutely necessary, must be varied in their nature and mode of administration, after a cautious view of the circumstances. In colic, for example, they will be of little advantage in many cases, and more especially in the colic produced by lead, until the painful spasmatic contraction of the bowels has been relaxed by the previous use of opiates. In dysenteric, they must be combined or alternated with opiates, otherwise the irritation which they occasion, in that tender state of the intestines, will counterbalance the effects of the evacuation, and keep up the symptoms of the disease. And in enteritis, or inflammation of the coats of the alimentary canal, the same irritation will tend to increase the inflammatory condition, and the consequent constrictions, and therefore impede, rather than expedite, the evacuation of the fecal matter, if they be employed before blood-letting and other remedies have reduced the inflammatory state. See Cole, Dysentery, Sec.

In a work lately published by an excellent practical physician, Dr. James Hamilton of Edinburgh, a degree of importance is assigned to cathartic medicines, in the treatment of several diseases, which they have not hitherto been considered as entitled to. Independently of the generally admitted opinion, that a loaded and constricted state of the intestinal canal is a common cause of general bad health, he maintains that this state usually accompanies and aggravates the other symptoms of fever; and that it is also the immediate cause, or a leading and permanent symptom, of certain disorders peculiar to children and young people; there are chorea, or St. Vitus's dance; marasmus; chlorosis, or green sickness; Ilesematema, or vomiting of blood; and even in Hysteria, and some chronic nervous diseases. In these diseases he never uses medicines in a purging dose; his intention being simply to expel the present contents of the intestines, and not to increase the secretion of the fluids into them. He considers gylters as inefficient expedients for moving and conveying off, through the whole extent of the intestines, the feculent matter, rendered offensive and irritating, especially in fevers, by coniposition, and by the changed nature of the secreted fluids, which seems to take place in the febrile state. In Typhus fever, he says, "it is now some years since I have left off almost entirely the practice of ordering emetics and gylters. I trust that purgation of inferior regular saline evacuation: for this purpose, however, a daily purgative is not always required. Thus I think I conduct the treatment of typhus fever to a favourable issue, with more certainty, and with the greater ease and comfort of the patient." We have had an opportunity, in a few instances, of verifying in a very satisfactory manner this important practice.

Chorea, or St. Vitus's dance, has been almost invariably treated with tonic medicines, especially with bark and metallic preparations, and with various stimulants and antispasmodics. It is unnecessary to say with how little effect in general. In every instance Dr. Hamilton has found that a large quantity of black and offensive feculent matter was collected in the bowels, and his plan of cure has consisted in a regular exhibition of laxatives, until the stools (which in all the diseases before mentioned should be regularly examined by the practitioner) assumed their natural appearance. With this intention the practitioner must persevere firmly in his measures, especially in the confirmed state of chorea; for if he relaxes he will be unsuccessful. By this treatment, which consisted in giving three grains of calomel, with six, eight, or ten, of jalap, daily, "Chorea is speedily cured, generally in ten days or a fortnight."

By means of the fame, or similar medicines, exhibited in the same way, he has speedily succeded in removing the symptoms of chlorosis; and hematemesis; and of some other hypochondriacal and nervous complaints, and he attributes the relief, which patients under these disorders derive from drinking mineral waters, to their purgative qualities, rather than to any other property which they may in a flight degree possess. (See Observations on the Utility and Administration of Purgative Medicines.)

When morbid or extraneous bodies are introduced into or generated
generated in the intestines, as in the case of worms, &c. cathartics are obviously indicated. But it should be observed, that the indiscriminate use of active purgatives in these cases, especially in young and delicate children, is often productive of more harm to the constitution, than the worms which they are intended to expel. They should be administered sparingly, and at some intervals; sufficient time being interposed for the operation of medicines, which may be deleterious to the animal, and of which, by augmenting the intestines, may prevent that morbid production of mucus, which is probably a serious danger to their generation.

Cathartics, either in a laxative or purgative degree, are useful in several other complaints, partly by exciting the intestines to evacuation, and partly in consequence of the extension of their stimuluses to the neighbouring visceras of the abdomen: as in jaundice, indigestion, impregnation of the medes, &c.

Another important operation of cathartic medicines remains to be noticed: namely, the stimulus they exert on the absorbent vessels, by which these vessels are excited to an unusual action, and thus to take up fluids which are morbidly effused. The fact is undeniable, whatever may be the principles on which it is explained. Dr. Cullen observes, on this subject, that, "as in every cavity of the body there is an exhalation and inhalation, or absorption, constantly going on, it is presumed that there is some balance constantly preferred between the secretory and absorbent powers; so that if the former are increased, the latter will be allo; and, therefore, that when the secretions are, upon occasion, much increased, the action of the absorbents may be particularly excited. This explains why purging often excites the action of the absorbents, to take up more copiously the fluids that were otherwise flagrant in the adipose membrane, or other cavities of the body, and thereby often proves a cure of dropsy." (Mater. Med. vol. ii. p. 56 c.) This explanation is perhaps, little more than an explicit statement of the fact. It is certain, however, that afeties, or dropsy of the abdomen, has been often affected by means of acid, cathatic purgatives, such as gamboge, feaminey, &c.; when diuretic remedies have failed. But it is obvious that these remedies can only be administered to those, who retain considerable strength of constitution, debilitated neither by inveterate intemperance, old age, nor a long disease.

Cathartic medicines may be introduced into the alimentary canal either by the mouth, or by the inferior aperture in the form of clyster. The preceding observations apply to the former mode of administering them. The latter must be adopted in those cases, in which the stomach is unable to retain, or would be injured by irritating medicines; as in colic, or inflammation of the stomach, and in febrile complaints attended with extreme debility, especially in the latter stages; since by this mode the contents of the lower parts of the intestines are finely evacuated, without any filaments to the secreting vessels, and with little or no irritation of the system at large. See CLYSTER.

In delicate and irritable constitutions the ill effects of an active purgative may be considerably diminished, without impairing its evacuating power, by combining a portion of opium with it. The nausea and griping, which are excited by some species of cathartics, may be alleviated by the addition of some aromatic medicine; or by the minute division of the sublimate by means of triturations with some other; as of jalap with crystals of tartar, &c.; or by giving it in divided doses at short intervals. This last mode is generally to be preferred with regard to very drastic cathartics; by which means the full effect is enfeebled, and any severe or dangerous degree of irritation is avoided.

CATHAY, in Geography, an ancient name of China; which see.

CATHEDRA, in a general sense, a chair.
The word is more particularly used for a professor's chair, and a preacher's pulpit.

CATHEDRAL, in a church wherein is a bishop's see, or throne, in a church.

CATHEDRAL, a phrase used in speaking of the solemn dictates or decisions of prelates, chiefly the popes, delivered in their pontifical capacity.
The advocates for the papacy maintain, that the pope is infallible, ex cathedra, a term of ancient theology entirely unknown to the ancients. Even those who used it do not agree in the explication of it.

CATHEDRAL, a church wherein is a bishop's see, or seat. See Church and Bishop.
The word comes from the Greek καθήδρα, chair, of κάθειν, to sit.
The denomination cathedral seems to have taken its rise from the manner of sitting in the ancient churches, or assemblies of primitive Christians; in these the council, i.e. the elders and priests, was called presbyterium; at their head was the bishop, who held the place of chairman, cathedrals, or cathedricus; and the prebendaries, who sat on either side, were also called by the ancient fathers episcoporum. The episcopal authority did not reside in the bishop alone, but in all the prebendaries, of whom the bishop was president.

A cathedral, therefore, originally, was different from what it is now; the Christians, till the time of Constantine, having no liberty to build any temple; by their churches, they only meant their assemblies; and by cathedrals, nothing more than consistorys:—which appears the vanity of some authors, especially the Spaniards, who pretend their cathedrals to have been built in the times of the apostles.

CATHEDRAL SERVICE. At the beginning of the reformation, the whole English choral service, including the process, prayers, and responses, was set to musical notes, and first published in 1550, by John Marbecke, organist of Windfor. The premature reforming zeal of this musician, nearly made a martyr of him, in the time of Henry VIII. He had, indeed, the honour of being condemned to the stake, with three other persons, who were burnt for hereby, but was pardoned by the intercession of Sir Humphrey Falker.

His notation of the English cathedral service was published under the following title:

The Booke of Common-prayer. noted. 1550.

Imprinted by Richard Grafton, Printer to the Kings Majestie, cum privilegio ad imprimentum solam.

As this book is become very scarce, we shall present the reader with a considerable extract from it.

"In this booke is conteyned so muche of the order of common-prayer, as is to be forre in churches; wherein are used only these iii fortres of notes."
CATHEDRAL SERVICE.

The first note is a breve note, and is a breve. The second is a square note, and is a semibreve. The iii, a pryeke and is a mynymme, and where there is a pryeke by the square note, that pryeke is half as muche as the note that goeth before it. The iii is a close, and is only used at the end of a verse."

• Strained, or stretched out: perhaps from its being the longest note used in chanting. Junius makes breve and strain synonymous.

MATTINS.

The Quere with the Priest.

O 

O Lorde open thou my Lippes

And my Mouth shal shew forth thy Praif.

Te Deum Laudamus.

We prayfe the, O Lorde, we knowlege the to be the Lorde.

All the earth doth worship the, the Father everlast ing.

To the al Angels cry aloud, the Heavens, and all the Powers therin.

To the Che-ru-bim, and Ser-aphin, continu ally

do cye, Ho-ly, Ho-ly, Ho-ly, Lorde God of Sa-ba-oth.
CATHEDRAL SERVICE.

Heaven and Earth are full of the Majesty of thy Glory.

The glorious Company of the Apostles pray the.

The goodly fellowship of the Prophettes, pray the.

The noble Army of Martyrs pray the. The Holy Church throughout all the World doth knowlege the. The Father of an infinite Majesty. Thy honorable, true, and onlye Sonne.

Also the Holy Ghost the Comforter. Thou art the Kyng of Glory, O Christ. Thou art the everlast- ing Sonne of the Father.

When thou tookest upon the to deliver Man thou didst not abhorre the Virgins Wombe. When thou haddest overcome the sharpnes of Death, thou didst open the Kyngdome of Heaven to all believers.
CATHEDRAL SERVICE.

Thou sittest on the right hand of God, in the Glorye of the Father.

We believe that thou shalt come to be our Judge. We therefore pray

the, helpe thy serrauntas whom thou haft redeemed with thy preci-

ous bloud. Make them to be nominated wyth thy Saints in Glorye e-

verlafting. O Lorde, save thy people, and bleffe thyne heri-

tage.

Governe them and lift them up for ever. Day by Day we magni-

ifie the And we worshipp thy Name ever World wythout end.

Vouchsafe, O Lorde to kepe us this Day without Sinne. O Lorde have

Mercy upon us, have Mercy upon us. O Lorde lett thy

Mercy lighten upon us, as our trufl is in The. O Lord

in The have I trusted, lett me never be confounded.
CATHEDRAL SERVICE.

After the Second Lesson of these that follow.

Benedictus Dominus.

Blef fed be the Lorde God of If - ra - el

The same Chant repeated to the end.

for he hath Visit - ed and Redeem - ed his People, &c.

Blef fed be the Lorde God of If - ra - el for he hath

Vi - si - ted and Re - de - med his People, &c. to the end.

In this manner the whole Morning and Evening Service, as it is now Chanted, is set; except the Litany. At the end is the name of John Marbeck.

At this time, the plain-song of the Romish church in the chants of the principal hymns and responses, remained nearly the same, as may be seen in comparing the Te Deum laudamus, and other parts of the cathedral service, in this publication, with the missals, graduals, and antiphonaries of those times. The chant to the Te Deum, as published by Melbournus, {Antiquae Mus. Ant. Sept. Amst. 1652. Vide pref. Lectioni benevoli,} from a copy nearly as ancient as the hymn itself, and another example of the same Canto Ferro, given by Glareanus, {Dodecad. p. 110.} in 1547, correspond exactly with that which was retained by Marbeck, at the time of the reformation: as the mode, the dominant, and medius, are all the same; nor is the least deviation discoverable, except where the different number of syllables in the translation required it, and which affect the melody no more, than those slight changes which happen in the manner of use of any two choirs in singing the same chants, or even in adjusting different hands of any song to the same tune.

Marbeck was admitted, in 1549, to the degree of bachelor in music, at Oxford, according to Anthony Wood, {Faiti Oxon.} who erroneously calls him James Marbeck: he is honourably mentioned by Bale, because he had been perverted by the Catholics, and his name is omitted by Pitts, for the same reason.

It seems as if we may safely conclude, that the chief part of such portions of Scripture, or hymns of the church, as have been set by English musicians to Latin words, were produced before the reformation, or, at least, in queen Mary's time; that is, before the year 1555, when queen Elizabeth ascended the throne, by which time a school of counterpoint was formed in this country, that was equal, at least, to that of any other part of Europe. A reason, however, may be assigned for the choral music of every Christian country approaching perfection by nearly equal strides.

Before the reformation, as there was but one religion, there was but one kind of music in Europe, which was plain chant, and the difficult built upon that foundation; and as this music was likewise only applied to one language, the Latin, it accounts for the compositions of Italy, France, Spain, Germany, Flanders, and England, keeping pace with each other, in style and elegance. All the arts seem to have been the companions, if not the producers, of successful commerce; and they will, in general, be found to have pursued the same course, which an admirable modern historian has so well delineated: {Hist. of Charles V. vol. i. sect. 1.} that is, like commerce, they will be found, upon inquiry, to have appeared first in Italy; then in the Hapsburg towns; next in the Netherlands; and by transplantation, during the 16th century, when commerce became general, to have grown, flourished, matured, and diffused their influence, in every part of Europe.

If this were a place to illustrate such an idea, it would be easy to shew, that ecclesiastical music, in the middle ages, was all derived from the papal chapel, and court of Rome; that counterpoint was first cultivated for their use; that it travelled thence to the Hapsburg towns, and the Netherlands, where the influence, which flowed from successful commerce, afforded encouragement and leisure for its cultivation; till about the middle of the 16th century, when, by the general intercourse which traffic and the new art of printing introduced, all the improvements in harmony, which had been made in Italy and the Low Countries, were communicated to every other part of Europe; which not only stimulated the natives to adopt and imitate them, but to improve and render them more perfect, by their own inventions and refinements.
CATHERETIC, doctor, doctor cathedricus, denotes a doctor poissif-id of a chair or fellowship in some of the universities of Spain.

They say a cathedratic doctot of Salamancii, of Alcala, &c.

CATHEDRATICUM, in Ecclesiastical Writers, denotes a sum of money, amounting to two shillings, annually paid by the inferior clergy to their bishop, or as often as he visited his diocese, ob honorem cathedrae, i.e. as an argument of their subjection, and for the honour of the bishop's seat or cathedra. This was otherwise denominated fxsoulaticum, and by modern writers procurament.

CATHEDRATICUM also denotes a sum which bishops newly ordained gave partly to bishops or patriarchs, by whom they were consecrated, and partly to the clerks and notaries who officiated on the occasion.

This was also called disponen, as being given on account of the throne, or chair, they had now obtained, and fxsoulaticum, or synodals.

Bishops consecrated by patriarchs or metropolitans, provided their church was not worth less than thirty pounds of gold, to make a hundred solidi by way of cathedraticum.

CATHETHM, in Geography, a town of Arabia, 80 miles S. of Baffira, and 170 N. of El Cattif. N. lat. 29°. E. long. 47°. 14'.

CATHENON. See CATHETIN.

CATHERETIC. See CATHEDRATIC.

CATHETERINA, SANTA, in Geography, a small Grecian island, which seems to have been detached from the south point of the island of Rhodes. It is a remnant of the land which joined it to another country, in like manner inhabited, and which bears the name of the island of Scarpanto.

CATHETERINE, in Biography. See CATHARINE.

CATHERINE, St. in Geography, a pleasant island in the harbour of Sunbury, and state of Georgia, in North America. Alfo, a small productive island on the south coast of St. Domingo, 20 leagues E. of the town of St. Domingo.

CATHETER'S TOWN, a town of America, in the flate of New York, and county of Ontario, situate 3 miles S. of the S. extremity of Seneca lake.

CATHETER Bay lies at the E. end of the island of Jersey, southward of the point so called, and affords a good road in well country winds.

CATHETER, St. Cap., lies on the W. coast of Africa, in S. lat. 24° 5', and E. long. 10° 38'.

CATHETER'S Fords lies in the straits of Magellan, near the cape end. N. lat. 52° 48'. W. long. 67° 57'.

CATHETER'S island, an island of America, on the coast of Florida. N. lat. 31° 30'. W. long. 81° 41'. Alfo, an island off the coast of Honduras. See PROVIDENCE island.

CATHETER Sound lies, with a small island of the fame name, on the coast of Georgia, in N. America, in 31° 10' N. lat.

CATHETER'S St. Tower, a sea-mark on the summit of St. Catherine's hill down, on the back of the Isle of Wight, about 750 feet higher than high-water mark. N. lat. 50° 34'. W. long. 1° 19'.

CATHERLOUGH. See CARLOW.

CATHETER, in Surgery, a curved tube employed for drawing off the urine, or injecting fluids into the bladder. The term catheter is derived from cathoire, dimittus, to thrust into; and although it signifies a hollow instrument, or syphon, for the above purpose, in the writings of Celsius, Galen, and Paulus Aegineta, this word has a very different meaning in Vol. VII.

the works of Hippocrates, who uses it to denote a piece of twisted cotton or lint introduced into ulcers. Vide Defin. Medic. Gorherr.

It appears from lib. vii. cap. 26, of Corn. Celsius's surgical work, that catheters were formed at first of polished copper or brass, though the Arabians made them of silver, lead, tin, or leather; and there can be no doubt that they were used by the ancients, not only for drawing off the urine, but for the purpose of removing obstructions in the urethra, as we now employ bougies: this is further evident from a passage in Galen, De Locis Afficectis, lib. i. where he treats of caremules in the urinary passage. See likewise Galeni De Math. Med. lib. v. cap. v.

It is also perfectly certain (notwithstanding the late claims of Mr. Jeffes Foot, in his treatise upon the "Vesica Lotura," that the older surgeons were accustomed, on various occasions, to inject the bladder through a catheter or cannula, precisely in the manner we administer an enema. Vide Paulus Aegineta, lib. vi. cap. 59. "De Catheterifino & Civitatis Vesica," likewise, Albucasis, lib. ii. fect. 59. "De Modo Vesica Liquorem Syringa infundendi, & de Forma Instrumen- torum ad loc idoneorum." Gorherrus describes the operation of using the catheter as follows: "Ea aStoqpee; tell administrationes chirurgicæ ratio qua injicimus per Ca- theterem in vesicam id quod ad ejus curacionem convenit; vel "examinus id quod impedit ne urina reddatur, fove con- cussus intus fangus fit, five aliud quipppiam, recto fiphone "immisso, quom Graeci catisterg vocant." For a particular account of the ancient modes of injecting the urinary bladder, and to the instructive reader more especially to the 55th section of Albucasis, already quoted, and to Avi- cenna, lib. in. Fen. 19. Traet. 2. cap. 9. This practice was continued by several surgeons of the middle age, but soon afterwards appears to have been generally neglected, until it was revived by Le Dran.

Although the original use of the catheter null necessarily have required it to be made of a tubular form, it is strange that this instrument has been described by many respectable French surgeons as a solid instrument! Thus, for example, M. Sue (in his Dict. de Chir.) expressly says, "Mal-a-propos confond-on le ca- theter avec la fonde: Le catheter n'a point de cavité intéri- sure; mais seulement une canniule qui regne tout le long de fa partie convexe, au lieu que le fonde est creuse inte- rieurement. Le premier instrument fera a connoître les pieux qui font dans la vessie, & sa fonde l'opération de la "taille. Le second fera à évacuer l’urine contournée dans la "vessie. Il est vrai que, dans plusieurs cas, celui-ci peut "supprimer à l'autre, mais non pas le premier au second." Again he tells us, "Le cathéterisme n'ira autre chose que "la vindicatidion du cathèter dans la vessie, p. ur s'affurer de l'"existence d'une pierre, ou faire l'opération de la taille "et on pas pour évacuer l'urine; ce qui peut se faire "qu'avec la fonde."

In the old French Encyclopédie, M. Louis says, that "some authors are accustomed to give the name of catheter "moreparticularly to a grooved sound which serves to "conduct the lithotome in the operation of cutting for the "fome!" whereas, by all English surgeons, this instrument is called a stiff. (See Article Lithotomy.) The sound is a stiff steel instrument, without any groove: the stiff is made of the same form and materials as the sound, but is grooved on its convex side; and the catheter is hollow throughout its whole extent, whatever materials it may be made of. The sound and the stiff are always curved to the shape of the urethra, and are inflexible; but the catheter may be made either of a rigid or a yielding substance; and in the

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former case it must also be curved like the found. The flexible catheters are now generally made of wove linen cylinders, covered with a coat of chiaie gum; the blad must be fabricated hitherto by M. Bernard of Paris, but they are at present well manufactured by Mr. Walsh of London. Their size and form vary, according to the sex or age of the patient. Bernard, in his dictionary of surgery, gives the following account of this instrument, as it is fabricated in Germany.—"One of the most useful inventions which have been made with respect to these instruments, is to construct them of chiaie gum, and the merit of this invention is to be ascribed, without doubt, to Mr. Theden. (Neue Beun- kungen u. Erfahrungen, &c. Th. ii. Berlin, 1782, pag. 113.) They were afterwards improved by a silver-smith at Paris, of the name of Bernard, who directed not to apply the dif- solved chiaie gum to a wire-cylinder, as Mr. Theden had done, but to one made of knitted silk; and these catheters certainly deserve to be recommended in preference to all others. But with respect to their price, the elastic catheters that are prepared by Prof. Pickel, (Richter's Chirurg. Bibliothek. ii. vi. p. 512.) of Würzburg, deserve particular recommendation. These consist of silk cylinders plaited or worked upon a probe, and afterwards covered with the following varnish. Three parts of white lead, one part, or fugar of lead with boiled hulled oil, which is the common varnish used by cabinet makers, mixed with one part of melted amber, and the same quantity of oil of turpentine. With this varnish he spredes the silk cylinders, and repeats this three times as soon as the former coating has dried in the open air; after which he puts the catheters into a baker's oven 24 hours, when bread has been baked in it the last time, and when it retains the temperature of 60°—70° Reaum. Here he lets them remain 10 or 12 hours. When he has taken the catheter out of the oven, he rubs the ine- qualities off a little with pumice stone, leaves up of the end, cuts into it the oblong lateral aperture, and then spredes it 12 or 15 times more with the varnish formerly mentioned. Every time, however, the catheter must be well dried in the open air before the varnish is spread upon it again, and after every third coating which it has received, it must be put again into the bake oven, so that in all it must have received from 15 to 18 coatings with varnish, and have been laid five or six times in the oven. The end is smoothed off well; each of these catheters costs a dollar.

The flexible catheters possess great advantages over those made of metal. For, in the first place, they can be introduced much more easily than the metal ones, even by an unpractised hand. 2. They may be suffered to remain in the urethra and bladder as long as is necessary, without occasioning much inconvenience. 3. There is no danger of injuring the tender surface of the urethra with them, or of pieces breaking off and remaining behind. 4. They may be used equally conveniently both for children and adults.

Another very important use may be made of elastic catheters in all cases in which the introduction of nourishment by the mouth is impeded or obstructed, as in wounds of the pharynx, in tetanus, hydrophobia, &c. In such cases an elastic catheter is introduced through the nose into the cesophagus, where it may be suffered to remain without occasioning any material inconvenience to the patient; and nourishment and drink may thus be introduced through it into the patient's stomach. In applying the instrument, it easily happens that the end of the tube gets into the larynx instead of the pharynx. This error is generally discovered merely by the circumstance that the flame of a candle, when held before the external aperture of the tube, is thrown into violent motion.—Dr. Hales describes a catheter of a new structure, contrived for the more advantageous injection of li- mithotomies into the bladder. Its cavity is divided lengthways by a thin partition into two separate channels, which end in two diverging branches. By one of these branches the menstruum is to be injected into the bladder, in the common, or rather in the hydraulic way, while it returns mixed with urine by the other. Hales, Hist. kat. p. 512.

There is likewise a description in the Philosophical Trans- actions, vol. xxiii. p. 492, of an ingenious catheter invented by M. Le Cat, at Rouen; and other surgeons have recommended an instrument made of silver-wire, flattened, and turned spirally, so as to be hollow and flexible. These contrivances are certainly very specious, but they are too complex to be useful in ordinary practice.

Concerning the introduction of the catheter into the ur- inary bladder, see the following article.

CATHETERISM, is the act of passing a catheter into the urinary bladder, with a view to draw off the urine, or to facilitate the introduction of fluids into the bladder by means of a syringe.

The introduction of a flexible catheter, of elastic gum, such as is in common use among surgeons, can scarcely give any trouble; unless there be a considerable obstriction in the urethra, which may prove the occasion of inexpressible difficulties. The observations which follow are intended chiefly to apply to the silver male catheter, which is generally used in cases requiring an evacuation of urine, or the injection of some fluid into the bladder. This little opera- tion, simple as it may appear to an inexperienced by-stander, is, in fact, sometimes one of the most perplexing to men of real ability, and therefore deserves the young surgeon's particular attention.

"I do not know," says Mr. John Bell, in his Principles, of Surgery, vol. ii. p. 269., "that even the operation of lithotomy itself is more difficult than that of introducing the catheter; more important it cannot be, than an operation which gives relief in accidents and difficulties so extremely common and so very afflicting." The first cause of embarrassment in performing this operation arises often from the incumbent position of the patient, which renders it necessary (at least surgeons have generally thought it necessary) to pass the catheter with its concave part towards the abdomen. This position, however, except in male subjects requiring lithotomy, is seldom the most eligible; as we have found a standing posture by far the most convenient for the operator's accommodation, provided the patient is not exceedingly fat and corpulent.

Support the surgeon sits on a low chair, or kneels on his right knee, while the patient stands before him, leaning against something immovable. The operator then holds the penis with the middle finger of his left hand, and the glans with the fore finger and thumb of the same hand; chiefly in order to expose the orifice of the urethra. The handle of the catheter, previously oiled, he holds with his forefinger, thumb, and middle finger of the other hand, and directs it in such a manner that its straight pollicier part is placed near the belly of the patient, and parallel with the axis of his body; and he thus introduces its point into the orifice of the urethra. The surgeon then draws the penis gently towards him and extends it, pushing the catheter forwards at the same time with the utmost caution, till its point has arrived at the bend of the os pubis; and in order now to introduce the catheter completely into the curvature of the urethra, the operator must suddenly deprefs the hand, with which he holds the upper part of the catheter, towards the thighs, and thus raise up the point of the instrument; so that it paffes behind the pubis, into the bladder itself. In
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In the other method, the operator gives the catheter such a direction, with the hand next to the patient's thighs, as to turn the elevated convex part of the instrument upwards, and to place the strait part under the belly before the thighs: the point of the catheter is then cautiously introduced into the orifice of the urethra and the bladder, whilst the penis is somewhat extended with the other hand. When the point of the catheter has arrived at the place where the urethra pâlies under the os pubis, the operator must turn both the catheter and the penis, fo as to make both describe a semicircle: this he does by turning them towards the groin at the opposite side; and from hence towards the belly; in which motion the point of the catheter must remain in the centre, as it were, round which the other parts revolve. At last the hand with which the catheter is directed, must be lowered a little, and the rest of the operation completed in the same manner as before. These two methods of introducing the catheter, differ only in this, that in the first the introduction is performed at once; but in the second (which is conceitedly termed "fonder par le tour du maître") it is done by two different manoeuvres, and consequently the operation is unnecessarily lengthened.

CATHETOLIPES, in Natural History, the name of a genus of fishes of the clafs of the Selenite, but differing from the common kinds in the disposition of the constituent plates.

The word is derived from cathetos, perpendicular, and lens, a scale or plate, and expresses a lot of these bodies whole plates are ranged perpendiculariy. All the known Selenites, except those of this genus, are composed of a number of parallel plates, or thin flakes, ranged evenly horizontally on one another.

CATHETO-PLATEUS, in Ichthyology, a term with its opposite, which is plagio-plates, very much used by Arcted, in his description of fishes, but not adopted by Lamans, or more recent ichthyologists; they may be explained in English by the two familiar words, compressed and deformed. The heads of fishes are the parts principally characterized by these terms.

CATHETUS, in Architecture, is a perpendicular line, supposed to pass through the middle of a cylindrical body, as a column.

Cathetus is sometimes applied to a line in the Ionic capital, passing perpendiculariy through the eye or centre of the volute. This is otherwise called the axis of the volute, which see.

CATHETUS, in Botany, Lourcino; Flor. Cochinich. Clafs and order, dicac monandria.


A shrub. Leaves falcate, small, oval, entire, flat, smooth. Flowers axillary, solitary, very small. A native of Cochinchina.

CATHETUS, in Geometry, a perpendicular, or a line, or radius, falling perpendiculariy on another line, or surface.

Thus, the catheti of a right-angled triangle, are the two sides that include the right angle.

Cathetus of incidence, in Catoptrics, is a right line drawn from a radiant point, perpendicular to the reflecting line, or the plane of the speculum, or mirror.

Cathetus of reflection, or of the eye, a right line drawn from the eye, or from any point of a reflected ray, perpendicular to the plane of reflection, or of the speculum. See Reflection.

CATHMANDU, or Cathmandu, in Geography, the capital of an independent kingdom in the kingdom of Nepal or Nepaul, in Hindoostan, situate to the northward of the plain of Nepal, 107 geographical miles of N. of Mainly, that is, in N. lat. 28° 6'. This city contains about 13,000 houses; and the kingdom extends, from south to north, to the distance of 12 or 13 days' journey, as far as the borders of Tibet; and it is almost as extensive from east to west. The king of Cathmandu has always about 50,000 soldiers in his service. To the eastward of Cathmandu, at the distance of two or three miles, is a place called "Tolu," by which flows a small river, the water of which is esteemed holy, according to the superstitious ideas of the inhabitants; and thither they carry perfons of high rank, when they are thought to be at the point of death. At this place is a temple, which is not inferior to the best and richest in any of the capital cities. They have also a tradition, that at Tolu, as well as two or three other places in Nepal, valuable treasures are concealed under ground; but no one is permitted to make use of them, except the king, and that only in cases of need.

These treasures, it is said, have been thus accumulated: when any temple had become very rich from the offerings of the people, it was destroyed, and deep vaults dug under ground, one above another, in which the gold, silver, gilt copper, jewels, and every thing of value were deposited. At Cathmandu, on one side of the royal garden, there is a large fountain, in which is one of their idols, called "Narayan." This idol is of blue stone, crowned, and sleeping on a matreans of the fame kind of stone; and both the idol and the matreans appear, as if they floated upon the water. This stone machine is very large, about 15 or 20 feet long, and proportionably broad, but well wrought and in good repair.

In a wall of the royal palace, there is a fline of a single piece, about 15 feet long, and four or five feet thick, on the top of which are four square holes at equal distances from each other. On the inside of the wall they pour water into the holes, and on the court-side, each hole having a closed canal, every person may draw water to drink. At the foot of the stone is a large ladder, by which people ascend to drink; but the curiosity of the stone confists in its being quite covered with characters of different languages cut upon it. Some lines contain the characters of the language of the country; others, the characters of Tibet; others, Peria: others, Greek; besides several others of different nations: and in the middle there is a line of Roman characters; but none of the inhabitants know how they came there, nor do they know whether or not any European had ever been in Nepal before the missionaries, who arrived there in the beginning of the last century. They are manifestly two French names of feacons, with an English word between them. To the northward of the city of Cathmandu is a hill called "Sinsh," upon which are some tombs of the Lamas of Tibet, and other people of high rank of the same nation. The monuments are constructed in various forms; two or three of them are pyramidal, very high and well ornamented. Round their rim are remarkable stones covered with characters, which probably are the inscriptions of some of the inhabitants of Tibet, whose bones were interred there. The natives of Nepal regard the hill as sacred, and conceive that it is protected by their idols; and, therefore, they never fire any troops there for its defence, although it is a post of great importance, and only at a short mile's distance from the city. Adjoining to the tomb they have
CATHOLIC, from καθολικός, and δοξος, abode, denotes a thing that is universal, or general. Some have said, that Theodosius the Great first introduced the term catholic into the church; appointing by an edict, that the title should be applied, by way of pre-eminence, to those churches which adhered to the council of Nice, in exclusion of the Arians, &c.—Catholicism, however, soon changed hands; for under the emperor Constans, Arianism became so predominant, that the Arians were called the catholic. But the term was used much more anciently, as by Polycarp and Ignatius.

"ubi fuere ipsi Christi, dixit ipse ecclesia catholic." The Romish church now affirms the distinguishing appellation of the catholic church. See Church.

The term catholic, or Roman catholic, is now fashioned by law (see the title to the act of 31 Geo. III., c. 52.) as well as by common usage, to denote the religion formerly called Popery; and the professors of it usually denominated Papists. See Papists and Popery.

Catholic Epistles, in Biblical History, a denomination given to seven epistles of the New Testament, figuring universal or general, because they are not written to the believers of one city, or country, or to particular persons, as St. Paul's epistles are, but to Christians in general, or to Christians of several countries. This is the case of five, or the greater part of them, with which the two others are joined. When the first epistle of Peter, and the first of St. John, were called catholic by the most early Christian writers, the two smaller of St. John were unknown, or not generally received. The antiquity of this denomination is easily ascertained. They were so called in the time of Eusebius (H. E. l. ii. c. 23. l. vi. c. 14.) and, probably, before. Of this fact we have good proof. For St. John's first epistle is several times called a catholic epistle by Origen in his remaining Greek works, as well as in others. It is likewise so called several times by Dionysius, bishop of Alexandria. Athanasius, Epiphanius, and later Greek writers received seven epistles, which they called catholic. They are so called likewise by Jerome. The epistles bearing this appellation are, one of James, two of Peter, three of John, and one of Jude; but they are cited in a different order by ancient authors. Of these epistles two only, viz. the first of St. Peter, and the first of St. John, were universally received in the time of Eusebius; though the rest were then well known. All the seven were received by Athanasius, Epiphanius, Jerome, Augustine, and many other writers. However, the Syrian churches received only three of these epistles; nor does it appear, that more were received by Chrysostom or Theodoret. These epistles were also called canonical by Cassiodorus, about the middle of the sixth century, and by the writers of the prologue to these epistles, ascribed (erroneously) to Jerome. The propriety of this latter appellation is not satisfactorily ascertained. Du Pin says, that some Latins have called these epistles canonical, either confounding the name with catholic, or else to denote, that they also are a part of the canon of the books of the New Testament. See Epistle.

Catholic furnace, is a little furnace, so contrived, as to be fit for all kinds of operations, which do not require an intense fire.

Catholic kings, is a title which has long been hereditary to the kings of Spain. Mariana pretends, that Reccared first received this title after he had destroyed Arianism in his kingdom, and that it is found in the council of Toledo for the year 589. Vafec afcribes the origin of it to Alphonfus in 738. Some allege that it has been used only since the time of Ferdinand and Isabella. Colombie says it was given them on occasion of the expulsion of the Moors. The Boedamites pretend, it was given by their predecessors, the Visigoth kings of Spain; and that Alexander VI. only renewed it to Ferdinand and Isabella. Others say, that Philip de Valois first bore the title; which was given him after his death, by the ecclesiastics, on account of his favouring their interests.

In some epistles of the ancient popes, the title catholic is given to the kings of France, and of Jerusalem, as well as to several patriarchs and primates.

CATHOLICA, in Geography, a town of Italy, in the province of Romagna. It derived its name from being the place whither the orthodox bishops retired in the year 359, after being ousted by the Arian party, in the council of Rimini; 9 miles S.S.E. of Rimini.

Catholic, La., a town of Sicily, in the Val di Mazara, situate in a spacious plain open to the sea, and shut up on the north side by a broken theatre of mountains. It is the chief town of the district. It was founded in 1612 out of several small hamlets by Francis Istar, lord of the soil, but is now possessed by the family of Bonanni, who take the title of princes of La Catholic. The number of its inhabitants exceeds 7000. The prince of La Catholic derives from Sicilian an annual income of 14,000 crowns.

Catholiciani, in Middle Age Writers, the officials or ministrants of the catholic, or receivers of the taxes of a diocese, sometimes also denominated Cæsarians.

Catholicon, in Pharmacy, a kind of soft purgative electuary; so called, as being supposed universal; or a purger of all humours.

Different authors give different recipes for it:—that called Catholicon Nicolai was long in use; it consists of sixteen ingredients, the chief whereof are:—mari di, cassia, fera, and rhubarb. It was called the double catholicon, when there was a double portion of fera and rhubarb.

The Catholicon for effusions, only differs from this, in that it had no rhubarb, and that honey was used in it instead of sugar.

Catholicus, the title of a dignitary, or magistrare, under the Roman emperors, who had part of the administration, and particularly the care and receipt of the revenues and taxes in Roman dioceses.

The catholics were the same with what was denominated by the Latins procurator, and rationalis Caesaris. Such was the catholics of the diocese of Africa, mentioned by Eusebius, and other ancient writers.

Catholicus, among Ecclesiastical Writers, an appellation given to the princes or metropolitans of several churches in Asia, subject to the see of Antich; but whose jurisdiction and dioceses are of such extent that they have assumed the title of catholic, q. d. universal bishops. See Private.

Cathion, in Ancient Geography, an island of Greece, S. of the Peloponnessus, in the gulf of Lacedemon.

Caticardamna, a town of India, on this side of the Ganges, according to Ptolemy.

Cathieh, in Geography, a town of Egypt, near the coast of the Mediterranean, 70 miles N.N.E. of Suez, and 130 miles N.E. of Cairo. Lat. 35° 7', E. long. 31° 30'.

Catif, or Katif, El, a town of Arabia, in the province of Lachfa, seated on the coast of the Persian gulf, at the distance of about 5 German miles from the Isle of Bahrein. The inhabitants earn their subsistence by the pearl-fishery. When any are too poor to fish at their own risk.
CATHOLICS, in Ancient Geography, a fountain from which proceeded the stream called "Aqua Petronia," which was a rite of Italy that discharged itself into the Tiber.

CATILINE. Lucius Sergius, in Biography, was descended from the illustrious patrician family of Sergii at Rome, but rendered infamous by a series of debaucheries, incests, murders, and the most atrocious crimes. He began his licentious career at an early age, by debauching a female of distinction, and afterwards marrying the daughter he had by her. He was also accused of holding a criminal intercourse with a vestal, the filter of Terentia, Cicero's wife, and of murdering his own brother, whose name he prevailed upon Sylla to inflict in the list of professed perfous for the purpose of justifying his crime. During the fainéant administration of Sylla, he was the chief instrument of his cruelties, and headed a band of affilius, who dragged out of the houses and temples perfous, whose names were inscribed in the list of profersons, and cruelly murdered them in the presence of his employer. He was also active in fearing out and afflicting many knights and senators, before they knew they were proscribèd. As a recompense of these savage servics, and in consideration of his birth and brutal courage, he was advanced, by the favour of the dictator, to the principal dignities of the state. Accordingly, he had been questor, legate in Macedonia under C. Curio, and prætor in Africa; but in all these employments, he had disgraced himself by his debaucheries and enormous oppressions. As he had dissipated his patrimony, and was overloaded with debts notwithstanding his uncontrouled exactions, he had no prospect of retrieving his affairs but by the subversion of the state; and he, therefore, seized all opportunities that occurred for exciting and promoting civil confusion. Upon his return from Africa, B.C. 67, he formed a conspiracy with other discontented and turbulent perfous for murdering the confiule, Aurelius Cotta and Manlius Torquatus, together with the greatest part of the senators, and violently feizing the government. This plot, though the execution of it was twice repeated, proved unsuccessful, in consequence of a mistake in the signal on the part of Catiline; and he was therefore under a necessity of deferring the accomplishment of his purpose to a future period. Having strengthened his party by the accession of a great number of senators and knights, of debauched young persons in the city, and of old soldiers and officers of Sylla's army, who had reduced themselves to indigence by the profuse expenditure of all the gains of their oppressions, he concerted a more extensive plan for the total subversion of the commonwealth. With a view to the more easy and certain execution of it, he offered himself a candidate for the confiuleship, and had Cicero for his competitor. In the mean while, the conspiracy of Catiline had been discovered to Cicero by Fulvia, a woman of distinction, who had discomfoured her family by a criminal correspondence with Quintus Curtius, one of the party concerned; and this discovery, though not fully authenticated, had excited suspicions against Catiline, which defeated his election, and favoured that of Cicero, his avowed adversary. A.U.C. 651, B.C. 65; Catiline, enraged by the success of his rival, determined to offer himself a second time for the confiuleate, and prepared for an open rebellion, in case of his failure.

With this view he borrowed large sums of money, and engaged Manlius, one of Sylla's old officers, who then resided at Puteoli, to make levies of soldiers throughout Etruria. Lucullus, however, whom Pompey had succeeded in the East, being informed of these hostile preparations, made a report of them to the senate, and affid the confiule with all his intercess in the prosecution of the traitor. Cicero also kept up a correspondence with Fulvia, and had even gained over some of the conspirators, who, pursuant to his directions, pretended to be the most ardent promoters of the plot. By means of this information, he discovered the designs of Catiline, the various sentiments of his accomplices, their number and quality, and the general, as well as the private, views of each of the conspirators. By them he was informed, that on a day appointed the conspirators were to set fire to several parts of the city; and that, during the confusion and uproar, which was general a conflagration would occur, some were to murder the chief men of the city in their houses, others to assemble the mutinous populace, seize the Capitol, and fortify themselves there, till Manlius should arrive from Etruria with his veterans. Two Roman knights were appointed to murder Cicero in his own house; but the confiule, previously informed of every thing that had passed in their affair, summoned the senate, and boldly apprized the confiule fathers, in Catiline's presence, of the danger to which they were all exposed. The senate, having been made acquainted with the whole plot, issued a public decree, according to an ancient form, which had been observed in times of national danger, "that the confiules should take care that the republic suffer no detriment." Cicero, thus invested with ample power, adopted every necessary measure for keeping in awe the principal cities in Italy, and for guarding Rome, the capital; and the senate, by his advice, promised not only a pardon, but ample rewards, to any of the conspirators, who should make further discoveries of this detestable attempt. Although the confiule might, on his own knowledge, have condemned Catiline and his accomplices to death without appeal, this would have been a pernicious measure; and he thought it more advisable to induce Catiline to leave Rome, and take refuge in Manlius's camp near Puteoli. With this view he addressed the senate, and pronounced, in the presence of Catiline, that most severe and spirited invective, still extant under the title of the first oration against Catiline, in which he lays open all his murderous designs, affiures him that they are fully known and guarded against, and exhorts him to leave that city which can no longer endure his presence. Catiline, retaining full possession of himself, with an air of great plausibility intreated the senate not to credit the accusations of a declared enemy, who had not in Rome so much as a house of his own, and who was attempting to raise his own character by the defeat of a conspiracy forged by himself, and thus to acquire the title of defender of his country. When he proceeded to invectives against the confiule, he was interrupted by the clamours of the whole assembly, and the senate-houfe echoed with the names of incendiary, parricide, and enemy to his country. Stung with these reproaches, and foaming with rage, Catiline exclaimed, "Since you have provoked me to the utmost, I will not perish alone, but will enjoy the satisfaction of involving those who have sworn my ruin in the same destruction with myself." Having thus spoken, he left the senate-houfe, and accompanied by about 3000 men, hastened to the camp of Manlius in the vicinity of Puteoli. Here he allured the command of the troops, together with all the enigms of a suprême magifrate, being preceded by lectors, carrying their axes and fasces. The senate, as soon as information was received of this act of open rebellion, declared Catiline and Manlius enemies of their country;
CAT

COUNTRY; and gave orders, that Antonius, the adherent of Caesar, in the present ship, should take the field with a pro-

confederacy, and that Cicero should continue in Rome to

watch the motions of the conspirators. Some of the party,

who still remained in the city, made an attempt to attach to

their cause the ambassadors of the Allobroges, who were then

at Rome, and thus to obtain assistance from Transalpine

Gaul; but these ambassadors, by the intervention of Sanyo,

the protector of their nation, communicated the whole affair
to Cicero; and he instructed them to proceed in the negoti-

ation, and to obtain the draft of a written treaty, subscribed

with the names of the conspirators. Cicero, being informed

of the ambuscades by the intervention of the Allobroges or Vultureus, who

had undertook to conduct them to Catiline, in order to ob-
tain his ratification of the treaty, were stopped in the way,

and brought back to Rome, with all the papers which either

the Allobroges or Vultureus had in their custody. Cicero,

having thus got into his possession undeniable proofs of the

conspiracy, dispatched proper officers to arrest Lentulus,

Gabinus, Cathegus, and Statilius, and to commit them to

safe custody. He then assembled the senate, in the tempo-

re of Concord, hid before the assembly the proofs of the plot,

and having obtained a decree for the execution of the crim-

nals at a subsequent meeting, ordered them to be capitally

punished.

During these transactions at Rome, Catiline resolved to

lead his army into Transalpine Gaul, where he expected

very general support; but he was prevented from accom-

plishing his purpose by Q. Metellus Caesar, who, leaving

Piemont, which he had guarded the last year, posted him-

self with three legions at the foot of the Alps, while An-

tonius followed Catiline in the rear, who, busied in by

two bodies of troops, made a retrograde march, and falling

in with the proconsul near Pildes, now Pilloa, in Tuscan,

offered him battle. Antonius, who had formerly been of

Catiline’s faction, appeared unwilling to engage; but his

troops, infilling on being led to action, he pretended indis-

position, and devolved the command on his lieutenant Pe-

tricus, a veteran of tried and distinguished valor. The

engagement was fierce and obstinate; but at length, when

Manlius and another commanding officer were killed, it ter-

minated, after a long and dubious contest, in favor of Pe-

tricus, who was left master of the field. Catiline, having loit-

ered Manlius and his associates, during the engagement, found

himself unable to rally the fugitives; and, therefore, deter-

mining not to survive the ruin of his party, threw himself

into the midst of the victorious enemy, where he was found

among the dead bodies of those whom he had slain, still

breathing, and retaining in his countenance the traces of

that ravenous valor which distinguished his character. Thus

the Catiline conspiracy, which was detected by Cic-

ero in October, was terminated in December. B. C. 63: The character of Catiline has been sufficiently deline-

ated in the orations of Cicero; and his portrait is thus
drawn by the strong pen of Sallust: "His powers of mind
and body were extraordinary, but his disposition had

and depraved. From his youth he took delight in civil

contests, murders, rapines, and indignities, and caused him-

self to be the source of all. His constitution was, be-
yond credibility, patient of hunger, cold, and hardships.

In temper he was daring, deceitful, capable of every
kind of duplicity and dissimulation, greedy of the property
of others, lavish of his own, ardent in his desires, plausible,

rather than deep, in discourse. His boundless soul al-
ways aimed at things immoderate, excessive, and out of

probability." In after times he appears to have served as an

example of desperate and flagitious traitor; and Virgil has

irreverently fixed his doom, in making him the figure by

which punishment the regions of Tartarus are delineated on the

field of Aeolus.

"—— et te, Catilina, minaci

Pendentem scapula, Pyrrorumque ora tremens." 

Ann. viii. 668.

"There Catiline, o'er-hung a mountain's brow,

And flound'ring' view'd the Furies glare below." 


vol. i.

CATILLUS, in Ancient Geography, a mountain of Italy

near the Tiber.

CATIMARUS, in Botany, Rumph. Amb. See Kleinoimia.

CATIMBRIUM, Juf. See Globb. 

CATINA, in Ancient Geography, a town of Pelopon-

neas, in Arcadia. Play.

tab. 263. fig. 1 and 2. Trees, the fructification of which

Cor. unknown. Stam. filaments numerous. Pelt. unknown.
Peric. drupe as large as an orange or citron, crowned with

the very small calyx, fibrous within, rich covered, with
vehicles, which contain an aromatic effusive oil; nut

brittle, kernel reddish, veined. Leaves most commonly op-

posite, oval, oblong, entire, beak-lined with transparent

points. Fruit axillary. These trees grow on the banks of

rivers in Guiana. There are two species; one of which

bears a round, the other an elongated fruit.

CATKIN, the English name of a species of infracer-

ence, called by Linnaeus amenum, and improperly con-

firmed by him as a species of calyx. It consists of nu-

merous chaffy scales, containing either the fashion or pulp

separately, or very rarely both together, and ranged along

a slender flake, which is the common receptacle. The

older botanists it was styled julus, nymphaeum, and ca-

tulus. The latter term, corresponding with the English

catkin and the French chaton, is derived from its fancied

resemblance to a cat's tail. The amethystaceous plants con-

stitute the sixteenth natural order of Linnaeus in his Phi-

losophia Botanica, and the fiftieth in his polished lectures

published by Giseke. In the latter work he orders the fol-

lowing genera: Ficus, papulus, platanus, floccana; fic-

gas, juglans, quercus, corvus, carpinus, betula, myrica, 

pietatis, cinnothornum. Julicinus and Ventenat have also a

natural order of the same name which is thus divided by

Julicinus; 1. With hermaphrodite flowers; iothaurila, ul-

mus, celtis. 2. With dioecious flowers; ficas, populus, 

myrica. 3. With monocious flowers; betula, ca pinus, fa-

gas, quercus, corvus, liquidambur, platanus. The three

species of the first division have not their flowers in true
cats; and Ventenat observes that, although they have some

affinity with the ameteaceae, they may properly be placed

in a distinct order. Tournefort, Boerhaave, and

Rosen, have also a class or order distinguished by its ame-

eteaceous flowers; a character which the former extends to

the confine of Julicinus; but he, according to Ventenat,

although in many respects allied to the true ameteaceae,

have several peculiar important characters which neces-

sarily keep them distinct. Besides their difference in habit, the

confine have a cylindrical embryo, surrounded by a tender per-

perm;
C A T

perm; whereas the true amebenece have a flat embryo with-
out a periperm.

CATLENBURG, in Geography, a town and bailiwicks of
Germany, in the circle of Lower Saxony, and principa-
listy of Grubenhausen; 10 miles S.S.E. of Einbeck.

CATLIN, among Surgeons, is a dismembering knife, for
cutting off any corrupted part of a body. See Surgical
Plates on Amputation.

CAT-MINT, in Botany. See Nepeta cataria.

CATO, Marcus Porcius, distinguished by the appli-
ation of the Censor," in Biography, was born at Tusculum
in the year of Rome 519, B.C. 233; and was brought up
at a small farm near the country of the Sabines, possest by
his father, which he cultivated with his own hands. At the
age of 17 years, he made his first campaign under Fabius
Maximus, when Hannibal was ravaging Italy; and five
years afterwards he accompanied the name general in his
expedition against Tarentum. At the commencement of
his military career, he attracted notice by his singular sobriety,
valor, attention to discipline, and all the virtues of the an-
cient Roman soldier. On his return from the army, he
joined his domestics in the culture of his small estate, de-
voting himself at his leisure hours to the studv of eloquence
at home and to the practice of it in the adjacent cities,
where he pleased on behalf of those who applied to him.
His talents and virtues engaged the notice of Valerius Flae-
cus, who had lands contiguous to the small farm of Cato;
and who belonged to one of the most noble, affluent, and
powerful families of Rome. With the advice and under the
promised patronage of this rich neighbour, he determined
to try his fortune at Rome, where the successful eloquence
of his pleadings and the interest of his friend laid the foun-
dation of his future preferment. In his 30th year he served
as military tribune in Sicily; and he was afterwards quaestor
under Scipio in the African war; but disgrunted with the
splendid liberality and popular manners of this great man,
he came to Rome and joined with Fabius in acceding Scipio
before the senate. But though Scipio was honourably ac-
quitted and continued in his command, Cato gained elima-
tion with the public for his rigid economy. Besides, his
masculine train of rhetoric, which occasioned his being de-
nominated the Roman Demosthenes, gave him great influ-
ence in the assemblies of the people. Having passed through
the office of edile, he was appointed praetor in the province
of Sardinia; and in this station he displayed, in a very emi-

C A T

nent degree, his temperance, integrity, and rigid justice.
His predeceofers in this office had ruined the country, by
extortions for supplying the means of profusion; whereas
Cato distinguished himself by the simplicity of his habit,
table, and equipage, and never touched a single farthing of
the public money. At this time Sardinia abounded with
refiners, who, under a pretence of affiling private persons
with the loan of sums of money for particular occasions, ut-
terly ruined them; but Cato expelled from the island all
persons of this description. In the year of Rome 558,
B.C. 106, he was elected consul, in connection with his
friend Valerius Flaccus, and the Iberian Spain was assigned
to him as his province. But before his departure he vigo-
ously opposed the repeal of the Appian law, which re-
trained the propriety of the female sex to indulge in show
and ornament; but Valerius the tribune, having carried this
point against him, which he defended with his single voice,
he proceeded to his province, where he undertook the disci-
pline of his troops confining of new levies, and let them an
example of encountering every kind of hardship. His habit
was always plain; his provisions were the same with those
of the common soldiers; and he took part with them in the
labour of forming the entrenchments of his camp. Having
thus prepared his troops for contending with the natives,
who, in their previous wars with the Romans and Cartha-
ginians, had learned the military art, and who were naturally
brave and courageous, he dismissed his fleet, that his soldiers
might solely confide in their own valour. In this war he
obtained several victories, and by demolishing the forts the
the towns which he captured, he completely sub-
jected the province to the Roman dominion. To each of
the soldiers, besides the spoils, he gave a pound of silver
out of the rich booty which he acquired; and when some of
the officers expressed their surprise at his liberality, he told
them, "It is better that many of the Romans should return
home with silver, than a few only with gold." However,
he appropriated to his own use not part of the booty; but
continued to live in as frugal a manner as the meanest fol-
dier. At the close of the campaign, he failed back to
Rome with his troops, and next year was honoured with a
triumpb. Notwithstanding this merit, he still
continued freely to serve his country in the forum and the
field; and when the public service did not call for his active
concurrence, he enjoyed the pleasures of retirement, and de-
voted his hours of leisure to study. In the campaign of
M. Acilius Glabrio against Antiochus the Great in Greece,
Cato served as a military tribune; and by his advice and af-
flance enabled the confid to force the Syren's fortified
entrenchments in the pafs of Thermopylae, as the Persians
had formerly done, and to oblige him to abandon Greece,
and retire to Epirotis. About ten years after his confulate,
viz. in the year of Rome 569, B.C. 185, he offered himself
as a candidate for the office of Censor; but the known
feverity of his character alarmed the nobles, and they set up
fesn competitors against him; however, the people persisted
in the choice of Cato, and they nominated as his associate
his confular colleague, Valerius Flaccus. Many of the fe-
nators, who had been guilty of fex dalous enormities, were re-
fected; others were degraded on more frivolous grounds; and
Cato seems to have indulged a personal pique against the Cor-
nelian family, by taking from Scipio Ahiaticus the horse which
the public kept for him as a knight. The rigid cenfor ex-
cyed his office with great severity; he laid a heavy tax on rich
furniture, jewels, and all superfluities; and by such popular
acts, he made himself acceptable to the people, that they
created a flame to him in the Temple of Health. After the
expiration of his confulship, he merely attended his duty
as a private senator, and his advice was received with de-
sence and respect. The necility of destroying Car-
thage was a point which he always fervently inculcated;
and in his elimination this necessity seems to have been justi-
fied by the single circumstance, that Carthage was the in-
veterate foe and rival of Rome. Cato, considering the or-
iginal rude character of the Romans as the standard of per-
fection, fervently opposed every kind of innovation, and
for a long time refuted the introduction of Grecian letters
and philosophy into Rome. To this purpose he exerted
himself in hallowing the diffusion of Gnaecides the acade-
ic, and Diogenes the Stoic, who had been sent on a public
embassy from Athens. He feems, however, in his old age,
to have changed his opinion; as he became a convert to the
caufe of learning, and affiduoufly studied the Greek lan-
guage. He became a writer himself, and composed a va-
riety of works, of which the principal was a History of the
Roman affairs, and of the origin of all the cities of Italy,
from that circumstance entitled "Origines." A few frag-
ments of the seven books which he lived to finifh, are still
extant. He also published a large number of his orations,
letters, a treatise on the military art, and another on rural
affairs;
C A T O.

At this the latter, of which still remains, and is usually printed with the "Scriptores De Re Rustica."

Cato married for his first wife a woman of family, who was professed in her exercises, and perversely in her temper, and who therefore afforded sufficient exercise to his philosophy. By his wife, he had a son, whose education he himself conducted, but he would not allow him to be taught the learning of the Greeks, alleging, that the only study of a Roman ought to be, how to conquer, and how to govern conquered nations.

In his advanced years he was a widower, and not choosing to marry again, he took a young female slave to his bed, at which his son being displeased, he married the daughter of Salmin, who had been his secretary; and by her he had a son named Salamin, who was the grandson of Cato of Utica. The cen[or lived to an advanced age, and died in his 59th year, as some say, and according to others in his 91st, in the year of Rome 627, B. C. 149, at the commencement of the third Punic war, which his advice very much contributed to prevent. Cato was a great folder, an eloquent orator, a learned historian, and well skilled in rural affairs; but these accomplishments were counterbalanced by great defects, and very unamiable qualities. As a matter, he was flen and unfeeling, so that he considered his slaves as a fort of labouring animals, whom he wished to get rid of when exhausted by age and servitude. His economy degenerated into avarice; and though he was uncorrupt in the management of public money, he defended to very mean and unanswerable practices to amass a private fortune. For money lent he took exorbitant profits; and received even from his own male slaves a certain pecuniary consideration for the liberty of frequenting the females. He used to say to his son, that no man deserves any esteem till he had doubled his fortune. In public he was ever extolling continence; but he indulged his passions in private with a beautiful female slave; and it is also said that he was equally faulty in the excessive use of wine.

"Narratur et pri[ei Catonis, Sane more calulue virtues." Hor.

His public censures of private men seem sometimes to have originated from envy and personal pique; and thus we may account for his having been 44 times impeached, which probably would not have been the case if he had not provoked private resentment by the unjustifiable severity of his temper. However, on all these occasions he was acquitted by the people, in whose estimation his virtues preponderated his defects and vices; so that although he lived was held in extraordinary veneration, and his name has descended with honour to succeeding generations. Cicero exhibits him in an amiable point of view, by making him the principal speaker in his beautiful dialogue on old age, which some have considered as a kind of fancy portrait, founded, however, on the real traits of the man, though softened and embellished. Plutarch has made him the subject of one of his lives, and Cornelius Nepos, at the request of Atticus, wrote a particular account of him, of which a brief sketch only is extant. Plutarch, t. ii. Cicero, Livy, Corn. Nep. Anc. Un. Hill, vol. xi. Rollin's Rom. Hist. vol. iv. and v.

Cato, Marcus Porcius, Cato Minor of Plutarch, surname of Uthina, from the place of his death, was great grandnephew to Cato the Censor, the subject of the preceding article, and born about 94 years B.C. As he lost his parents at a very early age, he was brought up in the house of Dru[us, his maternal uncle, and a man of high rank and character. Whil[i he was a child, he manifested that readiness of temper and solidity of under[standing, which were the distinguishing features of his character; and though his apprehension was slow, his memory was tenacious. His passions, though seldom displayed by outward signs, were durable in their influence; and his inflexibility approached even to stubbornness. However, when his reason was convinced, he readily complied; and this was found by the instructors of his youth to be the only method for securing his obedience. Of his firm and unyielding temper, when he was an infant, Plutarch mentions a singular instance. The Italian allies of Rome having demanded admission to the right of citizenship, Pompeus Silo, one of their deputies for urging this claim, was a guest at the house of Dru[us, and in a jocose manner asked young Cato to recommend his fuit to his uncle. The child was silent; but expressed by his looks and an air of dislike in his countenance, that he would not comply with the wishes of Pompeus. Pompeus renewed his solicitations, but was unable to prevail. At length he took up the infant Cato in his arms, and carrying him to the window, threatened to k[t him fall out of it if he persisted in his refus[t. But fear was equally unavailing with intreaty. Pompeus, on letting him down in the room, exclaimed, "What an happiness it is for Italy, that thou art but a child! For if thou were at age, we should not have a single vote." At the age of 14, Cato was introduced by his tutor, Sarpedon, to the house of Sylia, the dictator, which, on account of the proclamations and cruelties of this tyrant, was a scene of torture and blood. Of blood he was also accused of sacrificing the heads of several noble victims that had been murdered carried out, and the bye-fandles secretly figuring on account of the horrid spectacle, he asked his tutor, why nobody killed such a tyrant. "It is," replied he, "because he is still more feared than hated." Cato exclaimed, "Give me a sword, that I may kill him, and deliver my country from slavery." He uttered these words with a tone of voice and an aspect that made his tutor tremble; and from this time he was very watchful of his pupil, lest he should attempt some rash and daring action.

Notwithstanding the firmness and intrepidity of Cato's temper, he was not unfe[ctible of tender emotions, nor deflute of kind affections. His love to his brother Capin was manifested on a variety of occasions, whilst he lived; and when he died, grief seemed to triumph over all his philosophy. He shed many tears whilst he embraced the dead body; for some time he indulged dejection and melancholy, and expended great sums in his funeral, and in erecting a monument of costly marble in the forum of Enus, a town of Thrace, where he died, nor did he quit his alca[t till he brought them into Italy. But though he was led by fraternal affection to incur this expense, and though in his mature years he received a considerable sum of money from his share of the paternal estate, the habits of his life were simple and frugal, and he cultivated the manners of a philosopher rather than those of a young patriarch. The course of his studies was adapted to his peculiar temper; and the principles of the Stoic philosophy, which he affluently cultivated, under Antipater of Tyre, habitually influenced his judgment, disposition, and conduct. With a view of being better qualified for defending the cause and claims of justice, and enforcing his wife and faithful counsellors, he studied eloquence; but his eloquence was altogether detrimental of artificial ornaments; it was simple and grave, and occasionally intermixed with dry humour and sarcasm. Cato not only cultivated his mind; but he inured himself to bodily exercise, and to every kind of fatigue and hardship, in order to acquire that corporeal strength and that firm tone of nerves which were suited to his mental disposition, and which would qualify him for the various active services to which he devoted
voted his life. He was also distinguished by his self-denial and temperance; and he avoided every kind of luxury in dress and in diet, which began very much to prevail among his countrymen. He has been charged, however, with occasional excesses in the use of wine; and his advocates have found it difficult altogether to exonerate him from the charge of drunkenness. The charge was strongly urged by Cæsar, who may be considered as an enemy; but as he was regarded by all Rome as a model of private as well as public virtue, and peculiarly distinguished for his temperance, we may infer that his conduct in this respect must have been manifestly exaggerated. Cicero, in his defence of him against Memmius, who accused him of passing whole nights in drinking, could only allege, that he could not reproach him with passing whole days at dice; and Seneca, his extrava-gant panegyrist, very absurdly says, “that it is more easy to make drunkards of virtue than Cato vicious.” In his dress he also affected singularity, and seemed to glory in counteracting the taste and fashion of the age in which he lived. We may also add, that he blended with that greatness of soul and confidence, which have been justly admired, a degree of haughtiness and contempt for others, attributable perhaps to the principles of his philosophy, which in a degree degraded his general character and rendered it less amiable. After all the allowances which truth and candour are constrained to admit in forming a general climate of his character, Cato has been justly considered as one of the most virtuous Pagans that ever lived. Cato acquired from inheritance an ample fortune; which he employed very differently from his ancestor, the Cenfors, in loans and gifts among his friends, without returning to duty for its increase. Dis- appointed in his first views of a matrimonial nature, by the prior claims of Metellus Scipio, he formed a connection of this kind with Attila, the daughter of Soranus, whom he repudiated for her infidelity, after having had two children by her. The first military service of Cato was in the “fer-vile war,” under the consul Gellius, against Spartacus; on which occasion his conduct was so much approved by his general, that he offered him some military rewards, which he declined, alleging, that he had done nothing that deserved such honours. Soon after he obtained a tribune’s commission, with which he went to the army in Macedonia under Rubrius. This general gave him the command of a legion, which became, in consequence of his sedulous attention to the morals as well as to the discipline of his men, the most orderly as well as the most martial in the service. It was at this time that his brother Capio died. When the term of his tributary service expired, he made the tour of Asia, without burdening the allies of Rome, which was too frequently done by the Jornades of Romans of distinction. At Ephesus he was introduced to Pompey, who received him with very distinguished tokens of respect; but though he paid him particular attention whilst he was present, he does not seem to have regretted his departure, as he did not wish to have his conduct inspected by so rigid an observer. After having visited the whole of Asia and Syria, Cato returned to Rome, accompanied by the celebrated Stoic philosopher, Athenodorus, who resided in his house. Having acquired those maxims of wisdom and habits of virtue which qualified him for the service of his country, he now wished to employ them for the benefit of the public. His philosophy, so far from aiming at that imaginary perfection, which confounds in abstraction from all the common duties of life, was such as the poet Lucretius represents:—

"patrisque impendere vitam, 
Nec sibi, sed toto geniturum se credere mundo."

Plat. ii. 322.

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"To hold his being at his country's call, 
And deem his life was lent a common good for all."

Accordingly he first aspired to the office of quæstor, having previously studied with diligence the rights and duties of this office. Having succeeded in obtaining it, he began with reforming a variety of abuses, which had been introduced by his predecessors; and, headed by private covetousness, he brought all defectors to account with the public, and abolished such checks and orders that might effectually serve to prevent future fraud and peculation. One of the boldest and most popular acts which he performed was his of calling to first account the infamous affairs employed by Sylla and extrava-gantly recommended out of the funds of the treasury for the apprehension and murder of proscribed persons. These men he caused to refund their ill- acquired gains, reproaching them at the same time for their crimes, and inditing them for their atrocious murders before the criminal judges. Such were the integrity and fidelity, with which he discharged all the duties of his office, and such was the high estimation in which his conduct was held, that his name became in a manner proverbial for uprightness. To this purpose we may adduce the compliment paid to him by a popular orator, who, on objecting to the decision of a cause by the testimony of a single witness, said, “One man’s evidence is insufficient, were it even Cato’s.” His fidelity in performing the duty of a senator was no less exemplary than the discharge of his functions as quaëstor. He was the first in the senate, and the last that left it; and as he frequently passed a considerable interval of time, before the house was assembled, he brought a book, and read till it began to deliberate; nor did he ever quit the city during the sittings of the senate. Although he attached himself at this time to none of those who led the prevalent parties in the state, but rather opposed and suspected all, he inclined to that of the aristrocracy, from an opinion that the existence of the republic was chiefly endangered by men of great popular influence. No man was ever less governed by that ambition, which actuated the leaders of all parties, than Cato. Nevertheless, he thought it his duty to step forward, whenever he apprehended that his country needed his services. With these views he altered his purpose of retiring from the public scene, when Metellus Nepos, whom he knew to be a man of dangerous character, was offering himself for the office of tribune; and became a candidate, as his competitor. They were both chosen; and Cato, as tribune elect, served his country very essentially at the time of the conspiracy of Catiline. Concurring with Cicero in his measures for the safety of the state, he supported them by his influence, honoured him with the appellation of “Father of his country,” and by his eloquence counteracted the speech of Cæsar, who wished to throw lenity to the conspirators, and procure their capital condemnation. He afterwards opposed a motion of Metellus for recalling Pompey from Asia, that he might have the command against Catiline; but his opposition was followed by a tumult, excited by Metellus and aided by Cæsar, which very much endangered his life. After Pompey’s return to Rome Cato exerted himself in defeating his unconstitutional projects; and when the first triumvirate was formed, he alone perceived the danger that might result from such an union of power. When Cæsar proposed his agrarian law, Cato raised an outcry against it, alleging that it was not proper to disturb the public tranquillity, and that he did not so much apprehend the division of the lands, as the wages that would be required of the people by those who sought to inveigle them by this present. Cæsar, who was thencefal, was too much provoked.
provoked by the invincible opposition of Cato that he committed him to prison; but he was soon after released. Ciceron used many arguments to mollify the inflexibility of Cato's temper; and fearing that banishment might be the consequence of his continued opposition, addressed him with these words, "If Cato has no need of Rome, Rome has need of Cato." At length Cato yielded; the agrarian law was paused; and the triumvirs became irresistible. Their principal agent was Clodius; and as Cato refilled his measures, he determined to remove him from Rome. With this view, he expressed confidence in his integrity, and having obtained a decree for depriving Ptolomy, the king of Cyprus, of his dominions, on the ground of personal animosity and revenge, he alligned to Cato this odious employment, and obtained a law, inviting him with the authority of pretor, for the execution of his iniquitous purpose. Whilft Cnadius, a friend of Cato, was sent to acquaint Ptolomy with the determination of the Roman people, and to propose to him terms of surrender, he waited at Rhodes to learn the result of the negotiation. In the mean time Ptolomy, fairly apprised that resistance would be vain, preferred death by poison to acquiescence in this arbitrary decree. As soon as Cato heard of the event, he sent Brutus, his nephew, to secure the royal treasures; and having re-established the exiles of Byzantium, which was another object of his commission, he repaired to Cyprus, where he disposed of all the treasures he found amounting to near 7,000 talents or about 1,500,000 pounds sterling; referring to himself only a letter from Zeno, the founder of the Stoic sect. This wealth was safely transported to Rome, and lodged in the treasury; and it seems to have been a just retaliation of the iniquity of the measure by which it was procured on the part of the Roman people, that it was soon after feized by Cesar and employed in the destruction of their liberty. After Cato's return to Rome a content took place between Cicero and Cato, respecting the legitimacy of the confulsipn of Clodius, and the consequent validity of every thing that had been done by Cato in the island of Cyprus; but the interruption of friendship and coolness that were this occasioned between these two distinguished persons soon terminated.

We have already mentioned Cato's first marriage of Atilia and his subsequent divorce. When this event took place, he married Marcia, the daughter of his friend Philipus, with whom he seems to have lived in collabial harmony and by whom he had several children. However, at the time when she was actually pregnant, he resigned her to Hortensius at his request, and having obtained her father's consent, gave her away in marriage to his friend. This transaction, though altogether inconsistent with modern ideas and manners, was conducted with gravity and decorum, and seems to have occasioned no scandal. After the death of Hortensius, who bequeathed his large fortune to his widow, Cato took her again. In this case, as a new marriage ceremony was performed on both occasions, it cannot be justly said that Cato "left" his wife. Moreover, he only availed himself of the unlimited right of divorce allowed by the Roman law, in first surrendering his wife to Hortensius and then marrying her again as his widow. It has been said, however, that notwithstanding the established usage among the Romans, a person of Cato's dignity and character should not have functioned it by his example.

Cato, who still persisted in his opposition to the triumvirs, took an active part in the canvass of Domitius his sister's husband, for the confulsipn against Pompey and Caesar; but whilst they were soliciting votes in the Campus Martius, they fell into an ambuscade prepared by the rivals of Domitius, and Cato was wounded by the assassins. This intrepid Roman, who was not to be deterred by any violence from serving what he apprehended to be the cause of liberty, exposed himself to new danger by his irascible opposition to the Trebonian law, which proposed to afflict the confuls the government of Syria and of Spain for five years, with as many troops as they should judge proper, and with the power of making war and peace according to their own pleasure. After all the efforts of a constancy equally obstinate and fruitless, Cato was feized by the legates of Trebonius and conveyed to prison; but the tribune fearing the consequence of this unpopular measure, caused him soon to be released. The next, and the highest civil dignity, to which he was advanced, was that of pretor, and in the execution of this office he engaged the Senate to influe a decree against bribery; but Rome was reduced to such a state of corruption, that the decree offended both the candidates for offices who purchased votes, and the people who held them.

After the death of Caesar, the agents of Caesar were indolent in their exertion. On his death, Cato, perceiving that the power of Pompey would force his friends to counteract their efforts, diverted his ambitious friends from the plan they were purposing of making him dictator, and proposed the left obnoxious measure of creating him sole consul. Pompey was not inoffensive of his obligations; and Cato, who professed to have served him with a view to the interest of the public, took the liberty of giving him free advice, and of checking him when he thought his conduct was improper. In the following year Cato became a candidate for the confulsipn, but not condescending to make a popular canvas, he was rejected. The disappointment, though much regretted by Cicero, was lightly felt by Cato himself; and from this time he resolved never more to aspire to this dignity. On this occasion he observed, that an honest man, and good citizen, should not decline the administration of public affairs, when he was thought fit to be employed; but that he ought not to be immediately anxious and ardent in seeking it. In the year 50 B.C. the predictions of Cato were fulfilled by the commencement of the civil war. On the division of the provinces by the senate, he was appointed as propraetor to the government of Sicily, and in the discharge of his office he acted with his usual vigilance and diligence in fitting out ships and raising forces; but when Curio arrived there with three of Caesar's legions, he abandoned the island and removed to Pompey's camp at Dyrrachium, where he was left to guard the treasure and military stores, when Pompey had set out in pursuit of Caesar; and thus he was preferred from being present at the battle of Pharsalia. During their previous intercourse, it was his advice to procuretime the war, and thus to leave room for a negotiation; for to patriotic were his feelings, that he indulged no faction from anticipating the continuance of the contest, whatever might be the issue to the victor included; and after the victory at Dyrrachium he could not participate the joy and triumph manifested by others on the occasion. From the commencement of this contest, apprehending the loss of many brave citizens which it must unavoidably occasion, he neither shaved his beard, nor cut his hair, nor wore any other garb besides that which testified the anguish of his mind. His humanity was very signally displayed in prevailing upon Pompey and the council of war to pass an order, that no citizen subject to Rome should be touched, nor any Roman put to death, except in the field of battle. After the disastrous battle of Pharsalia, Cato failed with his troops to Coreya, where he offered the command to Cicero, as superior officer; but Cicero, conscious
Cato.

feous of his unfitness for the arduous and important undertaking, declined accepting it; upon which Cæcilius, the son of Pompey, was so provoked, that he drew his sword and would instantly have killed Cicero, if his hand had not been stayed by Cato, who conveyed the orator from the camp privately by night. From Cæcina, Cato proceeded to Africa, in order to join Pompey; but immediately on his arrival he received the news of his assassination. Adhering still to the cause of liberty, whilst he conceived any hope remaining, he proceeded with his troops to Cyrene; whence he pursued his march across the deserts, encountering many toils and dangers, with a view of joining Scipio, the father-in-law of Pompey, who had landed before him in Africa, and taken refuge with Juba, king of Mauretania. In this fatiguing and hazardous march, he exhibited every quality that was adapted to inspire his soldiers with elan and attachment, leading them for seven days on foot, and subjecting himself to hardships equal to those to which the meanest of them were exposed. At length a junction of the whole force was effected at Utica; and when a council arose concerning the lapsed command, Cato, representing the advantage which would result to the pro-confular dignity and auspicious name of Scipio, and pleaded all to acquiesce in his superiority. But he had afterwards reason to repent of his self-denial. As the inhabitants of Utica were justly suspect'd of entertaining a secret inclination for Cæsar's party, Juba, whose temper was violent and cruel, wished to destroy the city and exterminate its inhabitants, many of whom were Romans. Cato人性化 interposed, and, though Scipio concurred with Juba in opinion, he interwove with so much vehemence and indignation against so unparalleled an act of cruelty, that he put a stop to the execution of this barbarous project. At the desire of Scipio, and in compliance with the request of the inhabitants, Cato undertook to defend the city; and with this view he formed ample magazines of corn, repaired its walls, erected turrets, and prepared a fort of camp without, enclosed with a ditch and palisade, in which, after having taken away their arms, he lodged all the youth of Utica. As for the rest of the inhabitants, he kept them within the walls, strictly watching their motions, but at the same time protecting them from the inquests of his soldiers. From this place, thus stored and guarded, he furnished Scipio with arms, money, and provisions; and thus rendered it the grand magazine for the supply of the army. Whilist Cato was thus employed, Scipio and Labienus were opposed to Cæsar in the field. It was the decided opinion of Cato, that the war should be protracted; and to this purpose he repeatedly counsel'd Scipio not to engage in a general action with a commander of Cæsar's abilities; but Scipio rejected his advice with disdain; and the consequence of disregarding it was that almost the whole republican army was destroyed at Thapsus. This fatal battle was fought at the distance of about three days' journey from Utica; and this garrisoned city was the only place in Africa that had not submitted to the conqueror. Cato, having quelled the tumult of its inhabitants, and dispersed their alarms, assembled the council of three, which he had formed into a kind of senate, and exhorted them to unite, with their persons, property, and counsels, against the common enemy. With a firmness and prudence for which he was eminently distinguished in the moment of impending danger, he exerted his utmost efforts in calming their apprehensions, composing their differences, and animating their constancy. But his endeavours produced only a temporary effect, and served only to delay the threatened evil. Upon the arrival of Scipio's cavalry, which had retreated from the field of battle towards Utica, his hopes revived; but when he received from them a message, expressing their attachment to him, and their distrust of the Uticans, he was again alarmed: more especially when they represented their assistance in the defence of the city, on the savage condition of previously killing or expelling the suspected inhabitants. Cato thought this proposal no less unreasonable than cruel, and declined accepting it. Cæsar was now approaching, and the senators resolved to send deputies to him for the purpose of implo-ring his clemency; avowing at the same time that the first and principal object of their solicitations should be Cato, for whom if they failed in obtaining protection, they would not accept any pardon for themselves, but would fight in his defence to the last moment of their lives. Cato acknowledged himself obliged to them for their kind intentions, approved of their design of submitting to Cæsar, and advised them to lose no time. But he forbade them to make any mention of him in their solicitations. "It is for the varnish'd, said he, "to have recourse to supplications, and for those who have done injustice to use for pardon. As for me, I have been invincible during the whole course of my life, and I will not be vanquished afterwards on appearing as a friend to, and triumph over Cæsar by the superiority of justice and equity. It is he that is conquered; it is he that is overpowered; being this day attacked and convi'd of undeniable evidence (notwithstanding he has always denied it), of plotting against his country." The cavalry, who had impatiently waited the result of Cato's deliberations, were now leaving the city, and before they departed enriching themselves with plunder, which Cato made every possible effort to restrain; and as most of the senators preferred escaping by sea to putting themselves under the protection of Juba, Cato, perceiving that their danger was increased by the departure of the cavalry and the approach of Cæsar, took the last measures for halting and securing their retreat. His own resolution was fixed; and that was neither to ask of Cæsar, whom he regarded as an usurper, nor to dishonour himself by flight, and thus protract a fruitless contest. Having determined to put an end to his own existence, he prepared for the last scene by acts of kindness to his friends, and grave discourses with philosophers. In the last evening of his life, he first bathed and then laped in the midst of a large assembly of his friends, and the magistrates of the city, whom he had invited to this last interview. They sat late at table, and the conversation was lively, gay, and instructive, turning on certain points of moral philosophy. Step by step being ended and the company dismissed, he walked for some time, according to his usual practice, and then returned to his chamber, where he read Plato's dialogue, entitled "Phaedo," on the immortality of the soul. Having made a considerable progress in it, he looked for his sword, and found that it was withdrawn; his son having taken it away, while they were at supper. Upon this he called his slave to question him concerning his sword; but receiving no answer he resumed his reading. He again asked for his sword; but perceiving, when he had done reading, that it was not brought, he called all his slaves one after another, and raising his voice, inflent on their bringing it. "What," said he, with a great degree of indignation, "do my son and family conspire to deliver me to my enemy, unarmed and defenceless?" His son then appeared, accompanied by other friends, who besought him with tears, and in the most suppliant manner, to alter his purpose. Cato's indignation was more roused, and he vehemently remonstrated against their conduct. "Brave and generous son," said he, "why do you not put your father in chains? why do you not tie my hands behind me, till Cæsar come, and find me incapable of
of defence? Had I a mind to destroy myself, I could easily effect it without a sword; since by holding my breath for some moments, or only once dashing my head against the wall, I could dispatch myself, were I so disposed." Afterwards recovering his composure, he vindicated to the two philosophers, Demetrius and Apollodorus, who attended him, the ra
donableness of his purpose, and the folly of attempting to deprive a man, already determined, of the means of death. A young slave at length brought him his sword, which he drew and examined with attention; and finding it sharp and fit for execution, he said, "Now I am my own master." He then laid it down, took up his book, and read it from the beginning to the end. Plutarch affirms us, that he afterwards slept, and so soundly, that those who waited without, and listened at the door, heard him snore. Some, however, have questioned this fact, and ascribed to him an affectation of tranquillity, by which he hoped to augment the false glory which he expected to derive from a voluntary death. However this be, about midnight he dispatched one of his freedmen to the sea-side, in order to bring him information whether or not his friends had kept faith; and being told that the wind was very high and the sea rough, he expected great concern. He went again to the port to know, if any remained, and if they wanted any assistance, and during the absence of the messenger, renewed his sleep. Being at length assured that all was quiet in the port, he directed to be let alone, and then stabbed himself with his sword. The noise occasioned by his fall summoned his son and his friends into the chamber, where they found him still alive, but writhing in his blood, and part of his bowels hanging from the aperture in his body. Attempts were made, during a saving instant, to preserve his life by replacing his bowels and sewing up his wound; but as soon as he came to himself, he violently tore it open again, and instantly expired. This event happened in the year B.C. 45, when Cato had attained the age of 45 years. As soon as the news of his death was spread through the city, the Uticans loudly lamented it, and caused the air to resound again with encomiums on his character, as their benefactor and their favour. Notwithstanding Caesar's approach, they solemnized his obsequies with great pomp, and erected a monument to him near the sea-shore, where, in Plutarch's days, was a statue of Cato, holding a sword in his hand. When Caesar received information of his death, he is said to have exclaimed, "O Cato! I envy thee the glory of thy death; for thou hast envied me that of faving thy life." It would lead us into a wide field of discussion to state the arguments that have been used by some to extenuate and even to justify, and by others to criminate and condemn this late act of Cato. In judging concerning his conduct, we should advert to the principles of his philosophy. Professing to believe with the rest whole texts he embraced, that it might or might not, in particular circumstances, be expedient for a man to preserve or lay down his life, it remained with him to determine whether his own situation was such as to warrant the voluntary termination of his existence. But it has been alleged, in reference to this latter view of his case, that he acted insensitively with that virtue, on which he chiefly valued himself during the whole course of his life; and this was an invincible contumacy, superior to all events. The situation of his country, though discouraging, was not absolutely desperate. The remains of Pompey's party began to revive in Spain, and became afterwards very formidable. Cato, therefore, it is said, in conformity to his character, ought yet to have tried that resource, or waited for some unforeseen and unexpected change favourable to his views; and consequently by the act of suicide, while any hopes yet subsisted, or whilst there remained a possibility of some favourable revolution, he was deviating from his own principles, and abandoning too soon the cause of liberty. Some, indeed, have ascribed his death to that pride and inflexibility of temper, which the Stoical philosophy was adapted to produce and cherish. Accordingly it has been said, that he declined such an humiliation as that would have been of owing his life to Caesar, and that he might not be obliged to his enemy for it, he preferred depriving himself of it by an act of despair. It we appreciate his conduct by the principles of an enlightened theism, and more especially by those which we derive from our holy religion, we cannot hesitate in condemning it. See Suicide.

It was, however, for many ages, and has been by some in modern times, extolled as an act of heroism; and it gained among his countrymen a general admiration. Horace, though writing under Augustus, places the "noble death" of Cato (Catonis noble lethum, Carm. lib. i. od. 12) among the greatest and most honourable events of the Roman history. Plutarch's Cato Minor apud open, t. p. 755, &c. Sallust. Rullin's Rom. Hist. vol. vii. and ix.

Cato, Valerius, a Latin poet and grammarian, was a native of Gallia Narbonensis, and driven by a civil war which occurred in his country in the time of Sylla and Rome, where he opened a school of grammar and polite literature, that was frequented by perpions of the first rank. His friend, Marcus Furius Bibaceus, gives his eulogium in these two lines:

"Cato grammaticus, Latina fyren,
Qui folis legit, et facil poetas."

From the competence acquired by his professional labour, he fell into poverty, which he bore with great unanimity, and died at a very advanced age, B.C. 26. He was the author of several grammatical works, and some poems, one of which (if it be his) entitled "Dioses," expressive of his sorrow at quitting his native country and his Lydia, has reached our times. It was printed separately by Christo
der Arnold at Leyden, in 1652. 12mo, and is contained in Matteiace's Corpus Poetarum. Gen. Diog.

Cato's Difticha, in Literary History, a well-known metrical system of ethics, which has been erroneously ascribed by some to Cato the cenuror, and by others to Cato of Utica; although it is perfectly in the character of the former, and Aulus Gellius (lib. xi. cap. 2) has cited with commendation M. Cato's "Carmen de Moribus," which is altogether different from this. It is entitled "Difticha de Moribus ad Tillum," which are distributed into four books, under the name of Dionysius Cato. This work has been absurdly at
tributed by some writers to Seneca, and by others to Autol
ius. It is, however, more ancient than the time of the emperor Valentinian I., who died in 425. On the other hand, it was written after the appearance of Lucan's Pharan
ta, as the author, at the beginning of the second book, commends Virgil, Macer, Ovid, and Lucan. The name of Cato probably became prefixed to these disticha, in a lower age, by the efficacious ignorance of transcribers, and from the acquiescence of readers equally ignorant, as Marcus Cato had written a set of moral disticha. Whoever was the au
tor, this metrical system of ethics had attained the highest degree of elmination in the barbarous ages. John of Salisbury, in his "Polyo,cratium," mentions it as the favourite and established manual in the education of boys. It is also much applauded by Isidore, the old etymologist, Alcuin and Abelard; and it must be owned, that the writer, exclu
dive of the utility of his precepts, possisses the merit of a nervous
nervous and elegant brevity. It is perpetually quoted by Chaucer, who calls the writer Caton or Catonh; and Caton observes, that it is "the belle boke for to be taught to youre children in sheode." But he supposes the author to be Marcus Cato, whom he duly celebrates with the two Sici- pios, and other noble Romans. It was translated into Greek at Constantinople by Maximus Planudes; and at the restoration of learning in Europe, illustrated with a commentary by Erasmus, which is much extolled by Luther. There are also two or three French translations. Fabr. Bb. Lat. ii. p. 213. Wharton's Hist. of English Poetry, vol. ii. p. 168.

Cato, in Geography, a military township of New-York state in America, 22 miles S.E. of lake Ontario, and about 20 S. of Olavego fort.

Catoche, or Catochus, in Medicine, from κατόκας, ικουρόται, or διάτοι, are terms nearly synonymous with CATA- PELPS. Galen observes that the ancient physicians deno- minated the diseals Catochus, which the later authors have named catoche and catochaleps. The latter term was first used by Alciphidias. The ancients, however, it is obvious, did not distinguish the different forms of的形象, with that accuracy with which they are now discriminated, and hence there is considerable difficulty in ascertaining the precise meaning of their terms. It appears that the word catochus was applied by different writers, not only to cat- eleya, but to cato and to Tetanus, and perhaps to other disas, in which the voluntary power of muscular motion was diminished, or destroyed. Among modern ethologists, Dr. Cullen considers the catochus of Galen, as a variety of tetanus; and Sauages refers it to the same class; observing, however, that it differs from the tetanus; 1. in being a slow or chronic disease; and, 2. because it is not attended with vehement agitation of the breast and difficulty of breathing. It is equally difficult and unimportant now to affix a pre- cise signification to a word, which was never accurately ap- propriated by those who originally used it.

Catochites, in Natural History, the name of a fossil mentioned among the ancients, as having great virtues in medicine, and in the cure of wounds. It is said to have been found in Corsica; and Pliny records this remarkable property of it, that if the hand were held upon it for some time it would thich to it in the manner of glue. Hence it appears to have been a bitumen.

Catodon, in the Arctideni system of Ichthyology, the name given to a genus of cetaceous animals, the characters of which are these: the teeth are placed only in the lower jaw; there is no fin upon the back, and the futilous aperture is placed either in the head or the fin. — This genus is not admitted by Linnaeus; its genus Physeter comprehends these cetaceous animals which have teeth in the lower jaw, and none in the upper; and the species P. catodon is one of the two species of that genus, which has no dorsal fin.

Catoluca, in Ancient Geography, see Catadia.

Catomum, or Catomus, from κατόμος and ωμός, should- er, in Middle Age Writers, denotes that part of the body below the neck, and between the shoulders.

Catonella, in Geography, a large river in Africa, in the kingdom of Benguela, which runs into the river, called by the Portuguese Rio de las V BASES, or Cow's river. It is composed of three large branches united, and of a saltish nature: along the banks the natives dig large channels to receive its briny liquor, which is afterwards conducded into a good salt.


Catoptis, in Surgery, a disorder of the sight; more usually called myopia.

Catoptics, derived from κατάπτωσις, premium: of cata, and opta, vision; i.e., the science of reflex vision; or that branch of optics, which illustrates the laws and pro- perties of light, reflected from mirrors or spectacles.

The principles and laws of catoptics, as a distinct branch of optics, will be found under the articles, Reflection and Mirror. See also Light and Vision.

The principal authors who have treated of catoptics, among the ancients, are Euclid, Alhazen, and Vitello. Euclid's treatise is the first that is extant on this subject; it was published in Latin in 1604, by John Pena, and is included in Herigon's course of mathematics, and in Gregory's edition of the works of Euclid. Some, however, have sup- posed that this piece was not written by that great geome- trician; though it is ascribed to him by Proclus (lib. ii.) and by Marinus in his preface to Euclid's Data. See Euclid. Alhazen was an Arabic author, and composed a large volume of optics about the year 1080, in which he treats pretty fully of catoptics. See Alhazen. Vitello was a Polish writer, and composed another treatise on this subject about the year 1370. Among the moderns, many authors have either directly or indirectly treated of this sub- ject. Tacquet has demonstrated very much at length the properties of plane mirrors in the first book of his Catoptices, printed in the collection of his works in folio. Fabri has also written on this subject in his book, entitled "Synopsis Optica." James Gregory in his "Optica Promota," and particularly Dr. Isaac Barrow in his "Optical Lectures," have also directed their attention to the principles and laws of catoptics. Dr. Barrow, in the last mentioned work, has laid down and demonstrated the principles of this branch of optical science with peculiar accuracy and clearness; and deduced from them the properties of spherical mirrors, both concave and convex. We have also David Gregory's "Elements of Catoptics;" Wolfius's "Elements of Catoptics," Dr. Smith's elaborate work on optics, in which he has amply discussed the laws of catoptics; and many others of his note or of later date; either printed separately or compris- ed in those courses of mathematics and philosophy, both theoretical and experimental, to which we have occasion to refer in various parts of the dictionary.

Catoptic Dial, a dial which exhibits objects by reflect- ed rays. See Dial.

Catoptic Telescope, a telescope that exhibits objects by reflection. See Reflecting Telescope.

Catoptic Cistula, a machine or apparatus, whereby little bodies are represented extremely large, and near one extremely wide, and diffused through a vast space; with other agreeable phenomena; by means of mirrors, disposed by the laws of catoptics, in the concavity of a kind of chest. Of these there are various kinds, accommodated to the various intentions of the artificer: some multiply the ob- jects; some deform; some magnify, &c. — The structure of one or two of them will suffice to shew how many more may be made.

To make a catoptic cistula to represent several different forms of objects, when viewed at different times.

Provide a polygonous cistula, chest, or box, of the figure of the multilateral prism, ABCDEF (Plate IV. Optics, fig. 1.) and divide its cavity by diagonal planes E B, F C, D A.
DA, intersecting each other in the centre, into as many triangular locules, or cells, as the cheek has sides. Line these diagonal planes with plane mirrors: in the lateral planes make round holes, through which the eye may peer within the cells of the box. The holes are to be covered with plan glases, ground within-side, but not polished, to prevent the object, in the cells, from appearing too distinctly. In each cell are to be placed the different objects, whose images are to be exhibited; then covering up the top of the box with a thin transparent membrane, or parchment, to admit the light; the machine is complete.

For, from the laws of reflection, it follows, that the images of objects, placed within the angles of mirrors, are multiplied, and appear some more remote than others; whence the object, in one cell will appear to take up more room than is contained in the whole box. By looking, therefore, through one hole only, the object in one cell will be seen, but those multiplied, and diffused through a space much larger than the whole box; thus every new hole will afford a new focus: according to the different angles the mirrors make with each other, the representations will be different: if they be at an angle greater than a right one, the images will be monochromatic.

The retreatment that covers the machine, may be made pellucid, by washing it several times in a very clear ley, then in fair water, and bruising it tight, and exposing it to the air to dry. If it be desired to throw any colour on the objects, it may be done by colouring the parchment. Zahnus recommends verdigris ground in vinegar, for green; decoction of Brazil wood, for red, &c. He adds, that it ought to be varnished, to make it more pellucid.

To make a catoptic cistula to represent the objects within it prodigiously multiplied, and diffused through a vast space.

Make a polygonal cistula, or chest, as before, but without dividing the inner cavity into any apartments, or cells; (Plate IV. Op. fig. 2.) line the lateral planes CBH1, BHLA, ALMF, &c. with plane mirrors, and at the foramina, or apertures, pare off the tin and quicksilver, that the eye may see through: place any objects in the bottom M1. v. g. a bird in a cage, &c.

Here the eye looking through the aperture hi, will see each object placed at bottom, vastly multiplied, and the images removed at equal distances from one another. Hence, were a large multangular room, in a prince's palace, lined with large mirrors, over which were plain pellucid glases to admit the light; it is evident the effects would be very surprising and magnificent. For other modes of applying and combining mirrors, see MIRROK.

CATOPRITES, in Natural History, a name given by some writers to a stone of the marble kind, which, when polished, was capable of serving as a speculum, either flat, and only used to represent the images of things; or concave, and used as our reflecting burning-glases. The hard black marbles were most frequently used for this purpose; but sometimes the reddish ones, and sometimes one or other of the jaspers. All these were indiscriminately called by the name catoptrite, when put to this use.

CATOPTROMANCY, formed from κατ' οπτον τον θεον, speculum, and μαντις, divinius, a kind of divination among the ancients: so called, because it confided in the application of a mirror.

Ptolemaeus says, it was in use among the Achaïans; where those who were sick, and in danger of death, let down a mirror, or looking-glass, fastened by a thread, into a fountain, before the temple of Ceres; then, looking in the glass, if they saw a ghastly disfigured face, they took it as a sign of death; on the contrary, if the face appeared fresh and healthy, it was a token of recovery. Sometimes glases were used without water, and the images of things future, they saw, were represented in them.

CATO-SIMIUS, P. TIV. in Zoology. See Lemur Vulpes.

CATRA, or CATTRA, in Ancient Geography, a town of the island of Crete. Step. Byz.

CATRALEGUS, a town of Spain, placed by Ptolemy in Latitutia.

CATRENSIS, an episcopal see of Africa, in Mauritania Carnariae.

CATROPITE, See ADONITI.

CATROU, FRANCIS, in Biography, a learned and ingenuous writer, was born at Paris in 1619, entered among the J. fulls in 1637, and took his vows at the college of Bourges in 1654. He officiated as a preacher for 7 years, and then abandoning that office, on account of the difficulty of committing his sermons to memory, he devoted himself to literature, and was employed from 1701 for 12 years in writing for the "Journal de Trévoux." In 1752, he published "A general History of the Mogul Empire," from the Portuguese memoirs of Manouchi, a Venetian; to the third edition of which, in 1715, is annexed the reign of Aurungzebe. His "History of the Fanaticism of the Protestant Religion," containing only that of the Ambassadors, appeared in 1706; and in 1733 he added, in two volumes, of Daviafin and of the Quakers. His "Translation of Virgil in Prose, with historical and critical notes," began to be published in 1708, and was completed in 6 vols. 12mo. in 1716. With many defects and faults, this work displays both ingenuity and industry. The most elaborate performance of Catrou is his "Roman History, from the foundation of Rome," which employed the greatest part of his literary life, and in which he was assisted by his brother Jefuit, Julian Roulle. This appeared in 1737, with the notes, dissertations, medals, &c. In 20 volumes 4to, and, without these appendages, in 20 volumes 12mo. The history was brought down by Rouillé, after the death of Catron, in one volume 4to, to the end of Domitian's reign. The work displays great labour and research, and contains an ample and well-connected collection of facts; though the Ryle is affected, and not characteristic of a bold and dignified historian. It has been translated into Italian and English. Catron died in 1757, in the 75th year of his age, and retained to a very advanced period the force and vivacity of his imagination. Nouv. Dict. Hilt. Gen. Biog.

CATRY, in Geography, a particular sect of Hindus, mentioned by Thienot, who places them in the vicinity of Moulain, and who says that they spread from hence over all the Indies. He explains this tribe to mean "Rajputs," or warriors; that is, the Kutry tribe, properly Thees Catries, according to Rennell, were the Catheri of Diodorus Siculus, and the Cathii of Arrian; with whom Alexander contended on the border of the Mall. See CATRIA.

CATSAL, a town of Chinee Tartary; 28 miles W. of Cuchna.

CATSABANIA, in Ancient Geography, a country of Arabia Felix, according to Steph. Byz.; called by Strabo Catalonia.

CATFACK, or CUTFACK, in Geography, a country of Hindooftan, and capital of a district of the same name, in the province of Orissa. It is fented on the river Mahanuddy, and is an important port, as it lies in the only road between Bengal and the northern circars; and the possession of this city and its dependencies gives the Bari rajah more confidence in the eyes of the Bengal government, than even his extensive
extensive domain and central position in Hindoostan. It is distant 785 miles from Agra, 452 from Benares, 1034 from Bombay, 231 from Calcutta, 902 from Delhi, 951 from Hydabad, 641 from Lucknow, 779 from Madras, 482 from Nagpore, 822 from Oungum, and 968 from Poonah. N. lat. 20° 12'; E. long. 86° 1' 30".

CATTHUNK, one of the Elizabeth islands, in the state of Massachusetts.

CATTIAO, a town of Italy, in the Paduan territory; 5 miles S. of Padua.

CATTARO, or CATARO, a town of Dalmatia, capital of the territory of the same name, surrounded with thick walls, and defended by a cullée; the see of a bishop, suffragan of Bari. It is subject to the state of Venice, and seated on a gulf of the same name. N. lat. 42° 25'; E. long. 15° 19'.

CATTECORONDE, in the language of the Ceylonese, prickly cinnamon. This is a bark very much resembling cinnamon, but produced by a tree which differs very much in the shape of the leaves, and is full of sharp thorns, which the true cinnamon tree is not. The bark has nothing either of the taste or smell of cinnamon, though like it externally. The natives use the root, leaves, and bark of this tree externally, to soften fetid gums. Phil. Trans. N. 54o. See Cassia and Cinnamon.

CATTIGARA, or Scaggarac, in Geography, a large gulf of the North Sea, between North Jutland to the west, Norway to the east, and the islands of Zealand and Funen to the south, about 150 miles from north to south, and from 60 to 70 from east to west. This gulf is sprinkled with an astonishing number of rocks and islands. See Belts.

CATTINOM, a town of France, in the department of the Mofelle, and chief place of a canton in the district of Thionville. The place contains 1057, and the canton 14,876 inhabitants; the territory comprehends 297½ square miles and 47 communes.

CATTERTHUN, a remarkable Caledonian post, situated a few miles N. of the town of Brechin, in the county of Angus, in Scotland. Mr. Pennant represents it as a very strong post, and particularly describes its structure and dimensions. Near it is another similar fortification of inferior strength, called "Brown Catterthun," from the colour of the ramparts, which are composed only of earth: the other consisting of stones. The former is of an oval form; but that of the latter is circular. Catterthun denotes "Camp-town," and Mr. Pennant is of opinion, that these might have been occupied by the Caledonians before their engagement at the foot of the Grampian mountains with the Roman general Agricola.

CATTI, in Ancient Geography, a people of Germany, who lived in the vicinity of the Cherusci. They were a warlike people, and their infantry was reckoned the best in Germany. The most remarkable places of their country were Cattellum Cattorum and Manitium. Under the lower empire they were divided into two bands or cliques, one of which joined the Cherusci, and the other established itself in a district of the country of the Batavi.

CATTIER, ISAAC, in Biography, born at Paris in the early part of the 17th century, received his education at Montpelier, where he took his degree of doctor of medicine, in 1657. Returning to Paris, he was made physician in ordinary to the king, and ranked among the most eminent physicians of his time. He was author of several learned works: "On the Waters of Bourbon;" "On the Powder of Sympathy," which he did not admit to be possessed of the qualities attributed to it; "De Rheumatismo, ejus Na-
CATTLE.

The characteristic distinctions of the genus or kind, according to the very intelligent naturalist, Mr. Pennant, are that they are four cloven footed, with or without horns, the horns bending out laterally; eight cutting teeth in the lower jaw, and none in the upper; the skin along the lower side of the neck pendulous; rounded horns with a large space between their bases.

This species constitutes the principal particular breeds, being formed from the original and most remarkable divisions or distinctions; and the varieties are produced by the intercrossing of these, which, from their being accidental, as well as from the great diversity of soil, food, and climate, must obviously assume a vast diversity in respect to shape and size. Some of these varieties, whether original or acquired, have, however, been preserved in a permanent state by the efforts and attention of the careful breeder. But notwithstanding the variations produced in near cattle by the influence of climate, or the agency of other causes, the natural divisions which have been made in their kind by the naturalist is that of the ursi, or common bull of temperate climates in its native wild state, and the cibion or bull of the more hot regions, having a bunch between his shoulders, which in some of the latter is said to be of considerable weight and exquisite flavour, and to form the characteristic distinction of the animal: while the elevated crest, and in some cases the lion's mane, form nearly a characteristic mark of the common bull, the former of which being individually preferred to the ultimate stages of domestication, as is occasionally seen in the Duchess, Aldeneey, and other kinds or breeds.

Before we come to consider the various breeds and varieties of domesticated cattle in our own country, it may be of advantage to take notice of some particulars respecting those in others, that are the most remarkable.

In regard to the ursi, or native wild bull, it has in general a curled shaggy coat, especially on the forehead: the hair constantly long on the fore quarters, neck, and forehead, and depending from the chin; the neck elevated, thick and short, with the tail long, the eyes red and fiery; the horns thick and short. It grows to a large size, the female being larger than our largest bull, and is of a black colour.

The cibion has the same hairy appearance in his fore part only; his long shaggy mane forms a sort of beard under his chin, but he differs from the former in having a lump or bunch between his shoulders, and the tail and legs are short, the eyes fierce, the forehead large, and the horns extremely wide.

The former of these sorts of animals are dispersed over the more temperate and cold climates, and especially throughout America, probably imported from Europe; while the latter have spread over most of the more southern parts of the world; but with considerable diversity in respect to their size and form:—Those met with in the island of Madagascar, in Malabar, as well as other parts of India, in Persia, the Ukraine, Calmuck Tartary, the Upper Ethiopia, and in Abyssinia, being of the proper cibion or large kind; while those of Africa, the higher southern latitudes of India, and some parts of Arabia, are of the small dwarf or azere kind; in which the hair is more fine, glossy, soft, and beautiful, than that of the common cow:—The largest animals of the different sorts being constantly met with in those temperate situations or districts, where the supplies of water and herbage are the most regular and abundant.

In some of the former of the above countries the animals are known to a very large size, sometimes being wholly without horns, but in other cases with extremely large branching or pendulous ones, having a very great sub stance or thickness at the basis. They are in much estimation, especially the oxen, when of a fine white colour, for the purpose of quick draught in carriages. And in some of the more barren and less fruitful parts of the latter countries the frost is found extremely useful in carrying loads, though often not more than three feet in height.

The Indian cattle have been occasionally brought from their native situations, and blended with the breeds of this country.

The mule bull, which is found in the interior parts of North America, between Churchhill and Seal rivers, may perhaps be considered as a variety of the above sort produced by intercrossing with the wild European kind, as the wild bull of this part of the globe emits a musky scent. It is described as somewhat lower, but more bulky than the deer; the legs short, a small hump or bunch on the shoulder; the hair of a dull red colour, very fine, and so long as to reach the ground; beneath which the body is covered with an ash-coloured wool of exquisite fineness, capable of forming stockings finer than silk. The tail not more than three inches in length, being covered with long hairs, which the Equinamaus Indians convert into caps. The horns are close and large at the base, bending downwards, and turning out at the tips, being two feet in length or more.

The farbic, or grunting ox of Tartary and Thibet, where it is brought into a domestic state, from having the hump between the shoulders, and being capable of generating with the bullion, may obviously be considered to belong to that kind. The chief circumstance in which it differs, is that, instead of bowing, as in the ox kind, it has the peculiarity of grunting like the hog, but it varies in other particulars. It has the whole body covered with a very long hair, which hangs down below the knees, mostly of a black colour, except on the ridge of the back and the mane, which is white. The horns are short, upright, sharp, and slender at the extremities. The tail in the form of that of the horse, but white and bushy. It but or strikes with its head like the goat, and in its wild state is extremely unruly. The tail is held in high estimation for various purposes of ornament.

How far any of these foreign breeds or varieties of cattle are capable of being introduced with advantage into this country, remains to be further proved by the tests of actual experiment, in respect to the qualities or properties of hardiness, quickness of fattening, fineness of flavour in the meat, and many other points, as has been ingeniously suggested by Dr. Anderton.

In regard to the cattle of our own country, as they are not less numerous in their varieties than those of the foreign kinds, and of much more importance to the farmer in a variety of different points of view, but particularly in that of profit, the greatest care and attention should obviously be bellowed on the breeding, rearing, and providing such sorts as are the best suited to the particular nature of the farm, or land on which they are to be supported. And as no one particular breed is suitable for every situation or kind of farm, much circumspection should be employed in adapting them to the peculiar nature of the climate, situation, and soil.

The circumstances that are to be more particularly regarded, in respect to the breeds themselves, in so far as they interest the farmer, have been already explained, in considering the method of breeding this sort of live stock. See Breeding.

It is not well ascertained what were the primitive or original sorts of cattle in this island, but it seems probable from those breeds which have, from particular circumstances, remained
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railed without being much debated by the admixture of other sorts, such as the Highland, the Welsh, and the North Devon, as well as perhaps the Lancashire long-horns, that, in the more hilly regions and the low valleys, they con-
fiicted of the long and middle-horned varieties, perhaps without any of the short-horned sort, which have, probably, been once introduced from the opposite continent. Same, however, think, with much probability, that the long-horned sort was originally brought into this country from Ireland, from the native stock of that island consisting wholly of that breed, and that other breeds of foreign cattle, which have a facility of form and size of horn.

Poland is likewise supposed to have supplied the breed, which, from their having no horns, is termed the polled, though it is probable from the want of horns being a part of the generic character, that a mixture of this sort of cattle may have originally existed in the country, notwithstanding they are now blended and intermixed with others as not to leave a possibility of discovering the original.

It is probable that the primitive or original sorts of cattle have not deviated much from their standard terms, except in what has proceeded from an increase of size, bulk, and sublance, in consequence of being better supported from the improved state of husbandry, and their being blended and muddled into different varieties by crossing, and other means made use of by the breeder.

The numerous breeds and varieties of cattle which are to be found in different districts of this kingdom have been principally designated either from the appearances which they im mediately present to the farmer, or the places in which they are found to prevail in a state of the greatest perfection; though no very correct enumeration of them has hitherto been given, only a few of the more valuable and useful sorts having been fully described.

There are the long-horned or Lancashire breed; the middle-

horneed breed; the short-horned breed; the Welsh breed, the polled or Galloway breed; the Scotch breed; the Alderney or French breed; and the mild breed.

It has been observed by Mr. Culley, in his "Treatise on Live Stock," that the long-horned or Lancashire breed of cattle are distinguished from others by the length of their horns, the thickness and firm texture of their hides, the length and closeness of their hair, the large size of their hoofs, and coarse, leathery, thick necks; that they are like-

wise deeper made in their fore quarters, and lighter in their hind-quarters, than the other breeds in general. And Mr. Donaldson says that in size they are superior to the Suffolk 
ducks, but inferior to the short and middle-horned breeds. Mr. Culley thinks also further that they are narrower in their shape, less in point of weight than the short-horns, though better weighers in proportion to their size; and that the cows give considerably less milk, though it is said to afford more cream in proportion to the quantity.

These are more varied in colour than any of the other breeds; but whatever the colour be, they have gen-

erally a white streak along their back, which the breeders term flueck, and molly a white spot on the insole of the hoof. And in the bending of the horns there is an equal variety in this sort of cattle.

It is likewise remarked by the same author, that many peo-
ple contend that they are the native or original breed of this island. It is not easy, he says, to ascertain this matter; but if he may venture a conjecture, he thinks it is probable these have been the inhabitants of the open plain country; whilst the wild breed, or perhaps the Welsh and Scotch, possessed the woody, wild, and mountainous parts of the island. — "However," says he, "Lancashire at present, and for a Vol. VII.

long time past, has as much right to be called the mother country for long-horned cattle, as Lincolnshire has for the large long-wooled sheep; for though all or most of the cheese-dairies in Chezshire, Gloucetsershire, &c. and indeed the greatest part of the midland counties employ a kind of long-horned cows, yet they are only a shabby mixed breed, much inferior in size and figure to the Lancashire breed, from whence it is very probable they all originated." The author of "The present State of Husbandry in Great Bril-

tain," however, thinks it probable that the long-horned breed originated in the importations of cattle from the neighbouring country of Ireland; a few of this breed brought from that island, having been coupled with the ancient breeds of the district, produced the sort of cattle known by the name of the Lancashire or long-horned, and which now occupy a large portion of the idle lands of this kingdom. It is added, that besides Lancashire, the long-horned cattle are also very general in the counties of Warwick, Leicesters, Gloucetsers, Chelford, and several others of the midland coun-
ties; and what is surprising, and shows great attention in the one instance, and equal neglect in the other, this sort of cattle is said to be found in greater perfection in the coun-
ty of Leicesters than in the district whence they take their name. This has arisen, according to the obserbations of the author of the Treatise on Live Stock, from the graziers of those counties buying their bell bulls and heifers for many years past, before the people of Lancashire were well aware of it. "The former paid more attention to that kind which were of a true mould or horn, and quicker feeders; while the latter contented themselves with the old-fashioned, large, big-horned kind, which are not only flower feeders, but when fed, are not flesh good beef. In short, the little farmers in Lancashire, tempted by the high prices given them for their bell stock, had lost their valuable breed before they were sensible of it." It is evident that the original breed of this sort of cattle spread themselves from the great breeding districts of the northern parts of Lancashire, Wellmore, and Cumberland, into the extensive grazing and dairying districts of the midland counties, where they are at present met with in the most improved state.

It is affected that this breed is understood by graziers to be in general rather slow feeders, except that particular kind selected and recommended by the late Mr. Bakewell, which are said to eat less food than the others, to become remark-
able fat in a short space of time, and to lay their fat upon the most valuable parts, but have little tallow in them when kilned; and, when used in the dairy, give very little milk. This variety also differs from the rest of the long-horned cattle, in having very fine, clean, small bones in their legs, and thin hides. They are stated to be "a middle-sized, clean-boned, round-cased, kindly-looking cattle." It is supposed by Mr. Culley that the Irish cattle are a mixed breed between the long horns and the Welsh or Scotch, but more inclined to the long horns, though of less weight than those in this part of the kingdom.

It was from the midland long-horned breed of neat cattle that the late Mr. Bakewell selected the flock for his great improvements in these animals. Much attention had indeed been previously paid to the procuring and introducing of the bell cow flock of this sort into this district by others, and it was by selecting from these that Mr. Webster constituted the noted Canley flock. And from cows of this celebrated fort with Wellmoreland bulls the very intelligent breeder just mentioned commenced his plan, which, after breeding repeatedly from the bell of the same kind, confantly choos-
ing individuals with the roundest forms and smallest bones, he produced that variety, which has since acquired to high a character.
a character for their fattening property. It is, of course, obvious that this variety which has been denominated the Dibley or New Leicester, is principally cultivated for the purposes of the grazier, while the original long-horns have preferred their superiority for the retail. The size of this improved horn is considerable, and its utility sufficiently shown by the high prices that are frequently given for them.

There is a sort of mixed kind which are termed half long-horns, that are an useful sort of flock, and which will be noticed below.

The middle-borne... of cattle... as according to the author of the Treatise on Live Stock, most frequently met with in the south and south west parts of the kingdom, Suffex, Dorsetshire, Hampshire, Devonshire, &c, and the use also reached so far north as Forfarshire, in which district the breed: The breed of this sort of cattle are now to be found. The cattle of this breed that are met with in Devonshire are fied by Mr. Culley to be found in the greatest purity, and of the bell kind, in the vicinity of Barnthistle; there are of a red colour; if they have any white spots they reckon the breed impure, particularly if those spots run into one another; with a light dun round the eye, and the muzzle, of the same colour; fine in the bone, clean in the neck, horns of a medium length bent backwards, thin-faced and fine in the chops, wide in the hips, a tolerable barrel but rather flat on the sides, tail small and set on very high; they are thin-skinned, and silky in handling, feed at an early age, or arrive at maturity sooner than most other breeds; they are well fitted for draught, both as to hardiness and quick movement; and their shoulder points are beautifully fitted for the collar.

But according to Lord Somerville, who has given a full account of them in the "Annals of Agriculture," and who must be allowed to be no mean judge of this breed of cattle; they are, when described, "not as they might be in imaginary individuals, but as they really are found, in general, speaking of this as of all other breeds, that conclusions must not be drawn from the shape and size of the bulls, but from the general quality of their flesh. Certain it is (he says) that individually handomest bulls are often to be found in other breeds; and it is as certain, that this race, of which the British breeders are the most fond, of all the crossbreeds, or among the very few at Smithfield, where prejudice cannot find the way. And in forming an estimate of merit or demerit, the annual produce is to be the object attended to; this in oxen, which for superiority of grain, activity in labour beyond all competition, and what in horses is termed blood, will be found a right criterion to judge of the bulls which got them."

And that "beginning with the shape of the bull, in any very handomai individual, the horns is (he says) found neither dropping too low, nor rising too high, nor with points inverted, called here flag-headed; tapering at the points, and not too thick, or goary at the root; the colour yellow, or waxy. The eye clear, bright, and prominent; looking well behind and shewing much of the white;—a dead-eyed ox not often a good prover, or fine in skin;—in occasional variation of colour round it. Forehead flat, indented, and small;—this found almost universally in this breed, and is a point that shews much blood. Check small and muzzle fine;—if the forehead is fine the muzzle is so too. The nose of a clear yellow, if possible like the horn, or mottled:—a black nose always to be avoided; for although occasionally a black-nosed ox may bear a white, and die well, yet it is a point often demonstrative of a bad constitution, of such as turn foetures, or flinters provincially, and particularly when the cast of the coat is of too pale a colour. The nostril high and open. In respect of throat, the bulls of this breed are sometimes reproached with being throaty, or with the skin too profuse and pendulous. The hair curled, giving an apparent comfort to the head not to be found in the New Leicestref bulls, when carefully trimmed with scissors. The neck perhaps thick and goary in the estimation of strangers, with which property the oxen of this breed are not to be reproached, or they would not labour as they do."

"Generally speaking (he thinks) the bulls are relatively to oxen not of a large size; and it should be observed respecting size in general, that nature operating in food and climate is imperative, and will produce oxen proportioned to those two circumstances in due course of time, whatever may have been originally the form of the bulls and cows."

Here end (he says) the points wherein there is any essential difference between the bull and the ox; the variation in one is small and unessential; a remark which is, however, subject to limitation; for individual influences will occur, which it much too much attended to, would seem to establish a different rule.

"The neatest sort of form, and energy and vigour in labour, greatly, if not wholly, in this breed are (he supposes) from breeding by heifers and yearold and two years' old bulls. Although an old cow may produce a finer lamb than a younger one, yet the quality of vigour is unnecessary and extraneous (he says) to the sheep. This, (continues he) is a prejudice deeply rooted in the minds of all practical men, although much, in the estimation of some, may be given to climate."

"Compared with the horse, the shoulder is (he conceives) low. It should correspond with the general thicknefs of the animal; on no account projecting. If a bull is inclined, or bending towards each other, the point of the toe must be out; the point of his shoulder must be the same; and he must he low behind the withers, (an incorrigible point in an ox for feeding) and he must be, of necessity, a slow worker."

"The boholn is not sharp with a loofe, pendulous dewlap; but wide in form, and mellow in handling. In buying an ox great notice should be taken of the breadth of the boholn, and between the fore-legs, standing quite wide, the legs like straight pillars supporting a great burden. Much in buying is loll or gained by attention to this point: it is not for symmetry only, but implies strength and speed; a proportionate breadth of breast giving wind; and here we find (he says) the application to a working ox."

"The legs are straignt; and the more blood an ox shews, the smaller will they be. The circumstance of this breed shewing more blood than any other in the kingdom, has (he observes) been remarked by many persons ignorant of cattle, but deeply skilled in horses. The leg neither too long, nor too short: an undue length is to be avoided."

"Very much of a bullock's proof is admitted, (he adds) on all hands to depend on the size of the rib, rotundity of the barrel, and mellowness of the skin. These are the first points to handle in a lean and in a fat ox. The two hind ribs should be bold, prominent, and widely independent of each other. The skin rising easily from the ribs, mellow, and elastic, affording room to lay fat on below it. A man buying a lean ox would do well to handle him on both sides: it often happens, that the frame or barrel is not equally round on both; one being evidently to the eye and hand flatter than the other."

"The hips, or pins, lie so high as to be on a level with the brisk, either in a fat or lean ox; by no means dropping. The other the animal, the lower the upper flank drops, and consequently, the higher the hips appear. In this point of the
CATTLE.

The upper flank, a skilful judge will (he thinks) discover much of the inward properties of a fat bullock. The hind quarters from the pin to the catch, or point of the rump, should be long and well filled up: handling the centre of this space is a leading feature, in the estimation of choice judges, and ascertains more of the substantial quality of the flesh and fat of a beast than the prominence of fat so much admired by bad judges on the catch of the rump.

"The letting on of the tail is on a level with the back, something elevated, nothing depressed: size long, small, taper, and with a round bunch of hair at the bottom; the tail, as in a horse, denoting much of high blood.

"The galloways are not too much cut away, nor, as in the Holderness breed, heavy and loaded: bearing always in mind, that these oxen are not bred for inutility, but for wind, vigour, and strength: for although a breadth in the boarom, in as much as it is essential to wind, in a working animal, is beneficial; yet a load of flesh on this hind part tends nothing to activity; and being of second-rate quality, is not desirable for profit.

"In point of skin they are among the thinner classes, rather than the thicker. It is very rarely that an ox is found with a hard or wiry skin. Much depends on colour: the shades most admired are the mahogany; and the more glossy filkens, if smooth, the better. Those with curled hair are deemed excellent provers, and a very glossy mahogany pater, lighter, with curls like ripples on a smooth mill-pond, is also in the highest estimation. It is hard to say which of these is the best; all turning out such numbers of good fat oxen. The paler shades, if the eye is clear and good, will bear hard work, and prove as well as any. This rule only is absolute, that a pale skin, hard under hand, with a dark and dead eye, too often denote a fitter in hard work, and rarely under any indulgence, a good prover.

"Respecting the lower flank and the cod, they do not deserve that attention which many persons pay them, who consider these points of prime importance.

"The graziers like this breed (he says) best at five years old. The worked-out fleeces of the vale fall for more. At five years, than at six; but six is the proper age. At eight, nine, and ten, they are going back in all their points; and in their value after seven. No ox should be kept after seven, or, at most, after eight.

"They (the red cattle) are (he says) yoked at two or three years old, and lightly worked; labour increased at four; from that period till six full worked. Worked oxen attain a larger size than unworked; finish their growth generally at fix years old; but the larger size grow the longest.

From the actual experience of the noble writer, "the pole and yoke form the true lever of an ox, and he can draw a greater weight in yoke, than in collar and harness, particularly in a steep country. The bullocks never come home in the middle of the day; a bundle of hay is carried into the field; all the calves of this breed are reared."

Thee oxen are "(he says) parted with by the tillage farmers until the harky-fowling is over, and, in many cases, the turnip-ground once fird; yet they are grazed fat, in six or eight months, to the average weight of forty-five score: these, kept on, after Christmas, fattened on hay alone, which, in the grazing districts of the west, is held equally nutritious with any other fort of corn; oil-cake feeding not practised: these hay-fed oxen stand the drift to London without waste. Influences of marsh-feeding heifers bought in April or May, quite poor, fit for the butcher by the middle of July; in August uncommonly fine beef."

"The station of this breed begins (his lordship observes) at Barnstable, and is traced, by pursuing the line of the river Taw, as high as Chulmleigh, then to Tiverton on the Ex, Wellington, and nearly to Taunton. Then turning north, straight to the sea, over the eastern boundary of the Quantock hills, to Stoke Courcy; from which place, on the eastern extremity, to the mouth of the Barnstable river on the western, includes the whole, to the length of forty-five miles, and to the breadth across, from Tiverton to Minehead, of twenty two. To the east of this range, the breed gets into a mixture of Gloucester, Welles, Upper Somerset, &c. being a varied dairy sample; and more to the west, a Devon, working on the principle of the Cornish flock. To the south, the variety of the four harms is found; coarse, with a good deal of white, the brown, with black and white mixtures, of uncertain properties. Excentric, the highest point of the district thus defined, the country fishing from it in every direction, the source of all the rivers, and the head-quarters of all the cattle. At Bampton and Wyvelcomb, they are found in great perfection."

It is observed by Mr. Lawrence, in his "Treatise on Cattle," that "the red cattle of North Devon and Somerset are, without doubt, one of the original breeds, and one of those which has preferred most of its primitive form: the excellence of this for labour is best proved by the fact, that the fashionable substitution of horses has made no progress in the district of these cattle; by their high repute as feeders, and for the superior excellence of their beef, which has been acknowledged for ages."

It was remarked by Mr. Bakewell, that the Devonshire could not be improved by any cross with other breeds. This breed has been supposed to some run to too great length of leg, crooked behind, or fickle-harnessed, to be of insufficient general substance, as well as to be more apt to be in-bred, that is, crossed in the fore legs.

It is fudged, by the writer just mentioned, that, "by a proper selection from their own flock, they might be bred somewhat more square and substantial, without all detracting from their delicacy, flesh of blood, or spice. Their labouring powers might be thus increased, and their quantity of beef, without either debasing its fine qualities, or rendering necessary a larger portion of keep. These cattle have generally, for a century past, it is added, commanded the best price at Smithfield; but of late years the buyers there have strangely remarked, that although blood and fine form are very pleasing to the eye of the gentleman breeder, yet substance and weight are, and ever must be, the grand objects at market."

It is stated that "the Devonshire variety of this breed are the quickest working oxen in this country, and will trot well in harness; in point of strength, they stand in the fourth or fifth class. They have a greater resemblance to deer than any other breed of cattle. They are rather wide in the horns, in part inclining. Some, however, have regular middle horns, that is, neither short nor long, turned upwards and backwards at the points. As milkers, they are so far inferior to both the long and short-horns in quantity and quality of milk, that they are certainly no objects for the regular dairy. They have, however, been formerly used with success at Epping in Essex, in one or two instances; as a balance to which they are universally rejected by the dairies of their own and the neighbouring counties."

It has been stated by Mr. Young, "that the natt or polled Devonshire breed, in the neighbourhood of Barnstable, is coloured, middle-sized, thick-set, and apt to make fat, but
The Devonshire, being a hill cattle, are said to be much more hearty, and better winterers, than might be supposed from their appearance.

The Suffolks and Herefordshires are varieties of the middle-horned, or Devonshire breed of a greater size; the Herefordshire being the largest. Of these cattle Mr. Culley gives the following description. Colour red, fine hair, and very thin skin, neck and head clean, horns neither long nor short, rather turning up at the points; in general, well made in the hind quarters, wide across the hips, rump, and shoulders, and narrow on the spine; tolerateably straight along the back; ribs or sides lying flat, thin on the thigh, and bone not large. An ox, six years old, when fat, will weigh from 60 to 100 stone, from 14lb. to the stone, the fore-quarters being generally the heaviest. The oxen are mostly worked from three to six years old, sometimes seven, when they are turned off for castrating.

It is conceived by Mr. Lawrence that the Herefordshire variety of cattle, which at present are a mixed breed, are, in general, to be considered as having been originally of the Devonshire breed. And that "its great size is probably derived from an intermixture with the heaviest of the Welsh or Shropshire breeds."

According to Mr. Marshall, "this variety has the countenance pleasant, cheerful, open; the forehead broad; eye full and lively; horns bright, taper, and spreading; head small; chap lean; neck long and tapering; chest deep; hocks broad, and projecting forward; shoulder-bone thin, flat, no way protuberant in bone, but full and mellow in flesh; chest full; loin broad; hips standing wide, and level with the spine; quarters long and wide at the neck; rump even with the general level of the back, not drooping, nor standing high and sharp above the quarters; tail slender, and neatly haired; barrel round and roomy, the carcases throughout deep and well spread; ribs broad, standing close and flat on the outer surface, forming a smooth even barrel, the hindmost large and of full length; round bone, small, firm, not prominent; thigh clean, and regularly tapering; legs upright, and short; bone below the knee and hough small; feet of middle size; cord and twist round and full; flank large; flesh everywhere; mellow, soft, yielding pleasantly to the touch, especially on the chine, the shoulder, and the ribs; hide mellow, supple, of a middle thickens, and loose on the navel and hock; coat neatly haired, bright and silky, colour a middle red, with a bold face, characteristic of the true Hereford breed."

However, Mr. Lawrence says, "of late years, considerable improvements of bone have been observed even in the best Hereford cattle; a circumstance which is of trifling importance, as they have proved themselves of such superior excellence, that no possible crosses could probably improve them."

It is supposed that the breeders should reflect on the importance of preserving the old blood in a state of greatest purity as possible, as they possess, for some purposes, the most valuable breed of cattle in the kingdom, and have been very judicious and fortunate, in nicely blending the elements of each variety; but they ought not to forget, that, by further mingling and crossing with inferior stock, they may, by degrees, recede from the great eminence they have attained. Should, however, a cross become really necessary, from too much coarseness or over-size, the Devonshire or Norman bulls are supposed the proper ones.

It is added, that "the great distinguishing properties of the oxen of this district are, the great produce of beef, quick feeding in proportion to their growth and size, and the union of strength and speed in labour. It is observed that, with respect to the most profitable return in quantity of beef, it may be presumed no breed in England can stand in competition with this, and they have accordingly been most successful at the annual prize fairs. They also are said to command the full price alive or dead."

It has been stated that the weight of Mr. Weftcar's ox, which carried the prize at the Smithfield show in December, 1802, was as follows:

<table>
<thead>
<tr>
<th>Stones of 5lb.</th>
<th>lb.</th>
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</thead>
<tbody>
<tr>
<td>Head, tongue, flanks, heart, and lights</td>
<td>13</td>
</tr>
<tr>
<td>Tripe, guts, feet, and liver</td>
<td>19</td>
</tr>
<tr>
<td>Hide</td>
<td>16</td>
</tr>
<tr>
<td>Blood</td>
<td>6</td>
</tr>
<tr>
<td>Fat</td>
<td>37</td>
</tr>
</tbody>
</table>

| Offals | 92 | 5 |
| Fore quarter | 73 | 2 |
| Hind ditto | 65 | 2 |
| One side | 137 | 3 |
| Ditto | 137 | 3 |
| Carcases | 73 | 6 |
| Offals | 92 | 5 |
| Gows weight | 367 | 3 |

Though the short horns are of larger size than those, they do not feed so quickly, and require more keep than the Herefordshire fort, which vary very conveniently as to size, but require to be well kept. They are the most powerful draught oxen, being speedy enough for any work, either in the plough or cart, and generally walk sufficiently quick. It is said that they are docile and tractable, and, if trained with temper and kindnes, will drive to an inch with reins. But "as milkers they have nothing particular to boast."

Mr. Lawrence thinks the old Gloucestershire Red and Brown were middle-horned, flowing blood, and reenabling, in a considerable degree, the South Devon, but of a more square and substantial form. They were, however, he supposes, a mixed breed, which flowed much Welsh blood, and were, it may be presumed, more apt to fatten than milk, since they have given way to the long-horned species in that dairy country. It would be difficult, he thinks, at this time, to find any genuine specimens of this old variety.

The Suffolks are of the same breed of cattle, Mr. Drayton says, in high estimation for beef and labour, and, in some degree, for milk; in which latter respect, they are inferior to the Devonshire and Herefordforts, to which they are related. They are a mixed breed, in which much Welsh crossing is sufficiently obvious; but equal pains do not seem to have been taken in their improvement as with the Herefordshire kind. They may be easily found in a state of original purity as to form. This fort are very flat and deep, generally red or brown in colour, and show much blood; both wide and middle-horned, the points turned upwards and backwards; of various sizes, but the largest generally for too coarse in the bone, and of insufficient width or substance for their great depth of carcases. They yet, he thinks, need no alien crosses; having all the materials of improvement within themselves, unless, indeed, to remedy the excessive fatness in some, a Hereford cross might be useful. Their speed appears to him remarkably great, and he doubts whether even the Dons are, in that respect, superior; they are, in the mean time, equal in power,
power to the cultivation of the heaviest clays, and to draught over the deepest roads; in temper somewhat quick, like the Devons. These different varieties of the middle-horned breed of cattle are said, for their particular excellencies, to deserve the utmost care from breeders, and to be one of the first objects of national interest, to spread them through the country as beasts of labour.

He supposes that the Kentish Homedreds, which are raised from dairy heifers, are of a mixed breed, the Suffotx generally forming the base, crossed with Welsh long-horns, Alderney, &c. A variety is, he says, thus raised of excellent butter-cows of a small size; and he fuggels it to the breeders of that district whether it may not be worth while to establish and render the breed permanent.

A good specimen of a bull of this sort raised from Suffotx bulls, introduced into that county about forty years ago, was remarkable for shortness of the leg, length of carcases, and vast sub stance; the bone somewhat coarse, and crooked in the hams. It is observed by the name writer that of, the white cattle of Surrey, mentioned by old authors, he knows nothing, nor does he believe it was ever a breeding country. The notion may have arisen, he thinks, from some temporary introduction of Alderney, or other flock of light colour. * In facts, he is it said, that some gentleman, about fifty years since, brought up from Lincolnshire, into Surrey, a lot of white cows, very large milkers, and that the same kind were at that time kept in Suffolk; they were probably, he thinks, of Dutch extraction.*

The author of the "Present State of Husbandry in Great Britain" remarks, that when all the properties which should attach to a useful breed of cattle are considered, the middle-horned may be said, as a general variety, to come nearer to perfection than any other in England. They are of a large size, well formed, and in disposition to fatten, they are probably, he thinks, much on a par with the short-horned, and generally superior to the Suffolk. As dairy cattle, they are also as valuable as any that fall under the description of quick feeders; for although they give a less quantity of milk than the Suffolk or the long-horned, it is said to be of a richer quality.

The short-horned breed of cattle, according to Mr. Collie, differs from the other breeds in the shortness of their horns, in being wider and thicker in their form or mould, consequently feeding to the root weight, in according by much the greatest quantity of tallow when fattened, in having very thin hides, and much less hair upon them than any other breed, except the Alderney; but that the most essential difference, he thinks, consists in the quantity of milk they give beyond any other breed; there being influences of cows of this breed giving 36 quarts of milk per day, and of 48 firkins of butter being made from a dairy of 12 cows; but the more general quantity is 3 firkins per cow in a season, and 24 quarts of milk per day. The great quantity of milk, thinness of their hides, and little hair, are, he says, probably the reasons why they are tenderer than all the other kinds, except the Alderney.

It is said of this kind, and he supposes very truly, that they eat more food than any of the other breeds; nor can we, he says, wonder at this, when we consider that they excel in these three valuable particulars, viz. in affording the greatest quantity of beef, tallow, and milk. Their colours are much varied; but the generality of them are red and white mixed, or what the breeders call flecked, and, when properly mixed, a very pleasing and agreeable colour. They are chiefly to be found in Lincolnshire, and the eastern parts of the counties of York, Durham, Northumberland, and Berwick. And this breed, in consequence of its having been originally imported from Holland, is, he adds, frequently called the Dutch, and sometimes the Hordernesf breed, from a place of that name in Yorkshire, where it would seem it was first established in this kingdom. Delitute of the exertion and agility of the middle-horned breed, says Mr. Donaldson, they are not so well adapted for the cart or the plough. And considering their size, and the quantity of food they devour, it is probable, he thinks, that they are inferior to any of the above-mentioned; and, when compared with the Suffolk duns, greatly so. Much attention, he observes, was formerly bestowed by the graziers in the midland districts on the improvement of the long-horned breed of cattle; and probably a greater number of eminent breeders have lately embarked in the laudable undertaking of improving the short-horned breed; and from their knowledge, affability, and exertions, much may be expected. Mr. Charles Collings at Kettnes, near Darlington, in Yorkshire, is supposed at present in possession of the bell breed of short-horned cattle in England.

There are many reasons, says the author of the "Treatise on Live Stock," for thinking this breed has been imported from the continent. First, because they are still in many places called the Dutch breed. Secondly, because we find very few of these cattle any where in this island, except along the eastern coast, facing those parts of the continent where the same kind of cattle is still bred, and reaching from the southern extremity of Lincolnshire to the borders of Scotland. The long horns and these have met upon the mountains which separate Yorkshire from Lancashire, &c. and by crossing have produced a mixed breed, called half-long-horns; a very heavy, strong, and not unsatisfactory kind of cattle; but we do not find that the one kind has spread further west, nor the other further east. This breed, says he, like most others, is better and worse in different districts; not so much from the good or bad qualities of the land, as from a want of attention in the breeders."

It has been observed, that the northern short-horned species is the largest breed in the island, the Herefords being the next. They are an original breed, but whether those of the northern counties are or not, cannot at present be ascertained; "that is to say, whether they are aboriginal, or were imported in very early times, as we know they continually been during several centuries."

Contrary to the long-horns, this breed has great depth of carcases; but with ample substance, large bone, thin hide, and gives much milk, which is not distinguished for its richness. They are not of first-rate character as labouring cattle, as has been seen, which, nevertheless, the Holdernesf variety, Mr. Lawrence says, seems to promise by their form. "We look, continues he, to the coarse, square, Dutch beefy breed, as the basis of this species. In many parts of the north, they remain, he adds, still coarse, and by no means equally disposed to large milking. The common Lincolnshire cattle are coarse in head and horn, large boxed, high upon the leg, and, to borrow a jockey phrase, ragged liped. Equally coarse internally, but producing flesh in great quantity. The Lincoln neat cattle, in fact, plainly, he thinks, demands a Bakewellian improvement, such as their sheep have received. The most accurately marked and distinguishable permanent varieties of the northern short-horns appear to him to be the Holdernesf and Lincolnshire. Collie, says he, tells us, that amongst the old flock there were some with black flesh, which would grow, but never fatten, provincially called heirs; these were to be known by the rotundity of their flaps, approaching, in many respects, that of an ill-formed ear-horfe. And the extreme coarseness and size of the northern short horns led, he thinks, to the introduction of Norman or Alderney bulls at some period of the 18th century, with the precise date of which we are unacquainted." And he supposes "there never was a more fortunate crofs,
as in no other country, excels so excellent a breed of cattle, including all the useful properties. In one, perhaps, the most important, respect, great milking, they are, say, better, superior, and even without rivals. Their beef is finer than that of the old short-horned breed, and they bear much earlier and quicker, carminghill a vast depth of natural flesh, and tallow within in the first degree. They have both fat and strength enough (he supposes) for labour, and their shoulders are well formed and well polished for draught. Being beautifully variegated in colour, spotted, striped, sometimes fleeced red and white, or black, or brown and white, they make a fine park flock. From their superior quality of milk, they rival, in his opinion, the belt long-horns in the cheese and butter dairies, and for fucking are unrivalled. It may be presumed (he says) they are at least equal to the Herefords in the stall, at all points: and there seems but one respect in which they are, in any considerable degree, inferior to any breed which can be named, which is fineness of flesh; in that particular, it is obvious, they can never equal certain other breeds without the entire overthrow of their Dutch basis by a repetition of the Norman or some other cross, which would go to destroy the present superior breed. An occasional mixture, however, of Norman blood may, he says, keep the Holdernses flack sufficiently fine, and prevent its degeneration on the other side; or a selection might be made of very elegantly shaped and fine-boned Holdernses cows, with the view of improvement. There are well known as the flack generally kept by the London cow-keepers. They have small short horns, in the shape of a half-ring, rather a long plain head, fine linn, the legs seldom too long, the carcase large but compact, good back and loin, the general figure square. They are not the species of flock for short keep, however small their size; indeed they are said to be good consumers. But this high character of the Holdernses cattle (he defers) should be received with considerable reserve. It relates to the cows chiefly, and to a selection of the oxen; to what they ought, and might be, rather than what they generally are. They are too often, he thinks, "the worst shaped cattle in the island, and perhaps the least profitable. Long, paint, deep carcasses, without adequate substance, placed upon high hills of the coarsest timber; low feeders, never fat, and the flesh excessively coarse. The feeding such ill-shaped flock must (he farther observes) be immensely disadvantageous, and is particularly disgraceful in districts which produce the best models." The short object, in respect to their improvement, is (he supposes) to shorten the legs; "which might be effected (he thinks) by a conjunction of the best Teeswater and Holdernses bulls, with selected short-legged cows. It is a striking fact (obviously he supposes) indicative of a rapidly increasing population, that, notwithstanding unprecedented prices, encouragement, and improvements, florce cattle are at this instant so scarce, that many graziers must come short of their necessary quantity." The following statement has been given, by the author of the "Treatise on Live Stock," as the weight of a five years old bull of the Teeswater fort killed in 1793, allowing 14 lb. to the stone.

<table>
<thead>
<tr>
<th>Stone lb.</th>
<th>£</th>
<th>c</th>
<th>d</th>
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<tbody>
<tr>
<td>Two fore-quarters</td>
<td>7.4 81</td>
<td>43</td>
<td>18 5</td>
</tr>
<tr>
<td>hind ditto</td>
<td>7.10</td>
<td>50</td>
<td>18 7</td>
</tr>
<tr>
<td>Weight of carcass</td>
<td>159 42</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>tallow</td>
<td>10 0</td>
<td>43</td>
<td>4 0</td>
</tr>
<tr>
<td>hide</td>
<td>10 11</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>177 1 5</td>
<td>Value</td>
<td>£30</td>
</tr>
</tbody>
</table>

It is added, by Mr. Lawrence, that the belt and quickest feeders of this breed are not remarkable for milking, and that the Teeswater short-horns are a valuable variety of the Teeswater fort.

It is believed, by the same writer, that the northern half long-horns are the immediate produce of a conjunction of the long and short-horns, which mixed, of necessity, frequently happen upon, and in the vicinity of those mountains which separate the native districts of the two kinds. The horns of this variety, he thinks, generally run out pretty straight and even, unlike those which are called middle or short-horns. They are a large and long breed of cattle, partaking equally, as may be supposed, of the qualities of each species, and hence ought to be good dairy cattle, as uniting quality and quantity of milk, and size; in fact, he has been assured, by an intelligent Effex dairy-man, that they have the belt title to such character, and many years since, when cow-stock was at a low rate, he preferred going to the price of 16 or 17 guineas a piece, for this description. They are not, he thinks, so permanently established and generally known as their originals.

And the "northern or Yorkshire polled cattle have (according to him) the same qualities as the short-horned, carrying vallublance, and some he has seen lately are of great size, although in that particular they are not conveniently various. In his opinion they are a most excellent breed, and well merit improvement, with the view of labour, by a selection of the finest breed and most active individuals. From the shape of these polled cattle, they hold a strict affinity in all respects with the short-horned, amongst which they are found; and it seems that various breeds of horned cattle are attended with horned, but perfectly congenial varieties."

The Berwickshire cattle have probably, he says, a relation to this breed, having been improved by Teeswater bulls from Northumberland. They rife, at three years old, to fifty, or perhaps nearly eighty stones, of fourteen pounds, and at five or six from the last to one hundred and twenty. The bell cows affording so high as six gallons of milk in the day. The ox is defterred as having a "long face, open countenance, clean and small, turned up, curving, and spreading horns, straight flanks, straight and round along the back, free and deep in the ribs, short legs, thighs turned out, open boned." This breed in the improved fort is highly valuable.

The Welsf breed of cattle, especially such as are found in Cardiganshire, are, the author of modern agriculture says, mostly black, with thick horns turned upward; of a small size, clean boned, of a good shape, especially where the native breed has not been injured by injudicious crossing with others from England. They are hardy and active; and in great request in the southern counties of England, on account of their being quick feeders. The quantity of milk which the cows of this breed afford is trifling; but they are, upon the whole, a breed well adapted to that country, although not capable of very great improvement: which might be effected with more certainty, and to a greater extent, he thinks, by selecting the bell individuals of the native breed, than by bringing others possessing probably very different qualities from England. But the author of a late treatise on cattle supposes that there may have been originally two different breeds, in this district of the kingdom, as the mountain kind having large wide horns, thick hides, and much bone in proportion to their size; the cows affording but little milk; and the low land or southern fort, which are of a larger size and finer form, having middle horns, being in some instances good milkers, those of some parts, as Glamorganshire, being in high estimation for the purpose of draught on the lighter forms of hilly lands. In general, he thinks, the cattle of this district are, however, deep
deep and flat in form, "some of them cloaddy and of great
substance also."

Thoue of the above part, Pembroke and Montgomery-
sire, are considered as the most valuable forts of the
cattle of this part of the kingdom.

It is suppos'd by the principal deffics in tllse cattle are,
at present, the want of substance, and great length of leg;
the remedy of which is suppos'd to be a Herefordshire crois
in the view of beef or labour. Their appearances in the
different counties of this breeding district, are flated by a
late writer somewhat as below.

The original Carmarthenshire fort, Mr. Lawrence says, is
"black, coarse, ill formed, short and thick, having wide
horns of great substance at the base. The cattle, in coarse,
small in the mountain districts, and of large size in the vales,
in good keeper."

"The improvers there," he adds, "have tried various croiscs.
Hereford, Shropshire, Leicelcr, Pembroke, Glamorgan,
but they fail without the defired succses. The produce of a Pembroke heifer and Hereford bull, is, he says,
the favourite flock in this county, where, in truth, the
prior object ought to be an improvement of keep."

The Glamorganfhire cattle are, according to the fame wrir-
tors, "in the cows rather small, of light bone, in colour
black or brown, handfome, and shew much blood. They
milk well, and feed quick, and are used as breed of labour:
they need no improvement from alien croiscs (he thinks); but
there are inferior varieties of them, from being mixed with the
flock of the borders. This breed (he supposcs) prevails
in Monmouthshire, and is to be found at the fairs and
markets of Pontypool."

But the Pembrokefhire cattle are, he says, "coal black,
sometimes dark brown, fnced, or white towards the tail;
some have white faces. They were originally finer than at
prefent, probably the fame race as the Glamorgans, which
some of the Pembroke cows resembe at this time: but the
breed has been crois'd with the old Leicelcr, with the view
of obtaining milk, in which the improvers did not succeed so
well; as in rendering their flock coarse, bony, and unfit for
labour. If butcher was the object, they had better, he thinks,
probably, have retained the imported long horns unmixed.
This crois accounts (he supposcs) for the Pembrokes being
fnced, and having long and round carcasses. They gene-
rally labour on the roads, yoked with horses, and their jour-
nies are performed with a speed unknown elsewhere. But
the Pembroke ox is too leggy, but he becomes early ripe,
and will make fat at four years old. He attains the weight of
80 to 130, or 140 fone London weight, and is faid to
fland his drift or journey better than any from Wales,
where he finds a preference particularly in the counties ad-
joning the metropolis. Two year old Pembroke bulls are
bought up at the fairs, at coniderable prices, by the im-
provers of the neighbouring counties."

The native Brecknockshire fort are, he thinks, "much the
fame as those of Carmarthen and Pembroke; but being
crois'd with Hereford, and one with Devonfhire bulls,
labour seems to be the object, and with fuch croiscs and a
attention to good keep, a very excellent breed may (he believes)
be rais'd."

And the Carmarthenfhire breed are a smaller variety of the
Pembroke and Carmarthen forts; accoiding to the fame wrir-
tor, being harder, and les milk}' than most breeds.

The Radnorshire forts are, Mr. Lawrence obferves, "dark
red, and brindled in consequence (he supposcs) of the origi-
nal black stock being crois'd with the bulls of Hereford and
Shropshire, which are adjoining counties. Although these
crois produced flock too large for the hills, they make ex-
cellent cattle, in good keeper, and of coniderable size, namely,
from 100 to 130 fone London weight. But it is faid that
the produce of the Hereford crois has not the charactcrific
bald face."

The Montgomeryshire fort are in the favourite colour blood
red, with a sticky face. The oxen from this county pro-
duce good prices.

The Merianshire fort are, according to Mr. Lawrence,
a small and ill shaped breed, faid to be the work in Wales;
but in Mr. Cobet's improvements, in crois'ing with good Eng-
lish flock, much advantage has, he fays, been obtained.

The Carnarvonfhire is a Hardy native fort, which has been
formerly crois'd and improved by English bulls and cows,
some of the New Leicelcr and Warwickshire kinds. The
improvement succeeded, and with a small additional expec-
tion in rearing, the flock has been found sufficiently hardy,
ether on the mountains or plains; and the improved cattle at
wo or three years old, are, in the opinion of the above wrir-
tor, worth more by two or three pounds than the original
breeds.

The Denbighshire and Flintfhire forts have, he fays, been
crois'd and mixed with thofe of England. There are
fome good milch cows in these forts, which give fix or seven
gallons per day, three or four months after calving.

The Anglefs fort is, he obferves, "a small black breed, with
wide and thick horns, being prevalent there, and in far greater
purity than in most other parts of Wales. This hardy race is
preferred on account of the coftant winter expofure, and
defect of winter provifion, and also because they are ap-
proved by the purchasers. An English crois has been at-
tempted without succcs, which was a neceffary reflult, un-
lefs the keep were at the fame time improved. The breed-
ers decline keeping any cattle beyond the age of three years,
not finding themselves reimbursed the charge of another year.
The weight, when fat, at three or four years old, from 60
to 120 fone, the fore quarters being the heaviest. No crois
could (Mr. Lawrence supposcs) poifibly improve thofe flanders,
unless bulls could be found of superior form, and equally
hardy; fuch are, perhaps (he fays) to be fought for in the
life of Sky."

The famc writer thinks, that, in the quality of the Welsh
cattle, generally, there is no appearance of improvement of
late years, notwithstanding the encouragement held out by
prices, of which no former age can furnish a precedent.
Indubitably the want of winter keep, and a good winter
fyme, is, he thinks, the chief caufe of this deffic.

According to the above writer, the Shropshire wide-horns,
which are large, square, deep, and bony, with thick hides,
in colour brindled red and brown, the horns branching, points
turned upward and backward, are used for labour, and faid to
be better milkers than their neighbours of Herefordshire,
with which they are doublets, he fays, often blended. Of
the origin of this variety no accounts, he obferves, are ex-
tant, or how long they have been a permanent or establis-
hed breed. It has, probably, he supposcs, originated in a mix-
ture of the old long horns, the Welsh, and the red breed of the
western district.

According to Mr. Culley, the polled or Galloping breed of cattle are a very valuable breed, and feem to be, in we fgt
and size, as much les than the long-horns, as they are than the
short-horns; they generally weigh from 50 to 60 fone.
Some particular ones reach 70 and upwards; but their most
feffential difference from every other breed of cattle is, their
having no horns at all: some few indeed. In every other re-
pect polls, have two little knobs or examing horns from
two to four inches long, hanging down loose from the folow
parts that other cattle's horns grow, and are joined to the
head by a little loose skin and flesh. In mob other respects, except
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except in that of wanting horns, these cattle resemble the long-horns, both in colour and shape; only they are shorter in their form, which probably makes them weigh less. Their hides seem to be in a medium between the two last-mentioned breeds, not so thick as the long-horns, nor so thin as the short-horns; but like the bell feeding kind of long-horns, they lay their fat upon the most valuable parts, and their beef is well marbled, or mixed with fat.

We find, he says, a few of this breed straggling through different parts of England: amongst the rest, he remembers the herd of Darlington having had a very handsome variety of them, finely gabled with red and white. But we must, he says, look for the original of these in Galloway, a large district in the south-west of Scotland, where they are mostly bred upon the moors or hilly country, and grazed upon the lands nearer the sea, until rising four or five years old, when the graziers and drovers take them up in great numbers to the fairs in Norfolk and Suffolk, previous to the turrip-feeding season, from whence the greatest part are again removed in the winter and spring, when fat, to supply the amazing consumption of the capital, where they are readily sold at high prices; few or no cattle selling so high in Smithfield market, from their being nice cutters up, owing to their laying the fat upon the most valuable parts; a great excellence in all feeding cattle. It is an uncommon thing, in this refined market, says he, to see one of these little bullocks outsell a coarse Lincolnshire ox, though the latter be heavier by several scores. And he has been informed, from good authority, that the polled cows are very good milkers, in proportion to their size, and the milk of a rich quality, yielding much more butter from a given quantity of milk than the short-horns; and also that the oxen and spayed heifers answer well for the draught; which certainly adds to the value of this excellent breed. But though the generality of the cattle of the above district are polled, yet they have several with horns, which, they say, are a bailard or mongrel breed, by crossing with long-horned bulls from Wigtown and Cumberland. They prefer the polled ones, and of these the black or dark brindled ones, to any other; and all allow them to be the original breed of the country. The breeders in Galloway complain of their old breed being lost, or at least much worn out; probably by want of proper attention in the breeder.

Mr. Lawrence supposes that the moors of Mungaff and Glelone are the only places where this fort of cattle at present exist in their original purity, and that they are generally thinner in the hind quarters than those which have been crossed with other breeds. They are likewise prevalent in Dumfriesshire, especially on the Nithdale side.

There are frequently among the common Galloway cattle foam that are white faced and pied, with small grizzly horns, which is supposed to be from a mixture of Dutch or English short-horned bulls, and to “extract 20 per cent. from the worth of the beast.”

In respect to form, according to the above writer, this fort of cattle are broad and square in the shoulders, long and round bodied, but deep, straight and broad on the back, with a thick flabby coat, the legs of a middle length, with large hocks. It is added, that the pelvis, or hinder part beneath the tail, and between the two bones, is frequently too narrow in the case of this fort, from which they want strength, and occasionally fail in bringing forth their calves.

The even of this fort, as well as the spayed heifers, make middling fixed beef, which is of an excellent quality. It is supposed that all the calves of this fort are reared in their native district, and more of the females spayed than of any other breed, the operation being performed on the yealings in the month of May. This fort of cattle are usually foud at about two years and a half old, the graziers in England being supposed to take off 3,000 head annually.

It is probable that this useful fort of neat cattle might be much improved in its native district, by having better accommodation and protection during the severity of the winter season, and a more abundant supply of different sorts of food.

The Suffolk breed is so called from its being the prevailing kind of neat cattle in the county of Suffolk, and which some may think a distinct fort, but which Mr. Culley is inclined to believe no more than a variety of the Galloway breed; which might easily, he says, take place from the great connection that has long subsisted between the Scotch Galloway drovers of cattle and the Suffolk and Norfolk feeders or graziers of them. Both kinds are in general polled; and though the Suffolks are almost all half duns, while the others are of various colours, yet this might at first proceed from a partiality to that colour. But from whatever place or cause this variety took its rise, they are, he says, at present a very useful kind of little cattle, particularly for the dairy; and great numbers of them are employed in that line, in some parts of Suffolk, where, perhaps, the bell butter and the worst cheese in the kingdom are made. The cows give great quantities of milk. Mr. Young states that they give in common 24 quarts a day, which is nearly equal to the bell short-horned cows. We find the cows of this kind, like all other deep milkers, very lean, very plain in their forms, and very big-bellied. The weight of this breed of cattle is about 35 stone on an average.

These are said to have a lighter colour, and to be smaller and finer in the bone than the Galloway fort; and to be long, with a large carpals, clean throat, the neck tapering to the head, the tail thin, and the legs rather short. They are excellent for the purposes of milking, whether for the dairy or private use; though the milk is probably less rich than that of either the Alderney or long-horned forts. It has been suggested that this breed is incapable of being rendered more valuable by the art of crossing.

The Scotch breed of cattle are, according to Mr. Culley, still less in proportion to the polled cattle than they are to the long-horns; this breed are also covered with a long close coat of hair, like the pulles and long-horns; and, like these, their beef is fine grained, well flavoured, and mixed or marbled, but not so handsomely on the outside of the beef when killed, being not of so bright a colour, and often spotted with black, even upon the bell parts, except when made very fat. When grazed, they feed very readily, their weight in general being from 24 to 35 stone. The most prevalent colour is black; some are brindled or dun; but the breeders here, like those in Galloway, prefer the black ones. Their hardy animals are in possession of all that extensive and mountainous country called the Highlands of Scotland, together with the western isles, bounded on all sides by the sea and the Grampian hills; the latter of which begin on the north side of the Firth of Clyde, and run parallel into the sea near Aberdeen. This fort of cattle are frequently termed kyler in that part of the country; probably from a district in Ayrshire, called Kyle, where they prevail much. But all the lowlands of Scotland, except Galloway, have a mixed breed of cattle; towards Cumberland they are half long-horns, half polls; on the borders of Northumberland they are mixed with short-horns until you reach Tivottdale, where they become altogether a coarse kind of short-horned, or what the Yorkshire jobbers call runts, except a few pretty good short-horned cattle, bred in that pleasant and the country,
country, the Tweed side. This same kind of ruffish coarse breed continues all the way to the forth of Firth. Crossing this narrow sea into Fifeshire, you would at first imagine the Fife cattle a distinct breed, from their upright white horns, being exceedingly light lyered, and thin thigthed; but he is pretty clear it is only from their being more nearly allied to the Kylies, or Scotch breed, and consequently having left of the coarse kind of short-horns in them. The cattle all along this coast continue to change more and more, growing still less, until upon the edges of the mountains they become quite of the Kylies kind; but still much inferior to that pure, unmixed, valuable breed of Kybotes which we meet with on the more northern and western Highlands, and all the isles; but particularly in the Isle of Skye, and that tract of country called Kintail. It is in these two districts that you meet with the native breed of Kybotes: a hardy, industrious, and excellent breed of cattle, calculated in every respect to thrive in a cold, exposed, mountainous country, and better adapted to the cold regions where they are bred than any other kind we are acquainted with. Thee cattle are driven to the southern counties in great numbers every autumn; many into the western districts of Yorkshire; but the greatest part are sent into Norfolk, Suffolk, Essex, and other parts in the south of England, where they are fattened, and either slaughtered at their home-markets or sent to Smithfield.

The great demand for this breed in the southern parts of the isle has rendered its improvement more attended to than formerly, and attempts have been made by different spirited breeders by crossing Ise of Skye cows with bulls of the long-horned kind.

Though it is allowed that the beef of the Kylies is superior to that of others, it is believed by some that there is a deficiency in respect to quantity on the acre, so that it be the beef it is not the least expensive.

The Highland cattle sometimes, however, rise to a considerable weight, especially when crossed with the larger breeds. The bulls of the Isle of Skye fort are held in high estimation by the breeders and improvers of this kind of cattle, the principal distinguishing marks of which are fine eyes and horns, with a thick pile, and not thick thigthed. They excel in the quality of the milk, but with regard to the quantity, should be crossed with the Norman or some other breed that is known to afford a large quantity of milk. This property is likewise said to be increased by crossing with the Tibet fort. The Highland cattle are hardy, and very little subject to diseases of any sort.

The Orkney Islands are said to contain a small breed that are good milkers, and which afford beef of a good quality; but they are a badly formed fort.

The Fifeshire fort are of considerable size, being of a black colour, lively and upthorned. They feed with expedition, and are fitted for labour, being held in high estimation by the graziers in the southern parts of the kingdom. As milkers, they are valuable for the quality of milk and fluidness of continuing beef, rather than the quantity. It is probable that they might be improved in this last respect by crossing with those smaller breeds that produce it in larger quantities.

The Renfrew, Ayrshire, or what are termed the Dutch fort, are considered, in relation to their size, the most valuable for the purpose of milking in the island, excelling equally in the quantity and quality. Mr. Lawrence says they produce "from 3 to 7 gallons per day," and that they "have the character of being the best possible poor man's cows," from their ability to shift on very scanty keep. In appearance they are, he says, small and ill-looking, with the shape and pile of Highlanders, yet bearing more resemblance to the Dutch than to any native Scotch breed. Their horns, he adds, "are short and small, standing remarkably irregular and awkward; the colour generally pied, or of a handy red. They appear unthritty and thin like the Alderney, even in the bull, and the few which are bred up to oxen make but a poor figure in grazing, feebly reaching the common weight of Kybotes." He "apprehends thisainty race to be the result of crossing the cows of the country with Alderney bulls; the cows, perhaps, having previously a portion of Dutch blood."

The Alderney or French breed of cattle is moody to be met with, according to the author of the "Treatise on Live Stock," about the feats of our nobility and gentry, upon account of their giving exceedingly rich milk. He imagines this breed to be too delicate and tender ever to be much attended to by British farmers, because they are not able to bear the cold of the isle, particularly the north-east parts of it. They are very fine-honed in general, light red or yellow in colour, and their beef generally yellow or very high-coloured, though very fine in the grain, and well-flavoured. They make themselves very fast, and none of them are in the least subject to typhus, or have black fleck. He has seen some very useful cattle bred from a cross between an Alderney cow and a short-horned bull. See Alderney Cattle.

The Wild breed of cattle, from their being untamable, can, in the opinion of Mr. Colley, only be kept within walls or good fences; consequently very few of them are at present to be met with, except in the parks of gentlemen, who keep them for ornament, and as a curiosity: there at Chilham—Castle in Northumberland, a feat belonging to the Earl of Tankerville, are, he says, innumerable of a coarse white colour, with black muzzles; the whole of the inside of the ear, and about one third of the outside from the tips downward; red; horns white, with black tips, very fine, and bent upwards; some of the bull have a thin upright mane, about an inch and a half or two inches long. The weight of the oxen of this breed is from 35 to 45 stone, and the cows from 25 to 35 stone, the four quarters, 10 lb. to the stone.—The beef is finely marbled, and of excellent flavour. From the nature of their pasture, and the frequent agitation they are put to by the curiosity of strangers, it is scarcely to be expected that they should get very fat: yet the six-years old oxen yield generally very good beef, from whence it may be fairly supposed, he thinks, that in proper situations they would feed well. When the cows calve, they hide their calves for a week or ten days in some sequestered situation, and go and suckle them two or three times a day. If any person come near the calves, they close their heads close to the ground, and he like a bare in form to hide themselves: this is a proof of their native wildness. The dams will not allow any person to touch their calves, without attaching them with an impetuous and savage ferocity.

It would from clear from the above general descriptions of the different breeds of cattle, that all the forts taken notice of are not equally profitable to the breeder. the rearer, the dairyman, the graver, the butcher, or the consumer. Some have greater adaptation to fatten than others. Some, being cleaner housed and better formed, have less offal. Some give a greater quantity of milk than others. In a word, some of the particular properties for which cattle are estimable are more discernible in one breed than in another.

Whether, says Mr. Donaldson, these can be all united in the same animal, or whether a breed of cattle,possessing all the requisite qualifications, would be equally suitable to all situations, are questions not easy to be determined. In regard to the first, says he, it seems universally agreed, that
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there are two species for which cattle are offered with advantage; that called the long-horned breed, and a tendency to yield a large quantity of milk. The form of the animal is remarkable for the first is very different from that of the other; in place of being large in the back, and big in the belly, as in all great milkers, it is long-ridged and light-bellied; in a word, its body is bastard formed, while that of the other is more fitted to embrace a loose collar with the wide side downwards. It is not possible, therefore, that the properties of two breeds of cattle, so opposite in form and general appearance, can ever be united in the same animal. If a large quantity of milk be required, by its quality, is the object, the dairymen must content himself with such plain-looking animals as have been described above. And as the milk of all cows is well known not to be of the same quality, it appears, he says, highly probable that in proportion as the cow of the walking tribe exceeds those that are more disposed to fatten in quantity, is nearly the same proportion will their milk be inferior in quality. If this should prove to be the case, the superiority of the quick feeders, one would suppose, says he, to be completely established; as while cattle of this description are confederally better for the purposes of the graziers, the butchers and the consumers, they would, if this point were determined in their favour, be also more valuable for the dairy. No person will think of affording, that a gallon or two of whey or of butter-milk extra (for the question, he thinks, comes to that) is a sufficient reason for preferring a breed of plain-looking, ill-formed cattle, to one that, except in this particular, is more valuable in every respect. In a word, no person who pretends to a knowledge of the different breeds of cattle, will think of supporting an opinion so erroneous, as that cattle which are disposed to fatten quickly, and at an early age, that, from the superior excellence of their form, have a small proportion of oil, or what the breeders call non-chillant, and that although they yield not a large quantity of milk, yet make up that deficiency in the richness of its quality, are no more valuable than those which have nothing to recommend them, but the single property of being great milkers.

It has been remarked by the author of the "Treatise on Live Stock," in comparing the breeds of long and short-horned cattle, that the long-horns excel in the thickness and firmness of the hide, in the length and coarseness of the hair, in their flesh being finer grained and more mixed and marbled than that of the short-horns, in weighing more in proportion to their size, and in giving richer milk; but they are inferior to the short-horns in giving a large quantity of milk, in weighing less upon the whole, in affording less lassow, when killed, in being generally flower feeders, and in being coarser made and more leathery or bullish in the under side of the neck. In few words, says he, the long-horns excel in the hide, hair, and quality of the beef; the short-horns in the quantity of beef, tallow, and milk. Each breed has long had, and probably may have, their particular advantages in different situations. Why not, the thick, firm bones, and long loose-fet hair of the one kind, be a protection and security against those impetuous winds and heavy rains to which the west coast of this island is so subject; while the more regular feasons and mild climate upon the east coast are more favorable to the constitution of the short-horns?—When he says the long-horns exceed the short-horns in the quality of the beef, he means that preference is only due to the particular variety of long-horns, feeleated, improved, and recommended by that attentive breeder Mr. Bakewell: for, as to the long-horned breed, in common, he is inclined to think their beef rather in

"superior, to that of the generality of short-horns; and there is no doubt, he adds, but a breed of short-horned cattle might be selected equal, if not superior, to even that very kind of the best of Mr. Bakewell, provided the breeders, or herdsmen, would pay as much attention to the case as he and his neighbors have done to the long-horns. But it has been the misfortune of the short-horned breeders to pursue the largest and biggest boned ones for the beef, without considering that those and the belt that pay the most may not be for the same quantity of fat. However, the idea of our short-horned breeders being now more open to conviction, we may hope in a few years to see great improvements made in that breed of cattle. Such rapid improvement has indeed taken place in the breeding of short-horned cattle, that he has reason to think they must soon surpass their rivals the long-horns. But he adds that, notwithstanding these two breeds have hitherto been in possession of the best part of the island, he is inclined to think that the Galloway cattle, and even the Scotch or Kyloes, might be bred with advantage in many situations, so as to be more profitable than either the short-horns or the long-horns: he has a very high opinion of both these breeds of cattle, as true quick feeders, and being kindly-fed, or excellent eating beef, which character they have established in the first market in the island.

He is likewise of opinion that the Scotch or Kyloes are better adapted to cold, exposed, hilly, mountainous situations, than any other breed we have; and that particular breeds are probably best adapted to particular situations; on which grounds he recommends to breeders of cattle to find out which breed is the most profitable and best suited to their situations, and to endeavour to improve that breed to the utmost, rather than to try to unite the particular qualities of two or more distinct breeds by crossing, which is a precarious practice; for, says he, we generally find the produce inherit the coarseness of both breeds, and rarely attain the good properties which the pure distinct breeds individually possess.

It must be plain from what has been already advanced, that, in order to have good cattle of any breed, particular regard must be paid in selecting those that are the most complete and perfect in their form, shape, and other qualities, to breed from them. See Breeding, Bull, and Cow.

The author of the Rural Economy of Yorkshire has well remarked, that the horn is a good criterion for distinguishing the different species, if the term be applicable, of cattle. It is a permanent specific character. The colour, though not altogether accidental, is changeable; and neither the form nor the flesh is permanently characteristic of any particular species. Good form and good flesh may be found in every species; though they are by no means equally prevalent, nor equally excellent in all; but a horn six inches long was never yet produced by the Cawston long-horn breed; nor one a yard long by the Holburns' breed. And the middle-horned breed of Herefordshire, Suffolk, and other parts of the island, appears to be as distinct a species as either of the former. He is not, however, a bigot to horns of any shape or length; as he would as soon judge of a man's heart by the length of his fingers, as of the value of a bell-lock by the length of his horns. If his flesh be good, and well laid on, and his ossa be proportionably small; if he thrive well, fatten kindly at an early age, or work to a late one if required; he would much rather have him entirely without horns, than with any which enthusiasm can point out. But the horn, as a permanent specific character of cattle, may in some varieties,
varieties, have its use as a criterion. Thus, fays he, supposing a male and female of superior form and flesh, and with horns resembling each other as nearly as the horns of males and females of the same variety naturally do, no matter whether short or long, sharp or clubbed, rasing or falling; and supposing a variety to be cultivated from this parentage, it is highly probable that the horns of the parents would continue for a while to be characteristic of the true breed, and might by inferior judges be depended upon, in some degree, as a criterion. But full, fays he, it is indisputable that horns remain the same while the flesh and fattening quality change; but every man of superior judgment will depend more upon the form and handle of the carcass, than upon the length and turn of the horn. For it is a notorious fact, that the individuals of a given variety may have exactly the same horns, without having exactly either the same fashion or the same flesh. If, however, there be any criterion or point of a beat which may be universally depended upon as a guide to the grazer, it is, he thinks, the eye, not the horn. The eye is a mirror in which the health and habit of the animal, at least, may be seen with a degree of certainty.

In respect to the rearing of cattle, different methods are pursued in different districts; but it is obvious that the better they are fed, at an early period, the better flock they will, in general, make. The rearing of cattle is become, in the opinion of Mr. Marshall, as stated in the Rural Economy of Norfolk, a subject of the first importance to this country; as an universal and growing fearc of neat flock is experienced, more or less, throughout the kingdom. He has, therefore, paid more than common attention to the rearing of calves, (the first and most difficult part of the bullocks) in this district; not only as being a primary object in the Earl-Norfolk system, but because the practice there is, in many respects, peculiar to the country. The number, he fays, varies with the quantity of meadow or other natural grafsland belonging to a given farm; and sometimes, but not always, with the time at which the cows happen to come in. Some farmers “bring up” all the year round; rearing every calf they have drop. Others rear in winter, only fattening their summer calves for the ped-markets; or, at a distance from them, for the butcher. Norfolk farmers, in general, begin early in winter to rear their calves; some fo early as Michaelmas; in general, if their cows come in before Christmas; not only as being fully aware of the advantage of rearing early, but in order that they may rear as many of their own calves as possible; drove calves being always hazardous and sometimes scarce. No distinction is made as to sex: males and females are equally objects of rearing, and are both, occasionally, subjected to califation; it being a prevailing custom to fpare all heifers intended to be tattened at three years old; but such as are intended to be finit in at two years old, are he and let, greatly generally let “open,” as are, of course, such as are intended for the dairy. There are two reasons, he obferves, for this practice: they are prevented from taking the bull too early, and thereby frustrating the main intention; and by this precaution they lie more quietly; and are kept from roving at the time of fattening. This may be one reason why fpared heifers are thought to fat more kindly at three years old, and to be better felled than open heifers. The method of treatment depends, in some measure, on the time of rearing. The rearing of the young animals in winter requires more milk than the later ones.

The particular practices that are followed in different places, in respect to the treatment of calves in rearing them, have been defcribed more fully under the head to which they belong. See Calves, Rearing of.

In the management of young cattle, it is remarked by Mr. Donaldson, that the method of managing them during the first winter is pretty generally the same in every part of the kingdom. They are almost always housed; sometimes housed up to the falling of the leaf; but more frequently allowed to remain at freedom. The way of feeding them in England is chiefly with hay, or hay and straw mixed; and in Scotland, sometimes hay, but more frequently draw and turnips. They are mostly turned out on some of the inferior pastures on the farm the following summer, and maintained the second winter on straw in the straw-yard, or in houses or fields erected for the purpose. Some farmers in the more northern parts of the kingdom, from being situated at a distance from any market at which they can dispose of falf-fed beef, very frequently give a considerable part of their turn-up-crop to their young cattle. This is, he thinks, an excellent practice; and one that ought to be followed even by those who, from being better situated in regard to markets, can adopt other methods of using turnips to advantage. The benefit of green winter food for live flock is so great, that there is, probably, he fays, no way in which turnips can be used, by which the farm or the farmer would reap greater benefit, than by giving the young cattle a daily allowance during the first two or three winters. There is but very little variation in the management of young cattle from this during the time they remain in the breeders’ possession, which must be longer or shorter, according to the peculiar circumstances of the cafe and the nature of the farm. In some districts, he further observes, it is the usual practice to allow the young heifers to take the bull at two years old; in which cafe, tho’, which are not necessary for keeping up the flock are disposed of the following spring, before they drop their calves. And where the practice of ploughing with oxen is continued, or has been a second time introduced, young oxen are broken into work in the course of the second summer; this, however, is by no means common, as, he fays, probably nine-tenths of the cattle reared in Great Britain remain in the breeder’s possession till the spring of the third year. The young cows are then disposed of to the dairy-farmers, who often do not breed a sufficient number to supply themselves; or to the cottagers, who have the mean of keeping a cow in summer, but not in winter. And the young oxen are sold, either for the purpose of supplying the ox teams, where they are full kept; or to the graziers, who sometimes fatten them for the butcher in the course of the grails-season, but more frequently content themselves with only putting them in condition to be falf-fed during the following winter. The premature age at which such cattle as are not employed in the operations of husbandry are now fattened, is, he thinks, a positive evidence of the fecrity of that species of live flock. Exclufive of the cattle fed in the plough or the cart, which are permitted to live a year or two longer, the oxen in this country are, in general, killed before they are four years old;—an age at which, it is well known, an ox does not fatten to the greatest advantage. And Mr. Marshall fays, that in Norfolk, when the lettertnheld and fhubbies are finitd, the yearlings, provincially “huds;” are put to turnips; either as followers to the bullocks, or have some fedd turnips thrown to them; in either cafe, they fleep in the par-yard, and generally have a separate par of fattened them; though sometimes they are paired with the two-year-olds. In the yard, the bot of the “rovst” is allowed them, and, perhaps, a little ordmary hay; it being a maxim,
a maxim, pretty generally adopted among good farmers, to keep their young flock as well as they can the first winter. In spring and summer they follow the bullocks, and run in the meadows; or, if these be wanting, are sometimes sent out to summer pastures in the fields, or grazing-grounds. The two-year-olds run in the fubblebers, and broken pastures till Michaelmas, or until turnips can be laped them when they generally follow the bullocks. In winter they are always “parred” at night; sometimes with the the cows; sometimes with the bullocks; sometimes alone. Good farmers generally keep them separate: if parred with the bullocks, they rob them; if with the cows, they are liable to be “horned,” and are never at rest; except while the cows are eating up the bell of the fodder. Some farmers, when turnips run short, “put out” their two-year-olds in winter; and others, when they are plentiful, “graze,” that is, fat their two-year-olds. In general, however, they are “kept over years,” on meadows or fays, or are sent to the meadows or grazing-grounds, as situations and circumstances point out; and, at Michaelmas, are put to traps as fattening cattle. The argument price for two-year-olds, from May-day to Michaelmas, varies with the keep.

On the management of young flock it is also observed, in the Rural Economy of Yorkshire, that they are invariably housed the first winter; generally loose, and moly indulged with the bell hay the farm will afford. Their fummer pasture is such as convenience will allow them; frequently of a secondary nature. In the open-field state, the common was generally their fummer pasture. The second winter oat-straw is the common fodder of young cattle; generally tied by the neck in hovels, or under fides. Their fummer pasture, common, woolly catte, rough grounds, or whatever fect suits their owner’s convenience. At two years old the fleers, provincially “lots,” are generally broke-in to the yoke; but are not, by good husbandmen, worked much at that age. At two years also the heifers, provincially “whis,” are generally put to the bull. This, however, is not an inviable practice. In the state of commonage they were frequently kept from the bull until they were three years old: now, in the state of inclosure and improvement, and at the present high rents, they are frequently suffered to take the bull when yearlings, bringing calves at two years old. This, says he, is an interceting subject in the management of cattle. Farmers in every distirct differ in their opinions respecting it. The arguments for bringing heifers in at two years old are, that they come sooner to profit; and that farmers cannot afford, at the present rate of rent, to let them run, unprofitably, until they be three years old. On the other hand, the argument in favour of keeping them in at three years old is, that, not being flintered in their growth, they make larger, finer cows than those which are suffered to bear calves at a more early age. But we have not yet met with any man who even attempts to prove which of the two is, upon the whole, the more profitable practice. The gardener, he remarks, seems to be well aware that, suffering a tree to bear fruit too early, checks its growth; and there may be some analogy, in this respect, between vegetables and animals. But even admitting this, if the cow receive no injury, as to thriving, calving, milking, nor any other that of being checked, in point of size, the objection appears to fail. If, however, early production check not only the cow but her progeny likewise, an objection, no doubt, will lie against it. He has long been of opinion that it is, in general, the farmer’s interest to let his heifers take the bull whenever nature prompts them. There is, undoubtedly, some present profit arising from their coming in at an early age; and whether a middle-sized cow may not afterwards afford as much neat profit as one of larger frame, is certainly an undetermined point. Much, however, depends upon keep. A traveling heifer will not take the bull at a year old. Nor ought any yearling heifer, which has taken the bull, ever afterwards to be flintered in keep. If she be ill kept, while with calf, there will be danger at, or after the time of her calving. If afterwards panicked, there will be danger of her not taking the bulb next year. Hence, he thinks, we may infer, with a degree of safety, that the propriety or impropriety of bringing heifers into milk at two years old depends principally upon soil and situation. On a good soil, and in a general climate, in which heifers do not experience a check from the time they are dropt, they ought, be it clearly of opinion, to be permitted to take the bull whenever nature prompts them. But in less genial situations, where I-an ill-heraged lands are to be pastured with young cattle, it appears to him equally evident, that heifers ought not, in strictness of management, to be suffered to come into milk before they be three years old.

Next cattle are capable of living a confiderable length of time, as fifteen or twenty years; but they are unfit for many purposes of the farmer after they become aged, and especially that of being employed as grazing flock; hence they are usually disposed of before they have attained their ninth year. For the purpose of breeding, they may, however, be kept much longer. With respect to the males, or bulls, where the chief object of the farmer is having good cattle flock, great attention should be paid to them, both in the rearing and their management afterwards, as well as to the form and kind. They should likewise be kept separate in a paddock inclosed for the purpose, and be constantly fed in the bull manner, and not be employed till they are three years old, when the cows should be separately admitted to them. Some farmers are, however, of opinion, that a little work does not in the least injure them, while it has the tendency of rendering them more tame and gentle.

But in other cases, as merely for the purpose of the dairy, where rearing the produce is not practiced, less attention is necessary with regard to these animals, it being of little consequence to the farmer, provided the cows be duly served. In these cases the bulls are, for the most part kept along with the cows, in sufficient proportion to the number of cows that may be kept. Under these circumstances they are seldom kept in any better manner than the cows; but it is probable that much loss may often be experienced by the dairy-farmer on this account, as it would seem proper that they should constantly be much better fed. In these circumstances they are often employed while very young, being frequently castrated, or what is termed jagged, in the third year of their age. The use of such young bulls is not, however, in general to be recommended. See Bull.

In respect to the management of the cows, it must of course vary in some measure according to circumstances, and the particular objects of the farmer. Such as are in calf should constantly have a sufficient supply of good food both during the summer and winter seasons, and in the latter should be well protected from the severity of the weather by proper houses, sheds, or fold-yards. With straw some other sorts of food should be combined, such as hay, turnips, cabbages, &c. as the milk is insufficient for keeping them in proper condition, and they will repay the increased expense of such keep, by their superior appearance, by the greater quantity and better quality of the milk, and by the better size and form of the young flock. Under the contr-
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In the same way they readily dwindle and become less valuable.

With regard to the feeding of putting cows to the bull, it is different, according to the views of the farmer; where his principal object is the milk, it is a matter of little consequence at what time they take the bull; but where the calves are to be reared, it is a point of material importance to have them dropped when the fawn begins to be warm, and there is a spring of young grass, as at that season they can be reared with the least trouble and expense, and in the most perfect manner. In the winter time this fort of buffaloes is attended with great expense, and the animals are often injured by the severity of the weather.

There is another point that ought likewise to be regarded in this fort of flocks, which is, that the cows should not be too greatly exhausted by milking them too long, or too near the period of their calving; but when they have good rich keep, they may be milked to a much later period without injury, than under the contrary circumstances. It is usual to let them become dry six weeks or two months before the period of their calving; but, with good keep, a month may be sufficient.

It is a bad practice to have bullocks in the same place with cows, as much injury may be done both to themselves and the cows, by their riding upon them. Some farmers think it a point of importance to preface cows to the bull with full udders.

It is of great utility in the management of cow flocks, that exact accounts be kept of the periods at which they receive the males, as well as of the times at which the young are brought forth. In large concerns, a fort of flocks should be kept for the purpose of entering various memoranda of this nature, as by such means accidents and uncertainty may be in a great measure prevented. As the time of calving approaches, more strict attention should be bestowed upon the cows, in order that, at the period of it, every necessary allowance may be afforded, and the welfare of the animals insured. It, however, rarely happens that any extraordinary aid is required where they are left wholly to themselves.

It is the practice of some farmers to lessen the quantity of food for a little while before the cows calve, from the idea that they do not succeed so well when they are in too high condition; but this is most probably a supposition which is not by any means well founded, as cows that are kept in good order are, in general, the least liable to accidents in these cases. It is of much consequence that, at these times, the cows be provided with due shelter, especially during the inclement parts of the year; as much injury is frequently done by letting them calve in exposed situations without any protection from the inclemency of the weather. See Cow.

Such young cattle flock as is intended for labour, should be gradually accustomed to be handled from infancy, and by that means be rendered perfectly tame and gentle, which will be of vast advantage afterwards when they are brought into labour. See Oxen and Team.

With regard to the management of cattle, there cannot be any doubt but that a large flock in feeding demands considerable and constant attendance, and that of steady and capable hands; as, unless a proper regard be paid to these respects, much confusion will occur, especially when fed in the fold-yard. Next to proper food, says the author of "Fourfeer's Cattle," the two great points in feeding animals to proof are, regularity, and a particular care of the weaker individuals. On this last account there ought ever to be plenty of troughs or rack-room, that too many may not feed together, in which very common cases the weaker are not only trampled down by the stronger, but they are worried, and become cowed and spiritless, than which there cannot be a more unfavourable state for thrif_these, there are ever compelled to shift with the worst part of the meat. This domineering spirit is so remarkably prevalent amongst horned cattle, that he has a hundred times observed the matter bulls running from crib to crib, and absolutely neglecting their own provender for the sake of driving the inferior ones from theirs. This is much oftener than suspected, the chief reason of that dilference to visible in a lot of beasts, after a winter's keep. It is like wise, he says, a very common and very shameful sight in a dairy of cows, to see several of them gored and wounded in a dozen places, merely from the attention of the owner, and the neglect of tipping the horns of those that butt. The weaker animals should be drawn and fed apart; and in crib-feeding in the yard it is a good method to tie up the matter-bulls at their meals. Where a sufficient number of cattle are not bred upon the farm, they are generally bought in at the neighbouring fairs to fat at spring, and about Michaelmas. Those bought in at spring will be fat in July, August, or September, according as they are forward, and there is keeping for them; and those which are bought in at Augulf, September, or October, must be either for sale in winter or in spring, and must be forward in flesh to be improved the beginning of winter, and kept up in flesh during the winter with burnet, hay, turnips, carrots, or other kinds of food, to be fit for a good market whenever it offers; or they must be young lean cattle, that may, by their growth, pay for their wintering, and be fit to fat the next summer. Some, upon ordinary land, buy in young Welsh heifers, which, if they prove with calf, they fall in spring, with a calf by their side for the dairy: and those that are not with calf they fatten; all which ways frequently turn to good account; but so well common all meet, either at Christmas, or in the spring, is one third part dearer than in summer; as all have not the convenience either of hay, turnips, &c. to fatten cattle with in winter; it is best to have them ready for the markets about these times.

The farmer who intends to graze cattle to the most advantage, should be particularly attentive to these three things: first, to raise a good quantity of artificial grases for hay and aftermaths. Secondly, to turn a good quantity of ground into rich pature, by feeding it, dunging it, and laying on it other manure, to make it fit for raising the bullock or heifer in the spring, when they come full from hay to grases, and to receive them with a vigorous aftermath, when other grases, as clover and other grases aftermath, go off. Thirdly, to have hedges or other buildings inclosed with close walls, to shelter the cattle in the winter from winds and rain. By adopting these methods in fattening cattle, the grazer, from having plenty of hay, will be enabled to purchase barren beals before the spring grases comes, when it is most likely they will be cheap, and may be bought to the best advantage, allowing for the value of the hay they may eat in conjunction with the purchase: and if, by winter-haying some meadow-ground after it has been kept high in heart by feeding, &c. he can, early in the spring, by April, or sooner, have a bite to take off such grazing-beals from hay to grases, it will be very advantageous before clovers can be ready, which, in many places, are seldom so till a week or a fortnight in May; and, by keeping such meadows for an aftermath, which, towards the end of summer, are in very good heart, he may support his bullocks, and carry them on when the strength of other grases fails. All fattening cattle, whether barren cows or oxen, require a proportional progression from coarser to better food, as they grow more and more into good flesh; otherwise, when half
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half fat, they will frequently go back, and the grazier will not, without great difficulty, be able to raise them again; which must be a great loss. See Grazing.

In regard to the feed: pursued with oxen, they are in milk places, where they are worked, turned off to fattening at two feasons of the year, which, in several respects, are very convenient. The first is about May-day, when the labour is pretty well over for the spring season; the spring corn being then generally all down. The second is the beginning of winter, as from the first of October to the middle of November, when the wheat and winter vetches are mostly put into the ground.

In regard to the various kinds of food with which cattle are generally fattened, it may be reduced under the following heads; grafs, turnips, grans, water from the distilleries, oil-cakes, corn, cut chaff, and a few other kinds.

The fattening cattle, according to Mr. Donaldson, are usually put to grafs in May or June, according to the season and situation in regard to climate. The period necessary for fattening an ox for the butcher depends on several circumstances; as the condition he was in when put to grafs, the nature of the pature, and many others; but in ordinary cases, an ox will be completely fattened in three months.

There is, he says, one method of fattening, connected with the grazing system, that the farmers in England are enabled, from the superior excellence of the climate, to adopt with success, which can never, he thinks, be attempted with propriety in Scotland. It is very common, at the close of the grafs season, when the fattening flock happens not to be fully in condition for the butchers, to render them so, by giving them hay two or three times a day in the field, or in hovels erected for the purpose, in which they have access at pleasure.

When turnips are employed for the purpose of fattening this sort of flock, especially if they are put up to the fulls in proper condition, which, considering the season of the year (November), must, with ordinary attention, always be the case, from 1 to 1½ weeks is fully sufficient to render them fit for market.

It is observed, that the fattening of cattle with grains may, in some respects, be considered as a branch of the distillery business; but yet there are some misbalances wherein those who cultivate farms practice it with a double view of obtaining a profit on the sale of the cattle, and the acquisition of a valuable treasure of useful manure. Mr. Adam, the renter of the farm of mount Not, near Streatham, in the county of Surry, has erected a very complete building, for the purpose chiefly of fattening cattle on grains. In this building, he, may sometimes be seen several hundred head of cattle.

And the method of fattening cattle with oil-cake, corn, cut chaff, &c. is practised in many of the English counties, with a degree of success sufficient to warrant farmers in other parts of the island to follow the same practice. The cattle are commonly put up to fatten at the end of the grafs season. The usual allowance of oil-cake, after it is broken in a large mortar, or, in the fruit districts, in a cider-mill, is about half a peck per day, which is given, one-half in the morning, and the other in the evening; to which is added hay, and in some cases ground corn, that is, oats and barley of inferior quality, and cut straw, provisionally "chaff." As bullocks fattened in this manner, get regularly five, sometimes six, meals a-day, it is sufficiently evident that, although it may be upon the whole an expensive mode of fattening, yet it must be both expeditious and effectual. But the subject of fattening cattle in the stall will be fully considered in another place. See Stall Feeding.

Mr. Marshall, in speaking of a Cottswold grazier, observes, that his fattening cattle are all tied up, some in single, some in double fulls. His reason for this practice is not altogether that of saving room; he is clearly of opinion that they do better, fatter faster, than bullocks which are kept in loose fulls. His reasoning is, he thinks, fair. Besides the indisputable advantage of their not being liable, in this case, to foul their meat and water; he holds out another which is not so obvious, but may nevertheless, perhaps, be equally true: cattle, which are tied up, are more calm (tamer, less wild) than those which are kept in loose fulls. A loose bullock (some loose bullocks at keat), when a stranger enters, has not the power of flight which a stall bullock commands. In the yards, look bullocks are equally liable to disturbance, and quietness is no doubt essential to quick fattening. Each bullock has two troughs, a small one for corn, a large one for hay, with a water trough, which runs the whole length of the shed, and is covered by a board; each bullock has a hole (large enough to admit the hoof) to drink at. The water trough (a hollow tree) forms, as it were, a top rail to the partition wall of the gangway. The others are beneath it, nearly level with the bed of the stall. The corn is ground, and given to them, mixed among cut hay, two or three times a day, beginning with half a peck, and increasing to about a peck a-day. The method of feeding with hay, which, in this instance, is practised, does, he says, the practizer infinite credit. He feeds his bullocks with hay as cart-horses are usually fed with corn; giving it to them by handfuls at once; never more than a time or the hands can grasp; continuing to feed them in this manner until they lie down, or till they refuse to eat. Thus they never have any hay to blow upon (the great objection against tying up bullocks); even at night, they have not a mouthful left before them. The leading principle of this practice is, that fattening cattle should never be cloyed with food; but should always eat with an appetite. In the morning they are fed with the word of hay (if any difference); for, being then hungry, they eat it with an appetite. Thus the hay is eaten up clean, and the bullocks are preferred in a thriving habit, while the extraordinary expense, where a number of cattle are fattened at once, is unconsiderable. In this case it is proper to appropriate a man's time to their attendance; and he might as well be employed in feeding them by handfuls, he thinks, until they lie down, as in cloying them with armfuls, and idling the rest of his time away.

According to the author of the Agricultural Report of Lincolnshire, about Haukthorn the larger farmers buy in beaifs in autumn; put them to coddil, and then feed with cake; and fell from Christmas to May-day; this is done for the sake of the dung, and it is thought if that is cleared that it answers well. Mr. Thorpe at Ketton, he says, fattens many beaifs every winter on cake; his landlord, Mr. Harrison, having built him for that purpose very convenient stalls, in a double range, with a gangway between their heads. They are in the Hereford style; the beaifs may be lofe or tied; a pump supplies water by troughs to colorls; the whole well executed. He has laid beaifs from three to 3½ a head, and 4½ in a beaif. The farm farmer has, on his farm at Overby, another bullock-house, in the same form nearly; here he fatts also on oil-cake; but the climax of it induced him to substitute luf-feed, built and mixed with barley meal; two quarts of barley, four hulds of luf-feed; and mixed, to give cold, in the form of a rich jelly; this quantity will go as far as half ton of cakes, colting lefs; when barley is not extravagantly high, that is, 24s. a quarter:— half
half a peck of linseed is boiled in four gallons of water. He inquired of Mr. Thorpe particularly if he had reason to expect for not lying beasts in their stalls, instead of giving them so much room separately; and he is clear they fatten much better: this necessity, however, he says, is not ascertained; for the question can hardly be considered as answered in any case where a farmer builds and a landlord pays. Mr. Thorpe buys his beasts at Lincoln; he thinks the Holderness too big for his purpose; but there is a very good crop of long and short-horns about Spilsby, which fatten kindly, and which he likes to buy. He is of opinion, from very considerable experience, and speaking of grazing in general, both summer and winter, that middling fixed beasts will pay better than large ones, for instance two of 50 stone will answer better than one of 100; they do not take so much food to bring them to their weight; and will do on worse pasture.

It is added, that at Knaith, in the same county, where the pasture is not of the finest quality, Mr. Dalton has fattened Teeswater beasts to 130 stone, at seven years old, and gave only half a ton of cake to each. He prefers this breed to any other he has tried. His beasts of 85 stone will be fat at five years from grafts, without any cake; and his regular return is seven a year, at four years old. The cows are good milkers in their own country, but here are not equal to Lincoln's. He is of opinion, in relation to the size of fattening animals, that an ox of 83 or 85 stone will not eat more than one of 50, and his bulshiff thinks he will not eat so much. At Bankside, Mr. Webster feeds his cows, and his team horses, with swelled turnips and cut chaff, with great success. Mr. Eliffeon, at Sudbrook, buys in about 30 bullocks annually; from April to Midsummer; which are put to grafts till a fortnight after Old Michaelmas; then he places them part in stalls, and part remains in grafts till near Christmas.—In the stalls, he feeds with cake and hay; they eat about 11/2 5 days a day, at 7 lb. each, and about half a ton of hay each beast; and are up about 10 weeks, some 12. They were bought in at 113 6 each (1788); and sold at about 200. In general, he reckons them to pay 100 6 each, which answers well. He prefers the short-horned breed, and has tried long-horned Clevans, but they did not answer at all. His bulshiff choises the finest boned ones he can get, clean heads and muzzles, wide in the hips, out in the ribs, and deep in the fore quarter. The greatest fault in the Lincoln short-horns is, he thinks, being thin in the backs and chine; it is not universal, but very common; but upon the whole they fatten kindly. He observes, that the oil-cake dung is uncommonly rich, so as by mixing to make the straw dange excellent. Mr. Moly, of Kitchel, fattens many beasts upon oil cake, even as far as buying 100 tons of cake in a year. He keeps them loose in a straw yard, and finds them do well without any hay, giving straw only in addition; and has fed beasts this fed at 40 guineas. The duke of Ancaster fattens many beasts; he buys in from Candlemas to Midsummer generally Scotch and Welsh bullocks of from 35 to 50 stone, sometimes larger; sells fat from Midsummer to December. He gives on an average, for the two last years, 81. 8s. or 81. each, and sells at 131. to 171. They are kept through the winter in the park, and go off at Midsummer, twelve months after. They have no fodder, except in a belt. North Wales, Pembroke, and Highland Scots, are found very little different in advantage; the Welsh grow rather more, and come to greater weight. The Ficks grow more than any, when they happen to be bought, but they require fodder, ring.

It is observed by the author of the Rural Economy of Norfolk, that the practice of fattening bullocks on turnips is now beginning to obtain in every part of the kingdom; but it may be said to be still in a state of infancy everywhere where except in Norfolk; therefore an accurate account of the practice of this parent country cannot fail of being useful to every other turnip-bred district. Impressed with this idea, he spared no pains, nor let slip any opportunity of making himself acquainted with the subject. The only species of cattle fattened in East Norfolk, he says, may be said to be the home-breds and Scots. Some Irish bulls have at different times, but not regularly, been brought into the country, and have generally done very well. In West Norfolk, great numbers of Lincolnshire and Yorkshire oxen were formerly, and some few, he believes, are now fattened; but in this district they have always been considered as much inferior to the Scotch and home-bred flock. Home-breds consist of fitters, spayed heifers, open heifers, barren cows, and running calves. The bull is a species of fattening cattle peculiar, perhaps, to this country. They are calves which are suffered to run with their dams until they be a twelvemonth or more old; the cow being all the while at head-keep, of which the calf partakes, as well as of the milk of its dam; while herself, in the mean time, generally gets fat enough to be sent to Smithfield with her calf (perhaps as heavy as herself) by her side. The Scotch cattle fattened in Norfolk consist of Galloway Scots, other Lowland Scots, Highlanders, and those of the Isle of Skye. The Galloway Scot is large, thick, short-legged, molly horns, and of a black or brindled colour; the flesh well grained, and the form altogether beautiful, chine full, back broad and level, quarter long and full at the nache, round barrel, deep girt, and the bone, head, and chimp, in general, fine. This he apprehends, is the genuine original Galloway Scot, and a principal part of the bullocks brought into Norfolk under that name is of this description; but the droves are generally adulterated with a mongrel foot, the produce of a cross with the long-horned breed. This species of adultery, he remarks, is said to be committed and encouraged by the nobility and landed gentlemen of the counties they are bred in; but the fact appears to be, that they have already one of the finest breeds of cattle in the world upon their estates; and it behoves them to hand it down to posterity as pure as they received it. In this age of improvement it might be laudable, he says, to endeavour to improve it to the utmost; not, however, by foreign admixtures, but by giving the most beautiful females to the most beautiful males of their own breed. They appear to him to have much to lose, but nothing to gain, from crossed, not even with the present long-horned breed of the Lowland counties. This species of Scotch cattle appears, he says, to be originally of the county of Galloway, which forms the southern extremity of Scotland; but they are now, it is said, propagated in other parts of the Lowlands, especially in the rich land counties of Lothian, in the neighbourhood of Edinburgh. He has known them fattened to 83 stone, and has been informed, from authority which he has no reason to doubt, that they have even reached near 100 stone, of 14 pounds each.

Lowland Scots are the ordinary breed of black cattle in the Lowland counties, size below the Galloways, and appear to be a mixture between these and the Highland Scots. Sixty stone is a good weight for a Lowland Scot. In form and inclination to fat they partake of the Galloway breed; the former, however, is seldom to near perfection as that of the true Galloway Scot. Lowland Scots are some of them horned, some of them polled; their colour black, or brindled, or can.

The Highland Scots seem to be a definite breed. The size is breadth that of the Lowland Scots; 42 to 52 stone is the ordinary weight of a Highland Scot. In form, flesh, and fattening quality the Highlanders resemble more the Galloway Scots, except that their backs in general are rounder,
CATTLE.

coarser, their bone proportionally larger, and in that they have in general, but not always, horns of the middle size, and mostly bent upward, like those of the Welsh cattle, but finer. In general appearance there is a strong resemblance (their horns apart) between the Highland Scotch and the black cattle of North Wales; but with respect to flesh and fattening quality, the main object, the comparison is greatly in favor of the Scotch breed, which the gentlemen of North Wales are said to fatten annually out of Scotland, or to buy them up at the English fairs to be fattened for their own tables.

Thole of the Isle of Skye appear to be only a variety of the Highland breed, contracted by full or climature, or both. They are, in point of size, the lowest in the gradation; but with regard to flesh and fattening, and growth while fattening, they may be said to stand foremost. He has known an Isle of Skye Scotch bought at 25 years old, for less than 40s., reach, in about 20 months, to 45 stone. At that age, says he, their growth in England is astonishing; owing, perhaps, not to more of their nature than to a change of climate and a change of food. Much, however, depends upon their age. If they be intended for immediate fattening, the age of four years is the most proper. An Isle of Skye or Highland Scotch at two or three years will grow, but he will not fatten; a five or six he will fatten, but he will not grow, while fattening, equal to a four-year-old bullock. At this age the weight of Isle of Skye Scotch, when fat, varies from 25 to 30 stone.

There are the four species or varieties of cattle which are brought by the Scotch drovers to the Norfolk fairs and which are bought up and fattened by the Norfolk farmers under the foregoing names. A comparative statement of the proceeds, expense, and profit attending the raising of three different kinds of Scotch cattle grazed in Norfolk, as given by Mr. Burton in the Appendix to the Agricultural Report of that county. The first is a bullock bought at St. Faith's for about 5s. turned of four years old, in such condition as is fit to be put immediately to turnips. This bullock is supposed to be brought to from 57 to 58 stone. He is put to turnips for about 24 weeks, the average expense of which, including turnips, carriage, and attendance, and in case of bad weather, when a little hay is unusually given, beside the turnips, cannot be reckoned less than 4s. per week; this brings him to 1s. 10s. and such a bullock generally will fetch about 4s. 7d. per stone of 12lb., which amounts to 14s. 10s. The second bullock is bought quite bare, about the same time as the former, for about 46s. and such a bullock generally will fetch about 5s. 7d. per stone of 12lb., which amounts to 15s. 7s. 6d. The third bullock is bought quite bare, about the same time as the former, for about 61s. and is a year younger than the former. He is first put into fiibles or ordinary grazes till the straw-yard is open, and then he is put to draw at night, and eat the offal turnips after the better beests in the day-time; his keep in this way 24 weeks, till May-day, may be at 1s. 6d. per week; he should then be put to marhor, or into good paturage, till a fettling after Michaelmas, which, say 28 weeks, at 2s. 3d. per week, is 31s. 3s.; he then goes to turnips, like the former bullocks, for 8 weeks at 3s. 11d., his aggregate charge is then 121 3s. His weight may be expected to be 44 stone, and value 31s. 10s. 6d.

The third is supposed to be purchased at Harlestone, in D.ember, a fine beast of the same age as the first, 31s. which goes immediately to straw and offal-turnips for about 8 weeks, at 1s. 6d. which is 12s. 3d.; then goes to full keeping, at turnips by day, and lies in the straw-yard at night, for about 10 weeks, at 2s. 6d., which is 12s. It is then put into the second year's hay, or good paturage, till harved, for about 20 weeks, at 3s. 6d. per week, which brings it to 11l. 11s. 9d. it will then have attained in general about 46 stone, at 2s. 7d. which will amount to 12l. 13s.

On this it is remarked, that the line deduction to be drawn is that the full pays 10 per cent. interest upon the capital laid out, as well as a fair price for every thing that it contains. That the second returns no interest for the original cost, but pays a fair price for what it consumes. That the third pays 15 per cent. for the original sum laid out, besides paying as the others for what is consumed. It is obvious that in this form the principal advantage is in the large supply of dung that is raised.

The author of Modern Agriculture has well observed, that, considering the early period at which the cattle of this country are generally slaughtered, it is not now of so much importance to lay down rules when to ascertain their age with precision, yet in many cases it must prove useful. The age of cattle, like that of horses, is discernible by their teeth. They lose the first fore-teeth at the age of 10 or 11 months; these are replaced by others of a larger size, and when about a year and a half old, the teeth next to those in the middle drop out. These are also replaced by others; and at the age of three years the others are renewed in like manner. They then appear white, even, and regular, and pretty long, becoming gradually black, unequal, and short, as the animal advances in age. Another mark by which to determine the age of cattle, is the appearance of the horn. Cattle shed their horns at the end of three years; and towards the root of the second set or horns there is a kind of ring or joint, formed every year that the animal lives afterwards; so that, reckoning three years for the top or plain part of the horn, and one for every interval between the rings or joints, the most ignorant person may, with considerable certainty, ascertain the age of any calf or cow that has horns.

The diseases of cattle make the subject of that art, called by the ancients aetia medii, and veterinaria, and by us farming.

The ancient riches consisted wholly in the number of cattle; whence it is supposed to be, that the Romans called money by a name formed from that of cattle: pecunia from pecus.

By the 6th article of the Union, no Scotch cattle brought into England shall be liable to any other duties but those to which cattle of England are liable. 7 Ann. c. 5. By 5 Geo. III. c. 13. made perpetual by 17 Geo. III. c. 8. all furs of cattle may be imported from Ireland duty free. By 5 Geo. III. c. 43. Lathis may be freely imported from the Island of Mann.

Factors, and those who sell cattle for others, are prohibited to buy any ox, steer, runt, cow, heifer, or calf, and to sell the same again alive in the same market or fair; or on pain of forfeiting double value, half to the king, and half to him who shall have them. 5 Geo. III. c. 4 3. Edw. VI. c. 19. 5 Ch. I. c. 4. See drovers.

Stealing of cattle, or killing them with an intent to steal any part of the carcasses, or afflicting in such offenses, are now made felony without benefit of clergy. See 14 Geo. III. c. 6. and 15 Geo. II. c. 34.

By cattle, in this act is to be understood any bull, cow, ox, steer, bullock, heifer, calf, sheep, and lamb, and no other cattle whatever. Stat. 13 and 16 Geo. II. c. 4. And every person who shall apprehend and procure to conviction any offender, shall have 10s. reward. See also black Act.

Cattle Farm, in Agriculture, is that sort of farm in which the principal object of the occupier is the profit of live stock in some way or other. And from the different modes in which advantage is derived from this kind of stock, it is obvious that they must be of several different kinds, as breeding farms, where the chief object is that of raising young animals of the several kinds for the purpose of sale; dairy farms, in which the main object is that of either milk, butter, or cheese, or the latter; the first being sometimes called cow-farms; grazing farms, when the chief point
CATTLE-SHED.

point is the fattening of different sorts of animals for the butcher; and suckling farms, as where the principal point of attention is the fattening of calves for the market. See Farm.

Cattle-Shed, in Rural Economy, is that sort of erection which is made use of for the purpose of containing cattle while feeding or otherwise. Houses of this kind are most readily and cheaply constructed when placed against other buildings or offices, and are of very different forms according to circumstances and situations. This sort of buildings may be used as cow-houses or feeding-houses, being built to answer either one purpose or the other, and they are either single or double: in the latter way a great many cattle may be accommodated at a very small expense.

The principal requisites in these buildings are, according to Mr. Beeton, the following: "4. That they be capable of being well aired. 3. That they be so constructed as to require the least possible labour in feeding the cattle and clearing away the dung. 3. That the stalls be formed as to keep the cattle as dry and clean as possible, with sufficient drains to carry away, and reservoirs to collect the urine and dung. He observes, with regard to the last requisite, that a free ventilation is as necessary in these buildings as in stables. How often do we see, he says, on entering a house where there are a good many cattle or cows, most of them, perhaps, in the highest state of perpiration, and smoking as if they had been at the hardiest labour? at the same time the whole timbers of the roof are completely wet by the condensed fumes arising from the heat and breath of the cattle. This can only happen in close buildings, which must undoubtedly be extremely unwholesome; and, he supposes, must prevent the cattle thriving so well as they might otherwise do. To a feeder of cattle, he says, he, who looks eagerly forward to the profits he is to reap, and who estimates every additional pound of weight that a bullough ought to take on each day, it would be well worth his attention to consider, whether any bullough, in a perpinating state, can fatten so well as when kept in a proper degree of temperature. He thinks it hard to reason he cannot. When such buildings are in the form of sheds, they are not so liable to this want of ventilation; but wherever the timbers above appear wet by the heat and perpiration of the cattle, it is an evident proof there should be some additional air-holes, which, in his humble opinion, ought principally to be in the roof, as recommended for stables. If there are gable ends, they should, he thinks, have a window in each, as high up as possible, with movable boards, as in granary windows, which may, by means of a cord or small rod, be easily opened or shut at pleasure. The advantages of this free and wholesome ventilation to the cattle must be very evident, and also to the preservation of the timbers of the building; for where the timbers are often wet in this manner, they cannot be of long duration, consequently the expense of repairing or renewing them would be greatly increased.

With respect to the second qualification, there are many different constructions of these buildings, but chiefly in the interior parts. "In many (he observes) the cattle are confined to sheds ranged along the wall at the distance of about three feet from each other, with a space of 18 or 20 inches between the wall and the sheds to lay their food in. This is a very general construction in many parts of the country; but it is somewhat remarkable (he says) in this as well as in many other things, that the plan most generally followed is the very worst that could have been thought of: according to this construction, except sometimes, when the cattle are fed from without, the feeder is obliged to go in among them to give them their food, which occasions a great waste of time as well as being attended with many other inconveniences. No construction can, he supposes, be more monstrous than when a sufficient space is left before the cattle, for the feeder to go with a large wheelerbrow to distribute their food. This may (he thinks) be obtained, either in single sheds, or in double ones, by making the cattle face each other, and leaving a free space of about four feet to admit a wheel-barrow," in the foddering of them.

He adds that the single ones may be formed as in Plate IV. fig. 3. Agriculture, in which A is the passage before the cattle, B the rack for their hay or straw. C a place for laying fodder or litter in occasionally. Or it may be constructed as in fig. 4. D the passage, E a perpendicular rack behind which are thin deals all along in the position F, for laying the hay upon; and under G is a square hole, opposite each flall, through which the cattle are fed from the passage D. This is a very good construction for this sort of shed, and is taken from the new offices of Mr. Bilton's, of Kilflaf in Shropshire, where economy in labour and convenience have been much attended to.

Double sheds may be constructed as in fig. 5, in which A is the passage; B, B are the flack to which the cattle are bound; C C are poles or pillars to support the roof. It might, he thinks, be an improvement here to adopt Mr. Bilton's plan, and make similar racks, with holes below, as is shown in fig. 4. Another way of constructing thefe double sheds is shown in fig. 6, by which a very convenient loft may be obtained in the roof. A is the passage between the cattle, and B the loft above, which, if clofe boarded, may serve many useful purposes. These double sheds, Mr. Beeton supposes, perhaps the best construction for feeding-houses, being not only the most commodious, but requiring less building for the same number of cattle than by having them all to face one way.

It is justly remarked, by the same writer, that where cattle are fed from the outside through holes left for that purpose, many inconveniences may arise, either in wet weather or in a severe frost, or by a heavy fall of snow. When they are fed within, no fort of weather can occasion any interruption, especially if there is a proper place adjoining, to keep the provender in security and under cover. In single sheds, it would be convenient to have a place above the cattle, as at B, fig. 6, for holding occasionally some hay or straw. This place might be boarded, and made to open from without by covers suspended on hinges, which, when opened, will afford an access for putting in the fodder from a cart. It would there be ready for the feeder to throw into the racks when required. The roof is in this case to be supported by poles or pillars about three or four feet high, on the top of the wall, and placed about eight or ten feet distant from each other, as at A, A, A, &c. fig. 1. in Plate V. B, B, B, &c. are the hinges of the covers, and C C, &c. the rings to raise them up. D is one of the covers open, which may be held up in various ways, as by a catch, F, fig. 2, movable on a small iron pin, the heaviest end, E, being within the fixed boards, and F without to catch in a hole in the cover, when opened.

In the third place, great attention is, he says, necessary to keep cattle clean and dry. The common method of taking away the dung in wheelbarrows is attended with a good deal of labour, and where there are many cattle or cows will require perhaps several men's attendance. If this labour can, therefore, be abridged, and one or two men's work saved by a proper construction of building, it will be a great advantage. This should be considered in the original design before the building is begun, and must be determined in a great measure.
mesure by the form and situation of the ground. If a proper receptacle can safely be had immediately behind the cattle, for throwing in the dung at once with a shovel, without wheeling it, this would be the easiest way, and will not only save trouble and expense, but if properly contrived, the dung will be the better for it. By the common method, the dung is, he says, in general so scattered about, and exposed to the weather, that a great part of its virtues is exhaled and lost; a matter of great importance to the farmer; for it is not merely the quantity, but the quality also of dung that is to be considered.

To preserve dung under cover would be attended with an expense in the construction of a proper place, that perhaps few would choose to go to; at the same time, there is no object of more consequence to the farmer than preferring the quality of his manure.

It is added that the facility of keeping cattle clean and dry, depends very much on the construction and paving of the flalls, of which there are various kinds. In many places, however, there is no such thing known as a flall for cows or oxen, they being bound to flakes, without any division whatever betwixt them. In some parts again, particularly in Cheshire and Lancashire, he observes cows are bound in pairs, at least there is but a very small division betwixt them, as will be seen by fig. 3 in Plate V. in which is a plan of these flalls: A.A.A., &c. being the flakes to which the cows are bound. In other parts they are not bound at all, but every cow or ox has a separate flall divided from the rest by rails of wood, that they cannot get out, and so narrow that they cannot even turn about. At fig. 4 is a plan of these flalls; S.S.S, &c. are the flalls. P is the passage betwixt them; T, T, &c. are the troughs out of which the cattle feed; At fig. 5 is an elevation of the rear of these flalls. RR is a rail that lifts out at the end of each flall. Sometimes there is a little door that opens, as at G. Fig. 6 is a section of these flalls, in which it will be observed there is a short rail or brace at A, to prevent the cattle touching each other with their horns. Some people are of opinion, that cattle feed much better and quicker in flalls of this kind than when they are not bound.

It is supposed that double flalls may be made without the short division, as already mentioned. The division between them, however, ought to be sufficiently boarded at the top, to prevent the cattle seeing their neighbours in the next flall. At each flake should be a trough for holding meat, and between these two troughs, another common to both cattle, for holding water, with which it may be supplied by a pipe communicating with a cistern or reservoir without.

These three troughs may be of stone, as in fig. 7, and all of one piece, if thought proper. A perpendicular rack for holding hay or straw may be placed over them, as represented in fig. 8, which is a section or view of one of the flalls, and fig. 1, is a plan. Perhaps it would be an improvement to divide them by a rail in the middle, as at AB, fig. 7, which would prevent the cattle turning too much about, and spreading their dung over the whole flall, for the more they are made to dung in the same place, the easier it will be to keep them clean. But although the double flalls here recommended are a good deal used for milk cows in different parts of England, yet they have in general only one trough for each cow, without any for water; nor indeed has he seen any with this convenience, except at Burleigh, in Rutlandshire, a seat of the earl of Winchelsea, where offices and farm-houses are on an excellent construction, being planned chiefly by himself.

In paving flalls for cattle, the same author remarks, "that there is generally too great a declivity made, which will cause them always to stand uneasy and uncomfortable; for, when feeding, there cannot be too much attention paid to their ease and comfort, as well as to their food. If they are constantly wet and dirty, or in pain by fouling in an unnatural position, it is impossible they can thrive so well as otherwise they might. Yet (says he) how little attention is there in general paid to this. One would almost be led to suppose it is the opinion of many, that if they stuff their cattle quite full of food, whatever may be its quality, it is all that is necessary. Sometimes they are chained so close to a flake that they can hardly move, and it is a practice in some places to fallen their heads between two flakes, by which they can neither lie down in comfort nor can they have it in their power to destroy or dislodge those tedious tormenting vermin which frequently prey upon them. Besides this, they are often suffered to be bemired on the back, and other smokings with heat for want of ventilation, or shivering with cold.

No animal can thrive well under such mismanagement, let his food be ever so plentiful, or of ever so good a quality; for, as an ingenious author says, to keep cattle clean and well littered, is to them half food. Cows are more easily kept clean than oxen, for they do not wet their flalls so much; but even oxen, when confined to flals nearly in the same place, cannot wet their flall above half way up, if properly constructed, and that generally about the middle. It is therefore clear, that if the moisiture is immediately conducted away, and prevented from spreading, the ox will be easily kept dry. The best way to do this is, (he thinks) in the manner described for paving the flalls of stables." See Stable.

The flalls of oxen or other cattle should, he says, "be paved in the same manner; but as their dung is of a more liquid nature than that of horses, it would be proper to have some commodious method to carry it off. Perhaps in some situations, where there is a proper declivity, this might be done by having an iron grating behind each ox or cow, immediately over the flall drain, and as nearly as can be judged to the place where the dung will drop, which by continuing the drain, or a wooden spout, to a pit or reservoir without, and giving it a sufficient slope, with the assistance of the other moisture, run and empty itself therein. If it should require the aid of a rake or hoe fitted to the drain, that may be easily applied, especially if those drains are made open and covered with a strong plank to take up when necessary. The moist dung being thus carried away, the remainder will be easily removed. — Something of this principle, suited properly to the situation of the place, would, (he thinks) have a great deal of labour, and very much facilitate the keeping of the cattle clean, and also be the means of saving a great deal of litter when scarce or dear. The advantage of proper drains to carry off the moisture from within the offices, and reservoirs for collecting it in, are therefore very obvious, as without such drains it cannot be expected that the offices or the cattle within them can be kept sufficiently dry."

But though these forms and modes of constructing cattle-flails and feeding-houses are, probably, the most frequently met with in different parts of the kingdom, they are often built on other places and in other forms, such as the circular and long square; the first of which, though rather more expensive in the construction, is probably the most economical in respect to labour, and the most convenient in the distribution of the food, especially where a great number of cattle are to be kept. In this case, the animals, contrary to the usual method, stand all round having their tails to the out wall, by which much convenience is afforded in throwing out the dung through crevices left for the purpose in
in the wall into covered pits made on the outside in order to receive it. The area or space within is converted to the use of feeding and attendance. There should be a room above in order to fake up different sorts of food that may be wanted for the animals, in order to complete the plan. The passage or gangway next the wall is left sufficiently large to permit the cattle to pass to and from their stalls; and the openings in the wall for the discharge of the dung should be contrived as to be capable of being shut up when the weather is fever.

The long square likewise admits of much room and convenience, and is a form in which many homies of this description have lately been erected. For this sort of shed the length of fifty or sixty feet affords room for a great number of cattle; the roof being made shelving, having the height of fourteen feet in the highest part and of seven feet in the lowest; the large space defined for the reception of the cattle being separated from that where the dung is to be deposited by a wall or some other convenient division. For the former the space of eighteen or twenty feet on the inside is sufficient to afford good room, the stalls being made each about twelve feet long, having the width of four feet, or four feet and a half; the gangways at the heads and behind the cattle being made three feet, or three feet and a half in breadth, doors being fixed to each, one for the admission of the animals, and the other for that of the persons who attend them. And when the buildings are of great length, it may be convenient to have doors at each end. There should likewise be troughs in each stall for the reception of water, which, where it can be made to run through them, is of great advantage; and boxes or mangers for particular sorts of food, as well as racks for hay, are also necessary to render them complete. The bottoms of the stalls may be formed of strong planking laid so as to have a very slight deflection, and be perforated with holes for the ready passage of the urine into the reservoir for it. There should be openings made in the wall behind the cattle, for the purpose of discharging the dung, between every two stalls of about two feet square, with proper shutters fitted to them; and also a wooden window of about the same size to each stall, to admit light and free ventilation, being placed as high as the house or shed will admit. The reservoir for the dung and urine should extend the whole length of the shed or building.

A shed on this plan has been found useful in practice by a person who has allowed much attention on the convenience of this sort of farm building. See Cow-House.

CATTU-GASTURI, in Botany, Rheed Mal. See Hibiscus elaterifolius.

CATTUPHUS, or Cossophus, in Ichthyology, a name given by Aristotle and other Greek writers to a species of Larbus of a bluish black colour; the Merula, and Turdus migratorius of some Latin authors. It is rather uncertain which of the Linnæan species is intended by those writers.

CATTUS, or Catinus catilucus, was in ancient history a sort of covered shed, sometimes fixed on wheels for the purpose of moving it, in some respects similar to the vina and pleuteus.

CATTUS-SCHIRAGAM, in Botany, Rheed Mal. See Conyza anthelmintica.

CATTUSE, in Geography, a town of America, in the state of Georgia; 12 miles W. of Tugeloo.

CATTU-TIRPALLI, in Botany, Rheed Mal. See Piper longum.

CATTUÆL, in Ancient Geography, a name given by Suidas to those who dug their habitations under ground; such were the Troglodytes.

CATTUCA, erroneously written calutus, carluc, a place of Gallia Narbonennis, between Alaxum and Apta Julia, according to the Itinerary of Antiquus.

CATULUS, an episcopal see of Africa, in Mauritania Caesariana.

CATULLUS-POLI, in Botany, Rheed Mal. See Pancratium zeleanium.

CATULLUS, Catus Valerius, in Biography, an eminent Latin poet, was descended from reputable parents, and born at or near Verona, about the year of Rome 608, B. C. 86. At Rome, where he settled at an early age, he formed an intimate acquaintance with some of the principal periphs in that city, as Cicero, Cinna, and Plancus, to whom he recommended himself by his wit and gaiety, and by the beauty of his poetical compositions, the obscurity and licentiousness of which seemed to have been no great hindrance to his reception among the ancient Romans. In some of his poems he attacked the private character of Caesars with severity, but a flight apologue effected a reconciliation; and Catullus was again admitted to his table. Although he accompanied his tutor Memmius to Bithynia, Rome seems to have been the seat of his settled residence; where he lived under the character of a wit and a man of pleasure. He published, however, a small villa at Tibur, whether he occasionally retired for relaxation, and he also speaks with an amiable enthusiasm of his paternal seat on the peninsula of Scirino, delightfully seated on the lake Benuca. He was much attached to a mistress, whom he has rendered immortal by the name of Lesbia, though her real name was Clodia. That the unshackled libertinism of Catullus had not extinguished in his breast the amiable feelings of fraternal love and friendship, we have sufficient evidence in the tender lines which he addressed to a friend on the death of a brother. The Euthychian chronicle has placed the death of Catullus in the year of Rome 69/6, B. C. 58; but as he alludes in a poem (Carm. iii.) to the consulate of Vatinius, in 707, he must have survived that period. In Blair's table his death is placed in the year of Rome 714, B. C. 40. Joseph Scaliger extends his life to 71 years, and consequently refers his death to the year of Rome 730, B. C. 15; but Mr. Bayle has examined his arguments for this date and refuted them.

The rank of one of the principal Latin poets is ascribed to Catullus by Ovid, who places him on a parallel with Virgil:

"Mantua Virgilio gaudet, Verona Catullo."

Amor. l. iii. el. 15.

Martial also acquiesces in the same opinion; (lib. xiv. Ep. 105.), and modern critics reckon him one of the most valuable examples of the golden age of pure Latinity. "He is the earliest remaining writer who gives specimens of a great variety of metrices; and his subjects and styles of writing are almost equally various. His peculiar excellence is thought to consist in the sweet and tender, combined with a sort of playful simplicity, and no pieces have been more frequently repeated than some of his short tributes of affection to Lesbia. They have, indeed, by their enduring diminutives, ferved as a model to a whole class of imitators. In other compositions Catullus aims at a higher flight, and exhibits much strength of imagination and expression, not without some of the harshness of a mode of composition not yet arrived at its due polish and correctness. His epigrammatic pieces are of various characters; but such are the licentiousness of idea and freedom of language in most of them, that nothing can be more offensive to moral purity. His amorous poems are likewise often in the extreme of warmth. Of his works we have extant, his "Liber Epigrammatum variomqum Popcatum," dedicated to Cornelius Nepos. His poems are divided into three books, one of lyrics, another...
of elegies, and a third of epigrams, which division appears in the edition of Venice, 1457, foll. The most approved editions of Catullus are those of Voëttius, Lond., 1663, 4to, with a commentary, and Utr. 1611; of Pulvinius, Patav., 1710, 4to, with annotations and an index; of Corradi, Ven., 1758; the "Variorum," by Grevius, with the poems of Tibullus and Propertius, Utr. 1683; and Mataria, in 1715, 12mo, and in the Corpus Poetorum, with Tibullus and Propertius, Lond., 1711, foll. A correct edition was printed a few years ago by an alderman of London; but not sold; and in 1705 was published an English translation, entitled "The Poems of Caius Valerius Catullus," in English verse, with the Latin text reviued, and classical notes, prefixed to which are engravings of Catullus and his friend Cornelius Nepos, 2 tols. Fabr. Bib. Lat. II. c. 5. p. 60.


CATULUS, in Libri quatuor, a name by which old authors have described the spotted dogfish, Aulakeus catulus of Linnaeus, which see.

CATURGIS, in Ancient Geography, a Celtic people, who inhabited the mountains of Gallia Lyonnaesis, or the Cottian Alps; placed by Ptolemy between Eburoinum and Vapincum. The country which they occupied was called in Latin "Cottia regnum," and in Celtic "Cou-rich," or "Catt-rich."

CATURGES, or CATURGIS, a town of Gallia Lyonnaesis, and the capital of the Caturges, between Eburoinum and Vapincum, according to the Itinerary of Antonine and the table of Peutinger, who names it "Caturimagus;" its modern name is thought to be Chorges.

CATURGICUS, a place of Gaul in Belgica Prima, N.W. of Naftum, on the route to Durocortorum.

CATURRACTONIUM, a town of the Brigantes in Britain, which was unquestionably the present Catterick near Richmond, in Yorkshire. In the time of the Romans it appears to have been a great city; and seems to have derived its name from a fort of cataract in its vicinity. Here one of the Roman highways crossed the river Swale. On its banks are the foundations of large walls, and a mount cast up to a great height. Many Roman coins and urns have been dug up here. The city was finally destroyed by the Danes.


Sp. 1. C. spiciflorus, Linn. Mant. Mart. Lam. Iluff. Pl. 8 05. (Azyaphila hispida, Burm. Flor. Ind. 303. tab. 61. fig. 1. Wart-Tuli, Rieh. Mal. 5. p. 63. tab. 32. Cauda feilis aggreditis abala, Rumph. Amb. 4. p. 84. tab. 17. fig.) "Spikes axillary, solitary, pendulous." A shrub. Stem from 15 to 20 feet high; wood white and close; bark thick, decoy, meagrous, modorous; pith yellow. Branches diffuse. Leaves alternate, petiolate, nearly heart-shaped, acute, bright green above; mulripal, hairy, with a few lateral nerves. Flowers in axillary, solitary, hispid, pendulous spikes; but, according to Burman, the spikes in most of the plants brought from the island of Java are not pendulous. Fruit round, yellowish-green, inohip. A native of the East Indies, where a conserve of the flowers is used in diarrhea, and all disorders arising from a laxity of the vaults. From a comparison of Rumphius's figures in tab. 36 and 37, with those of Riehd and Burman, J. Mareck infers that several species are confounded together. 2. C. acanthus, Mart. Lour. Cateh. 612. "Spikes axillary, upright; leaves oblong, somewhat serrated; stem climbing." An unarmed shrub. Stem long, branched, climbing, but without tendrils. Leaves alternate, acuminate, veined, smooth. Flowers very small, white, in close short spikes, with awl-shaped bracts; calyx of the male flower three-leaved. A native of the woods of Cochinchina.

CATURUS RAMIFERUS, Linn. Lam. See Boerema rami-fera.

CATUS, in Geography, a town of France, in the department of the Lot, and chief place of a canton in the district of Cahors; 32 leagues N.N.W. of Cahors. The place contains 4 244, and the canton 9927 inhabitants; the territory includes 200 kilometres and 16 communes.

CATUS PARSUS, in Zoology. See Felis pardalis.

CATUS ZIBITHICUS, a name given by some old writers to the civet, Vivera cvea of modern naturalists; called also by Gencer and others felis zibeth. The English name is civet, this being the animal which produces the perfume of that name: it is oftentimes, though improperly, called the civet-cat.

CATUSIACUM, in Ancient Geography, Claviers, a place of Gaul, in Belgica secunda, at some distance N. of Durocortorum.

CATUS-THIERN NARCAGEM, in Botany, Rieh. Mal. See Lamiola acidiflamma.

CATY WYCK, in Geography, a village of Holland, on the borders of the sea, near which the Rhine loses itself in the land. The Romans built a castle near this spot, and the rains may be sometimes seen, when the sea retards more than usual; 2 leagues N.W. from Leyden.

CATY, CATI, or CAITI, an East India weight, used especially in China. It is equivalent to one pound round and two drams English.

The cit is divided into sixteen taels, and the pie into an hundred caties.

The city is also used in Japan, Batavia, and other parts of the Indies, where it weighs more or less, according as it contains a greater or less number of taels; the city of Java is equivalent to twenty taels; that of Cambay to twenty-seven; the city of Siam is double that of China, and amounts to about 120 French pounds.

The Chinese also give the denomination city to the Simche shan.

CAYT is also a small weight whereby the lapidaries of the East weigh their emeralds, equivalent to three grains.

CAYT is also a money of account, used in Java, and some of the neighbouring islands, amounting to about nineteen florins Dutch money.

In the island of Sumatra, city is laid to denote a piece of money valued at fix shillings and eight pence Sterling.

CATZ, James, in Biography, an eminent Dutch flatem and poct, was born at Brunsvork-haven in Zealand, in 1777; and became so much attached to literature, that he resigned very elevated posts under the civil government for the sake of study and reflection. He was prevailed upon, however, by the States to undertake the arduous office of ambassador to England in the critical and tumultuous time of Cromwell. On his return he retired to one of his estates at Sargislet, where he died in 1660. His poems in Dutch, almost all of which are on moral topics, have been held in high
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high estimation by his countrymen, and have passed through several editions. The latest edition was that of 1726, in 2 vols. fol. Nouv. Dift. Hist.

CATZENELNBÖGEN, or CATZENELNBÖGEN, Count of in Geography, a county of Germany, in the circle of the Upper Rhine, which devolved to the landgrave of Hesse in 1479, after the decease of Philip, the last count. It is composed of many districts, which, if they were united, would form a county 20 leagues long, and 10 broad; but the city of Mentz, with its territories, inhabited in this country, makes an interruption of 10 leagues. The Mayn, which runs through it, and divides it into Upper and Lower; the Upper belongs to the prince of Hesse-Darmstadt, and is called Darmstadt from the capital. The Lower county fell to the landgrave of Hesse-Rheinfels in 1498, except the town of Catenelnbögen, Bruchbach, and the castle of Marburg, which belong to Darmstadt.

CATZENELNBÖGEN, a town and castle of Germany, in the circle of the Upper Rhine, seated on a mountain which gives a name to a county belonging to the prince of Hesse-Darmstadt; in its vicinity are mines of iron; 28 miles N.W. of Mentz, and 22 E.S.E. of Coblenz.

CAVA, in Anatomy, is a name applied to some large veins. The superior or descending vena cava is the vessel which returns the blood from the head, upper extremities, and chest, to the right auricle of the heart. The inferior or ascending cava receives the blood from the lower extremities, abdomen, and pelvis, and pours it into the right auricle.

The vena cava hepatica are the returning veins of the liver, which join the inferior cava. For a description of these vessels, see Veins and Liver.

CAVA, in Ancient Geography, a large village of Afa, mentioned by Xenophon; and supposed to be in Bithynia.

CAVA, in Geography, one of the smaller Orkney islands, about a league S. from Pomona.

CAVA, LA, a town of Naples, in the province of Principato Citra, the fee of a bishop, immediately subj ect to the pope. Since a new road has united the Sorrentine promontory with the Apennines, which passes by Cava, it has brought to this city a concourse of travellers and merchants. It has been encouraged to trade by many valuable privileges, a cloth manufacture has improved it, and increased its population; and it carries on a great trade in silk and linen. It is distant 24 miles N.W. from Salerno. N. lat. 40° 20'. E. long. 14° 55'.

CAVADó, a river of Portugal, which runs into the sea near Epofenda.

CAVÆDIUM, in Architecture. This term, derived from the words caüa sedium, signifies a vacant space within the body of a house; it has therefore the same meaning with our word court. Vitruvius has a chapter upon cavædiums (lib. 6. cap. 3.) which he divides into five kinds, called, from their various forms, Tuscan, Corinthian, Tetralytyle, Displyvated, and Telfudinated. The Tuscan cavædium was a square court, with a roof projecting from the sides to shelter the walls, and convey the rain water towards the middle. The Corinthian cavædium was similar to the last, except that the roof, projecting further, was supported by columns under neath. The Tetralytyle was so called, from having four columns supporting the angles of the roof. The Displyvated was entirely open, having no roof projecting from the sides, and was therefore lighter and more agreeable for the windows of winter apartments to look into. The fifth kind was covered over, being telfudinated or vaulted; this manner was used when the span was not very great; and the space above was used for chambers or other apartments.

CAVAGIRO, in Ichthyology, a small fish found in the Mediterranean, which Ray describes as being something of the eel shape; but thinner and flatter. The same writer also calls it Tena rubra, and Friggia. This is the cepola Tana of recent authors, which see.

CAVAGLIA, in Geography, a town of Italy in the lordship of Vercelli; 16 miles W. of Vercelli.

CAVAILLON, a town of France, in the department of Aube, and chief place of a canton in the district of Avignon, situated on the Durance, in a pleasant and fertile country, and abounding with remains of Roman magnificence; 4 leagues S.E. of Avignon. The place contains 5196, and the canton 6075 inhabitants; the territory includes 146 square kilometres and 6 communes. N. lat. 45° 54'. E. long. 4° 17'.

CAVAILLON, a town on the south side of the fourth peninsula of the island of St. Domingo, in the West Indies, about three leagues N.E. of Les Cayes, and five W. by S. of St. Louis.

CAVALA, LA, a town of European Turkey, in the province of Romania; 30 miles E. of Emboli.

CAVALCADE, a pompous procession of an affamblage of people on horseback, with their equipages, &c. by way of parade in order to grace a triumph, a public entry, or the like.

CAVALCADOUR, or CAVALCADEUR, anciently denoted a riding-matter; but at present is diffused in that sense, and only employed to denote a sort of equerries, or officers who have the direction of princes' stables. The French say, ecuyer cavalcadeur of the king, the duke of Orleans, &c. Menage writes it cavalcadeur, and derives it from the Spanish cavalador, a horsemanship.

CAVALCANTI, BARTOLOMEW, in Biography, a learned Italian, the descendant of a noble family, was born at Florence in 1503; and having been led by the disturbances of his country to assume the profession of arms, he displayed his eloquence and his valour in an oration on liberty, which he pronounced in 1530; armed with a corselet. Taking part against the house of Medicis, he was under a necessity of withdrawing from his country after the offer of Duke Alexander and the election of Cofmo. He then settled at Rome, where he was employed by Pope Paul III. and his grandson Ottavio Farnese, in many important negociations. He also faithfully served Henry II. king of France in the cause of the Sienese, as long as they were able to defend their liberties. After the termination of the war between France and Spain, he retired to Padua, where he devoted himself altogether to literature, and where he died in 1592. His "Rhetoric," first printed in 1570, and several times reprinted, has been reckoned among the best works of the kind in that age, when it was the common fault to regard Aristotle as insinuable. His "Treatises on the best Forms of Republics ancient and modern," published in 1555, are also valued. He also wrote an Italian commentary on the first books of Aristotle's Poetics, and translated into Italian the "Caframetation of Polybius." Moreri. Gen. Biog."

CAVACANTI, GUIDO, one of the very early Italian scholars, was born of a family of rank at Florence, in the 13th century, and became the disciple of Brunetto Latini, and an intimate friend of Dante. His father, having been a free speculator in philosophy, was placed by Dante in his Inferno, among the condemned Epicureans in the lower regions;
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rions; and Boccacio intimates, that the son was addicted
to familiar opinions. Guido was fond of a retired and con-
templative life, and attained among his countrymen a high
character both as a philosopher and a poet. In his pilgrim-
age to St. James of Compostella, he formed an anxious at-
tachment to a lady at Toulouse; but having taken part in
the contentions of his country against Carlo Donati, a prin-
cipal person of Florence, was in danger of assassination in his
pilgrimage.

In the year 1500 he was banished to Serrazzano;
but on account of the unhealthiness of the place, where he
fell sick, he was allowed to return to Florence, and died
there in that or the following year. His poems, for which
he is chiefly distinguished, are, allowing for the time, ele-
gant and correct. They consist of sonnets and canzonets,
and were printed at Florence in 1527, in a collection of an-

CAVALE, LA, in Geography, a small town on the northern
point of the island of Tallo, in the Archipelago, west
of the birth formed by Cape Aferea; the town projects
into the sea, and has some resemblance of a horse, whence its
name. This town, which was formerly called Bcrea, was
for a long time in possession of the Genoese and Venetians;
of late years it has become a very active point of the
Levant trade; its harbour, though not very safe, is frequent-
ed by ships which load there with corn, tobacco, and other
commodities.

CAVALE MAGGIORI, a town of Italy, in the prin-
cipality of Piedmont; 3 miles north of Savigliano, and 19
miles of Turin.

CAVALERI, a small island in European Turkey, in the
Archipelago between the south-west end of the island of
Negrupont, and the continent of Greece. N. lat. 38° 7'.
E. long. 24° 17'.

CAVALERIE, LA, a town of France in the depart-
ment of the Aveyron, and chief place of a canton in the dis-
trict of Millau, two leagues S.E. of Millau.

CAVALET, in the Glass Art, a small iron ring which
surrounds the lunella, or hole in the center of the floor,
in the tower of the leer, used for annealing glass vellts.

CAVALIA, a town of Africa, on the Ivory coast.

CAVALIER, in Military Language, a trooper, a man
of warfare or soldier, that serves and fights on horseback.
The appellation of maire or matter, has sometimes been
given to him. Thus they say, cette compagnie eet de trente
sur garante maire, non onps les officers, this company
consists of thirty or forty matters, exclusively of the officers.
This name is very old. And they inherit it from the men of
arms, the first corps of cavalry that was raised under
Charles VII. of France. These men at arms, who were
gentlemen, carried each of them into the field with him
three archers, one cutler, and one page or valet. The num-
ers of each were distinguished by so many matters, so many
archers, so many cutlers, and so many pages. When these
lait were sent on detachments, by themselves, some of the
gens d'armes commanded them. And the officers did
not march but with the gens d'armes alone. This term was
formerly confined or restrained to a knight or miles, and had
the same import or meaning as that which the French
at present annex to the word chevalier. The word now de-
notes any soldier that serves and combats on horseback; and
he is reckoned a good cavalier who takes particular care of
his horse and his equipage.

CAVALIER, the name in a military sense as Bachelor,
which title was formerly given to a young cavalier, who
had commenced his military career, served his first campaign,
and received the military chivalry.

CAVALIER, a term in Fortification, made use of to denote

a work raised generally within the body of the place from
ten to twelve or more feet higher than the rest of the works.
Its most common situation is within the baillon, and nearly
of the same form. It is sometimes placed in the gorge of a
baillon, and sometimes on the middle of a curtain, in which
case it is usually made somewhont in the form of a horse-shoe,
but a little flatter, or not to so much rounded, or circular.

The principal use of cavaliers is, to command all the ad-
jacent works, and the country around them. They are
federal or ever made but when there is a hill or rising ground,
which overlooks some of the works.

Sometimes the earth of the rampart fills up the whole
baillon, which is then called a full baillon; and sometimes
the rampart follows the moiler-line, or sight line, running
parallel to the parapet of the baillon, which is then called
an empty or hollow baillon. The empty spaces in hollow
baillons are convenient for magazines of powder and ammuni-
tion, and for various other purposes. But when the baillons
of a fortified place are full, and there are no eminences or
rising grounds near it, that command any parts of the
works, outworks, terraces or mounds of earth, called
 cavaliers, more or less raised as there occasion, are made
in them, which are sometimes walked round, and always have
like other works, a parapet for covering the cannon placed
in them for removing such exterior commands, or for defend-
ing the faces of the opposite baillons, as well as the baillons
themselves, in which they are raised, should the enemy make
lodgments in them. Such a cavalier is called cavalier de
baillon; and, when made nearly of the same figure with one,
forms a fort of double baillon, which is often attended with
great advantages. To construct such a cavalier in a baillon,
draw two right lines parallel to the faces of the baillon,
about twenty yards within, and distant from the fame; and
form, at this distance, an interior baillon, with flanks either
straight, or with orillons, similar to those of the outer baillon,
or the baillon itself, and you will get the magistral line of
the cavalier.

Cavaliers are often made on the middle of the curtains,
and near the parapet, in order to command a view of the field
from the place, to discover the enemy in his works, and
to double the fire which defends such parts of the town as may be attacked.
At other times when any parts of the place or works are liable to be enfladed, cavaliers are
raised to cover them against an infilade.

A work of this nature is sometimes erected in the ditch
of a fenny place, for the purpose of covering a gate, or
lodging a guard in it against surprises. It is then called a
horse-shoe, and when very irregular, pate.

Ever since the invention of modern fortification, cavaliers
have been in estimation and use in fortified towns, as
appears from Palma-Nova, Orih-Novo, the ezadel of Turin,
and various other places. They are raised considerably
higher than any other parts of the works; and as they have
different uses, or answer different purposes, they are also of
different figures, being sometimes rectangular, sometimes
round, sometimes oval, sometimes of the baillon form, &c.

For which, see Fortification, Pl. 1, fig. 2.
The principal advantages of cavaliers are these, that they
mekt a belief in his army as long as he is in the field, expose
him to the view of the beleaguered in his works, and
approaches, annoy him in his batteries, and oblige him to open
his trenches at a greater distance from the place than he other-
wise would. They subject him to this inconvenience, that, to
be under cover from them he must perform more labour
and make greater excavations to raise his trenches and other
works a good deal higher than he need do, were it not for
them, which, when there is but a small depth of soil and rock
under
under it, is attended with much difficulty. At the same
time he cannot, but with extreme difficulty, raise works in
the field sufficiently high to command them. They serve
also for covering those parts of the works or place, that are
exposed to an enfilade, and, when conveniently situated, al-
mock double the fire of the faces of the ballions. They
likewise answer for ferrying into the retranchments from
the moment the enemy makes a lodgment in the ballion.

Some engineers disapprove of them, alleging, that they
are of no great use or service, and do not contribute much
towards the defence of a place, because, being retired from
the out-works, they cannot keep the enemy at a distance.
Then they observe, that the height of these works is attended
with much inconvenience in different respects. First, in the raising of them, as it is difficult to heap up
earth upon earth in this manner, and afterwards place a
parapet at top of all; secondly, that they are butts for the
enemy to fire at; thirdly, that, besides this, in time of need,
and, when the enemy is near, they serve in no case for
the purposes of defence, because the men in them cannot
point their cannon on objects near and below them, without either
exposing themselves, or greatly diminishing the thickness of the
parapet; and, lastly, that they hinder the making of re-
tranchments in the ballions, and that when the enemy once
gets possession of them, he can turn them to a good account,
and make use of them to great advantage.

In answer to these objections, it may be very justly ob-
erved, that several engineers of reputation have made use of
them with great advantage, conscious that, when added
to good fortifications, they assuredly render it much flonger.
Thus, although they are retired within the body of the
place, their height remedies that defect, enabling them to see
and command whatever is in front of them. That the
difficulty of making them is not so great as has been sup-
posed, as they are actually to be found in many places, and
that it ought not to be objected to them, as they afford ad-
vantages much more than sufficient to counterbalance it.
And that as to their being butts for the enemy's cannon
to destroy and batter down, it ought to be considered that,
for this purpose, they must face his batteries, and raise them very
high, during which operations he is liable to be greatly an-
noyed and intercepted by the fire of the cavaliers, and to perform a great deal of labour before he can put his own in
a condition to do them any essential damage. And after
he has made them, they are subject to be more suddenly bat-
tered down by the cavaliers, than the cavaliers are by them,
as the one is composed of earth well settled and rammed,
and the others of earth, loose, and suddenly thrown up.

When there is but little soil on the outside of a fortified
place, the besieged may derive great advantages from such
works, as they can raise them before-hand at their leisure to
what height they choose, and may diminish the means and
power of the besiegers to injure them, by bringing the earth
from the outside for that purpose, which will compel the
enemy to bring earth and materials from a distance to raise his
batteries and approaches sufficiently high to counteract the
effects, and cover him from the command and fire of the ca-
valliers; an operation that must be always attended with
much loss of time, as well as great labour and fatigue.

Such works cannot fail to be useful by being high, since
when placed near the extremities of the curtains, they afford
a defence to the opposite ballions; and not only commanding
but ferrying to a distance, they can greatly injure and annoy the
enemy after he gets into the ditch, and compel him, when he is going to make the traverse, to raise it very high,
in order to put himself under cover. When they are thus
placed, they do not interfere with the making of retranche-
ments in the ballions, but furnish a very good defence for
them. To say that the enemy will be able to make use of
them, after he once gets possession of them, as so many citi-
dels against the town, city, or fortified place, is no argument
at all against the construction and use of them. For on the
same ground, it might be alleged, that we never ought to make
ballions. When it is considered, that after the besiegers
shall have taken all the ballions, and all the retranchments
within them, which they must do before they can become
masters of the cavaliers so situated, the place will hardly be
able to defend itself, whether there be cavaliers or not; and
when there are such works there will still remain this defence
after the great injury the enemy must have sustained by them
before he was able to force all these other works.

It may not be improper to observe, that it would not,
however, be advisable to introduce cavaliers as a principal component part of the works of the body of a place, or to
revet them like ballions, and employ them as such. For
when the ballions of a fortification are at too great distances
one from another to furnish a good mutual defence, or when
the curtains are excessively long, it is better to place ravelins
before them than to introduce cavaliers into the middles of
them.

The height of cavaliers above the level of the rampart,
must depend on convenience and the purposes for which
they are raised or erected. It ought to be from 10 to 15 feet or
more. The length of one should be at least 14 fathoms,
in order to receive conveniently 4 or 6 pieces of cannon,
and its breadth 6 fathoms, for them to have room to recoil in,
and to be served commodiously. The said height in such
works is exclusive of that of the parapet, which should look
outwards, or towards the field, like that of the rampart, and
ought to be 4 feet 4 inches high, and from 15 to 20 feet thick.
On the part looking towards the town, a very thin parapet is
all that is necessary, and the slope or ascent there, for carry-
ning the guns up should be from 10 to 12 feet broad.

When there are hills or eminences near the works, cavaliers
are sometimes made sufficiently large to hold 10 or 12 guns
each and are raised much higher.

Different forms of cavaliers are respectively best adapted
to different purposes, and much depends in this respect on
the judgment and knowledge of the engineer who constructs
them. The round or circular form, however, is exceedingly
good. Of all figures under the same periphery it contains
the greatest area. The fire from it is equally distributed in
every direction, which is not the case with that from the
rectangle, square, &c. A cavalier of this form is less ex-
pended and less liable to be ruined or battered down in any
particular place than one in the form of a rectilinear figure.
The fame advantages are in a great measure attributable to
one of an oval form, as it differs but little from the circular.
The exterior slope of the parapet ought always to be con-
siderable, particularly if it be made of loose or bad earth; and
is ought ato that of the cavalier itself to be, wherever it is
not faced with masonry.

Some are for placing them in the entrance or gorge of the
ballion, between the two flanks. This position enables
them to fire and to defend the faces of the opposite ballions.
But it interferes with the retranchments in these works, and
is too much retired from their fallant angles for commanding
effectually the parts without the body of the place. Thosc
in the citadel of Turin are thus situated, but it is in order to
command the town.

Cavaliers placed near the extremities of the curtains neither
hinder the erection nor occupy the places of other defences,
but rather increasing them have a great command of the
traverse, which the besiegers make for approaching the
ballion.
battered, to be very proper for placing them in.

The capital of a cavalier placed at the middle of a curtain, should be at right angles to the same. Its lateral angle should be nearly a right one, which will enable the faces containing it to furnish a pretty exact and good defence to those faces of the two fortifications that are opposite to them. The middle of the curtain is a bad position for a cavalier, when it is otherwise constructed. No cavalier, indeed, placed on the middle of a curtain ought to be raised high above the rampart; for if it be, its fire along the faces of the adjoining balistons will be too plunging to produce much effect. And, on the other hand, if it be kept low, it cannot command the field much better than the curtain itself. For these reasons the middle of the curtain does not appear to be an eligible or advantageous situation for a cavalier.

That a plunging shot is not near so destructive and annoying as a horizontal one, or one nearly so, is a truth so obvious that it hardly needs in need of demonstration. For a shot fired horizontally or from a very small elevation greater and bound above, and may hurt or injure fifty objects in its progress, but its force is entirely spent; whereas one fired from a considerable height at an object at a moderate distance, or from a small height at one very near, never fails if it can bury itself. But let A K, &c., represent the line of the horizon, A B the altitude of any place, work, or height above the same, and let A D, A F, A M, A K, be different distances on the horizontal line, from the foot A, thereof. Now if E G be the height of an object, at which a gun is to fire from B, G O be drawn parallel to A K, and from the points I, N, O, where G O intercepts B D, B M, B K, right lines I H, N L, O a be drawn parallel to A B, the relative degrees of the extent of offence in firing from B at an object of the height, E G, placed at the points E, H, I, L, &c., will be as E D, H F, I L, &c., and A K respectively, or as the tangents of the angles A B D, A B F, A B M, A B K, to the radius E G.

The chances then of hitting an object of a given height from B, at different distances from A, will, ejusdem generis, be as the tangents of the angles, which lines drawn from B along the top of the object at these distances to meet A K, form with A B, to the height of the object as radius. But if it be considered that a shot fired from B meeting the surface of the earth at D or F will bury itself if the ground admit of it; whereas, meeting the surface at M or K it may have a first, second, and even third grace, in each of which it may hit and injure almost a number of objects, it will be found, that the chance of doing mischief is greatly beyond the foregoing ratio in favour of the shot that is fired horizontally. Heights create dead parts for some distance in front of them, which is the cause why troops in ascending them are generally exposed to but little danger from fire-arms and fascines as little less.

In main: places cavaliers are placed either in the balistons or on the curtains, according as their situations are best calculated for enabling them to command a view of the sea, and to fire on shipping at a distance. Wherever a cavalier is placed within the body of the place, there should be a passage of 6 or 8 feet between the parapet and it, for the convenience of the folliers, and to prevent its rains when it is battered, from falling into the ditch.

Some are for placing cavaliers without the body of the place, beyond the places of arms. But this seems to be a bad plan, as they must in such situations be raised very high, be revetted, and after all can furnish no flankings defences to other work.

CAVALLERI

CAVALLERI. 

Cavalier de trinche. 

Trench-cavalier, is a work raised by the besiegers, of earth, and such other materials as they can make conveniently procure, as gabions, &c. Sometimes halfway between the termination of the flanks and the covert-way; sometimes only a third part of the breadth of the flanks distant from the covert-way; and sometimes close on the very crest or highest part of the flanks. It is difficult to establish such a work. It cannot, indeed, well be done without batteries a ricochet to embush completely the covert-way. But when the cavaliers de trinche are once well established, they present frequent issuing, and soon compel the besieged to retire within the body of the place. For it is then easy to push on three trenches or approaches to the flanks and distances of the covert-way, and to make at these angles small lodgments in the forms of circular arcs, by means of which the besieged may be driven entirely out of the places of arms, and from which the besiegers can extend their lodgments to the right and to the left, in directions parallel to the branches of the covert-way, or middle of the flanks, and about three totes distant from the same; which thickens of earth of will serve as a parapet to their lodgments, and shelter them from the fire of the cannon of the place.

In order to oblige the besieged to abandon their cavaliers, or to make them fall to diminish the brilliances of their fire, it is necessary to keep almost continually throwing large shells into them. These damage them materially, diminish the guns on the batteries in them, break the carriages, and prevent the besieged from re-placing or re-establishing them, without great loss, if they persist in working on the cavaliers.

If the cavaliers of the besieged be revetted and in the batteries it is also necessary to bother them with heavy cannon, in order so to fill up with the rubbish and ruins that part of the rampart, which is at the foot of each, as not to leave sufficient space for them to retreat themselves to oppose the assault or attack of the balistons.

When the miners once get so far as to penetrate into the earth of the rampart, and into that of a cavalier, they should make use of mines to throw as much as they can of the earth of both into the ditch, to affight in filling it up. After that, they should continue working on the breach, to render it practicable and of ease access, after which the besieged having no retreat, either in the balistons or in the cavalier, will naturally surrender, to avoid having the place stormed or carried by assault.

Should the besiegers, however, be driven to the necessity of forming the balistons, they will as soon as they reach the top of the rampart make small lodgments at the foot of the cavalier, on each side of the breach to support that of the top of the breach in the cavalier. 

CAVALLERI A CIVIL. 

This is an application given by the Italians to the large square towers, which they make over the gates of cities for the purpose of placing cannon on them.

The ancient raised cavaliers or terraces of wood and earth against the walls of towns they were besieging, in order to throw fire, darts, &c. into them.

CAVALLERI, EMILIO DEL, a Roman gentleman, who first set the dialogue, of an oratorio, or sacred drama, to narrative music, or recitative. This oratorio was entitled, 'Del Animas e dels Corp,' and was performed at Rome in 1600, the same year that Rinuccini's 'Offen, the first opera, was set by Jacopo Peri at Florence, and performed to popular music: so that the Italians themselves are unable to determine which was the inventor of the musical declamation called recitative, which has been cultivated and composed in the musical dramas of Italy, sacred and secular, ever since; and which
which, though attempted in other dialects elsewhere, seems to suit no language but that of the country where it had its birth. See Recitative, Opera, and Oration.

CAVALLERS, or Cavalliers, in English History, the appellation given by one of the parties in the ill-advised time of Charles I. called the Round-Heads, on account of the short cutp hair which they wore, to another party composed of reduced officers, and young gentlemen of the inns of court, who offered their service to the king. Under these party names the different factions rendezvoused, and familiarized their mutual hatred. See Tories.

CAVALLERI, or Cavallerius, Bonaventura, in Biography, an eminent Italian mathematician, was born at Milan in 1508, and entered at an early age into the order of Jesuites or Hieronymites. In the course of his studies he manifested such talents, that his superiors, after he had taken orders, thought proper to send him to Pisa in order to enjoy the advantages of the university established in that city. Cavallari at first regretted this change of situation; however, it was to this circumstance that he owed the celebrity which he afterwards acquired. Here, with the advice of Benedict Cailli, the disciple and friend of Galileo, he applied to the study of geometry, in order to relieve the pains of the gout to which he was subject; and in this science he made such progress, and acquired such an accurate acquaintance with the ancient geometers, that Cailli and Galileo concurred in predicting the eminence at which he afterwards arrived. Soon after this period he invented his method of indivisibles. In 1629 he communicated to some ingenuous persons and to the magistrates of Bologna, his treatise of indivisibles and another on the conic sections; and thus he obtained the honour of succeeding Maginius as professor in the university, in the year 1629. See INDIVISIBLES. Besides his celebrated work on indivisibles, entitled, "Geometria Indivisibilius communium solidorum novi quidam Ratione promotis," and published at Bologna in 1635, 4to. and again in 1653; he also published a treatise on conic sections, under the title of "La Spechio Utitorio overo Trattato delle Settoni Comiche," or "De Speculo Utitorio, &c." Bologna, 4to. 1632; a system of trigonometry under the title of "Diriectorum generale Urametricum," 4to. 1632, including an account of logarithms, together with tables of the logarithms of common numbers and trigonometrical tables of natural sines, and logarithmic lines, tangents, sines, and versed lines; of which a new and enlarged edition was published at Bologna in 1643, 4to. entitled, "Trigonometria Planam ac Sphaerica, Linearem ac Logarithmica, &c.;" a "Compendium Regularum de Triangulis," and a "Centuria Problematum Altronomorum." He was also the author of a treatise of astrologry, entitled "Rota Planetaria," and published under the appellation of Sylvius Philomantus; and this publication was the more surprising, as he was an enemy of judicial astrology. The bulk of his works was entitled "Exercitationes Geometricae," 4to. Bonon, 1647, and contains exercises on the method of indivisibles; answers to the objections of Guldinus; the use of indivisibles in Cooke's powers, or Algebra, and in considerations about gravity; with a miscellaneous collection of problems. Towards the close of this year, 1647, he died a martyr to the gout, which had deprived him of the use of his fingers. Montucla, Hist. des Math. vol. ii p. 57, &c.

CAVALLERIA, among the Ancient Spanish, a kind of tax, or impost on the inhabitants of great towns and cities, for the support of horsemen.

CAVALLEROS, in Geography, a town of North America, on the north-west part of the bay of Panama; 75 miles S.W. of Panama. Vol. VII.

CAVALLES, a cluster of small islands in the Southern Pacific ocean, near the coast of New Zealand; 3 leagues N.W. from Point Pocock.

CAVALLI, Francesco, a Venetian dramatic composer, who furnished the theatres of Venice, between the year 1630 and 1666, with 35 operas. Of his genius, science, and fertility, we are now unable to judge, except by Erfinenza, one of his operas that has been preferred in England, and which having examined, we find the music as good as that of any of the time and kind. And indeed, the number of his operas is a strong exogage upon his genius, in a city where the musical drama was more cultivated in the 17th century, than in any other part of Italy.

CAVALLI Marino, in Natural History. These are described by old writers as being little dried animals about the length of a man's thumb, found on the sea-coast near Ponzolli. The head, they observe, resembles that of a horse, and the body terminates in a tail like that of a shrimp. Women, it is said, use them to increase their milk; and apply them as an anodyne for the breast. Drunk with vinegar and honey they are applied as a plasher to the part bitten by a mad dog. This species of fish is also found on the other side of Italy, along the coast of the Adriatic; but not in such abundance. The marine animal, to curiously described, is no doubt the small species of Syngnathus or pipe-fish, known among modern naturalists by the name of Hippocampus. See Syngnathus Hippocampus.

CAVALLINI, Pietro, in Biography, a historical painter of the thirteenth century, was born at Rome in 1259, and became the disciple of Giotto. The number of his paintings is said to have amounted to 1500, and his pigny was no less extraordinary than his affability as an artist, in consequence of which he has been esteemed as a saint. His principal works are at Rome, where he assisted Giotto in the celebrated picture in Mosaic, which is over the grand entrance into the church of St. Peter; his performance in fresco was in the church of San Cavali at Rome; in which he represented the Virgin and child above, surrounded with glory, and below was the figure of Octavian, and also that of the Sybil, directing the eye and the attention of the emperor to the figures in the air. It has been suggested by Mr. Vertue (Ice Anecdotes of Painting, vol. i. p. 17) that the thron of Edward the Confessor, and the crosier erected to the memory of queen Eleanor, were constructed from the designs of Cavallini by Abbot Ware; and he supposes Cavallini to be the inventor of Mosaic, alleging that Giotto was 20 years younger than the other. But this appears, by the testimony of Vafari, and of other writers, to be anachronism; as Giotto was three years older than Cavallini, and was, in reality, his instructor in the art of Mosaic. Besides, the abbot Ware died 1283, when Cavallini was only four years old, and eight years before the death of queen Eleanor, who died in 1291. Pilkington, an enemy of judicial astrology.

CAJALLO, in Geography, a sea-port town of America in the province of Venezuela, on Terra Firme, or island of Darien, 27 miles N.E. of St. Jago de Leon. It is well fortified, and in a former war was unsuccessfully attacked by Commodore Knowles. S. lat. 10° 15'; W. long. 80° 12'.

CAVAZOS d' Enix, two small islands in the Atlantic near the coast of Portugal, about half a league S.S.W. of Espofenda. N. lat. 41° 46'; W. long. 8° 6'.

CAVAQUET. This is the name given to a particular found of the trumpet, which the cavalry make use of on approaching towns or passing through them.

CAVALRY, in French chevalerie, or cavalierie, in Military Language, a body or bodies of troops, who serve and fight on horseback. Of these there are different descrip-
Cavalry.

Before the year 1668 the regiments of French cavalry consisted of two, three, four squadrons; each squadron consisted of three companies, and each company of a captain, a lieutenant, a marshal des Logis (quarter master) and fifty maitres (troopers).

During the war of 1668 their ancient regiments were divided into squadrons, and every squadron consisted of four companies. A company consisted of 40 maitres, and had four officers, as formerly. The new regiments consisted each of four squadrons, of which each had three companies. And each company was composed of 55 maitres and four officers.

During the war of 1704 the squadrons consisted each of four companies; and each company had 35 maitres and four officers.

Before the breaking out of the war of 1744 each regiment of their cavalry consisted of four squadrons; each squadron of four companies; and each company of 25 maitres.

During the war the companies were increased each to 35 men. The regiment de Royal Allemands, and that de Rolen, consisted each of six squadrons, and each squadron of three companies of 35 men each. The regiment of Fitzjames had four squadrons, and each squadron three companies of 45 men each. That of Nassau had the same number of squadrons and companies, but each company had 50 maitres.

The ordnance of the 8th of March 1749 reduced the cavalry to 129 squadrons, consisting each of four companies, and each company of 35 maitres.

The ordnance of the 25th of March 1776 made each regiment consist of four squadrons of cavalry, and one of light-horse, of one company each. By the 11th article of that ordinance there was attached to each regiment of cavalry a squadron under the title of an auxiliary squadron, for the purpose of replacing, in time of war, the men, that might be deficient or wanting in the squadrons of cavalry or light-horse.

The ordnance of the 8th of August, 1784, made some alterations in this arrangement, and made each regiment of cavalry consist of four squadrons, and each squadron of one company. By it both a peace and a war establishment was prescribed. But in both the one and the other the number of officers and non-commissioned officers of all ranks, was to be the same.

By it also the six regiments of light-horse were reunited to the cavalry, and every regulation for them was preferred. And they were to retain the rank they then held among themselves, and with regard to the other regiments of cavalry.

The offensive arms of the cavalry are, the pikiol, the carbine, the blunderbuss, the fusil and bayonet, the sword and the sabre.

The defensive arms of the cavalry are the calotte or leather cap, the plate, and the demi-cuirass, or half cuirass.

As the Franks, before they conquered Gaul, had but very little cavalry, it is probable they employed in their armies by degrees the Gallic cavalry, which possessed much reputation, and for a long time had formed the most numerous part of the Roman cavalry. Clodius, at the battle of Tolbiac, fought at the head of his cavalry, and in 537 Theodobert carried home with him on his expedition into Italy. At the battle of Tours, in 732, we are told, that the French army consisted of 60,000 foot, and 15,000 horse, which last-mentioned body had neither boots nor defensive armour, and had no other offensive weapon than the lance or javelin.

Under Pepin, in 768, the number of their cavalry was augmented.
CAVALRY.

augmented. Under Charlemagne its number almost equalled that of their infantry. This probably was owing to the vast extent of his empire and the insurrections, that were constantly taking place in it, which required prompt and expeditious movements from one place to another. In his time the horsemen or cavaliers were armed with swords, and coats of mail made of small rings, inter-wrought or connected like links together.

Towards the end of the second race of French monarchs, and the beginning of the third, their armies were almost entirely composed of cavalry; a circumstance which arose out of the nature of their situation. Not willing to confide the defence of their country to the body of the people, who were then herd or slaves, it was left in a great measure solely to the nobility, who would not serve but on horseback. They, accordingly, formed a corps of cavalry or horse, to which the name of gendarmes was given. The gendarmes were armed with curassés, bracelets, cuisses, greaves, gauntletts, helmets, with the lance, the sword, and the hatchet. Their horses were covered with plates of iron, or with thongs of leather. The infantry were employed in going after forage, raising up the wounded gendarmes, and in performing similar services.

The cavalry, that got the name of light, was composed of the vaillants whom the señores or nobility carried along with them. They had not all the arms of the gendarmes, and did not fight in the same line with them. They were furnished with very little defensive armour; they carried the hatchet, the club, and sword, and worked nearly as hussars do.

Louis le Gros, having establisht communities, formed from that milicia, in 1018, some light horse. But there was no regular formation or establishment of cavalry in France before the time of Charles VII., who made one under the name or appellation of compagnies d'ordonnance, and one of infantry, at the same time under that of Francs-archers. Then the cavalry assumed a more regular form, and fought in squadrons; whereas, before that time they had not been accustomed to fight but in a single rank, because no one of the nobles that composed it chose to stand behind another.

The d'armes is the first corps of French cavalry next to that of the Maison du Roi, and has always been remarkably distinguished for its valour and intrepidity. Charles V. having applied to Francis I. in 1552, to lend him a number of them and the vaillantous corps of foot that followed him in repulsing the Turks by whom he was at that time hard pressed, received for answer from the French monarch to the effect of his demands, ' that he was not a banker;' and to the second, 'that his gendarmery never fought but with their king at their head.'

In 1445, Charles VII. observing the difficulties he experienced in assembling the noblesse, who then composed the French cavalry, the continual wars they were engaged in having exhausted their means of supporting the expense, and wishing, for various good reasons, to have a corps of cavalry that should be constantly engaged in his service, and which he could dispose of at all times, and on all occasions, as he might think proper, created or formed fifteen companies, to whom he gave the name of hommes d'armes d'ordonnance du Roi. These companies were composed of the bravest and most experienced men in military service then in the kingdom. Each of these companies consisted of 100 lancers, or hommes d'armes, and each homme d'armes had five followers or aids, viz., three archers, one cutler, and one page or valet. Each company then contained 600 men, all mounted on horseback; and the fifteen companies formed together a body of 9000 cavalry. This was the commencement of a standing army in Europe. That sagacious king set the example to other monarchs, and pointed out to them the most effectual method of not only counterbalancing, but also of lowering, by degrees, the exorbitant power of their nobles.

The officers of these companies were all lieutenants of the first distinction. The hommes d'armes, or matières, themselves were gentlemen, and their followers were obliged to wear the livery of the captain of the company to which they belonged. For this purpose they ornamented their coats with the colours that composed it.

This uniformity of drays in each company was established that they might be known in action, and that they were guilty of any irregularities: whence proceeded this uniformity in clothing that has been since established among troops in every nation. These companies afterwards diminished, in regard to the number of men in each, but always retained their reputation for valour. This diminution was occasioned by the establishment of a confederable body of light horse or cavalry, in which several of the gendarmes accepted of employment; to that under the reign of Henry IV. the armour cap-a-pie having been abolished, the gendarmes ceased to be distinguished from the other cavalry but by their name and prerogatives. At last under the reign of Louis XIV., at the time of the peace of the Pyrénées, all these ancient companies were reduced to the four first, of which the king chose to be captain, and to some others that belonged to the princes of the blood. These last were suppressed as the princes died. The fame king afterwards, however, augmented that corps to the number of sixteen companies, at which establishment it was continued.

The Scotch company of gendarmes du Roi was the only one that remained of the fifteen which Charles VII. established in 1445. It had the appellation of cent lances, or the hundred lances, and was unquestionably the oldest troop in the kingdom. It possessed some privileges superior to those of the Scotch body guards, though these held the first rank, and was always held in such high estimation, that, so long as it was composed of Scotchmen, it was commanded by Scotch noblemen of the first qualification, and even by several of the blood royal. The tons even of the kings chose to bear the title of captain of that company, which, of right, belonged to them, as appears from several treaties, and the example of the duke of York, afterwards king of England, under the title of James II.; who was captain of it in 1607. And it was not till after he resigned the command of it, that it was commanded by a French seigneur.

Under Henry IV. there were carabiniers, who did not form a separate corps, but were put by fitties into the companies of light horse, and had no other captains or cornets, than the captains and cornets of these companies. These carabiniers, under Louis XIII., formed regiments, and were diffused in separate corps, in the same manner as the carabiniers, who were distributed among the regiments of light cavalry, were, in the reign of Louis XIV., formed into regiments of carabiniers. Since his time the French cavalry has consisted of different bodies. Some were in companies, others in corps or regiments. The body guards of the king, the gendarmes, the light horse, the mulletiers, have been on the footing of companies, and have not formed regiments. The rest of their cavalry have been distributed in regiments commanded by colonels, and gone under the general name of light cavalry, which, however, is distinct from the compagnies des chevaux légers d'ordonnance.

The Spanish cavalry is naturally good. And were it properly disciplin'd and taught to make: the best s of its
force, there are hardly any troops that could stand its shock.

The Turks, the Tartars, the Arabs, and even the Moors themselves, or the people of the kingdoms of Fez and Morocco, have excellent horses for cavalry as well as the Spaniards. But their fabrics, though of a good temper, are not so useful or so well calculated for doing execution, as the Spanish sword, or even the swords of the Germans. Besides the advantage of good and fleet horses, they fit to front on the stirrup, that they can stand up quite straight at a full gallop, and, supporting themselves with their stirrups, can make a better stroke than those who use long ones, and at a greater distance.

The Turkish cavalry owes its origin to the Scythians, a race of people, that were always fond of making war on horseback, and transmitted that passion to the Turks.

The Sultans too tyrannized over their new subjects, after conquering them, as even to deprive them of their lands, and appropriate them to the maintenance and support, not only of the *seravatuly* infantry, and the marine, but also to that of the cavalry. At the same time they left the conquered countries divided into and distinguished by the names of kingdoms, provinces, great and small departments; and sufficed for each of these districts particular and distinct orders, touching the prompt raising of the militia and the support of the cavalry.

Their cavalry is not all on the same footing in regard to pay. It is divided into the cavalry *capacibly*, the cavalry *topably*, the cavalry *ferratuly*, and the cavalry *de tribut*.

The cavalry *capacibly* or *topably* pays no lands, but are paid by the grand sultan, and serve as a guard to his person. Their number amounts to about 15,000, one half of whom are called *fitehataris*, and are distinguished by a yellow standard or cornet, and the other half are called *fiphasis* or *fiphasis*, who are distinguished by a red cornet or standard. Originally these last served the first. But having in an engagement given astonishing proofs of valour to the flame and disgrace of these, whose servants they had been, they were formed into a separate and distinct corps. Their offensive armours confull chiefly of the fabric and the lance, which they call *mijrak*. They frequently also carry bows and arrows, and sometimes pithos and carbines. And they make use of the long dart or javelin, called *gerit*, which they handle with much address and dexterity, catching it up from the ground, when their horses are even at full speed, if they mis their aim in throwing it at the enemy. When the grand feignor takes the field in person, it is customary to make a present of 5000 aspers each *fiphas* to enable him to purchase bows and arrows.

When the *fiphas* are on a march, they follow their standard without observing any certain order, advancing in a confused manner in small bodies, sometimes in the van of their own corps, and sometimes in the rear.

Besides these two bodies of *fiphas*, there are four others, who are not called on to serve but when the urgent necessities of the state render their services absolutely necessary. The first of these are called *feg-uduf*, and carry a standard red and white; the second *fod-uduf*, and carry a standard white and yellow; the third *faz-uduf*, with a green standard, and the fourth *fod-uduf*, with a white one. All these *fiphas* receive a daily pay, from 10 to 20 aspers, and are liable to perform every kind of service.

There are likewise *fiphas* called *timarissi*, who are obliged to serve at their own expense as soon as the *beglershes* or governors of provinces command them, in consequence of the lands they possess, the revenues of which are appropriated to this service. Of these there are two kinds, the one called *reglerelis*, and the others *fischerelis*.

The *Tezkerahs* receive the grants of their *timars* from the court of the grand feignor. But the greatest revenue of one of them must not exceed 10000 aspers.

The *Tezkerah* take their letters patent from the *beglershey*; and the revenue of one of their *timars* is commonly from 3000 to 6000 aspers.

The *Chousen* also form a branch of the cavalry *capacibly*. They are people of the court as well as of war, carrying, like aides-de-camp or adjutants, the orders of the sultan, the vizier, or other general, to the officers of the army, whether these be verbal or in writing. They escort the couriers dispatched on affairs of importance, and serve themselves when it is necessary. They are always within reach of the vizier, and affect to pass for inferior *eques*. Their chief, called *Chousen-basy*, is immediately about the vizier.

The cavalry *topably* or *topably* is, properly speaking, that which the officers of the countries subject to the Ottoman empire support out of the revenues of the lands called Maly-mukata. These officers not only pay this cavalry, but also furnish them with provisions under the name of *uyjor*, which exactly signifies *theirs*.

The cavalry *ferratuly* is a militia defined to guard the frontiers. They are obliged to remain on the confines of the Ottoman empire, both to prevent incursions by the enemy and to act as escorts when wanted.

The horsemen of this corps, on the frontiers of Hungary between the Imperialists and the Turks, were the choicest and very bravest men. They are commanded by one or more officers called *alaybche*, who arrive at these commands by the valour and experience in war. They are, for the most part, natives of the environs of the frontiers, that, from their knowledge of them, they may be the more expert in guarding them against inroads or incursions. Besides the Turks they speak the Hungarian and Scelvonian languages.

The cavalry *de tribut*, or tribute cavalry, is so called from its being furnished by provinces, where the people are not only tributary to, but even slaves of the empire, as they can have no particular prince to govern them, but those only who are entirely subject, in all respects, to the will of the *porta*. The government can change them, depose them, and nominate them at pleasure. These princes are moreover obliged to appoint the sultan as their absolute sovereign, and to do homage to him as his vassals. Bessarabia, Moldavia, and Walachia, are of this number.

*Of the advantage, use, and application of cavalry.>*

In open, plain, extensive, and level countries, or in those that are intersected with deserts, there always have been, and ever must be, a considerable proportion of cavalry employed on all enterprises, and on operations, both of offence and defence, on account of their singular utility and the necessity of making use of them. They are singularly useful in protecting the wings and centre of an army; for engaging in an open plain; for furnishing detachments; for elcorts; for forming blockades; for intercepting supplies intended for places beleaguered; for foraging; for scouring a country; for procuring intelligence; for the speedy conveyance of dispatches; for heralding and fatiguing an enemy’s army; for covering a retreat; &c. &c. Cavalry, indeed, is so peculiarly useful and necessary for a great variety of operations, in countries where it can act successfully, and to advantage, that it has in all ages been held by the greatest generals in high estimation. The very successful services, which troops of this description have performed, show the vast number of decisive
CAVALRY.

effive advantages, that have been obtained by means of them, in the most important battles, of which history, ancient and modern, furnishes the details, the unanimous testimony in their favour of authors regarded as judges of military affairs, and masters in the art of war, prove beyond the possibility of contradiction, that cavalry is not only useful, but absolutely necessary in armies. The great Turenne used to say, that it was with good cavalry that one could so molest and harass an enemy's army, as to ruin it by degrees. It is, however, often attended with inconveniences to have a great number of cavalry, as you cannot take the field with a numerous body of them till there is grass or green forage for the horses. The Turks, whose military force consists greatly in cavalry, on this very account, open their campaigns later than other people, and retire from the field sooner. Besides a very great number of cavalry occasions such a prodigious consumption of forage as sometimes to compel a general to quit an advantageous camp or position contrary to his inclination, or former than he wishes, from other considerations.

It ought also to be remembered that open and level countries only are favourable for the operations of cavalry. And they cannot be maintained but at a great expense. Accordingly in mountainous countries, and flats that were small and at the same time not very fertile, rich or wealthy, there have generally been but few cavalry. The military force of Switzerland has for the most part consisted chiefly of infantry. In the flats of Greece, if we except Thessaly, a great part of which was level, rich, and fertile, their cavalry formed but an inconsiderable proportion of their forces.

The Thracians were dextrous horsemen, and carried the discipline and arms both offensive and defensive of their cavalry to great perfection. The other parts of Greece imitated them. And from the Greeks the Romans borrowed the arms and armour for their cavalry, who, as Polibius expressly informs us in his sixth book, were in his time armed exactly as those of the Greeks. His words on this subject are the following:

"The manner in which these troops (the Roman cavalry), are armed, is at this time the same as that of the Greeks. But anciently it was very different. For, firstly, they wore no armour upon their bodies; but were covered in the time of action with only an under garment. In this method they were able indeed to defend from their horses, or leap up again upon them with greater quickness and facility. But as they were almost naked, they were too much exposed to danger in all close engagements. The men also, that were left among them in former times, were in a double respect very unfit for service. First, as they were of a slender make and always trembled in the hand, it not only was extremely difficult to direct them with exactness towards the determined mark, but very frequently even before their points had reached the enemy, the greatest part of them were shaken into pieces by the bare motion of the horses. Add to this, that these spears not being armed with iron at the lower end, were formed to strike only with the point, and when they were broken by this stroke were afterwards incapable of any further use. Their buckler was made of the hide of an ox, and in form was not unlike to those globular dishes that are used in sacrifices. But this was also of too inferior a texture for defence. And as it was at first not very capable of service, it afterwards became wholly useless when the substance of it had been softened and relaxed by rain. The Romans therefore having observed these defects, soon changed their weapons for the armour of the Greeks. For the Grecian spear which is firm and stable, not only serves to make the first push or stroke with the point in just direction and with sure effect, but with the help of the hand at the opposite end, may, when turned, be employed against the enemy with equal readiness and force. In the same manner also the Grecian shields, being strong in texture and capable of being held in a fixed position, are alike serviceable both for attack and for defence. These advantages were soon perceived and the arms adopted by the cavalry. For the Romans above all other people are excellent in admitting foreign customs that are preferable to their own."

It was by using both ends of such a spear that Philopomen killed Machandas the tyrant of Sparta at the battle of Mantinea.

The fame judicious historian in his remarks on the battle of Cannae, in which the Romans left 70,000 men on the field, observes that the Carthaginians on that occasion, as well as in other battles they fought under Hannibal with the Romans, were chiefly indebted for the victory to the numbers of their cavalry; and that hence succeeding ages would be able clearly to perceive, that in time of war it is far more advantageous to have a great superiority of cavalry, with no more than half the infantry, than an army that is in all its parts equal to that of the enemy. In that action the Romans had eighty thousand foot and somewhat more than fix thousand Ufors; and the Carthaginians had somewhat more than forty thousand infantry, including the Gauls and Spaniards, and about ten thousand cavalry.

At the battle of Trebia, Hannibal had upwards of ten thousand cavalry, the Gauls included, whereas Tiberius had only about four thousand. On the other hand Hannibal had only about 20,000 infantry, whereas Tiberius had 36,000.

In the action near the Ticinus between the Roman and Carthaginian cavalry and light infantry, Hannibal had a superior number of horse. There is a circumstance, however, that ought not to be lost sight of, namely, that Polibius, in making these observations, supposes the armies to be acting in an open country or in one favourable for the operations of cavalry. For he expressly tells us, that Publius, after his defeat near the Ticinus as the country round him was all flat and open, and the Carthaginians superior in their cavalry, marched in file through the plains, repelled the Po, and then went and encamped near Placentia, a colony of the Romans. He also informs us, that at the battle of Trebia, the ground that lay between the Roman and Carthaginian camps, was a smooth and naked plain; but that the banks of the river were considerably high and covered with close shrubs and bushes, which suggested to Hannibal the idea of an ambush. We likewise learn from him, that the country where the battle of Canus was fought, was all plain and open, and that on this very account, and the superiority of the Carthaginians in cavalry, the consul Emilus thought it would be prudent to decline a general engagement till he could draw the enemy to some other ground where the infantry might bear the chief part in the action. For the same reason, the prudent and sagacious Fabius kept along the sides of the hills, observing the motions of the enemy, without advancing into the open plains. The battle of Zama, too, was fought in an open and level country. And Scipio Africanus was chiefly indebted for the victory there gained over Hannibal, which terminated the obstinate and long contended struggle between Rome and Carthage, for the sovereignty of the world, to his superiority in cavalry. It must therefore certainly be allowed, that a superior number of good cavalry is of prodigious moment in a country or in situations where it can act to advantage. But on the other hand it must also be allowed, that in a woody, mountainous, broken, aperut, and uneven country, where it cannot act to advantage, it is very little useful, and leaf of all in an enclosed country like Great Britain, which in this respect is widely different from
from the continent of Europe or indeed any other country. Any person acquainted with military manoeuvres, accustomed to reflect on them attentively, must be sensible that cavalry cannot be employed to advantage in either attacking or defending this country, and that therefore for the purposes of national defence, a very small proportion of them indeed is necessary. He must also be equally sensible, that neither the Prussian nor German tactics can be of any utility, or even be made use of in carrying on military operations in this country; and that therefore in defending it, that very constitutional, and at the same time very considerable part of our force, called the volunteers, as well as the militia, if properly employed and disposed of in the moment of invasion, should it ever arrive, will be equal, if not superior to our regular forces, particularly in their own counties. The same reasoning will extend to our numerous horse-artillery, which in most situations could, in case of invasion, be of little or no use in defending this very and singularly enclosed country, in which no operation, or even series of operations of an invading enemy can prove decisive, if we only adopt the proper mode of defence.

It was anciently the custom of the Romans to choose their cavalry as well as their infantry, and to add two hundred harquebuses to every four hundred foot. But in the time of Polybius, the citizens from whom the cavalry was taken or selected were first enrolled, having been before appointed by the censors according to the rate of their revenue. And three hundred of them were assigned to every legion, which then consisted of 4200 foot. The number of the Roman cavalry then in his time bore but a small proportion to that of their infantry, being to it in the ratio of only 3 to 12 or 1 to 7, whilst the cavalry of the allies was to their infantry in the ratio of 1 to 7.

Scipio Africanus, after taking New Carthage in Spain by storm, paid great attention to his cavalry before he took the field with them, and even introduced among them a new system of evolution, discipline, and exercise, which is described by Polybius in his tenth book, and is well deserving of the most serious attention of cavalry-officers even at this day.

The order of battle now generally adopted and practised in Europe, is to place the cavalry on the wings, and the infantry in the centre, each to be full armed or equipped by itself alone, instead of assembling them in such a manner as to make them furnish mutual support and assistance to each other. The placing of the cavalry in a line with the infantry on its flanks certainly retards the motions of the whole, as no part of the line can advance unless the whole does.

Marshal Saxe in his order of battle therefore places small bodies of cavalry, not only behind his infantry in the centre of his first and second lines, but also in the reserve, at the distance of about thirty paces; and half way between his two lines of cavalry, on the wings, battalions armed with pikes and formed into squares with large intervals between them, for the free movements of the horse and for the facility of their rallying under cover of and behind these battalions in square, if broken or repulsed. He also places transversely between his two lines of infantry and nearly in the directions of right lines joining their extremities, battalions drawn up in the usual depth to flank those in square, and to cover the flanks of his infantry.

General Lloyd being decidedly of opinion, that cavalry should never appear till the moment it is brought into action, places none of it in the wings, but the whole of it in two lines behind the infantry. This last he forms in such a manner as to leave an interval of 150 yards between every two battalions. His first line of cavalry is placed in separate squadrons at a proper distance behind his infantry, and opposite to the intervals between the battalions. And his second line of cavalry is, in like manner, placed in separate squadrons at a proper distance from and opposite to the intervals between those of the first. His flanks he covers with battalions in the rectangular form, armed with pikes, and at right angles to his line of infantry. In front of his army he has two lines of square redoubts with one angle of each towards the enemy; and in front of each of his battalions he has an enfilade, leaving however sufficient intervals for the whole to manœuvre on.

Cavan, in Geography, an inland county of the province of Ulster, Ireland, situated midway between the Atlantic ocean, and the Irish sea. The extremities of the county being but 14 miles distant from either of these waters. It is bounded on the north by the county of Fermanagh; on the north-east and south by Monaghan, on the south by Meath, Westmeath, and Longford, and on the west by Leitrim. Its greatest length from east to west is 40 Irish miles (51 English); and its greatest breadth from north to south 22 miles (28 English). Its area is 470 square miles (775 English) or 371,000 acres (483,573 acres. English mean) (of which about 50,000 may be ranked as mountain, bog, or water. The number of house in 1791 was 184,152, from which we may esteem the population at about 90,000, which is 5 to 1 house, and much less in proportion to the number of acres than that of some other northern counties. The number of parishes, according to Dr. Beaufort, is 39, of which 26 with 24 churches are in the dioce of Kilmore, 3 in the dioce of Ardagh, and one in that of Meath. It lends only the two county members to the house of commons, the boroughs of Cavan and Belturbet having lost the privilege of being represented in concert of the union. The face of the county is very irregular, being entirely hill and dale without any extent of level; in some places it is rocky, but excepting the mountains and water very little under actual water. To the north and west the prospect is bleak, dreary, and much exposed, but in the other parts, especially on the banks of the Erne, it is not well sheltered and woody, but the scenery is highly picturesque and engaging. Numerous lakes of great extent and beauty adorn the interior, and, generally speaking, the features of the country are strikingly diversified for ornamental improvements. The barriers of the county on the north and west are highly marked by Slieve-Rushehill, and the mountains of Ballynagoragh; and Bruce Hill is a striking feature in the southern extremity. The climate is cold, chilly and boisterous, but not unwholesome, and the inhabitants, benefited to it, are a hardy race, remarkable for good health and longevity. The soil is not fertile, though considerably engaged in tillage; it is chiefly a stiff brown clay, over heavy yellow argillaceous subfrusta, and produces naturally a coarse hardy failure. Wheat is very little cultivated, but there is great abundance of oats. The mountainous parts contain several minerals; in Quill mountain is a rich iron mine, and there are also found lead ore, manganese, coal, fuller's earth, pipe-clay, and other substances which may hereafter be turned to a good account. There are also some mineral waters, especially the sulphureous one at Swanling bar. See Swanling Bar.

The principal river is the Erne which crosses the county from south to north, and receives some small streams in its way to the celebrated lough of the same name in the county of Fermanagh. The lakes are numerous; some of them very extensive sheets of water, which cover several hundred acres. Many of them are dry in summer, and others considerably less than in winter, so that by proper management much land might be reclaimed, and the falls are such that a considerable supply of water might be conveyed to a canal that
that would connect Coote-hill and Cavan with Lough Erne. Such a canal, besides the conveyance of manufactures, would facilitate the carriage of lime-stone, which is much wanted for manure. The lime manufacture is carried on in this county, and the average tale of lime manufactured in it is valued at about 100,000l. The principal bleach-greens are in the neighbourhood of Coote hill, and Killeenmuhdra. The average value of land is about 17s. the acre. This county was formerly called Leoigillie, and also O’Kelly’s country, from the Irish family which possessed it. It was forfeited at the beginning of the reign of James I.; when it was divided amongst English and Scotch undertakers, forfeters, and natives. Some changes were made by Oliver Cromwell, but many of the allotments are at present possessed by the descendants of James’s letters. The afflizes are held, and other public burdens transferred at the town of Cavan. Cooe’s Stat. Acc. of Cavan, Beaumont’s Memoir, Transactions of Dublin Society, &c.

Cavan, the afflize town of the preceding county, is a poilt and market town, but has no manufacture, nor is it in any way of importance. There is an endowed school with an income of eight hundred a year in lands, set in the same manner as bishops’ lands, secured to it at the time of settling the county, and the presentation to which is with government. Until the act of union Cavan returned two members to parliament. Distance N.W. from Dublin 54Irish miles. N. lat. 54°, W. long. 7° 16′.

Cavan, a place in the county of Donegal, Ireland, near Lifford, where Mr. Maffon erected a temporary observatory by the Royal Society in 1769 for the purpose of observing the transit of Venus. From a number of observations made during a residence of near eight months, he determined the longitude of this place to be 7° 23′ W.; and the latitude to be 54° 51′ 41″ N.; and thus afforded an important datum for the construction of future maps of the county, of which Dr. Beaumont has availed himself.

CAVANA, or CABANA, in Ancient Geography, a town of Arabia Felix, according to Ptolemy.

CAVARES, or CAVART, in Ancient Geography, a people of Gallia Narbonensis, who inhabited the bank of the Rhone opposite to that occupied by the Volsci. Ptolemy assigns them the colonies of Aranzio and Cabilio, and some others. Strabo represents them as a very powerful people, who held in subjection several others. They pillaged the districts of the towns of Orange, Avignon, Cavaillon, and Carpentras.

CAVATINA, Ital. cut off. This term in Myice, when in times of Da Capo, when almost every opera song has a second strain in a different key from the first, implied a short air without a second part, is now seldom used as a section of an air, but as an entire air of short duration.

CAVATUM Sub, in the Materia Medica, a term used by some of the old Roman writers, as a name for the finest sort of fal gemma.

CAVAZATES, in Geography, a town of the island of Cuba; 130 miles E. of Havana.

CAVATION, or CAVATION, called also CAVING, in Architecture, the underdigging, or hollowing of the earth, for the foundation of a building. Pandrose lays, it ought to be the sixth part of the height of the whole building. See Foundation.

CAUB, in Geography, a town of Germany, in the pata-
tinate of the Rhine; seated on the Rhine; 10 miles S. of Coblenz, and 28 W. of Mentz.

CAUC, a river in the illiuns of Darien, which has its source in common with lsa Magdalena, in the lake Papes, near the 35th degree of S. latitude, and which falls into this latter river.

CAUCAS, in Ancient Geography, Cosa, a town of Ilithier Spain, S.W. of Ronda. Appian speaking of the treatment which this place received from Lucullus, against the faith of treaties, calls the glory which the Romans derived from it “hateful glory.” The emperor Theodosius was a native of this city. The Itineraries place it on the route of Segas. According to Appian, it seems to have been situated between the Tagus and Darius. The position of the modern Cosa is that which has been above assigned to it.

CAUCADEBE, a people of Asia, in Sarmatia, placed by Pliny near the river Lagonas.


Gen. Ch. Cal. Umbel univalve, unequal, with very few rays; umbel partial with more rays, the exterior ones larger. Involucres univalve; leaflets generally the number of the rays, undivided, lanceolate, membranous at the edge, egg-shaped, short; sometimes none. Inv. partial, with similar leaflets, longer than the rays, often five. Perianth proper, five-toothed, protruded. Cor. univalve irregular, radiate; flowers of the disc generally abortive. Cor. proper of the disc, male, small; petals five, inflamed-cordate, equal; of the ray, hermaphrodite; petals five, inflamed-cordate; unequal, outer one the largest, bifid. Stam. Filaments five, equal; anthers small. Pist. Germ oblong, scabrous, inferior; styles two, awl-shaped; stigmas two, spreading, obtuse. Peric. Fruit ovate-oblong, longitudinally finitied, in pulp with rigid bristles. Seeds two, oblong, convex on one side, flat on the other.

Eff. Ch. Leaflets of the involucres undivided. Corolla radiate; flowers of the disc male. Fruit somewhat egg-shaped, lirated, armed with rigid bristles.


Widl. 1. Gard. tab. 20, fig. 5. Linn. Illuf. Pl. 152. fig. 1. Jacob. Inv. tab. 54. (C. umbellus planis; Hal. her. 742. C. areniscus echinata magnoc flore; Bauh. pin. 152. Tourn. 253. Mor. hilt. tab. 14, fig. 3.) Echinophora flore magnio; Riv. pent. 25. E. pycnocarps; Column. Ephir. 1. p. 91. tab. 94.) “Each involucr five-leaved; one leaf double the size of the roll.” Linn. “Umbel flat; exterio petals very large; involucres of about five leaves.” Lam. Root annual. Shoot a foot high, channelled, branched. Leaves twice or three winged, finely cut, pale green, slightly villous. Umbels more than two inches in diameter, confining of from five to eight rays. Flowers white; inner ones with very small petals; outer ones with a bifid petal four or five lines long; so as to make the general umbel, but not the partial ones, appear completely radiate. Leaves of the involucrs membranous, and whitish at their edges. Lam. Seeds somewhat compressed, having four thick dorsal ribs, each of which is armed with rigid, ascending, pungent thorns placed somewhat alternately or in pairs; and between these three elevated furrows, furnished with small, short, bristle-shaped prickles, divaricated and incurved upwards. Gart. A native of corn-fields in the south of Europe, flowering in July and August. 2. C. dianthides, Linn. Mant. p. 351. Syl. nat. 2. Smith Engl. Bot. 197. Jac. Aud. tab. 137. Gard. tab. 20. (C. leptophylla; Hufl. Flor. Ang. 11 Ed. but not of Linnæus. C. parviflora; Lam. Conium Royen; Linn. Sp. Pl. 350. Echinophora
Five-leaved Ich, p. 1
A. Bauh., 1 peduncles "opposite or little thrice Linn. finely y 200. to winged; Relh. partial e partial • leaves fruit general, crepance oiks bur-parflcy. latifolium Ss.-Js Nat. custed three
1742, jular, o:ie-lta!ed
2. low, pinnated; Gtrt. flowers; th-
3. leaves of the involucre, in-
4. involucre, egg-fhaped, fhaped, or in involucre, two or three inches long; partial umbels very small, of man- or ten short rays. General and partial involucres very short, many leaved. Seeds rough with bristles terminated by a small viscid gland. A native of the Ealt. 7. C. Capefeld, Lam. 12. (C. africana, Wild. 7. Thumb. pred. 49?) "Stem very low; rough; general and partial involucres generally five-leaved; fruit globular, mucilaginous. 

"Umbel trifid; partial umbels five; leaves twice pinnatifid, hairy." Thumb. Stem two inches high, slender, angular, zig-zag, with one or two branches. "Umbels small, twice winged; segments linear, acute. Umbels terminal, of four or five rays, very rough. Flowers white, a little radiate. Fruit small, globular, befr with short points. 

La March, from a dried specimen communicated by Sonnerat. A native of the Cape of Good Hope. 9. C. leptophylla, Lam. 6. Wild. 8. Gen. Prov. 276. Hoff. gen. 97. (Echinophora tartaria leptophyllon purpurea; Col. p. 5/., tab. 95.) "Leaves three winged, very slender; umbels generally trifid, without an involucre; little umbels three-leaved, three-seeded." Lam. "General involucres almost always none; umbels bifid; partial involucres five-leaved." Wild. Root annual. Stem from eight inches to a foot high, branched, slightly angular, a little villous on its upper part. Leaves more finely cut than in any other species of the genus, triangular, thrice winged; segments short and fine. Umbels three, sometimes four and even five-rayed. Seeds large, rough with long points. La March, from a living plant. A native of the South of France. 

Dr. Smith oberves (Eng. Bot. 197) that it is not certain what plant Linnaeus originally intended by his leptophylla. 9. C. platycarpa, Lam. 7. Wild. 9. Gounin fl. mont. 285. Roth. Byrr. 1. p. 127. (C. monopeliae echinato, magno fructu, Bauh. ppn. 153. Tourn. 223. Morsh. illus. 3. tab. 14. fig. 2. Echinophora altera alpestris platycarpus, Col. Ecphr. 1. tab. 54.) "Umbel trifid; general and partial umbels three-leaved." Root annual. Si m a foot and half high, a little branched, angular, beft with a few scattered hairs. Leaves large, green, twice winged. Peduncle very long. Umbel very rare, rarely of four rays; one of the leaves of the involucre sometimes galled; partial umbels with from seven to ten flowers, of which seldom more than two are fertile. Fruit large, oval, slightly compressed; rough, with long, unequal, purplish points. 

The flowering gene-dittigmas Willd. common 14. of August. by somewhat D. licus or sterile; do sum outer stone place file, twice tiole erect,... ternate, with cream-coloured, times (harp rone. moreous li... Root Fl. almoft... Fl. Flowers larger... Fl... Fruit Flowers... Fl... Anothers violet coloured; styles divaricate, reflexed. Fruit egg-shaped, larger than that of the preced- ing species, armed with incurved bristles, violet at the tip. A native of England, and other parts of Europe, in hedges and waste places; flowering in July. 12. C. japonica, Wild. 12. "Involucres many-leaved: feeds egg-shaped; leaves twice compound; leaflets wedge-shaped, pinnatifid; item hairy. A native of Japan. 13. C. kibipanica, Lam. 11. Hebr. Infrad. & Vaill. MSS. "Umbels compound, fefile, lateral; leaves thrice-winged, finely divided, whorled at the flower bearing knots." Stem scarcely a foot high. Leaves petioloed, three together in a whorl, occupying the place of the general involucre. Umbels generally of five rays, two of which are so short that the partial umbels appear fefile; partial involucres two or three, generally simple, but sometimes resembling the leaves of the plant. 14. C. nudo- fa, Mart. 9. Wild. 13. Rai. lyn. 220. Hudfi. Fl. Ang. 114. Eng. Bot. tab. 199. (C. nolidora, Lam. 3. Tordylium nodolum; Linn. Sp. Pl. Jacq. Ault. app. tab. 24.) Knotted flax or baffard parfley. "Umbels lateral, simple, nearly fefile; items prolate." Rose annual, small. Stems branch- ed, leafy, fruticat, roughfih with reflexed hairs. Leaves somewhat glaucous, twice-winged; pinnules pinnatifid and gatthed. Umbel opposite the leaves, solitary. Flowers white, or reddifh, small, clustered, on short peduncles, surrounded by the linear hairy leaflets of the involucre. Seeds small; outer ones mucicrated with length,aight, rough, rigid hairs; inner ones rough with warly points. Whither the latter are abortive has not yet been determined. Dr. Smith. A native of England and the south of Europe on the bor- ders of corn fields, and on banks; flowering from May to August. Caucausus, in Ancient Geography, the name of the highest and most extensive range of mountains in the northern part of Asia; and which the ancients erroneously con- sidered as a mountain Taurus. See Tauros. According to Strabo (tom. ii. p. 762) this mountain ex- tended from the Euxine to the Caipian sea, including, as within a wall, the ilithmus that separated thefe seas. It divided Albania and Iberia towards the fouth from the level country of the Sarmatians on the north; and abounded with various kinds of trees, some of which were used in the construction of ships. According to Herodotus (lib. i. and III.) it commenced above the territory of Colchis, and bounded the northern part of the Caipian sea. Procopus says, that the eastern limit of this mountain had two defiles, one of which was called the "Caipian way," and the other the "Cau- cian way." Thefe defiles served as a paffage to the Huns when they invaded the territories of the Periains and Romans. Piny says, that Seleucus Nicator had formed a project of joining the Euxine and Caipian fears by a wall; and it is also said that Antiochus Soter or Antiochus Thesus executed Nicator's project. This wall fink into ruin after the fall of the Selcuces. Herodotus mentions the two paffages in this mountain; and he fays that the Scythians and Cimmerians made ufe of them in their incursions into Upper and Minor Asia. They are also mentioned by Pliny, Tacitus, and Lucan. The ancient mythologists report that Prometheus was bound on this mountain for having flen fire from heaven, and that Hercules came hither to release him; and it is reported by some historians, among whom is Strabo, that the river of this mountain brought down gold sand, which was collected in sheep-skins. The inhabitants of this mountain region were very numerous, and formed, as some fay, 70, and according to others 300, different na- tions, who fpoke various languages, and subdivided upon the flith of wild beafs, fruit, and milk, having, on account of their uncultivated and savage manners, no intercourse with one another. The appellation of Caucausus is fuppofed to have been transmitted to the Greeks by their intercourse with the Periains, in whole language ca-ton cob signifies a mountain; whence, it is said, was formed Cob-car, or the mountain of the Chafas, an ancient and formidable tribe, who inhabited this immense range from the caipian limits of India, to the confines of Peria, and probably as far as the Euxine and Mediterranean fia. Captain Willford informs us (Atalic Refferuces, vol. vi. p. 455) that the Chafas are often men- tioned in the sacred books of the Hindus. Their defendants still inhabit the fame regions, and are called to this day by the fame name. They belonged to the clans of warriors, but they are now confidered as the lowest of the four classes; having been thus degraded, according to the initiates of Memn, by their omifion of the holy rites, and by feeing no Brahmins. Il- dorus (Orig. i. 14. c. 28.) fays, that Caucausus, in the caipian languages, signifies white; and that a mountain close to it is called Caffs by the Scythians, in which language it signifies snow and whites.
The Caucasian mountains have been well described by Russian travelers. They present a range from the mouth of the river Cuban to the north-west to the estuary of the river Kur, or the Caspian sea, to the south-east. A chain probably extends from Caucasian south-west to the vicinity of the bay of Scanderoon. This range seems to have been the Araratian of antiquity, various portions of which have been known by different names. At the other extremity of the Caucasus either branch out into Persia, which they pervade from north-west to south-east, but terminating in the deserts of the south-eastern part of Persia, or, at least, imperfectly connected with the mountains of Timbers-Kh., that it would be difficult to trace any continuous line. Much less can they be regarded as an extension of Mount Taurus, which terminates at the Tauric Passes and deserts of Albania. The Caucasian mountains, as far as they have yet been explored on the Russian side, are an alpine range, extending between the Euxine and the Caspian, from west to east, about 500 miles in length, about 35 English miles, and towards the north and south in a country 5 miles in breadth, at the greatest elevation of the chain, which is covered with perpetual ice. Its breadth on the northern declivity extends about 52 miles, and runs along the prodigious height of the chain, which, taken in the quadrature, measure, one thousand English miles; being bounded on the east by the Sinuera, and on the west by the Valakan mountains. The Marshol von Ruffia, who remained in these regions a considerable time, and took pains in investigating them, states the extent of the Caucasus, in length, from its western extreme at Ghowat to Targirn, 52 German miles, and in breadth, on the side adjoining the Caspian sea, 53 miles in the middle, (where the river Terek to the north and Arakhal to the south form a division between the caucasian and western half); and in the western part, along the Porta Cumana, a celebrated narrow part, 350 miles. The key ridges of the Caucasus, as well as the others, at their highest points, consist mainly of granite; the sides leaning towards the next mountains, of all kinds of slate, and the outward sides of lime-stone, &c. The alpine chain, formed by the highest sides, covered with snow, or ice, and exhibiting, in some open situations, bold rock without vegetation, or trees, seemed to Goldbladt not more than from 5 to 7 miles in breadth. The two sides which compose the main mountain, measured from north to north, or right across, on an average, more than 70 miles; and the north side is visibly finer or higher, than the heaths, as it declines in a far narrower or smaller breadth, or rather only by the side towards one part. The lime-stone mountains run in a flat clayey field of 20 miles breadth, gradually declinings till it ends in a precipitous side of 2 miles breadth, which consists almost wholly of the same rocks; this again runs out in a steep plan about 3 miles broad, in which numerous fountains arise. In this part common flat and narrow caves exist; and in the provinces of the river Baksan, we have seen volcanic springs, some in the mountains, some in the plains. The latter are caused by earthquakes, and are very hot. Specimens of coal and copper are occasionally found in the mountains but more frequently in the plains, at the foot of the mountains.
Caucasus, in Ancient Geography, a part of the island of Chios, mentioned by Herodotus; pp. c. 37.

Caucasus, province of, in Geography, one of the governments of Russia, in the southern region, comprises the Cuban, and all that district to the east and south now in the possession of Russia, between the rivers Don and Cuban, and between the Capan and Euxine, extending as far as the confines of Georgia, and continually augmented by the inroads and subjugation of the wandering hordes of mountanous Caucasus. By the treaty concluded between Catherine II. of Russia and the Ottoman Porte, June 21, 1782, authenticated by the seal of government, Jan. 5th, 1784, the provinces of the Crimea and the Cuban, to the empire gave the ancient names of Taurid and Caucasus, were annexed to the Russian dominions.

Caucabhene, in Ancient Geography, a people of Arabia Deserta, according to Ptolomy.

Caucumilli, in Geography, a small island belonging to the Turks, in the Mediterranean; 20 miles S.W. of Stanchio. N. lat. 36° 32'. E. long. 26° 26'.

Cauci, in Ancient Geography. See Cauchi. An ancient people of Ireland under this denomination, according to Ptolomy, are supposed by Camden to have inhabited the present county of Wicklow; and they are said by Mr. Ledwich to have come, with the Menapi, direct from Germany to Ireland.

Cauchi Nummi, a base sort of coin, current under the lower empire; thus called because concane, like a little cup, from the barbarous Latin, caesus, a cup. Halander and Murerius are mistaken in saying this coin was so called from having the figure of a cup on it. Du-Cange. The cauci are the name with what are popularly called among the Irishians, medallia de S. Eoinus, sometimes superstitiously worn by the women.

Caucoliberum, in Ancient Geography, a name given about the 7th century to a town of Gaul, now Collioure.

Caucun, in Botany, a name used by Pliny, and some other authors, for the equislinum, or horse-tail.

Caucun, in Ancient Geography, a river of Greece in the Peloponnæus, which fell by Dyme, and discharged itself into the Themus, according to Strabo. Alto, a maritime place of Sicily, 250 Itid from Syracuse; called Caura by Ptolomy.

Caucones, an ancient people of Paphlogonia, who inhabited the coast of the Euxine Sea from the Marianides to the river Parthenius, according to Strabo; but in other times this space was occupied in Bithynia. Some authors pretend that they were driven from Arcadia together with the Pelasgi, and that they had been wanderers like them. Others say, that they were Scythians; and others say, that they were Macedonians. One part of this nation settled in Greece near Dyme, in the district of Depradum and the Lower Elide. Another part occupied the territory of the Lepeantes and Cyparisians, and the town of Macta in Tithynia. Herodotus speaks of these lads (lib. i. c. 145) and gives them the name of Pylilites to distinguish them from those of the Lower Elide near Imya. Homer mentions the Caucones; who were Paphlogonians, and who came to the succour of Troy.

Caucus, in Ichthyology, a species of carp about eighteen inches in length, that inhabits the fresh waters of Chili. Moison describes it in his natural history of that country, as having thirteen rays in the anal fin; the body tuberous, and slightly tinged with silver. See Cypriaus Caucus.

Cauda, in a general sense. See Tail.

Cauda is sometimes also used in Anatomy to denote the EITORS.

Cauda Boris, in Ancient Geography, a promontory of the island of Cyprus, called by Ptolomy, and placed by M. d'Avzile at Boos Ura to the north west.

Cauda Carpiorni, in Aeronomy, a fixed star of the fourth magnitude, in the tail of Cepheus, called also by the Arabs, Duce Algeid; marked by Bayer.

Cauda Carl, a fixed star of the third magnitude; called also by the Arabs, Duce Kattos; marked by Bayer.

Cauda Cygni, a fixed star of the second magnitude, in the Swan's tail; called by the Arabs, Duce Addër, or Al-Ciigiyd, marked by Bayer.

Cauda Delphica, a fixed star of the third magnitude, in the tail of the Dolphin; marked by Bayer.

Cauda Draconis, the Dragon's tail, the name of the moon's southern or descending node.

Cauda Equina, in Anatomy, a name applied to that portion of the medulla spinalis, which is contained in the lumbar vertebrae, and the canal of the sacrlium. For a description of this, with the rest of the spinal marrow, see Brain.

Cauda Equina also denotes a medicinal herb, whose leaves are reputed to have a strengthening virtue. This, in English, is called the horse-tail. The official kind is more particularly called by botanists equisium major, in English, the great marsh-horse-tail.

Cauda Leonis, in Aeronomy, a fixed star of the first magnitude in the Lion's tail; called also by the Arabs, Duce Eldëd, and marked by Bayer. It is called also Lucinda Gouda.

Cauda Urae Majoris, a fixed star of the third magnitude,
in the extreme part of the tail of the Great Bear; called also by the Arabs, Alistab and Benenade, and marked a by Bayer.

CAUDA Ufæ Minoris, a fixed star of the third magnitude, in the extreme part of the tail of the Lesser Bear; called also the polar star, and by the Arabs, Alwadah, marked a by Bayer.

CAUDAMATRIS, in Geography, a town of the island of Ceylon; 64 miles N.W. of Candy.

CAUDAR, a river of Spain, which runs into the Xucar a little above Cuencia.

CAUDATUM, in Counceology, a species of Bucinum with an ovate shell surrounded with roundish ribs; the beaks a little prominent. Knorr, &c.

This shell is fusiform, umbilicated, with a large aperture, the lip of which is plaited and toothed within; spire with fix short inflated whorls. The length is three fourths of an inch; very thin, of a flavous colour, brownish in the ribs, with five horizontal lines in the whorls of the spire.

CAUDATUS, Lat. in Music, a musical note with a tail to it; as a minuet to distinguish it from a minuette, which is round. In the early period of counterpoint, a tail added to a note made it of double its natural length; as a tail to a breve made it a long  \( \text{\textcopyright} \). See the ancient time table.

CAUDABEC, in Geography, a town of France, in the department of the Lower Seine, and chief place of a canton in the district of Yver in the Seine, surrounded with walls, flanked with towers; a town, though not large, populous and commercial; 5 leagues W. of Rouen, and 8 E. of Havre. The place contains 2500 and the canton 15,674 inhabitants; the territory comprehends 210 kilometres and 18 commons. N. lat. 49° 33'. E. long. 0° 37'.

CAUDABEC, in Manufacture and Commerce, a fort of hats, thus called from the town of Caudabec above mentioned, where they manufacture a great number of them. They are made of lamb's wool, of the hair or down of ostriches, or of camel's hair.

CAUDEC, in Ornithology, the name given by Buffon in his natural history of birds to the Gmelinian mystacica caudex, and yellow crowned fly-catcher of Latham. Buffon in another work, Pl. enl., called it gobemouché tachete de Cayenne.

CAUDECOSTE, in Geography, a town of France, in the department of the Lot and Garonne, and district of Agen; 14 leagues S.E. of Agen.

CAUDEL CENSIS, in Ancient Geography, a people of Gallia Narbonensia, 8 of the Vingetian. They were the ancient inhabitants of Caducet, where has been found an inscription that adorned the front of a small temple or Frichetum, built near the place and dedicated to the goddess Desiva. Many medals of silver, and other curiosities, have been dug up at the same place.

CAUDEX. in Botany, is considered by Linnaeus as one part of the root of plants, of which the radicle is the other. It is divided by him into the caudex defensum, and the caudex ascenden. The caudex descendens is the black or main body of the root, gradually flinking downwards into the ground, and producing the radicles which extract the nourishment from the earth, and are the only essential part of the root; for annual plants have root frequently no defending caudex. The caudex ascenden is a continuation of the same, which gradually rising above the ground, and producing the proper herb of the plant, or the branches and leaves with their various appendages. There are many plants, both annual and biennial, in which it is not found.

In trees it is usually placed in the trunk in lumps the calix or flem; and as it has never been admitted into the popular idea of a root, it is nearly fallen into disuse. Indeed it was never much employed by Linnaeus himself in his practical works.

CAUDEX, in Gardening, a term, which, by some early writers on vegetation, signifies the item or trunk of a tree; but according to the later ones the floc or body of the root, part of which ascends and part descends. It has been observed by Mr. Darwin on the authority of Linnaeus, that the part which joins together the plumula, or leaf, and the radicle, or root-fibres, is called the caudex, when applied to entire plants; and may, therefore, be termed caudex generalis, when applied to buds. In herbaceous plants, the caudex is generally a broad, flat, circular plate, from the which the leaf-leaf ascends into the air, and the radicles or root-fibres descend into the earth. Thus the caudex of a plant of wheat lies between the stem and the radicles, at the base of the lowermost leaf, and occasionally produces new leaves and new radicles from its sides. Thus the caudex of the tulip lies beneath the principal bulb, and generates new smaller bulbs in the holom of each bulb-leaf; besides one principal or central bulb; the caudex of orchis, and of some ranunculacees lies above their bulbous roots; whereas the caudices of the buds of trees constitute the longitudinal filaments of the bark, reaching from the plumula or apex of the bud on the branch to the base of it, or to root-fibres under the soil. Nor, continues he, is this elongation of the caudices of the buds of trees unanalogous to what happens to some herbaceous plants; as in wheat, where the grain is buried two or three inches beneath the soil, an elongation of the caudex occurs almost up to the surface, where another set of fibrous roots is protruded, and the upright stem commences. The same happens to tulip-roots when planted too deep in the earth, as he has witnessed, and, as he supposes, to those of many other vegetables.

He is also of opinion, that the caudex of the buds of trees not only ascends and, as above described, but also ascends from each bud to that above it; as on the long shoots of vines, willows, and briers, in this respect resembling the wires of strawberries and other creeping plants. Thus the caudex of perennial herbaceous plants consists of a broad plate, buried beneath the soil to protect it from the frosts; while the caudex of buds of trees consists of a long vascular cord, extending from the bud on the branch to the radicle beneath the earth, and endures the winter frosts without injury. The long caudices of the individual buds of trees, which constitute their bark, are, he says, well seen in the cloth made from the mulberry bark brought from Otaheite. On inspecting this cloth the long fibres are seen in some places to adhere, where it is probable they occasionally inarticulate, like some of the vessels in animal bodies; because, when some buds are cut off, the neighbouring ones flourish with greater vigour, being supplied with more of the nutritious juice. This informs us, he says, why the upper bark of a tree grows downwards with so much greater expedition than the under one grows upwards to meet it; as the descending caudices of the individual buds are supplied directly with nutrient from the vegetable arteries, after the oxygenation of the blood (fleshy) in the branches; whereas the upper lines of the wound is nourished only by the lateral or intercostal vessels; which, he thinks, propinque us with an argument against the individuality of trees, and in favour of that of buds. See Bud.

CAUDI-CAROLINÆ, in Ancient Geography, a place of Italy, mentioned by Herodotus.
CAUDIES, in Geography, a town of France, in the department of the Eail Pyrenees, and district of Perpignan; 9 leagues N.W. of Perpignan.

CAUDIMANE, in Zoology. Some French naturalists discriminate by this name those animals which have the tail flexible, molinate, and prehensile, such as the Sapajou tribe of monkeys, &c.

CAUNO, in Natural History, or curculio, in Ancient Geography, a defile by which the Romans, after a defeat, were obliged to pass from Campania into Samnium, in 437, and where they preferred their lives under the humiliating condition of paffing under the jugum or yoke.

CAUDISONA Piperta, in Zoology, a name by which authors call the Rattle Snake.

CAUDIVERBERA Peruviana, the name given by Laurenti to the Greenlandic LACERTA CAUDIVERBERA, which see.

CAUDIVERBERA Egyptian, L. Aur., is variety β of the same species.

CAUDEA, in Ancient Geography, a small town of Italy, in Samnium, belonging to the Hirpini, on the route from Capua to Benevento. 

CAUDO, an island of the Mediterranean, in the neighbourhood of that of Crete. Suidas.

CAUDROT, in Geography, a town of France, in the department of the Gironde, and district of La Roche, seated on the Garonne; 3 miles W. of La Roche.

CAVE, a subterraneous hollow place of a certain extent. Some authors distinguish between a cave and a cavern, making the frill the effect of art, and the latter of nature. Caves were doubtless the primitive habitations; before men brought themselves to erect edifices above ground, they took shelter under it. The primitive manner of burial, was also to repulse bodies in caves, which appears to have been the origin of the catacombs. Phil. Trans. No. 244, p. 244.

Badsminton cave, in Wilts, consists of a series or row of uniform holes, wherein pieces of armour are said to have been found, whence they are by many supposed to have been tombs of ancient warriors.

Caves long continued the proper habitations of shepherds. Among the Romans, caves, etna, used to be consecrated to the nymphs, who were worshipped in caves, as other gods in the temples.

The Persians also worshipped their god Mithras in a natural cave, consecrated for the purpose by Zoroaster.

Kircher, after Gassendi, enumerates divers species of caves, divine, human, brutal, natural, and artificial.

Of natural caves, some are pellucid of a medicinal virtue, as the Grotto di Serpente; others are poisonous or medicinal; others are repulsive to metallic exhalations, and others with waters.

Divers oracular caves occur among the ancients, the fumes of which intoxicated the head, and produced a sort of boundless or madness, which was interpreted inspiration, prophecy, and divination. Such were the sacred caverns at Delphi, which inspired the Pythia. Such also was the Sybil's cave at Cumae in Campania, still shown near the lake Avenus: though Porcellius takes it this to be of modern date, and not the true Astrum Sybillae, so finely described by Virgil. Homer likewise gives a description of Antipates, the Cave of the Nymphs, on which Porphyry has a treatise still extant, containing many of the secrets of the heathen theology, both natural and symbolical. Virgil. Æn. lib. vi. Hom. Odys. lib. xiii.

The cave of the nymph Egeria, where Numa held nightly conversations with that deity, is still shown at Rome.

The cave of Trophonius, originally the mansion of that celebrated Bocotian, became afterwards famous for the oracle which Apollo delivered in it. Paulus, who visited it, gives a large description of the ceremonies observed by those who entered the cave to consult that god. Vide Potter Arch. lib. ii. cap. 10. p. 290, &c.

Cave, in Agriculture, is a term provincially employed to signify the raking off any coarse material, such as the short straw and ears of grain, from the corn in chaff on the barn-floor during the time of threshing, &c.

Cave, CAVEY, or COLT, is a term used for earth that sinks down from the banks of canals, &c.

CAVE, dead, live, in Mining. See Live cave.

CAVE-Hill, in Geography, one of the hills in the county of Antrim, Ireland, near the town of Belfast. It is found to be 1193 feet high.

CAVEA, the place in the ancient theatres where the spectators were seated. The cavea, called by the Greeks κάτοικοι, flowers concentrically arranged from the scene, σκηνή, which was the place for the actors. The cavea was divided by partitions into three equal parts, rising one over another: μεσονέα, app. int. for the people of quality, and magistrates; the middlemost, μέσον κατώ, for the community; and the uppermost, μόρφωτα, for the women.

As the theatres were open at top, porticoes were erected behind the cavea, where the audience might retire for shelter in case of rain.

CAVEA also denoted the middle part in amphitheatres, otherwise called ARENA.

CAVEA was also used for the cage or den of a wild beast, kept for the amphitheatres. See CAGE.

CAVEAR, CAVIAR, or KAVIAR, a kind of food or pickle, in great use, and reputed throughout Russia: and also introduced upon the English table.

It is formed from the Italian cavare, or barbarous Greek καταρρεύω, which signifies the same.

The cavear or caviar, called by the Russians ikra, is an article of great importance in its reference to the industry and commerce, as well as to the palates of the Russians, who derive great advantages from it, not merely as an article of trade, but also of diet, particularly during the three lents which they observe with great strictness. It is prepared in the parts about the Volga, the Ural, and the Caspian, of the roes of flurges, ilerets, fevugas, and fritinas. The lump of roe is the first thing taken out after cutting up the fish. A large beluga will yield above 5 pounds of roe; but this, on account of the quantity of viscus matter that is mixed with it, is not much esteemed. From a flurgeon never more than 30 pounds has been taken, and from the fevuga only 10 or 12. As of the beluga roe five eggs weigh a grain, so a large beluga has 6 or 7 millions of eggs. The different treatment of the roe determines the different quality of the caviar. The word fort is the common "profiled caviar," "paynsnaia ikra." In the preparation of this the roes are cleaned from the coarsest string and fibres, then salted with about two pounds of salt to the pound, and spread out upon mats in the sun to dry, which in fair weather requires about six hours, and in cloudy weather, at most, a day. It is afterwards trodden with the feet, the person who treats it having leatheren stockings. It is then put into tubs. To make this fort for sale, it is common to take the spoiled roes of dead fish thrown upon the shore, or such as are too greedy for other forts, and even the fragments and offals that would not pass through the sieve of the finer kind, felt it in boxes, and then tread it down in tight tubs. Such caviar colls in Astrakan half a ruble per pound. A better fort is that called the "grained or scafouded caviar," "Serulaia ikra," but this is too salt to suit every palate. When the roe is cleaned from the coarser particles, it is shaken into large troughs, salted with 8 or 10 pounds to the
CAV

polish, well welling it over and over, well mixed. It is
now ready for the finest or flecked net-work, through
which are drawn and orderly completely to separate the re-
mainder of the paint, thus, like the former, it is prefixed in
wedges of three, two and one rubles; and used for the hand of the common people during
the present day, is known by the religion of the country;
but it is not fit for every sort of picture. The clearness and
color of the painting, so called, is the style of a manner, to appear...;
and almost entirely of the edges of the tarsus, and does not easily be
collected if it is dominated from its preparation "mife-
of-in our."

After being cleaned, it is dipped in soot
burnt, till the grains re quire it. It is then hung up in long,
swallow pointed bags, of strong linen, resembling jelly bags,
which are half filled. About half a pound each, as thick
rows, and filled to the top by pouring in the brine. When
the branches are dried through, the bags, hanging on waxed
poles, are powerfully wrung with the hands, so after water
the material is wholly discharged, and now the ross
are worked to dry for 16 or 12 hours in the sun. These are
then packed in small canvas or tubs, and trampled down by a laborer
in leather stockings. This first requires the rice to be quite
fresh, and is the duxial, casso two rubles per paid, and
upwards. In winter the rice is dried, and mixed with
a great dainty. In general, the tvanced and cursed is in
the least that: a bit of cotton it will keep the nets
time.
Winter in large quantities or in cold weather are far
from the Volga to all parts. The method here used
fatting the rice is by pigging them. After being well cleaned.
and laden into casks, with a number of holes in the let
within which they are let to drain, and its laid at top,
or are made up in linen bags, till press in cold, with
fish-fur past over the surface, in order to keep it as much
as possible from corruption. The caviar is prepared in a
manner, in the other parts of the empire, where there have
left proper for the purpose. Among these are the red
the white salmon and the pike, from the roses of which
a reddish kind of caviar, "khrustaia iska."

They have been Fresco
CAV

in Caves', a long measure used in Portug.
and equal to 27:1 English inches.
CAVENDON, James, in Biography, an historical
writer, was born at Calliac near Medelin, in 1582, and
educated in the Academy of the Caracci, where he learned
design, attending also frequently the schools of Rubens
and Fontainot, to fill dy after the model. In order to acquire a
proper knowledge of painting, he went to Venice, and atten-
tively examined the pictures of Titian; and so that upon his
return to his own country, his performance was much
admired; and adjudged to posses an agreeable mixture of the
colors of the Caracci with the talent of Titian. For some time
in Bologna, the works of Cavendone were esteemed equal to
the masterpieces of Amedel. His talent was strong
and new, and the taste of his composing was natural and
beautiful; but at three different periods of his life, his
painter is said to have had three different manners: his
first excellent, his second colder, and his last treble
and very bold; which degradation has been ascried to the
effect of poverty, fortune, and bodily injury, and the
natural effect of age. In the church of St. Salvator, at
Bologna, there are several very capital performances of
Cavendone; but one of his best performances in the dean
of the Mendicants at Bologna, in which he represents
Petrus Rus and another saint on their knees, in the lower part
of the picture, and the Virgin and child in the clouds
attended by angels. This picture died in 1600, aged
53.
CAVENDON, or rather CAVE D; thus they call it:
Amsterdam, what we and the French style a lot of merchan-
dize.
CAVENDISH, or Candle, Thomas, in Biography, an eminent
painter and naval adventurer in the reign of
Elizabeth, was the son of William Cavendish, Esq.,
of Trinimel St. Martin, in Suffolk, where he was born,
and whose estate he inherited. But having confirmed
his property by early extravagance in his attendance on
the court, he determined to retrieve his losses by a
predatory voyage against the settlements of the Spaniards.
The fleet which he fitted out for this purpose con-
formed only of three vessels of 120, 60, and 40 tons,
manned with 125 persons of various qualities. Having
equipped this small squadron for a voyage of two years, be
CAV
He took the command, and sailed from Plymouth July 27, 1536. On reaching at Sierra Leona in Africa, he stretched over to the coast of South America, and ran along it as far as the mouth of thetraits of Magellan. Here he
found, at a place named by him Port Famin, the wreathed remains of a Spanish colony which had two years be-
fore been dispatched in order to form a settlement in that inhospitable climate. Having reached the South Sea, he
directed his course northwards, and notwithstanding various encounters with the Spaniards, which gave him an op-
portunity of displaying with his small number of men very dif-
tinguished valor, he succeeded in burning Paita, Aca-
pulco, and some other settlements, in taking and destroying
several ships, and ravaging the coasts of Chili, Peru, and
New Spain. At length, being off California in November
1578, he performed the extraordinary exploit of capturing,
with a force much reduced, the Spanish admiral's ship of
700 tons, well manned and richly laden.Resolved on com-
ing home with his bounty, he crossed the South Sea with
one of his two small vessels, the other being destroyed, to
the Ladrones in 45 days. Thence proceeding through the
Indian Archipelago, he paffed the straits of Java, and
having touched at the cape of Good Hope, arrived at
Plymouth, after having circumnavigated the globe in 2
years, 1 month, and 10 days, the shortest period in which
it had then been effected. In 1591, he planned an-
other expedition, and set sail August 21st with three sail-
tips, and two boats, suitably equipped. This adventure
was attended with various difficulties, which disconcerted
and defeated his projects; so that, his principal success was
the capture of the town of Santos in Brazil. With part of
his squadron, he entered the straits of Magellan in April,
1592; and being forced by the inaccessibility of the fafond to a
small bay, his men endured many hardships from the severity
of the cold, and want of provisions. Having lost many of
his crew, he relinquished his purpose of traversing the South
Sea, and proposed to proceed to China by the Cape of
Good Hope; but first returning to the coast of Brazil, he
suffered many losses by some rash attempts to plunder
ports which were prepared to resist him; and defeat-
ed by several of his men, and controlled in his schemes
by the mutiny of others, he was prevented from accomplish-
ing his purpose of returning to the straits of Magellan, and
returning to the South Sea. Sickness and gun-shot at length
terminated his life, probably whilst he was at sea in his way
to England. "From the relations we have of this naviga-
tor, he seems to have paffed great perfections, with a
true enterprising spirit, but not sufficiently under the control
CAVENDISH, William, duke of Newcastle, a distin-
guished leader of the king's party in the civil wars of Charles
I. He was the son of Sir Charles Cavendish, younger brother of
the first earl of Devonshire. He was born in 1572, and
educated by his father, who directed his attention to that
polite and solid literature, which in that age was thought a
proper accomplishment to high birth and rank. James I.
made him, when very young, a knight of the bath, and
when the death of his father devolved upon him a large
estate, he was raised in 1600, to the peerage, by the title of
baron Ogles, and viscount Mansfield. By Charles I.,
who honoured him with his favour, he was advanced to the high-
er title of earl of Newcastle-upon-Tyne. His attendance at
court insured him in expence beyond his income; but he
received some remuneration by the honourable trust, confi-
ed to him in 1638, of the tutelage of the prince of Wales,
and after onward Charles II. Some court intrigues induced him
to resign the honour in 1642. His attachment to the royal
cause, however, was unabated; and on the approach of
open hostilities between the crown and parliament, he offered
his services for securing the important poit and town of Heli,
which were then thought untenable. In 1643 he took
upon himself, in consequence of the king's order, the care
of the town of Newcastle and the four adjacent counties; and
was soon after invested with a commission, constituting him
general of all his majesty's forces raised north of Trent,
which, with very ample powers. With great abilities and expence
supplied by his private fortune, he trained a colossal ar
my, with which, for the time, he maintained the im-
portance of the king's cause in the north. In military matters
he chiefly depended upon the professional skill of lieutenant-
generals, some of Scots office of merit, while he himself
inclined to the country pleasures and literary society to
which he was attached. In believing circumstances he was
charged with a blamable provocation, and his appointment
of Sir W. Davenant, the poet, to the post of lieutenant-
general of the ordnance, redounded more to his honour as a
patron of literature than as a soldier. One of his most splen-
did actions was a complete victory obtained over Ferdinando
lord Fairfax on Adderton-hill near Bradford, which, how-
ever, he is said not to have improved to the best advantage.
On the advance of the Scots army into England, and its
junction with those of Fairfax and Manchester, the marquis
of Newcastle, for that was the rank to which he had been
promoted, threw himself into York, which was soon invested
by the three armies. After a siege of three months, he was
relieved by prince Rupert; but this prince resuming upon en-
gaging the enemy, and pending the king's positive orders for
the pursuit, the marquis opposed his intention; and the fatal
battle of Marston Moor, fought July 16, 1644, began with-
out his being previously apprized of it. Nevertheless he
took part in it with his usual valour, and his infantry was
almost totally destroyed. Mortified by this defeat, and de-
spairing of the royal cause, he took shipping at Scarborough,
and immediately left the kingdom, to which he did not re-
turn till the restoration. Antwerp was the place of his re-
sidence, where he suffered with equanimity and resignation
much pecuniary distress; though he was treated with great
respect by the government of the country, and was fre-
quently visited by the king. After an absence of 18
years, he returned with his royal master, who, in 1664,
conferred upon him the dignity of a dukedom. From this
time he lived for the most part in retirement, prosecuting his
favourite studies and endeavouring to repair his shattered
fortunes. He died December the 5th, 1667, in his 54th year,
and was buried together with his duchess, in Westminster
Abbey, where a very sumptuous monument is erected to
their memories. He left one son, in whom the title of New-
castle, in the Cavendish family, became extinct. His daugh-
ters formed connections by marriage with some of the
principal families of the kingdom. The duke of Newcastle
ranks among the noble authors of this country. His great
work is a book of topography, first printed at Antwerp in 1638;
and afterwards in a revised different form, in English, Lond., 1667, 4to. This has been reprinted, and it has been much commended by the judges of that art, and has been restored principally visible by the
five figures of Drayton. — 4to. He made frequent com-
modities, applauded at the time, and that exact text has
dence links into oblivion. — Biog. Brit.
CAVENDISH, MARGARET, the eldest of Newcastle, wife of
the preceding, was the daughter of Sir Charles Lascelles of
Lascelles, and to her time much esteemed for her beauty.
Distinguishing herself under the reign of her nephew by her
attachment to Italy, and visiting Oxford, where the court
lived.
faded, in 1643, she was appointed one of the maids of honour to queen Henrietta Maria. She accompanied her majesty to France, and at Paris first saw the marquis of Newcastle, then a widower, who married her in 1645. With him she lived in retirement during his exile; endearing herself to him by the charms of her conversation and the productions of her pen. Upon his reinstatement in his fortunes and honours, she principally devoted herself to the composition of plays, poems, letters, philosophical discourses, orations, &c. in which she became a very voluminous writer; her works at length amounting to 13 folios, 10 of which are in print.

She was more distinguished by her disposition to commit to paper any thoughts that occurred to her, however rude or trivial, than by her taste and judgment. So important in her own estimation were these thoughts, that she kept within a call a number of young ladies, who rote at any hour in the night when she summoned them, in order to pen down her meditations, lest she should forget them before morning. She seldom bethought the trouble of revising on her works, "left," as she said, "it should disturb her following conceptions." From the mercenary pedants of the age this folly obtained the most extravagant applause; and both at Oxford and Cambridge the poetry and philosophy of the duchess of Newcastle were applauded with boundless admiration. Her writings have long since been confounded to oblivion, and scarcely a fragment of them is fought after by the English scholar, except a few lines descriptive of melancholy, quoted in the Connoisseur, No. 69, and praised beyond their defect. The duchess had derived much greater honour from her first attention to domestic duties than from her writings. She died in January, 1673-4. Biog. Brit.

Cavendish, William, first duke of Devonshire, eminently for his patriotism, was the eldest son of William, third earl of Devonshire. He was born in 1640, educated with great care in classical literature, and brought into public life as knight of the shire for the county of Derby as soon as he was of age. On various occasions, public and private, he distinguished himself by his spirit and personal valor, and in 1677 commenced that steady opposition to the arbitrary measures of the ministers of Charles II., which caused him to be regarded as one of the most determined friends to the liberties of his country. Intimately connected with the patriotic lord Ruffell, he joined him in all constitutional proceedings for the security of free government and the Protestant religion; but as soon as he found a tendency in some of the opposition party to the adoption of illegal and dangerous measures, he withdrew from their meetings. Nevertheless he remained attached to lord Ruffell with an unbroken friendship; on his trial he appeared as a witness in his favour; and he even made the generous proposal of promoting his escape when under sentence of death, by changing clothes with him in prison; which lord Ruffell declined accepting. After the execution of that nobleman, lord Cavendish testified respect for his memory by marrying his eldest son to the daughter of his friend. In 1684, he succeeded to his father's title; and being regarded as one of the most formidable opponents of king James's arbitrary designs, attempts were made to intimidate him; but they were ineffectual. Having rashly struck a gentleman who had offended him within the verge of the court, he was fined in the exorbitant sum of 52,000l., and being obliged to give a bond for the payment of it, this was held as a pledge against him. He then retired into the country, and employed himself in improving his magnificent house at Chatsworth, where he displayed his taste in architecture and decoration. In this retirement, however, he was not inattentive to public events; and when he observed evident indications of a plotted design for subverting the religion and liberty of his country, he held conferences at Whittington, a village in his neighbourhood, with lords Danby and Delamere, and others, for the purpose of effecting the revolution. On the landing of the prince of Orange, the earl of Devonshire was one of the first who declared for him. He secured the town of Derby, and at Nottingham received the princes (afterwards queen) Anne, whom he conducted to her comfort at Oxford. He strenuously supported all the measures which led to the transferring of the crown to king William and queen Mary, and officiated as lord-high-steward at their coronation. In consequence of his zealous attachment to the royal pair, honours and dignities of various kinds were conferred upon him; and, in 1694, he was advanced to the title of marquis of Hartington and duke of Devonshire. Uncorrupted by these distinctions, he maintained a parliamentary conduct, that was free and independent; and whilst he firmly supported the throne, he occasionally refuted projects which he thought to be unjust. Under queen Anne he retained all his posts; and was appointed one of the commissioners for treating on the union with Scotland. He died in August, 1707, in the 67th year of his age; and the following inscription was, by his own direction, placed upon his monument:

William Dux Devon, Bonorum Principum Fidelis Subditus, Inimicus et Invisus Tyrannis.

William duke of Devonshire, a faithful subject to good princes, hating and hated by tyrants.

In love and fighting the duke of Devonshire had a strong tincture of the gallantry of the age. His manner was dignified; his spirit bold and free. He was well accomplished in polite arts and studies; and occasionally amused himself in poetical composition, of which two pieces were published; "An ode on the death of queen Mary," and "An allusion to the bishop of Cambrai's supplement to Homer." Biog. Brit. Gen. Biog.

CAVERIPATAM, in Geography, a town of Hindoostan, in the country of Mytore; 90 miles E. of Scringapatam, and 130 W.S.W. of Madras.

CAVERN. Caverns are, in a great measure, peculiar to mountains; and are seldom or never found in plains. They frequently occur in the Archipelago, and other islands; because islands generally consist of the limbs of mountains. Like precipices, they are formed by the boiling or crumbling of rocks, or like abysses, by the action of fire. Caverns may be produced by the same causes which occasion guls, apertures, or sinkings of the earth; and these sinkings are explosions of volcanoes, the action of inflammable vapours, and earthquakes, which create such communications in the earth, as must necessarily produce caverns, fissures, and hollows of every kind. The caverns of St. Patrick in Ireland is not to be considered as it is famous; and the fame observation will apply to the grotto del Cane in Italy, and to that of mount Beni-guazeval, in the kingdom of Fez, which throws out fire. In the county of Derby in England there is a very large cavern, which is much more capacious than the celebrated one of Bourenn, near the Back Forest of Bromwich. The entrance to this cavern, called the "Devil's hole," is larger than the door of any church; a small river runs through it; and after advancing in it some way, the vault of the cavern sinks so low that in order to proceed farther, it is necessary to lie flat in a beat; and to be pushed through the narrow passage by people employed for the purpose; and after getting through this avenue, the roof, or arch, of the cavern rises to a great height; and after
after walking a considerable way on the side of the river, the arch Unit again so low, as to touch the surface of the water. Here the cavern terminates. The river, which seems to have its source in this part of the cavern, swells occasionally, and transports heaps of sand, which, by accumulation, forms a kind of blind alley, the direction of which is different from that of the principal cavern. See Peak, Castle-, and Buxton. Other remarkable caverns are found in the northern ridge of English mountains. In the vale of King's Dale, on the western extremity of Yorkshire, is Yordas cave, which presents a subterraneous cascade; this cave is about 50 yards in length. But the most noted is Wethercot cave, not far from Ingleton. It is surrounded with trees and shrubs, in form resembling a lozenge, divided by an arch of limestone; in falling under which, you behold a large cascade, falling from a height of more than 20 yards; the length of this cave is about 60 yards, and the breadth 30. Among other curiosities of a similar kind, we may mention Hurle-pot, in Yorkshire, which is a round deep cavity, not 40 yards in diameter, almost surrounded with rocks about 30 feet perpendicular above its black waters, while the overbranching trees increase the horrors of the scene. The river Ribble near its origin sinks into a deep cavern; and silently pervades the mountains for about three miles. In Carniola, near Potspechio, there is a large cavern, in which is a subterraneous lake. Near Adelberg we meet with a cavern, in which a person may travel two German miles, and which contains several deep and tremendous precipices. The Mendip Hills in Somersetshire present extensive caverns, and very fine grottoes, near which are found veins of lead, and sometimes large oak trees, buried 15 fathoms deep. Woolley-hole in these hills, near Wells, is a stalactitic cavern of about 600 feet in length, divided by low passages into various apartments; one of which, called the hall, somewhat resembles a Gothic chapel, and is said to be 80 feet high; while the farther, denominated the parlour, is of moderate height, but extensive diameter. On the north-west side of the Mendip hills is a more remarkable curiosity, which is a subterraneous cavern, at the bottom of a deep ravine, near the little village of Berrington or Berrington. Here are found human bones gradually incorporating with the lime-lime rock; a constant dripping from the roof feeds the stalactitic beds of the bones. Several nodules contain perfect human skulls. At the further end, where the height is about 15 fathoms, there is a large conic stalactite, which nearly meets a pillar rising from the floor. This cave was very lately discovered; and as the matter increases so rapidly, it is conjectured that it would soon have been closed up. Hence it is probable that these bones are of no remote antiquity, and may, perhaps, be the remains of prime wretches who had taken shelter here from the cruelty of Jelliffies, after the insurrection of Monmouth. In the county of Gloucester, about five miles north of Bristol, there is a large cavern called "Pen-park-hole," supposed to have been an ancient mine, at the bottom of which are thirty-two fathoms of water. M. Buffon observes, that the Devil's hole, and other caverns, from which large springs or brooks issue, have been gradually formed by the operation of the water, and that their origin cannot be ascribed to earthquakes or volcanoes. One of the largest and most singular caverns with which we are acquainted is that of Antiparos, described by Mr. Tournefort. See Antiparos. The large cave in a mountain of Livadia, formerly famous for the oracles of Trophonius, is situated between the lakes of Livadia and the Sea, from which, at the nearest part, it is distant about 4 miles; and it has no less than 40 subterraneous passages, through which the waters run under the mountains.

See CAVE and GROTTO. In all countries, which are subject to earthquakes or volcanoes, caverns are frequent. The structure of most of the islands of the Archipelago is exceedingly cavernous. The islands in the Indian ocean, and particularly the Moluccas, appear to be chiefly supported upon vaults. The land of the Azores, and the Canaries of the Cape Verds, and, in general, of all small islands, is, in many places, hollow and full of caverns; because these islands, as we have already remarked, are the tops of mountains which have suffered great convulsions either from volcanoes, or by the action of the waters, of the fruits, and of other injuries of the weather. In the Cordeliers, where volcanoes and earthquakes are frequent, there are many caverns, precipices, and abysses. The famous labyrinth in the island of Crete is not the work of nature alone. M. Tournefort affirms us, that in many parts it exhibits traces of the operation of men; and it is probable that this is not the only cavern which has been enlarged by art. Mines and quarries are constantly dug, and after these have been long deserted, it is not easy to determine whether such excavations have been the effects of nature or of art. Some quarries are very extensive. That of Macbirth, for instance, is sufficient to shelter 50,000 men, and is supported by more than 1000 pillars, 20 feet high; and the earth and rock above are 25 fathoms thick. The salt-mines of Poland exhibit excavations still more extensive. See SALT.

CAVERNOSA corpora chitricidais, in Anatomy, two small bodies, resembling in structure, on a small scale, the cavernosa corpora of the male penis. See Generation, organs of.

CAVERNOSUM corpus uteritis, or more properly corpus uteritis corporis, a peculiar vesicular subterraneous of the greater part of the urethra in the male subject. See Generation, Organs of.

CAVERS, in the Language of Miners, are any poor people that go about the mines in Derbyshire, to beg or steal ore from the miners. They are punishable in the hergnait or minery court.

CAVITY, or CAVERNY, in Geography, a river of Hindostan, which rises in the Bednore country, passes by Seringapatam, Trichinopoly, &c. and discharges itself by three branches into the bay of Bengal.

CAVESAS, in Geography, a cluster of small islands in the Spanish main, a little to the east of Cape St. Blas. N. lat. 9° 20' to 9° 40'. W. long. 78° 20' to 78° 40'.

CAVESON, CAVEON, or CAVEZON, in Horsemanship, is an instrument of iron or other matter which is applied to the nose of a horse in order to tame him, by pressing hard on his nostrils and squeezing them.

The word is derived from the Spanish Cueva, or Ca i, head.

The caveons for breaking young horses are usually of iron, made nearly circular, of two or three pieces turning on joints; others are twisted, others are flat, others hollow in the middle, and indented like faws, called mordants: which last are now banished the academies. The rope and leather caveons serve for pasling the horse between two pillars.

An iron caveon spares a young horse's mouth in the breaking, since by means hereof he is accustomed to obey the hand, and bend the neck and shoulders, without injuring his mouth. All iron caveons are mounted on a head电子商务 and a throat-band, and two straps or reins, with three rings: through the middle ring, one rein is passed to make a horse work round a pillar, and through the two side rings the other two reins are passed, which the rider holds in his hand.
hand, or fastens to his saddle to keep the horse's head in
position. This kind of instrument has been employed and con-
considered from the earliest days of modern horsemanship, even
to the present time, as the most effectual, and almost the only
means of breaking and reducing a horse to subjection and
obedience. Cav-pons are variously constructed; but they differ
from each other in no essential point, except in being of
different degrees of mildness or severity: and, indeed, it is
astonishing to what an excess of cruelty they were carried in
order to answer the latter purpose. Being tied over the nose,
made of iron, and armed with sharp teeth, they harrowed
and tore the poor animal in a shocking manner. Nevertheless,
it was a sort of proverbial boast among the old horsemen, that
a "bloody nose" made a "good mouth;" their chief intention
being to refrain and bend the horse by the cavenon, and
to save the mouth at the expense of the nose: at the same time
cumbering the horse with both, without considering that
while they thought of favoring the mouth, by not making it
acquainted with the bitt, it could never, till it had been properly
worked and formed, be true and faithful to the hand; and that
in order to be made, it must first be prepared and seasoned:
and although a raw and ignorant mouth may be spoiled by
a rough and injudicious hand, yet there is no natural mouth,
however good, that does not require to be moulded, and
wrought upon by the bitt, before it can be brought to such
a temper and feeling as to act in a close and delicate corre-
respondence with the hand which is to govern it. Upon this
principle and mode of reasoning, it must follow, that if a
horse is to be worked only by means of the cavenon, and the
bitt is to be inactive, or lightly employed, let him be ever
so well dished to the cavenon, yet, when he comes to be
rode with the bitt alone, he ought sometimes to be, his
mouth, for want of practice, will be awkward and un-
formed, though years may have been spent to make him
otherwise complete. The cavenon, therefore, considered in
the most important view of it, and allowing it the most ex-
tensive merit, should never be used but as preparatory to the
bitt, and as an engine to bend and supple the horse. In this latter
office, it certainly can boast a power much superior to that
of the bitt, and such as entitle it to the greatest applause,
if it were not attended by one humble circumstance, that,
while it bends, it pulls down the head, and puts the horse
upon his shoulders. Notwithstanding this inconvenience, it is
certain, that if the services of the snaffle were not known,
the cavenon would deserve much praise; and as it is very
efficacious in bending and suppling the horse, it may at least
dispute precedence with the bitt; but the snaffle combines
both these advantages. Berenger's Hist. and Art of Horse-
manship, vol. ii. ch. 11. See Bit and Snaffle.
CAVETTO, in Architecture, a hollow member or mould-
ing containing a quadrant of a circle. It is frequently used
in cornices, see Plate XXI. Architecture. The word is Ita-
larian, and is no more than a diminutive of cavo, hollow.
CAUHQ ROY, in Natural History, a name given by the
natives of the East Indies to a sort of fowl which they
calculine, and afterwards give in large doses in the hicouche
and many other complaints. It is also used in dicing.
The Indians boil it in water, and dye or slain their cloths
with it, to make them appear different from others: it is
a kind of ochre, or clayey iron ore, and is found in great
abundance in the hills, and iron is sometimes extracted from
it.
CAVIA, in Zoology, a genus of quadrupeds that appear
to form an intermediate link between the murine and rabbit
tribes. The animals of the cavia genus have generally a flow
and sometimes leaping pace, and are observed to never
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curb. They live like the rest of the glives on vegetable
food, and in their natural state inhabit excavations in
red trees, or burrows which they dig in the earth.
The fore teeth of the cavia, which are two in number, are
enamelled; the grinders eight; toes on the fore feet, from three
to five; on the hinder feet, from four to five: tail either very
short, or none: eacvies, or collar bones, none.
Exlerben, Buffon, Gmelin, and other authors, describe
the following species of the cavia genus: C. Paca, Acculych,
Aguti, Iepicina, Americana, Aperca, Cubaya, Patathan-
ica, or Magelica, and Capibara.
CAVIA PACA, the spotted cavy, is tallied; the feet five-
feet: and the sides lined with yellowish. Erxleben—
M. Pacu, Linn.—Conusites Pacu, Brull.—Paca, Macrave.
—Lambia, Bancroft.
This species is near two feet in length; the form thick
and clumsy, and bearing some resemblance to that of a pig,
for which reason it has been sometimes called the hog rabbit.
The name paca is of Brazilian origin, being pronounced Pag
by the natives of that part of South America: the French
settlers in Surinam call it hrve aquagique, or the water hare.
The head is round; the muzzle short and black; the upper
jaw larger than the lower; and the lip divided like that of
the hare: the molaris are large; the whiskers long; the eyes
large and prominent, and of a brown colour; the ears short,
moderately large, round, and naked: the neck thick; the
body very plump, larger behind than before; and covered
with a soft, short, thinly scattered hair, of a mild brown colour,
departed on the back the throat, back, sides, and head, thick
and belly, dingy white, and on each side of the body are
large longitudinal rows of roundish, or slightly angular spots,
spotted contiguous to each other. The legs are short, and
the feet have five toes, four of which are armed with strong
and sharp claws; that on the fifth toe being very small. The
tail consists merely of a small cone, projection not more than
half an inch in length.
The spotted cavy inhabits Guiana, Brazil, Paraguay,
and other parts of South America, and appears to be common
throughout those countries, with the exception of Paraguay,
where, according to M. D'Azara, this animal is very rare.
It lives principally in burrows which it forms in the banks
of rivers, reeding in its hole during almost the whole day,
and venturing out in quest of food in the night. The flesh
of the paca is of a good flavour, and is held in esteem in South
America as an article of food, but is very fat. It is easily
domesticated, and in this state readily feeds on almost every
kind of vegetables. The female is said to produce but one
young at a birth. A variety of the paca entirely white has
been found near the river St. Francis.
CAVIA AGUTI, olive cavy. Tailed, with olive-coloured
body. Erxleben and Schreber.—Acuti, Buffon.—Olive
Cavy, Pennant.
This species, which is about half the size of a full grown
rabbit, inhabits the woods of Guiana. By some writers the
acouchy is considered as a variety of the aguti, from which
it differs in being somewhat smaller, rather thinner, and en-
tirely of an olive colour, paler, or more inclining to whith
beneath: the tail also is rather longer than in the aguti.
Both animal's are natives of the same parts of South Ame-
rica, and their manners are similar, except that, according to
M. de Borde, it does not attempt the water like the aguti.
M. de l'Obel observes that the acouchy produces but one
young at a birth. Its voice resembles that of Cavia cebuva,
or guinea-pig. This kind is easily tamed, and the flesh is
eatable. See Agouchy
CAVIA AGUTI, long-nosed cavy. Tailed; body tawny
brown; belly yellowish. Erxleben and Schreber.—Ala
Aguti.
CAV

*Agouti, Linn._—Caniculus agouti, Buff. —Agauna, Buff._
Long-nosed Cavy, Pennant.

The agouti is an inhabitant of South America, and the West Indies. It is the size of a rabbit; the body plump, and thicker behind than before; the head rather small and somewhat compressed laterally; snout long and rather sharp; nose divided at the tip, and the upper jaw longer than the lower; ears short, broad, naked, and rounded; neck rather long, but thick; legs thin, almost naked and blackish; the hind legs longer than the anterior ones, and furnished with only three toes; tail extremely short, naked, and sometimes fearfully visible; the whole of the animal covered with hard, strong, and shining hair, in general of a rufous brown colour with blackish freckles; rump-orange coloured.

Buffon observes that the agouti has the hair, scanty, and voracious appetite of the hog; and when fully fatigued hides the remainder of its food, like the fox, in different places. It takes delight in gnawing and spoiling whatever it comes near. When irritated, it bites fiercely; its hair stands erect along the back, and it strikes the ground violently with its hind feet. It does not, he remarks, dig holes like the rabbit, but lives in the hollows of trees. Roots, potatoes, yams, and fruits are its principal food. It uses its forepaws, like the squirrel, in carrying food to its mouth; runs swiftly up hill, or on even ground, but its fore-paws being shorter than its hinder ones, it is in danger of falling upon a declivity. The flesh of the agouti being nearly as good as that of the rabbit, and the skin of such a durable quality, as to form an excellent upper leather for shoes, the hunting of these animals is an object of attention among the Indians and negroes. They commonly go in search of them with dogs, or take them in traps; the natives know how to allure them by whistling or imitating their cries, and kill as many as they please. When they go among the sugar-canes they are easily taken, for fasting at every step in the straw and leaves which cover the ground, a man may easily overtake and kill them with a stick. When in the open country, it runs with great quickness before the dogs; and having gained his retreat nothing can force him to come out but smoke; for which purpose the hunters burn faggots and straw before the mouth of the hole, but the animal seldom quits the place of his concealment till the last extremity. The young agouti is easily tamed. When in a wild state they generally dwell in the woods, where the female chooses the most obscure parts, and there prepares a bed of leaves and grasa for her young. She usually brings forth two or three at a time, and in a day or two afterwards, she carries them in her mouth like a cat, into the hollow of some tree, where she fixes them for a short space of time, for they are soon in a condition to run about and provide for themselves. They multiply as fast as rabbits, producing three, four, and sometimes five young ones, every few days of the year. When in a domestic state they never remove to any great distance, and always return to the house; but constantly retain something of their wild disposition. In general they remain in their holes during the night, under the moon shines bright, but run about most part of the day.

See Aguti.

*Canis lupina, B of Gmelin, a supposed variety of the agouti, is described by Erxleben as having a tail, and the body of a rufous colour above, beneath white. —Mus lupinus, canis abbreviatus, palmi tetradoxyli albo albo. Linn. Syll. Nat. 15. —Caniculus lupina, &c. Bibron.—Jawa Lur, Cateo, B.—Zoon cavy, Pennant.

This differs from the agouti chiefly in being of a reddish colour above, with the back and belly white; the legs are long; the posterior part large, and the tail very short.
provided it be taken care of, and sheltered from the inclemency of the weather. This animal is frequently reared in Europe, and though very prolific, the attention they require is but poorly rewarded by the profits derived from them. The skin is of little or no value, and their flesh, which is indeed eaten by some people, is notwithstanding very indifferent. Buffon conceives this objection might be removed by rearing them in warrens, where they might have air, space to range in, and an agreeable choice of herbs. Those kept in houses have the same kind of bad taint with the house rabbit, while the flesh of those kept in gardens during summer is less disagreeable though still insipid. They willingly feed on a great variety of vegetable fishermen, and may be successfully reared on parsley, cabbage, and row-thistles. In winter they may be fed with bread, carrots, and various kinds of grain.

The guinea pig is an animal of very warm disposition, being in heat so early as five or six weeks old; their growth, however, is not completed before the end of eight or nine months. The females go with young three weeks, and they have been known to bring forth at the age of two months. The first litter consists only of four or five, the second of five or six, and afterwards they will sometimes have eleven or twelve. The female does not suckle her young more than twelve days, and when the male returns to her, which he never fails to do three weeks after the litter has filled, she drives them from her, and if they persist in following her often kills them. Thus these animals bring forth at least every two months, and as their young produce in the same period their multiplication is astonishing. In one year, says Buffon, a thousand might be produced from a single couple, but their consequent increase is checked by various means of destruction. They have no distinct sentiment but that of love, and when disputing for a particular female, they will throw themselves fiercely against the other, fight, and are sometimes killed in the contest before they will yield. In their quarrels they not only bite, but kick each other like hares with their hind feet. They pass their lives in eating, sleeping, and love; their sleep is short but frequent, they eat every hour, night and day, and indulge in their amours almost as often as they eat. It has been observed that the male and female seldom sleep at the same time; but seem alternately to watch each other, one sleeping while the other is feeding. They subsist on all kinds of herbs, especially parsley, which they prefer to either grain or bread; and they are also fond of apples and other kinds of fruit. Like the rabbit they eat little at a time, but precipitately and very often. They grunt like a pig; make a chirping noise when pleased with their females, and have a sharp loud cry when hurt, or irritated. They are very delicate in their constitution, and so chilly that it is difficult to preserve them through the winter, the place where they are kept during that season must be therefore warm and dry. When they feel cold, they assemble and press close together, and in this situation are sometimes found dead. They are naturally of a mild disposition, and in their manners are remarkably neat; they are frequently observed in the act of smoothing and dressing their fur in the same manner as a cat. This little animal is very easily tamed, but is seldom observed to swim any very lively attachment to its benefactors; neither is it distinguished by any remarkable degree of docility.

Cavia capybara, river cavy. Taüla; anterior feet three-toed and palmed, Schreber.—Sau Hydrocroris, Linn._Hydrocroris, Buffon.—Cavia capybara, Pallas.—Cavira, Buffon.—Thick-nosed caique, Penn.  

The capybara inhabits the eastern parts of South America, but is said to be more common in Brazil than in any other region. This animal grows to the length of two feet and a half, and weighs sometimes one hundred pounds. It feeds not only on various vegetables, and particularly on sugar canes, but also on fish, in which particular it differs from most animals of the Glires tribe. The habits of the cavy are adapted to its mode of life; it frequents fenny woods near large rivers, swimming with the same facility as the otter, and, like that animal, dragging its prey out of the water and eating it on the bank. Its excursions in quest of prey are made principally during the night.

In general, the cavy is considered as an animal of a gentle disposition, and is readily tamed and made familiar. The female produces but one young at a birth. These animals are said to go in pairs, and are naturally shy and timid. Their voice resembles the braying of an ass. The cavy runs but indifferently, on account of the length of the feet, and therefore commonly makes its escape by plunging into the water and swimming to a great distance. Buffon supposes from the number of its teeth this to be a prolific animal; but this is contradicted, and it is asserted to produce but one at a birth. The flesh has a rank and fishy taste, which renders it but an indifferent article of food.

The cavy has a large head, and a thick divided nose, with strong and large whiskers on each side; the ears are furnished with both the eyes large and black; the upper jaw longer than the lower; in each jaw are two very large and strong cutting teeth; and the grinders, which are eight, in each jaw, are divided into three flat surfaces on the upper part; the neck is very short; the body short and thick, and covered with coarse brown hair; the legs short; feet long, the forefoot divided into four toes, connected to each other by means of a small web at the base, and tipped with thick claws or rather hoofs at the extremities; the hind feet are formed in a similar manner, but are divided only into three toes. This animal sometimes, while feeding, sits up, in the manner of a squirrel, holding its food between its paws. It is said to commit considerable deviation in gardens during the night time, especially among the esculent vegetables.

Cavia Hudsonii of Klein, is the quadruped called Hystrix dorjuta, by Gmelin, Schreber, and other late authors.

Cavia capenosis of the twentieth edition of the Linnaean Sys. Nat. and of Pallas, is Hyrax capenosis of Gmelin, and Schreber.

Caviavana, in Geography, an island of the North Atlantic Ocean, under the equinoctial line, formed by the two mouths of the river Amazons, which surround it. W. long. 50° 30'.

Caviano, a town of Naples, in the province of Lavora; 7 miles N. of Naples.

Cavidos, or Cabidos, in Commerce, a Portuguese long measure, used in the measurement of cloth, linen, and the like; equivalent to two feet eleven inches, Paris measure.

Cavl, ca villatis, is defined by some a fallacious kind of reason, carrying some resemblance of truth, which a person, knowing its fallacy, advances in dispute for the sake of victory.

The art of framing sophisms or fallacies is called by Boe- thius, casselleo, or Casselleo, in Geography, a town of France, in the department of the Gard, and district of Uzes; 8 miles N.E. of Uzes.

Cavin, in Military Language, a hollow place or fort of ground fit for covering a body of troops or favouring the approaches to a place. Cavin near a place besieged are of great advantage.
advantage to the besiegers, as by means of them they can open the trenches nearer to it, construct places of arms, and station parties of cavalry for the protection of the workmen under cover from the fire of the place. A commandant or governor of a place, who attends to his duty and understands it properly, will know how to turn caunis to the disadvantage of the enemy, from the moment he perceives that the place he commands is menaced or in danger of being attacked.

CAVING. See Cavazion.

CAVINGS, in Agriculture, a term provincially applied to the rakings or coarc materials, as short straw, ears of grain, &c. collected from the corn in chaff, while thrashing.

CAVING CHAFF, the coarse chaffy draw or other similar material raked off from the grain after the operation of thrashing.

CAVING RAKE, the tool or implement employed in the above operation, and which is a sort of barn floor rake with a short head and teeth of considerable length.

CAVITA, in Geography, a port town of the island of Lacon, or Lucania, 3 leagues S. W. from Manila, the capital of the island. It was formerly a very considerable place; but as the great towns in the Philippine islands, as well as in Europe, have the small ones, there now remain in this place only the commandant of the arsenal, a contador or accountant, two port lieutenants, the commandant of the town, 150 soldiers in garrison, and the officers belonging to that corps. All the other inhabitants are metis (a species of mulattoes, half black, or the immediate offspring of a white man with a black woman), belonging to the mestizos, and form, together with their families, which are generally very numerous, a population of about 4,000 inhabitants divided between the town and the fuburb of St. Roch. There are two parishes, and three monasteries for men, each occupied by two ecclesiastics, though 30 might easily be accommodated. The Jesuits had formerly a very fine house, of which the trading company, established by the government, has obtained possession. In general, nothing is now seen here but ruins: the ancient edifices of stone are defaced, or occupied by Indians, who never repair them; and Cavita, the second town in the Philippine islands and capital of a province of the same name, is now only a paltry village, uninhabited by Spaniards, except the military officers, and those of the civil administration. In the port belonging to this town, the commandant has established an order and discipline which give it great reputation. La Perouse's Voyage, vol. i. p. 209, &c.

CAVITY, in Anatomy, is a term applied to several hollow spaces, lined by membranes and containing the different viscera of the body. As the extent of these cavities is bounded and defined by the membranes, which line them, and they have no external communication, they are frequently called the circumfered cavities of the body. These spaces are in every instance completely and accurately filled by the contained viscera; which generally have their surface covered by a reflected portion of the membrane which lines the cavity.

The surface of the viscera is in contact with that of the lining membrane, but is prevented from becoming actually adherent, by the secretion of a fluid from the exhalent arteries, by which the opposed surfaces are constantly prepared in a moist state. Hence it will be seen that the anatomical term cavity, in the sense which we have now mentioned, does not denote any void or empty space, and that it differs in that respect from the common acceptance of the term. The following cavities of this kind are found in the body: Cavity of the Abdomen; Pelvis; Pericardium; Thorax; and Tunica vaginalis testis; for a particular description of which the reader is referred to those articles—The various joints of the body present examples of similar cavities; they are lined, and circumfered by the capsular ligaments.

The word cavity is also frequently employed in oölology: where it is not only applied to larger and more circumfered spaces, as cavity of the cranium, cavity of the orbit, but also to the comparatively superficial impressions which contribute to the formation of joints, and which are denominated articular cavities of the bones. The same term is applied to the space included in any hollow part of the body: thus we have cavities of the heart, of the arteries and veins, of the stomach, intestines, &c. &c.

CAUK, or Cauk, formed probably of the German kaul, a spar, is used by miners in the Peak, to denote a coarse sort of spar; being a vitrified poudrous earth, or marmor metallicum, generally found near lead mines, which will draw a white line like chalk, or the galactites. Phil. Trans. vol. N° 119, p. 226. Phil. N° 39, p. 772. It is unalterable in acids, and fusible by fire. See Earth, ponderous. It is properly not a spar, but sparvary matter, rendered very coarse by being mixed with a large portion of earth. In some places it is found more clear and transparent than others: it approaches in this state to the nature of crystal, and is called bollard cauk, and bright cauk. Philos. Trans. vol. N° 47.

There is a singular process mentioned by Dr. Lister, which is that of vitrifying antimony by its means. This is done with great readiness and speed by it, and the glass, thus made, will produce some effect on other metals, which no other glass will, nor indeed any other preparation of antimony. The method of preparing it is this: take a pound of antimony, flux it clear; have ready a fine ounce or two of cauk in a lamp red hot; put it into the crucible to the melted antimony, and continue it in fusion: then call it into a clean mortar not greased, decanting the clear liquor from the lump of cauk. This process gives more than fifteen ounces of glafs of antimony, like polished steel, and bright as the moly refined quicksilver. The cauk, in the mean time, is found to be diminished. not increased in its weight, and will never flux with the antimony, though ever so strong fire be given it. This is a very odd mineral, and this learned author supposes it to be allied to those white, milky, and mineral juices which are found in mines. The effect of both is evidently the same; for the milky juice of lead mines vitrifies the whole body of antimony, in the same manner that the cauk does in this experiment. Phil. Trans. vol. N° 111.

That there is somewhat very peculiar in the cauk is plain from this effect on antimony, which no other thing of this kind is so peculiar of; for lapis calaminaris, flux with vivum, galactites, mundicia, alum ore, &c. and many other things, have been tried with antimony in the same manner, but not one of them has this effect.

CAUKING, in Architecture, signifies dove-tailing down. See Dove-tailing.

CAUKING TIME, in Falconry, a hawk's treading time. See Cauking.

CAUL, in Anatomy, is the part generally deprived under the term Osmentum. See Peritoneum.

CAUL, or Caul, among Mineralists, a reddish pink-coloured stone, found in the strata of the tin-mines. See Tin.

CAULCI, in Ancient Geography, a people of Germany placed by Strabo towards the ocean.

CAULEDON, from tavo, a gem, in Surgery, is applied to fractures which happen traumatically, wherein the parts of
the broken bone first attend, so as not to lie directly against each other.

CAULISCENT, in Botany, a term applied to such plants as have a stem.

CAULIAC, Gulde, or Guido de Cauliaco, in Biography, a celebrated author of the art of surgery, was born at a small town in the Cavalcuin, on the frontiers of the province of Aegypt in the early part of the fourteenth century. He studied medicine at Montpellier under Raymond de Malleres, and made such progress that he was early appointed teacher in surgery in that university. He was three years for Aegypt, and made phisiom to Pope Clement the Sixth. This was in the year 1348, at which time a dreadful pestilence brake out, which sundered every part of the then known world, and destroyed, it was thought, nearly a fourth part of its inhabitants. Under this prince, whose confidence he gained by his diligence and skill in the performance of his duty, he acquired considerable wealth; and with this wealth, such reputation for his abilities, that he was retained in the office of chief physician to the court, under Innocent the Sixth, and Urban the Fifth. It was during the pontificate of Urban, in the year 1443, that he composed or completed his "Magnus Chirurgiae," which gained him such reputation that Fallopius does not hesitate to compare him to Hippocrates. Cauliac not only restored the surgery that had been taught by the Greeks and by the Arabians, but, what Capulis did in anatomy, he improved what he found, and added considerably from his own flock. He first, Dough-faces taught that accidents over the eyebrows should be made longitudinally in the direction of the fibres of the muscles. He also described more accurately than had been done before, the lower end of the humerus, and the joint of the elbow. He revived the use of the trepan, and invented several instruments, of which he gave the figures; among them, a pair of forceps, to take up wounded arteries. His work may be considered, Haler says, as an abridgment of all that had been done on the subject of surgery before his time; it also contains the names and the practice of several writers on the art, whose works have perished, and who are not noticed by any other writer. His work, originally written in the Latin language, has been printed many times, and translated into all the modern languages. The first impression of it appeared at Venice, in the year 1497; in folio; an English translation of it was published in 1541. A copy of this edition was in the library of Sir Hans Sloane, now in the British Museum. Laurence Joubert published a translation of it into the French language, with explanatory notes and observations. At Lyon, in the year 1784, 4to. Haller Bib. Chirurg. Eluy. Dict. Hist.

CAULI, an appellation given to the juice drawn from the flaky of the flippers, contradistinguished from that drawn from the root of the same plant, which is called ribs.

Schrader makes the caulis the same with our asphodela.

CAULIC, in Ancient Geography, the name of a nation which inhabited the coast of the Ionian see. Steph. Byz.

CAULICOLES, CAULICULUS, in Architecture, denotes those eight lesser branches, or flanks, in the Corinthian capital, which spiring out from the four greater principal caulis, or flanks.

The word comes from the Latin caulis, the flank, or stem of a plant.

The volutes of this order are sustained by four caulis, or primary branches of leaves, from which arise their caulicles or lesser foliages.

Some authors confound the caulicles with the volutes themselves: some with the helices in the middle, and some with the principal flanks whence they arise.

CAULIFEROUS heres, are such as have a true calyx, flanks, or tubes, which a great many have not; as the capillaries, &c.

They are sometimes divided into caulifervis, and aculeis.

The former are either perfectly cauliforous, as cabbage; or imperfectly, as mullein.

CAULiflower, in Botany, See Brassica Clearea.

CAULIFLOWER, in Gardening, an excellent plant belonging to the genus Brassica. It is said to have been brought to this country from the island of Cyprus. By cultivation, this fine vegetable has lately been much improved in size, as well as in its other properties, and become common at our table during the greater part of the summer month, and even in the beginning of the autumn. See Brassica.

CAULUS, in Botany, a term applied to the leaver flanks, &c. of a plant when they proceed from the stem, in contradistinction to those which proceed from the root or branches.


Sp. 1. C. frugilis. Wild. Ann. Bot. vol. 2. tab. 1. fig. 2. (Napoli Lian. Sp. Pl. N. Minor. Alion. Peram. 2106. Schkuh. Bot. Lard. 2. tab. 256. Flavialis minor. Micheli gen. tab. 8. fig. 53.) "Leaves terete or opposite, linear and recurved, pricked, prickly-toothed, rigid." Roots diliform, quite simple, very long and perpendicular. Stem one to seven inches long, brancht from the base, diffusely spreading; branches dichotomous, smooth, compressed. Leaves as inch long or more, acute, proceeding from a round membranous flath/ teeth alternate, minute. Flowers axillary: ligulas one to three. The whole plant is very bushy. In so much that when fresh, the flalk and leaves will break to pieces if touched by the hand. Native of lakes and rivers in Italy, France, and Germany. 2. C. indica. Wild. Ann. Bot. tab. 2. "Leaves terete or opposite, linear and recurved, repand; younger ones bristle-toothed. Stem a foot and half or two feet long, spreading, round, hifiform, dichotomously brachiate. Leaves spreading, fraisht. Fowers axillary, fijllis; germ oblong; style bifid: ligulas tw: simple. It differs from the preceding species in being larger, flible, and not in the least brittle; its leaves are not recurved; when young, they have sharp, bristle-toothed teeth, which afterwards drop off, whence the full grown leaves become incanis at the border. A native of Transcaucass. 3. C. hispanic. Wild Ann. Bot. tab. 1. fig. 1. "Leaves in its, linear, toothed at the tip, spread." Stem a foot long, flame at extremities, branched, diliform, round. Branches all the doing quite towards the bottom. Fowers axillary fijllis; germ oblong; style bifid: ligulas tw: simple. A native of Persia. The whole plant in all the species is constantly immersed in water.
C A N I S

CAULIS, in Botany, a part of a plant which rises above the ground in a single stalk, and is common to annuals and perennials, though, as the vegetable botanist observes, in trees it has a peculiar name, and is called phragma, or trunk, in the common English sense of the word. The Latin writers seem to confine the term to the stem of herbaceous plants. According to Linnaeus, in his Philosophia Botanica, it is a species of trunk in its most extensive signification; denoting, in the language of the great Swedish botanist, the organ which multiplies the plant, or, in plantar language, that part in every plant which rises above the ground, and supports the parts of fructification, either with or without branches and leaves. See Trunk.

The caul is or item, in the Linnaean sense of the word, is the most common kind of trunk, that which supports some of the leaves, as well as the fructification; but Wildenow, in his Principles of Botany, confines the term to herbaceous plants, and considers the trunk as peculiar to trees and shrubs.

Stems are distinguished from each other as they are,

1. Simple, or proceed in a single unbroken form nearly to the summit of the plant. In this point of view they are either quite entire, i.e. without branches or nearly so, i.e. furnished with only a comparatively few branches, and those so small as not to destroy the integrity of the item. 2. Compound; to subdivided as nearly as to lose the appearance of a item. 3. Dichotomous; always divided into pairs as in vienam albulum, melolotus, valeriaca loculca, corn falled, &c. 4. Flexure, or bending in a zigzag manner, so as to form a number of alternate curves or very obtuse angles. 4. Climbing, (conclavia) too weak to support itself, and therefore lacking support from other bodies. 5. Twining, (vulgibus) ascending in a spiral direction round the item or branches of another plant, or any kind of foreign prop. In some plants, as in humulus, helix, lobeca, and tainus, the direction is from left to right, i.e. according to the course of the sun as seen by a spectator in our hemisphere with his face to the south; in others, as convolvulus, phascelus, &c. from right to left, or opposite to the course of the sun. 6. Erect; nearly perpendicular. 7. Noding; with the upper part bent outwards towards the horizon. 8. Incurved; with the upper part bent inwards. 9. Declining; bent downwards so as to form an arch. 10. Aftending; growing firft in an horizontal direction, and afterwards curving upwards. 11. Procurvunt; feeble and retting on the ground. 12. December; upright near the root, but afterwards bent down, fo that the greatest part of it is pro- cumbent. 13. Creeping, (repens); running along the ground, and here and there throwing out roots. 14. Serrantius; biflorus, almof. nakc2; or having leaves in bunches only at joints or knot, where it strikes root. 15. Rooting, (radicans); throwing out lateral radicles, by which it attaches itself to other plants for sustenance or support; as in cefulea, and hecera helix. 16. Paraffaria; growing entirely on other plants, as vicem, epidendrum, tillaedrina. 17. Articulated; having joints at certain distances. 18. Anasty, (nodulos); swollen at the joints. 19. Glandulatus; jointed, bending at the joints somewhat in the manner of the human knee. 20. Rund, (teres); cylindrical, without angles. 21. Half round, (fenitores); round on one side, and flat on the other. 22. Comprefled; having two opposite flat sides. 23. Aprialect; two-angled, compressed with sharp edges. 24. Angular; having more than two angles separated by angular or curved hollow spaces. 25. Trigemotus, &c. three-faced, &c. having the spaces between the angles perfectly flat. 26. Trigonous, &c. having the spaces between the angles convex. Linnaeus is by no means clear in his definitions of the last three terms, and is differently understood by different authors. Who have endeavoured to convert ours fo as to convey different and precise ideas; premising however, that an attention to the etymology of the words is more likely to confound than to enlighten, but for this we are not answerable.

CAULKING, CAURING, or CAURING, in Ship Building, the operation of driving a quantity of oakum, or old ropes untwisted and drawn afunder, into the seams of the planks; or into the intervals where the planks are joined to each other in the sides or decks of the ship, in order to prevent the entrance of water. After the oakum is driven very hard into these seams, it is covered with hot melted pitch or resin, to keep the water from rotting it. The firft among the ancients, who made use of pitch in caulking, were the inhabitants of Phenicia, afterwards called Corica. Wax and resin appear to have been commonly used previous to that period; and the Polis, at this time, use a sort of unctuous clay for the fame purpoze. Kennet derives the word from the barbarous Latin calcutta, a foot.

Caulking Irons, are iron chittels for driving the oakum into the seams. Some of these irons are broad, some round, and others grooved.

CAULNE, in Geography, a town of France, in the department of the North Coaals, and district of Dinans; 32 leagues S.W. of Dinans.

CAULON, CAULONIA, or VALLONIA, in Ancient Geography, a small town of Italy, situate on the cael cafl of Bruttium, N. of Locri, and S.W. of the promontory Co- centum. It was founded by a colony of Achaean, and for a time made a part of the territory of the Locrians Epiphysiane. This city was demolished, and its inhabitants transported into Sicily by Dionysius the tyrant about 400 years B.C. Ovid and Virgil mention it; but it did not subsist in the time of Ptolemy.

CAUM, a place of Spain, marked, in the Itinerary of Antonine, between Olca and Mercedeia.

CAUMAN, one of the branches of the river Ineis, near its mouth, according to Arrius.

CAUMONT, in Geography, a town of France, in the department of the Calvados, and chief place of a canton, in the district of Bayeux; 4 leagues S.S.W. of Bayeux. The place contains 2171, and the Canton 1896 inhabitants: the territory comprehends 755 kilometres and 8 communes.

CAUNE, a town of France, and principal place of a district in the department of the Tarn; 3 leagues E.N.E. of Caures. The place contains 2488, and the canton 7351 inhabitants: the territory comprehends 285 kilometres and 8 communes.

CAUNES, Les, a town of France, in the department of Aude, and district of Carcassonne; 7 leagues W.N.W. of Narbonne, and 33 N.E. of Carcassonne.

CAUNENUS, in Ancient Geography, a son of Aia Mi- nor, in Lycaia.
CAUNGA, in Botany, Rhed. Mal. See Areca Cane.

CAUNGALASS-POINT, in Geography, a cape on the southern coast of Dingle bay, county of Kerry, Ireland. N. lat. 51° 58'. W. long. 10° 8'.

CAUNI, in Ancient Geography, a people of Mauritania, according to Ptolemy.

CAUNIA, the inhabitants of Caunia.

CAUNSRA-HEAD, in Geography, a cape of the county of Kerry, Ireland. N. lat. 52° 5' 30'. W. long. 10° 16'.

CAUNUS, a Sphinx in Entomology, a variety of the Fabrician Sphinx Audromachus, described by Cramer under this name.

CAUNS, in Ancient Geography, Montauis, a mountain of Spain, placed by Livi in Celtiberia. —Allo, a town in the island of Crete. Steph. Byz. —Allo, a town of Aiolia. —Allo, a town of Aisia Minor. in Ionia. —Allo, a town of Caria, on the southern side of the Dorile, called "Rhodos" or of the Rhodes. It was situated at the foot of mount Tarbelus, W. of the small Gulf of Glaucon. The account is proverbially fabulous in summer and autumn, on account of the extreme heat, and the evil was increased by the abundance of its fruits. Steph. Byz. says, that this city took its name from Caunus, known in fabulous history for his inceletious love of his litter Bibilis; whence the proverb denoting this sort of attachment, viz. a coaus, i.e.; Caunus Amor. This city was the native place of the celebrated painter Protegenes. The citadel, according to Strabo, was above the town, and called "Imbroi." It has been conjectured that the ancient Caunus has been occupied by the town now called Kajnez.

CAUHPICA, a town of Peribia, in the interior of the country, according to Ptolemy.

CAURARELE, Bistaur, and CAURALL SNAPE, of Latham, in Ornithology. See Areca Heias of Pallas and Gmelin.

CAURANANI, in Ancient Geography, a people of Arabia Felix, whose name denotes their wealth in cattle, according to Pliny.

CAURASTLE, a people of Spain, in Botica.

C. AUREUM, in Entomology, a species of Papilio, the wings of which are indented, tailed, fulvous with black spots; posterior pair marked beneath with a golden C. Fabricius. This insect inhabits Aha.

CAURIENSES, in Ancient Geography, a people of Spain in Lusitania, according to Pliny, who inhabited the town called by Ptolemy Caunium, which M. d'Anville places in the country of the Vettovenses, N.E. of Norba Cæzarea.

CAURIS, in Botany, a name by which certain authors formerly distinguished shells of the Cyprea genus. The word cauris is of Indian origin, being the name by which the small maccy-couris are known among the natives of the West Indian islands. It is from a false pronunciation of the word couris, that these shells are now called couries or gouries. See Cyprea.

CAURO, in Geography, a town of the island of Corfu, or the department of Golo; 9 miles E.S.E. of Ajazzo.

CAURROY, Francis Eustache du, in Biography, an eminent French musician, was born in 1549; and became master of the chapel to the kings Charles IX. Henry III. and IV., and also canon of the holy chapel in Paris, and prior of St. Auloi. By his contemporaries he was named the prince of musicians; and he was much beloved by cardinal du Perron, who frequently wrote verses for him to set to music, and composed a pourous epitaph for his tomb. He died in 1589, and was buried in the church of the Grands Augustins at Paris. Of his works, which seem never to have been known out of France, there remain a "Neffe for the Dead," for four voices, which used to be sung annually in the cathedral of Paris, on the commemoration of the faithful deceased; and a book called "Mélanges de la Musique de Lutetiae du Cauroy," Paris, 1616. This last is said to have been the origin of most of the Christmas carols sung in France. The merits of this composer will appear to a modern musical critic to have been much over-rated. Burney's Hist. of Music, vol. iii.

CAURSINES, Caursini, in English History, denote Italian bankers or money-changers, who flocked into England, France, and the Netherlands, about the year 1335, calling themselves the pope's merchants, but, by departing from the proper business of merchants, and becoming agents for the pope in his various transactions, they rendered themselves as odious as the Jews. According to Matthew Paris, a contemporary historian, they sometimes exacted no less than 60 per cent. interest per annum. This, together with their ostentations display of their riches, drew upon them a very severe proscription. They were several times banished the kingdom for their extortion, and re-admitted by the intered and intrigues of the popes. Mat. Paris, Hist. Ang. p. 272. Du-Cange.

They are also called caurini, caurcini, catarini, catarucini, and corsesi. Some will have the name formed from Caurs, Cahors, a city of France, where they flourished more than ordinarily. Others derive it from the Corsini, a family of wealthy merchants at Florence.

CAUS, in Ancient Geography, a village of Pellonnesus, in Arcadia, and in the country of Telephusia. According to Steph. Byz. and Pasianus, Eulalius was worshipped here under the appellation of "Causian.

CAUSA Matriumini praebuit, in Law, a writ that lies when a woman gives land to a man in fee, or for life, to the intent he shall marry her, and he refuses to do it in a reasonable time; and in such case for not performing the condition, the entry of the woman into the lands again has been adjudged lawful. The husband and wife may sue this writ against another, who ought to have married her.

CAUSA Nobis significates, a writ directed to the mayor of a town, &c. who being by the king's writ commanded to make seif of lands to the king's grantees, delays doing it. The writ requires him to show cause of the delay.

CAUSALITY, or Causation, in Metaphysics, the power or action of a cause in producing its effect.

It is a dispute among the school-philosophers, whether, and how the causality is distinguished from the cause and effect? Some held it a mode, or modal entity, superadded to the cause, &c. others contend for its being a cause itself, only considered primumvate and terminare, &c. See Cause.

CAUSALITY, in Metallurgy. See Casuality.

In the tin-works the causality is thrown in heaps upon banks, which in six or seven years they work over again, and receive a new supply of metal from it. Phil. Trans. No. 158, p. 352.

CAUSE, Causa, which contributes to the production of an effect; or that by virtue whereof a thing is done, or from which it proceeds.—In which sense, cause islands essentially related to effect.

In every part of natural philosophy, it is assumed as a fundamental principle or axiom, that no event or change comes to pass merely of itself, that is, without relation to any thing else; but that every change itself related to, and implies the existence and influence of something else, in consequence of which such change came to pass, and which may be regarded as the principle, beginning, or source of the change.
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chance referred to it. Accordingly, the term cause is usually employed to denote the supposed principle of change; and the term effect is applied to the change considered in its relation to the principle of change whence it proceeded; for it must be observed, that both these terms, as commonly used, are relative. The axiom or principle, to which we have above referred, is usually thus expressed; 

"For every effect there must be a cause."— Nothing exists, or nothing comes to pass, without a cause!—Nihii turpius philosopho quam mete line causa quotidem dicit.

This principle, which is the foundation of natural philosophy, has been regarded both as a physical and as a metaphysical axiom; that is, as expressing an important general fact with respect to the material world; metaphysical, as expressing a corresponding law of human thought, or something which all men of competent judgment think, and cannot help thinking. This axiom, however, though it must be admitted as unquestionably true, has not precluded a difference of opinion with regard to the meaning of the term cause, and the relation conceived to subsist between cause and effect. Mr. Hume is represented by Dr. Reid, as the first author, who maintained (ubi infra), that we have no other notion of a cause, but that it is something prior to the effect which has been found by experience to be constantly followed by the effect; but it will appear in the sequel of this article, that a similar opinion, at least with regard to physical causes and effects, has been maintained long before, as well as after his time. Accordingly, his theory regarded events as simply conjoined, and not connected together by any conceivable process, nor produced the one from the other by any operative principle. As all our reasonings concerning matter of fact seem to be founded on the relation of "cause and effect," it is of importance to investigate, and, if possible, to ascertain this relation. Mr. Hume affirms, as a general proposition, admitting of no exception, that the knowledge of this relation is not, in any instance, attained by reasonings a priori; but arises entirely from experience, when we find, that any particular objects are constantly conjoined with each other. Let an object, says this acute writer, be presented to a man of ever so strong natural reason and abilities; if that object be entirely new to him, he will not be able, by the most accurate examination of its sensible qualities, to discover any of its causes or effects; or, he says, can our reason, unaided by experience, ever draw any inference concerning real existence and matter of fact. This proposition, he alleges, will readily be admitted with regard to such objects, as we remember to have been once altogether unknown to us; since we must be conscious of the utter inability, which we then lay under of foretelling what would arise from them. Such events as bear little analogy to the common course of nature, and are also readily confounded to be known only by experience. The cause is, when an effect is supposed to depend upon an intricate machinery, or secret structure of parts, for we then do not hesitate in attributing all our knowledge of it to experience. But the same truth may not appear to have the same evidence, with regard to events which have become familiar to us from our first appearance in the world, which bear a close analogy to the whole course of nature, and which are supposed to depend on the simple qualities of objects without any secret structure of parts. Such effects we are apt to imagine that we may be able to discover by the mere operation of our reason, without experience. But, in order to convince us that all the laws of nature, and all the operations of bodies, without exception, are known only by experience, Mr. Hume suggests a variety of reflections. The mind, he says, can never possibly find the effect in the supposed cause, by the most accurate scrutiny; for the effect is totally different from the cause, and consequently can never be discovered by it. And as the first imagination or invention of a particular effect, in all natural operations, is arbitrary, where we do not consult experience; so must we also esteem the supposed vice or connection between the cause and effect, which binds them together, and renders it impossible, that any other effect could result from the operation of that cause. Moreover, after we have experience of the operations of cause and effect, our conclusions from that experience are not founded on reasoning, or any process of the understanding. For the author's illustration of this remark, and the evidence adduced in support of it, we must refer to his own reasonings ubi infra. Experience, says Dr. Brown, can inform us only of the past. But the relation of cause and effect has reference to future and invariable antecedence and sequence, of which our experience can inform us. We believe it, indeed, irresistibly; and the belief is not denied; it is only the attempt to found the belief on reason which this proposition opposes. He who affirms, that A will always be followed by B, affirms, more than he who affirms, that A has always been followed by B; and it is this addition which forms the very essence of the relation of cause and effect. Neither of the propositions includes the other; and, as they have no agreement, reason, which is the sense of agreement, cannot be applied to them. Till it be shewn, that the future is involved in the past, we must allow the truth of Mr. Hume's second proposition, that even after experience, the relation of cause and effect cannot be discovered by reason. Mr. Hume advances, in the course of his reasoning on this subject, a third proposition, which is, that the relation of cause and effect is an object of belief alone; and this, it has been said, must be admitted, if the two former propositions be received. This belief, not the result of reason, is derived from our nature, and, in its operation, is as certain and powerful as if it were an inference established by a reasoning process. As soon as we believe the relation of cause and effect, the idea of power arises; which idea confutes not in the antecedence of one event to another, which has been uniform in all preceding cases, but in the uniform and invariable antecedence that shall take place in all future cases.

A cause, says Dr. Priestley, a late zealous advocate for the doctrine of necessity, cannot be defined to be any thing but "such previous circumstances as are constantly followed by a certain effect;" the constancy of the result making us conclude, that there must be a sufficient reason in the nature of things, why it should be produced in those circumstances.

Another ingenious writer (professor Dugald Stewart) who seems to have adopted Hume's general theory with regard to causation, as it respects physical causes, observes, as a fact pretty generally admitted among philosophers, that there is no influence in which we are able to perceive a necessary connexion between two successive events; or to comprehend in what manner the one proceeds from the other. From experience, indeed, we learn that there are many events, which are constantly conjoined, so that the one invariably follows the other; but it is possible, for any thing we know to the contrary, that this connexion, though a constant one, as far as our observation has reached, may not be a necessary connexion; may, it is possible, that there may be no necessary connexions among any of the phenomena we see; and if there are any such connexions existing, we may rest assured that we shall never be able to discover them. This author remarks that the word cause is used, both by philosophers and the vulgar, in two senses that are widely different. When it is said, that every change in nature indicates the operation of a cause,
cause, the word cause expresses something which is supposed to be necessarily connected with the change; and without which it could not have happened. This may be called the metaphysical meaning of the word; and such causes may be called metaphysical or efficient causes. In natural philosophy, however, when we speak of one thing being the cause of another, all that we mean is, that the two are constantly conjoined; so that when we see the one, we may expect the other; these conjunctions we learn from experience alone; and without an acquaintance with them, we could not accommodate our conduct to the established course of nature. The causes, which are the objects of our investigation in natural philosophy, may, for the sake of distinction, be called physical causes. This doctrine, says this ingenious writer, concerning the object of natural philosophy, is not altogether agreeable to popular prejudices. It is a curious question, what gives rise to prejudices of this kind? In laying the argument for the existence of the duty, several modern philosophers have been at pains to illustrate that law of our nature, which leads us to refer every change we perceive in the universe to the operation of an efficient cause. This reference is not the result of reasoning, but necessarily accompanies the perception, so as to render it impossible for us to see the change, without feeling a conviction of the operation of some cause by which it was produced; much in the same manner in which we find it to be impossible to conceive a sensation, without being impressed with a belief of the existence of a sentient being. Hence it is, as professor Stewart conceives, that we find two events constantly conjoined, we are led to associate the idea of causing, or efficiency, with the former, and to refer it to that power or energy by which the change was produced; in consequence of which association, we are led to consider philosophy as the knowledge of efficient causes; and lose sight of the operation of the mind, in producing the phenomena of nature. By an association somewhat similar, we connect our sensations of colour with the primary qualities of bodies. In the same way we associate with inanimate matter the ideas of power, force, energy, and causation; which are all attributes of mind, and can exist in a mind only. Our language also, with respect to cause and effect, is borrowed by analogy from material objects; and hence we transfer to certain events the same language which we apply to connected objects. Thus, we speak of a connection between two events, and of a chain of causes and effects. This language is purely analogical, and our knowledge of physical events is restricted to the laws which regulate this succession; and yet it has misled the greater part of philosophers, and has had a surprising influence on the systems, which they have formed in various different departments of science. The maxim that nothing can act, but where it is and when it is, has been always admitted with respect to metaphysical or efficient causes. Whatever objects, says Mr. Hume, are considered as causes or effects, are contiguous; and nothing can operate in a time or place which is ever so little removed from those of its existence; we may therefore, he adds, consider the relation of contiguity as essential to that of causation. But admitting this maxim in relation to causes which are efficient, and which as such are necessarily connected with the effects, there is surely no good reason, professor Stewart conceives, for extending it to physical causes, of which we know nothing, but that they are the constant forerunners and signs of certain natural events. According to this doctrine, indeed, it may be improper to retain the expressions cause or effect, in natural philosophy; but as long as the present language upon the subject continues in use, the propriety of its application, in any particular instance, does not depend on the contiguity of the two events in place or time, but solely on this question, whether the one event be the constant and invariable forerunner of the other, so that it may be considered as its invariable sign. Notwithstanding, however, the evidence of this conclusion, philosophers have in general proceeded upon a contrary supposition; and have discovered an unwillingness, even in physics, to call one event the cause of another, if the shortest interval of space or time existed between them. In the case of motion, communicated by impulse, they have no scruple to call the impulse the cause of the motion; but they will not admit that one body can be the cause of motion in another, placed at a distance from it, unless a connection is carried on between them, by means of some intervening medium.

Mr. Hume's theory on the subject of causation, and the relation between cause and effect, has occasioned alarm, and excited an application that it fapped the foundation of those arguments and principles of reason, by which the existence and supposition of a Deity are illustrated and established. Hence his truth has been disputed and denied; and without considering that the fallacy of the system does not confound in his premises, but in the conclusion which he draws from them, it has been represented as favourable to infidelity, but it ought to be recolected, that the principle which has been frequently ascribed to Mr. Hume as his author, by both his followers and his opponents, or that of restricting the physical inquirer from tracing necessary connections or ascertaining the efficient causes of phenomena, is of much earlier date, and has been maintained by many of the most enlightened and the most sceptical of our modern philosophers; nor does its dangerous tendency seem to have been subjected till the publication of Mr. Hume's writings, and the great misapplication which he made of his premises for invalidating the argument for the existence of the Deity derived from his works. An opinion coinciding remarkably with that advanced and defended by Mr. Hume is ascribed to Socrates by Xenophon. The sophists in ancient Greece, like their successors in modern times, appear to have entertained some confused notions about a necessary connection between cause and effect, implying the existence of an operating principle in the cause; they required, says Xenophon, "ΤΑΙΝΑΝΑΙΑΝΤΑΙ ΕΙΔΗΝΕΙΕΝΤΕΝ." The same excellent writer informs us in what light Socrates regarded these things by whom such notions were adopted. "ΑΝΑ ΚΑΙ ΤΟΥΣ ΦΡΟΝΙΖΟΝΤΑΣ ΤΑ ΤΟΥΓΑΤΙΑ ΜΟΡΦΑΝΟΝΤΑΣ ΕΙΔΗΝΕΙΕΝΤΕΝ." Afterwards he adds, "ΕΙδομενος η τη μν ΦΑΓΙΤΩΣ ΕΙΔΗ, ότα να αντικ Και στου γενετο άναρητοι υπέρων." "If we except," says Dr. Barrow (Mathematical Lectures read at Cambridge), "the mutual causality and dependence of the terms of a mathematical demonstration, I do not think there is any other causality in the nature of things, wherein a necessary consequence can be founded. Logicians do indeed boast of I do not know what kind of demonstrations from external cause, either efficient or final; but without being able to shew one genuine example of any such: may, I imagine, it is impossible for them to do. For there can be no such connexion of an external efficient cause with its effect, (or at least none such can be understood by us) "through which, strictly speaking, the effect is necessarily supphed by the supposition of the efficient cause, or any determinate cause by the supposition of the effect." Heads afterwards, "therefore there can be no argumentation from an efficient cause to the effect, or from an effect to the cause which is lawfully necessary."

"All things," says Dr. Clarke (Works, vol. ii. p. 698, fol. ed.) "that are done in the world, are done either immediately by God himself, or by created intelligent beings; matter being evidently not at all capable of any laws or powers whatsoever, any more than it is capable of intelligence;"
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gence; excepting only this one negative power, that every part of it will, of itself, always and necessarily continue in that state, whether of rest or motion, wherein it is at present. So that all those things which we commonly say are the effects of the natural powers of matter and laws of motion, of gravitation, attraction, or the like, are indeed (if we will speak distinctly and properly) the effects of God's acting upon matter continually, and every moment, either immediately by himself, or mediate by some created intelligent beings. Consequently there is such a thing as what men commonly call the course of nature, or the powers of nature. The course of nature, truly and properly speaking, is nothing else but the will of God producing certain effects in a continued, regular, continual, and uniform manner.

Dr. Butler also, in his Discourse on the ignorance of Man (Sermons) has remarked, "that it is in general no more than effects that the most knowing are acquainted with; for as to causes they are as entirely in the dark as the most ignorant." "What are the laws," he continues, "by which matter acts on matter, but certain effects, which home, having obversed to be frequently repeated, have reduced to general rules?" "The laws of attraction and repellion," says Dr. Berkeley (Siris, p. 128.) "are to be regarded as laws of motion, and these only as rules or methods observed in the productions of natural effects, the efficient and final causes whereof are not of mechanical consideration." Certainly, if the explaining a phenomenon be to assign its proper efficient, final cause, it should seem the mechanical philosophers never explained any thing; their province being only to discover the laws of nature, that is, the general rules and methods of motion; and to account for particular phenomena, by reducing them under, or showing their conformity to such general rules."—With more to the same purpose. Professor Stewart has also cited a very remarkable passage from Mr. Locke (Ess. b. ii. c. 23. § 28, 29.), which shews clearly, that this eminent philosopher considered the connection between impulse and motion as a conjunction which we learn from experience only, and not as a consequence deducible from the consideration of impulse, by any reasoning à priori. The passage is the more curious, because it is particular application of Mr. Hume's doctrine, that has been generally supposed to furnish the strongest objection against it. Some of Mr. Hume's reasons concerning the nature of the connections among physical events coincide perfectly with those of Malebranche on the same subject; though they were employed by the last writer to support a very different conclusion.

The author of the "Procedure, Extent, and Limits of Human Understanding," (said to be Dr. Peter Brown, bishop of Cork), says it down as the first fundamental unerring rule in physics, that it is not within the compass of human understanding to assign a purely speculative reason for any one phenomenon in nature. By a purely speculative reason, the writer means, such as does not consist of any such cause as is possible by nature. "We find," indeed, he adds, "by observation and experience, that such and such effects are produced; but when we attempt to think of the reason why and the manner how the causes work those effects, then we are at a stand, and all our reasoning is precarious, or at best but probable conjecture."

At a still earlier period, Hobbes expressed himself (see his Tripos), with respect to physical connections, in terms so nearly approaching to Mr. Hume's, that it is difficult to suppose that they did not suggest to him the language which he has employed on that subject. "What we can experience," he remarks, "is nothing else but remembrance of what antecedents have been followed by what consequents." "No man," he continues, "can have in his mind a conception of the future; for the future is not yet; but of our conceptions of the past we make a future, or rather call past future, relatively," &c. &c. Lord Bacon also hath piously taken for granted the doctrine now under consideration, without formally flating it, in all his reasonings on the method of procuring philosophical discoveries; for if we could perceive in any instance the manner in which a cause produces its effect, we should be able to deduce the effect from its cause by reasoning à priori; the impossibility of which he every where strongly insinuates. "Homo naturæ minime intelligit et intellectu quantum de natura ordinem vel mente observaverit; nec amplius satis aut potissim. However, lord Bacon's metaphysical notions on this subject do not stem from other passages in his writings to have been very accurate.

The consistency of Mr. Hume's fundamental principle, independently of his application of it, with the most devout impressions concerning the existence and the power of God, is sufficiently evinced by the testimonies of the excellent writers already cited. If it be alleged, that the passages above quoted are furnislhed by authors prior to Mr. Hume, and who were not fully aware of the consequences which he afterwards deduced from them; the following authorities are collected from philosophers and divines of a later date.

"What we observe by our external senses," says Dr. Price (Review of the principal Questions and Difficulties in 'Morals'), "is properly no more than that one thing follows another, or the constant conjunction of certain events, so of the melting of wax, with placing it in the flame of a candle; and, in general, of such and such alterations in the qualities of bodies, with such and such circumstances of their situation. That one thing is the cause of another, of produces it by its own efficacy and operation, we never see."

"With regard to the phenomena of nature," says Dr. Reid (ubi infra), "the important end of knowing their causes, besides gratifying our curiosity, is, that we may know when to expect them, or how to bring them about. This is often of real importance in life; and this purpose is served by knowing what by the course of nature goes before them, and is connected with them; and this, therefore, we call the cause of such a phenomenon." See the sequel of this article.
The language of Mr. Hume, as professor Stewart observes, has even been adopted by philosophers, and by aesthetists as well as theists. The latter have represented natural events as parts of a great chain, the highest link of which is supported by the Deity. The former have pretended, that there is no absurdity in supposing the number of links to be infinite. Mr. Hume, the professor adds, had the merit of shewing clearly to philos. phers, that our common language, with respect to cause and effect, is merely analogical; and that if there be any links among physical events, they must for ever remain invisible to us. It is this part of his system be admitted, and if, at the same time, we admit the authority of that principle of the mind, which leads us to refer every change to an efficient cause; Mr. Hume's doctrine seems to be more favourable to theism than even the common notions upon this subject; as it keeps the Deity always in view, not only as the first, but as the constantly operating cause in nature, and as the great connecting principle among all the various phenomena which we observe; this, according to, was the conclusion which Malbranche deduced from principles very nearly the same with Mr. Hume's. That a necessary connection has been supposed to exist, among physical events by many philosophers, whom it would be unfair to charge with atheism, is a fact that must be allowed. It was the doctrine of the ancient fatalists, that all things above and below are linked together by an inevitable necessity, but they did not, therefore, deny the existence of God, as the "Cum fatum (says Seneca) nihil addit et quam fere implica conftarum, sic et prima omnium caufa ex quae eft extort pendens." 

"While we condemn, therefore, the conclusion of Mr. Hume (so far as it has a tendency to weaken the evidence for the existence of the Deity) as sophistical and false, we are constrained," says professor Stewart, "not by that justice which is due to his philosophical abilities, but by our fidelity to the cause for which we profess to combat, not to involve both conclusions and premises in the same condemnation."

Having stated Mr. Hume's theory of causation, and presented to the view of the reader some of those arguments and authorities which have been urged by his advocates, in order to vindicate it from those licentious conceptions with which it has been charged; we shall now give as concise an account as possible of the sentiments of those who have differed from him with regard to this subject. To the chief of such persons we may refer Dr. Reid, whose opinions and reasoning claim peculiar attention, and merit the distinct examination. They will probably be no less satisfactory to many of the readers of this article, than to the compiler of it. Every thing that begins to exist, says this excellent writer, must have a cause of its existence, which had power to give it existence; and every thing that undergoes any change, must have some cause of that change. This principle appears very early in the mind of man; and it is so universal and so firmly rooted in human nature, that the most determined scepticism cannot eradicate it. From this principle it follows, that every thing which undergoes any change, must either be the efficient cause of that change in itself, or it must be changed by some other being. In the first case it is said to have active power; and to all in producing that change. In the second case it is merely passive, or is acted upon; and the active power is in that being only which produces the change. The name of a cause, and of an agent, is properly given to that being only, which, by its active power, produces some change in itself, or in some other being. The change, whether it be of thought, of will, or of motion, is the effect. Active power, therefore, is a quality in the cause, which enables it to produce the effect; and the exertion of that active power in producing the effect, is called action, agency, efficiency. In order to the production of any effect, there must be in the cause not only power, but the exertion of that power: for power that is not exerted produces no effect. With regard to the opinion of Mr. Hume and his followers, who maintain, that a cause is only something prior to the effect, and constantly conjunct with it, Dr. Reid observes, that every man who understands the language knows, that neither priority, nor constant conjunction, nor both together, imply efficiency. Every man free from prejudice must assent to what Cicero has said: "Itaque non hic causa intelligi debet, ut qui cum quaeque antecedat, id et caufa fit, sed quaeque consequit antecedit." In common language we say, the sun rises and sets, and comes to the meridian, the moon changes, the大火 ebbs and flows, and the winds blow; and as languages were formed by persons who believed these objects to have life and active power in themselves, it was proper and natural to express their motions and changes by active verbs.

Our knowledge of the real causes of the phenomena of nature is very imperfect; but though our acquaintance with external objects must be grounded upon the information of our senses; yet causation and active power are not objects of sense, nor is it always the cause of a phenomenon which is prior to it, and constantly conjunct with it: otherwise night would be the cause of day, and day the cause of the following night. It is to this day problematical, whether all the phenomena of the material system be produced by the immediate operation of the first cause, according to the laws which his will determined, or whether subordinate causes are employed by him in the operations of nature; and if they be, what their nature, their number, and their different offices are? And whether, in all cases, they act by compulsion, or, in some, according to their disposition? In consequence of this imperfect knowledge of the real causes of the phenomena of nature, ingenious men who have been desirous of exploring and ascertaining them, have formed numberless conjectures and theories; and unwilling to confine their disappointment in the search of causes, they have vainly conceived every thing they stumbled upon to be a cause; and the proper notion of a cause is thus lost, by giving the name to numberless things which neither are nor can be causes. In a very ancient system, love and desire were made the causes of things; in the Pythagorean and Platonist system, matter, ideas, and an intelligent mind; by Aristotle, matter, form, and privation; Dr. Cartes thought that matter, and a certain quantity of motion given at first by the Almighty, are sufficient to account for all the phenomena of the natural world. Leibnitz conceived that the universe is made up of minds, active and percipient, which, by their active power received at first, produce all the changes they undergo. In the ordinary concerns of life this confusion of various things under the names of causes is of little moment and influence; although it may be very hurtful to found philosophy. A constant antecedent or concomitant of the phenomenon whose cause is sought, may answer the purpose of the inquirer, as well as if the real cause were known. In compliance with custom, says Dr. Reid, or perhaps to gratify the avidity of knowing the causes of things, we call the laws of nature causes and active powers. Thus we speak of the powers of gravitation, of magnetism, and of electricity. But persons of juster discernment perceive, that the laws of nature are not agents; they are not endowed with active power, and therefore cannot be the proper causes of events. They are only the rules according to which the unknown cause acts: hence it happens that the word cause, and other words bearing relation to it, become so ambiguous as to have, in a manner, lost their proper and original meaning; and yet,
CAUSE.

Yet we have no other words to express it. Every thing joined with the effect, and prior to it, is called its cause. An instrument, an occasion, a reason, a motive, an end, are called causes; and the related words, effect, agent, power, are extended in the same vague manner. Were it not, continue this ingenious writer, that the terms cause and agent have lost their proper meaning in the crowd of meanings that have been given them, we should immediately perceive a contradiction in the terms necessary cause and necessary agent.

If this necessity, thus combined with cause and agent, be attributed even to the Deity, it must follow, that there neither is, nor can be, a cause at all; that nothing acts, but every thing is acted upon; nothing moves, but every thing is moved; all is passion without action; all instrument without an agent; and that every thing that is, or was, or shall be, has that necessary existence in its seconf', which we commonly consider as the prerogative of the first cause. If it be evident, says Dr. Reid, that what begins to exist must have an efficient cause which had power to give or not to give it existence; and if it be true that effects well and widely fitted for the best purposes, demonstrate intelligence, wisdom, and goodness, in the efficient cause, as well as power, the proof of a Deity from these principles is very easy and obvious to all men that can reason. If, on the other hand, our belief, that every thing that begins to exist has a cause, be not only by experience; and if, as Mr. Hume maintains, the only notion of a cause be something prior to the effect, which experience has shown to be constantly joined with such an effect, I see not how from these principles, it is possible to prove the existence of an intelligent cause of the universe. Accordingly, Mr. Hume seems to reason jolly from his definition of a cause, when, in the person of an Epicurean, he maintains, that with regard to a cause of the universe, we can conclude nothing; because it is a fingular effect. We have no experience that such effects are always joined with such a cause. Nay, the cause which we assign to this effect, is a cause which no man hath seen nor can see; and therefore experience cannot inform us that it has ever been joined with any effect. Mr. Hume, according to Dr. Reid, seems to deduce a just inference from his definition of a cause, when he alleges that any thing may be the cause of any thing; since priority and constant conjunction are all that can be conceived in the notion of a cause.

The following consequences are stated by Dr. Reid, as deducible from Mr. Hume's definition of a cause. It follows, he says, that night is the cause of day, and day the cause of night; for no two things have more constantly followed each other since the beginning of the world. It follows also, friendly, that, for what we know, any thing may be the cause of any thing, since nothing is essential to a cause but its being constantly followed by the effect. What is unintelligible may be the cause of what is intelligible; folly may be the cause of wisdom, and evil of good; and all reasoning from the nature of the effect to the nature of the cause, and all reasoning from final causes, must be given up as fallacious. A third consequence from this definition is, that we have no reason to conclude, that every event must have a cause; for innumerable events happen, when it cannot be flown that there were certain previous circumstances that have constantly been followed by such an event. And though it were certain, that every event actually observed by us had a cause, it would not follow, that every event must have a cause; for it is contrary to the rules of logic to conclude, that because a thing always has been, therefore it must be; to reason from what is contingent to what is necessary. Fourthly, it would follow, that we have no reason to conclude that there was any cause of the creation of this world; for there were no previous circumstances that had been constantly followed by such an effect. And, for the same reason, it would follow from the definition that whatever was fingular in its nature, or the fult thing of its kind, could have no cause.

Having shown what he conceives to be the absurd and dangerous consequences that follow from Mr. Hume's definition of a cause, Dr. Reid proposes another not chargeable with such consequences. "Why," says he, "may not an efficient cause be defined to be a being that had power and will to produce the effect? The production of an effect requires active power, and active power, being a quality, must be in a being endowed with that power. Power without will produces no effect; but when there are conjoined, the effect must be produced. This, I think, is the proper meaning of the word cause, when it is used in metaphysics; and particularly when we affirm that every thing that begins to exist must have a cause; and when, by reasoning, we prove, that there must be an eternal first cause of all things. Was the world produced by previous circumstances which are continually followed by such an effect? Or, was it produced by a Being that had power to produce it, and willd its production?"

"In natural philosophy," says this ingenious writer, "the word cause is often used in very different senses. When an event is produced according to a known law of nature, the law of nature is called the cause of that event. But a law of nature is not the efficient cause of any event; it is only the rule, according to which the efficient cause acts. A law is a thing conceived in the mind of a rational being, not a thing that has a real existence; and therefore, like a motive, it can neither act nor be acted upon, and consequently cannot be an efficient cause. If there be no being that acts according to the law, it produces no effect."

It can hardly escape our observation, says Dr. Gregory, (ubi infra), that the notion of a cause, as explained by Dr. Reid, is very different from that commonly adopted by philosophers, either metaphysicians or physical inquirers;—so very different, indeed, that the axiom, "Every change or effect must have a cause," as understood by him, will fearfully be admitted even by physical inquirers; and will not only not be admitted by metaphysicians as a principle universally true, but will be regarded by many of them, especially by Dr. Priestley, and all the disciples of Mr. Hume, as universally false, and even impossible. Dr. Reid, like many preceding philosophers, had attended too much to one kind of cause, or principle of change, namely, what a man, or any other living being, is to his own voluntary actions, or to those changes which he produces directly in himself, and indirectly in other beings, by the occasional exertion of his own power. This kind of cause may be called, for distinction's sake, exclusively an agent. That there are such agents, and that many events are to be referred to them, as either wholly or partly their causes or principles of change, is allowed as not only certain, but even irrefutable. Nevertheless, Dr. Gregory will not allow, that all events, without exception, are to be referred to some such causes, and necessarily imply the operation of agents, and the exertion of power; because he neither perceives it as a self-evident necessary truth, nor has ever met with any evidence of it. To this author it appears, that Dr. Reid, and many philosophers, who have thought and argued nearly as he has done on this subject, have gone as far wrong on one side as Mr. Hume, Dr. Priestley, or M. Leibnitz, or, in general, all adherents of the doctrine of necessity, have done on the other. These philosophers have attended too much
to another kind of causé, called, by way of distinction, physical causé; as, e. g. what impulse is to motion, heat to expansion, fuscene, and evaporation, the earth to the fall of a stone towards it, the fun and moon to the tides, &c. That there are such causés, or, in other words, that we conceive some relation to subsist between the various things and events respectively that have been mentioned, which relation we are accustomed to express by the terms causé and effect, is as certain as that there are agents for other events.

However, it seems evident, that these two relations are some-how different from one another; and that both of them are very different, and easily distinguishable, from various other relations of event. When heat is said to be the causé of the melting of ice, a certain relation is supposed to subsist between the heat and that event; but very different from that between a man and any of his voluntary actions; different also from that between motive and action; different even from that between evidence and belief; different from that between the vital principle of a plant or animal, and its growth, its functions, and accidents; different from that between the various occasional or exciting causés, (such as air, water, light, heat, cold, contagion, poison, &c.) and the growth, the functions, and the accidents of plants and animals; different even, in some measure, from that between impulse and motion; and different from that between any body and the fall, or tendency to fall, of another body towards it. All these relations, and such like, are easily distinguishable from one another; and cannot be confounded, by any thinking and discerning person, with the simple relation of priority and succession among things and events; as, e. g. between the morning dawn and the rising of the sun. No man fully ever regarded the dawn as the causé of the rising of the sun, or night as the causé of day. But as the philosophy of Mr. Hume, adopted by other metaphysicians, and even his definitions and explanations of the relation between causé and effect, lead men to confound all these notions, it is expedient to keep in view the simple relation of priority and succession, even in our inquiries concerning causé; that we may then be the better enabled to perceive what more there is in the relation of every kind of causé and effect than merely of the sequence of the one to the other. Whilst philosophers have speculated concerning the nature and influence of causés, they have been prone to overlook some of the kinds of causés that have been mentioned, and to confound others of them; to attend chiefly to physical causés; to suppose that for every event, even for the voluntary action of a living person, there must be such a causé; to maintain that the relation of motive and action is essentially the same with that between physical causé and effect, and thereby to exclude, not only the necessity, but almost the possibility, of the operation of an agent, or causé of that kind which Dr. Reid, in the passages above cited, and which many other philosophers have thought universally necessary for the production of change. Dr. Gregory differs from the system both of Hume and Reid; from the latter, because he thinks there are many events which we have no reason whatever, either from the primary laws of human thought, or from particular observation, experiment, and induction, to refer to agents; and from the other, because there are many events, e. g. the voluntary actions of mankind, which, in his opinion, ought to be referred to agents as their proper and chief principles of change. When we refer the voluntary action of a person to the agent as the author of it, that is, as the causé, or principle of change, from which it proceeded, we cannot reasonably be charged with the absurdity, that there may be an event or effect without a causé. As little can we be charged with that absurdity, when we refer the melting of ice, and the boiling of water, to heat; and when we refer the falling of a stone to the ground, and the ebbing and flowing of the sea, to the influence of the earth on the stone, and of the fun and moon on the ocean, according to the principle of general gravitation. We have evidence sufficient, corresponding to the nature of the subject and the extent of our own faculties, to believe, that among things inanimate, and consequently incapable of power or activity, in the literal and common sense of the term, there are such relations that they may be mutually causé and principles of change to one another, without any exertion of power, or any operation of an agent directly for causing the change, for ought we know, may subsist among bodies remote from one another, as well as among those that are really or apparently in actual contact; and they may vary, both in kind and degree, according to the distances between the bodies. We know their relations, however, merely as matter of fact; but the result, in point of event, in any given case of the application of such causés, will be the same, whether the relation among the bodies be necessary, or contingent and arbitrary; provided only that it be established and constant. Some of the relations of event, particularly that of physical causé and effect, comprehending the circumstance of their concomitant conjunction, as it has been very properly called, which seems always to be implied in strict physical reasoning, as well as in the common notions, and actual conduct of mankind, are necessary, like those of quantity, which are the objects of mathematical reasoning; the opinion, that there must be an exertion, or power, or activity, to produce such events, would be not merely erroneous, but absurd; for, on that supposition, no power or agency would be requisite to produce them, any more than to produce the relations of geometry; and no power in heaven or earth could prevent them from being what they are. If such relations, comprehending the circumstance of concomitant conjunction, subsist only by the will but arbitrary appointment of the Supreme Being, who might, if he had thought fit, have made them different; still the necessity at least, if not the possibility, of any exertion of power, or of any agency, would be completely excluded; while some other relations of events, that do not comprehend the circumstance of the concomitant conjunction of the causé with its effect, but, on the contrary, imply their occasional and very frequent separation, as, e. g. the relation of motive and action, not only do not exclude, but absolutely require and imply the operation of an agent, and the exertion of power. The question, it should be remembered, is not whether body can act, either where it is, or where it is not; but simply whether it be consistent with the laws of human thought to believe, that such relations may subsist among bodies, either by necessity, or the nature of things, or by the arbitrary appointment of the Deity, that they shall, in certain circumstances, be mutually causé or principles of change to one another. Whatever may be thought of numberless other events, and of their causé, it must be admitted, says Dr. Gregory, that every voluntary action of a person does proceed from some exertion of active power, or some such causé as Dr. Reid supposes to be universally necessary for every change. See on the subject of this article, besides the authors whose works have already been cited, Hume's Essays, &c. vol. ii. p. 4. part i. § 7. part i. Stewart's Elements of the Philosophy of the Human Mind, ch. i. § 2. Notes C and D. A short statement of some important facts relative to the late Election of a Mathematical Professior in the University of Edinburgh, &c. 1855. Brown's Observations on the Nature and Tendency of the Doctrine of Mr.

CAUSE.  

First, is that which acts of itself, and from its own proper power or virtue.—In this sense, God is the only First Cause.

CAUSES, Second, are those which derive the power and faculty of acting, from a first cause.

CAUSES were distributed by Aristotle into four different kinds; viz. the efficient, the material, the final, and the formal. Efficient causes are the agents that produce certain effects. Material causes are the subjects on which the agent performs his operation, or through whose action which lie within the reach of the agent to influence. Final causes are the motives or purpoſes, which move to action, or the end for which any thing is done. See Motive.

The doctrine of final cause furnishes an obvious and unanswerable argument in proof of the existence of a Deity, infinitely wise and benevolent. This argument is admirably illustrated by Dr. Paly in his "Natural Theology," or "Evil æst. of the Existence and Attributes of the Deity, collected from the Appearances of Nature." Sw. 1802. This excellent work deserves unprejudiced and attentive perusal; and thus perused cannot fail to produce conviction in every mind. See God and Providence. Formal causes denote the changes relating from the operation of the agent; or that which determines a thing to be what it is, and distinguishes it from every thing else. See Form. Instead of dividing causes into these four kinds, it would be more proper to leave out matter and form, as not being properly causes; and the rest might be divided into four kinds, viz. emanative, efficient, intentional, and final; and these include all the various ideas of positive proper causes in the most natural and easy view and order. An emanative cause is when the effect flows from it without any action to produce it, supposing only that all obstructions be removed. Thus water flows from a spring, and heat from the fire. An efficient cause, which most properly describes the name of a cause, produces the effect by some sort of active power or natural agency. Of efficient causes there are many subrespective divisions. An infradivine cause is that which produces effect either by way of manifestation of truth, or direction in practice; and may be called manifestive or directive. A fūsive cause is properly fomething from without, which being apprehended by the mind, excites or incites a voluntary or free agent to act, and it operates either by intreaty or authority, by commands or counsels, by promises or threats, by rewards or punishments, by fear or hope, or any other motives; all which are called moral agency or influence. The end or design is one of the chief infradivine causes, and is usually called the final cause; of which the scholastics have given a variety of divisions. They have also given us several other distinctions and denominations of causes, which it is hardly necessary to enumerate. Accordingly causes are distinguished into physical, or natural, and moral. The former is that which produces a sensible corporal effect. See Cause, above. The latter is that which produces a real effect, but in things immaterial; thus repentance is the cause of forgiveness.

Others define a phænomenal cause to be that which produces its effect by a phænomenal virtue or natural influence; and a moral cause, that which determines the phænomenal cause, though not necessarily, to produce the effect, or which works by persuasion: in which sense, it is also called a styphosive, expository, and imputative cause. Thus, the sun is a phænomenal cause of light: a flame, that breaks the skull, is a phænomenal cause of death: and thus the advice, intreaty, commands, or menaces, which determine us, though not necessarily, to do, or not to do, any thing, are moral causes. In this sense, a moral cause is only applicable to a free intelligent agent; and it is this notion of a moral and phænomenal cause that is the most clear, and distinct.

CAUSES, again, are considered, either as universal, or particular; principal, or instrumental; total, or partial; universal, equivocal, &c. An universal cause is that, which, by the extent of its power, may produce all effects. Thus the sun, fire, and air, are universal causes of plants, herbs, and flowers; for by the same force of influences, each of them produces various and different effects. A particular cause is that which can only produce a single effect; or a certain kind of effects. Thus the particular seeds are the particular causes of each different herb and flower. To these, common and proper causes are nearly allied. A principal cause is that which gives motion to the instrument, or which does not operate beyond its own natural efficacy. An instrumental cause is that which is only the principal to produce its effect; or which is excited to produce an effect, beyond the measure of its own perfection. A total cause is that which produces the whole effect. A partial cause is that which occurs with some other in producing the effects. An equivocal cause is that which is of a different kind and denomination from its effect: as when a man writes a book, when a root produces a leaf and leaves, or when money buys land. An universal cause is that which is of the same kind and denomination with its effect: as when a lion produces a young lion, or when a fountain sends forth a stream of water, or when money being lent, gains money by interest. See Watts's Brief Scheme of Ontology, in his Works, vol. v. ch. 10.

CAUSES, Occasional, are only the occasions, not the direct causes of their effects. The Cartesians resolve all phænomenal causes into occasional ones. See Occasion.

The soul, say those phælosophers, is not able to act on the body; nor the body reciprocally on the soul: to keep up an interchange between them, God, on occasion of a motion of the body, impresses a sensation on the soul; and, on occasion of a sentiment of the soul, impresses a motion on the body; the motions, therefore, of the soul and body, are only occasional causes of what passes in the one or the other. Thus, say they, the stroke, or percussion, is only the occasional cause of the motion produced in the body by it; it is God the direct efficient cause. And thus the action of objects on our organs is not the efficient cause of our ideas and perceptions, but merely the occasional cause which determines God to act on the mind, according to the laws of the union of soul and body.

CAUSE, in Medicine, is usually considered in a sense somewhat complex, and different from the ordinary acceptation of the word. It signifies not merely those agents, which, when applied externally or introduced internally, excite, in the body or in some of its organs, a state of disease; but it is also employed to express the previous condition of the body, which renders it liable to disease, as well as that which constitutes the disease itself. Thus physicians have treated of the causes of diseases under the two heads of remote and proximate causes; the former of which they have again divided into predisposing and exciting, or occasional, causes.

The predisposing cause, is that which renders the body liable to be attacked by disease, or to be acted upon by an exciting cause; for the operation of an exciting cause alone is generally not sufficient to produce disease. Thus several persons may be exposed at the same time to the same external agents,
agents, e. g. to cold and moisture; in some these agents will excite disease, or on others they will act with impunity. In the former persons some circumstances must have existed, which rendered them liable to receive those morbid impressions; in the latter no such predisposition was present. Again, some of those, whom the exciting causes affected, may suffer one species of disease, and others a different species: thus one individual may be affected with rheumatism, another with catarh, a third with dysentery, and so on; a fact implying the existence of some peculiar condition of the body, or of the organs respectively attacked, which is justly deemed a predisposing cause of the particular malady, which may have occurred. In some instances the predisposition is obvious and well understood: thus one attack of rheumatism, pleurisy, or any inflammatory disorder, generally renders the body more liable to suffer a second: a peculiar formation of the chest, combined with a fair and delicate skin, with dark eyes, lively spirits, &c. implies a tendency to be affected with pulmonary consumption: and a phteritic habit, large head, short neck, very florid complexion, &c. portend a probable apoplexy. In such circumstances the kinds of exciting causes, which ought to be peculiarly avoided, are manifest; and by a careful attention to this suggestion, the diseases, with which the individuals are menaced, may be altogether warded off.

In some instances this predisposing condition of the body, after long continuance, becomes gradually a condition of actual disease, without the concurrence of any external exciting cause; or it becomes, in the language of some writers, itself an exciting cause of disease. In this light a general mobility or morbid irritability of the system, excessive plethora, &c. must be considered. The exciting or acutaneous cause is that agent which produces disease in the body already predisposed to receive it. There are some exciting causes, however, so powerful, as to occasion the most severe maladies, in the most vigorous constitutions, from which every predisposition to disease seems to be absent. Such are the poisons of small pox and syphilis, the extremes of heat and cold; and so forth. And again, an exciting cause which may not immediately induce disease, may, if frequently applied, undermine by degrees the strongest habit, and render it liable to various infirmities. Such are luxury, intemperance, exposure to inclemency of weather, &c.

The proximate cause is usually defined, that, "quae presens morbum fact, sublata tollit, mutata mutat." It is that condition or circumstance, from which the symptoms of a disease immediately originate, and on which they exclusively depend. The proximate cause of the generality of diseases is obscure; and this obscurity has led ingenious men to enter into a variety of speculations altogether fictile, and tending rather to mislead than to inform the mind; and in some inferences indeed altogether unintelligible.

Causa et Efficit, in Law. In most cases the law hath respect to the cause or beginning of a thing as the principal part, on which all other things are founded: and herein the next, and not the remote cause, is most looked upon, except it be in criminal and civil things: and therefore that which is not good at first, will not be so afterward; for such as is the cause, such is the effect: e. g. if an infant or feme covert make a will, and publish it, and afterwards die of full age, or folly, this will is of no force, on account of the original cause of infancy and coverture; &c. Finch 12. Where the cause ceaseth, the effect or thing will cease. Co. Litt. 13.

CAUSEDO. Cape, in Geography, lies on the south coast of the island of St. Domingo; 5 miles S. E. of St. Domingo.

 Causeway, or Causey, a massive concretion of flem, flakes, and laticines; or an elevation of flat, vitious earth, well beaten; serving either as a road, in wet marthny places; or as a mole, to retain the waters of a pond, or prevent a river from overflowing the lower ground.

The word comes from the French chaussée, anciently wrote chausée; and that from the Latin calcata, or calculus; according to Sommer, and Schulein, à calco.la. Bergier rather takes the word to have had its rife à peditum calicis, qui- bus terraror.

Causeway, collectum, or collect, more usually denotes a common hard raised way, maintained and repaired with stones and rubbish.

Causeway, Devil's, a famous work of this kind which ranges through the county of Northumberland, commonly supposed to be Roman, though Mr. Horlby suspects it to be of later times. Horlby, Brit. Rom. fabrics. cap. 2, p. 449.

Causeway, Giants, is a denomination given to a huge pile of flem pieces, in the district of Colesfane, Ireland. See Basalt and Giants' Causewry.

CAUSSADE, in Geography, a town of France, in the department of the Lot, and chief place of a canton, in the district of Montauban; 12 miles N. E. of Montauban. The place contains 4142, and the Canton 13,183 inhabitants; the territory includes 225 Kilometers and 11 communes.

CAUSSINS, see Advocate.

CAUSSINS, Nicholas, in Biography, a learned French Jesuit, was born at Troyes in 1585; and having entered into the society of Jesuits at the age of 23 years, taught rhetoric with great reputation at their college. He afterwards became a popular preacher and writer, and was chosen confessor to Lewis XIII. For this situation he does not seem to have possessed the necessary talents; but more attentive to his duty than to the means of maintaining the good opinion of an all-powerful minister, he opposed cardinal de Richelieu in urging the king to recall the queen-mother, and not only lost his post but was exiled from the court to a town in Brittany. After the cardinal's death he returned to Paris, and died in the house of the society in 1624. Among his various works in French and Latin, the most popular of the former was his "La Cour Sainte" in 5 vols. 4to., indicating thepiety rather than judgment, but much read, and translated into several languages. His principal learned work is "De Eloquentia facra et humane," 1616, 4to., which was several times reprinted. It exhibits numerous examples of different fyles in writing. He also published "Electorum Symbolorum et Paschalarum historicarum Symposium," 1618, 4to.; "Disputes sur les quatre Livres des Rois, touchant l'Education des Princez," fol.; "Tragedies Sacree," 1620; "Apologie pour les Religieux de la Compagnie de Jésus," 1644, 4vo.; "La Vie heureuse des Filles devote," &c. 1642; "Symbolica Egyptianap Sapiencie," 1647, 4to., and some other works of devotion and controversy. Nou. Dict. Hiller.

CAUSTIA, in Antiquity, a kind of woollen cap used by the Macedonians; which was so strong as sometimes to serve instead of a helmet. Men. Acad. Inscript. vol. ii. p. 594.

CAUSTIC, Common, in Chemistry, a fixed alkalai deprived of aereal acid and most of its water. If the lixivium of the soap-bailers be evaporated to dryness in a silver or copper vessel, then fused in a crucible, poured out into a baloon, and when solid, cut into small pieces, it forms the common caustic which must be kept in a bottle to prevent its dislueing. When a piece of this alkalai is applied to the skin, for the space of three quarters of an hour, it corrod
rodes it; forming without doubt a fopanaceous compound with its fat parts. It was much used in making inks, before that practice was laid aside. See Caustic Alkali, and Caustic, infra.

Caustic, in Surgery, from *cau*; to burn, a substance, which, by its activity, will erode and consume the animal texture, wherever it is applied: the burning sensation it produces, and the astringent effects which are occasioned by its application, exactly accord with its name. (See Cathartics and Escharotics.) In some cases of ulcers and deep-set inflammation, particularly in chronic affections, the use of caustics is very considerable. The reader will find a few observations on the comparative ufe of caustics, in our article Access, under the head of "Various modes of opening ulcers." We shall here subjoin some remarks on their composition, and the method of employing them.

Caustics are used either in a solid or fluid form; but those which are fluid, can seldom be applied with all the requisite advantages. The stronger concentrated mineral acids are most frequently chosen by surgeons, when they use fluid caustical applications; as they are less liable to spread than an alkaline fluid, such as the aqua kali part of the London college, or the common lacticum causticum.

The solution of caustic alkali or potash, has, however, been often used as a solvent of the stone in the urinary bladder, (See Lithotriptic); for which purpose M. Fourcroy recommends applying the remedy by injecting into the bladder a tepid solution of potass or loda, so weak as to be borne in the mouth. Before it is injected, the bladder should be completely evacuated of urine, and washed out with warm water. After the solution has been injected, and retained half an hour or more, it may be voided and allowed to settle in a proper vessel. If, on the application of a little muriatic acid to the fluid, a precipitate be formed, we shall have reason to conclude that the calcina contain tnic acid, and that the alkali has acted on it.

The strongest caustic of a solid form, in general use among surgeons, is prepared as follows:—evaporate a solution of pure kali or potash in a clean iron vessel to a flake of dryness; after which let the flake matter, in a melted plate, be poured on a smooth iron plate, and divided into small pieces before it hardens, which must immediately be placed in a well flapped vial for use. This caustic is very apt to liqouity on exposure to the air; it is therefore usually managed, by the admixture of quick-lime, to render it less liable to defileuceness; but this procedure also weakens the causticity of the remedy, so that it is not so fit for surgical purposes.

Some practitioners will even dilute the caustic fluid more, before they use it, by the mixture of soft soap, &c. which forms a paste; and then apply this in the following manner: put several folds or layers of common adhesive plaster upon the part, through each of which a cut circular aperture for the reception of the paste. Then fill this hollow with the caustical substance, and let it remain for the space of six, seven, or eight hours, according to the effect desired; when it will be found to have penetrated sufficiently deep. Although this method has been sanctioned by the names of many eminent surgeons, it is very far from being the most eligible; as the pure kali rubbed on the skin about three or four minutes, will produce all the purposes wished for, and cannot extend itself or penetrate farther than is proper. The pain caused by this short process, is not to be compared to that of applying a milder caustic several hours together.

When the caustic has produced its full effect, there will be a portion of dead skin or flesh, called an efehar, which, by degrees, will separate and leave an opening. The part should be pusticed until the efehar is cast off; but should the separation of the dead skin be longer in taking place than the surgeon expects, he may puncture it through with a lancet, to facilitate the discharge of the confined matter.

When a superficial and more circumcised effect is required, the lunar caustic will be found preferable to the pure kali; as it is much less apt to dissolve, and therefore is easily managed even by an unfledged hand. The lunar caustic consists of a solution of pure fiver in nitrous acid, formed into long solid pieces, about the size of a goose-quill; which must be always moistened a little, before we apply them to the skin. A scurpil or half a dram of this substance, dissolved in an ounce of water, makes a useful lotion for languid phlegm; demes forte; or it may be now and then injected into fistulous ulcers, until the surface begins to suppurate freely.

The milder caustic substances, are burnt alum, vitriolated zinc, vitriolated copper, verdigris, &c. but they seldom produce much benefit without repeated application, as they are too weak to act upon a part which is not previously deprived of its cuticle.

Artificial caustics have likewise been employed by surgeons, especially in cancerous cases; but their superiority to more safe applications is very questionable; and it is certain that bad consequences have sometimes arisen from the use of them, even in the hands of skilful practitioners. See Home and Julland's Tracts on cancers.

Caustic Curve. See Curve.

Caustic, by reflection. See Caustic Curve.

Caustic, by refraction. See Caustic Curve.

Caustic gauze. See Burning gauze.

Caustic, Lunar, in Chemistry, improperly called "lapis infernalis," consists of the crystals of silver obtained by solution in nitrous acid, and afterwards fused in a crucible. It is prepared by dissolving very pure silver to saturation in nitrous acid, and separating the crystals by evaporation and cooling. These are to be fused in an earthy crucible, sufficiently large to admit of the frothing and swelling that happen at the commencement of the fusion. The heat must be gentle, because the crystals are very fusible, and the acid easily decomposed and driven off. It requires, however, to be somewhat raised after the ebullition has ceased. As soon as the matter is in quiet fusion, it is to be poured into a mould, consisting of five or six small cylindrical cavities, by which it acquires the form of small pencils, and may conveniently be held in a case instead of touching it with the fingers. The blackness of lunar caustic seems to arise from part of the acid being driven off, and a portion of the silver received. Its causticity or action on animal substances appears to depend on the strong diisposition of the silver to recover its metallic state, and consequently is a true combustion.

Causticity denotes a quality belonging to several substances, by the acrimony of which the parts of living animals may be corroded or destroyed; accordingly, all substances which have to bring a tendency to combine with the principles of organized bodies to destroy their texture, are laid to be caustic. The chief of these are the concentrated acids, pure alkalies, and the metallic salts. See Caustic, supra.

Causticum Antimoniale, the name given in the late London Dispensatory to what was before called biter of Antimony.

Causus, in Medicine, *causus*; from *caus*, I burn, a term applied by Hippocrates and other Greek writers, to an acute fever, accompanied by great heat of the skin. It is the
the same with the *fabris aurum* of the Latins. See Inflam-matory Fever.

CAUTERISATION, in Surgery, is the operation of burning any part of the body artificially by means of a hot iron.

CAUTERY, *cuvah*, is a surgical instrument made of iron, gold, or silver, which, after having been made red hot, exerts its cauterizing power upon the part to which it is applied; and it must be of various dimensions according to the purposes for which it is to be used. It is also termed the actual cautery.

The actual cautery was formerly much employed for stopping hemorrhages, by touching the wounded arteries with it. When this is used, we must, in order to avoid irritating and burning the neighbouring parts, place an iron tube or cannula upon the orifice of the artery, surrounded with cold wet cloths, through which the red hot iron is to be introduced, and the artery touched for a moment with it. Should it be practicable, we ought previously to stop the hemorrhage by means of the tourniquet, and dry the wound well. But as the eschar produced by the cautery may easily separate, and the hemorrhage return, the patient should lie quiet and be constantly watched; and in order to prevent the separation of the eschar, it may be frequently moistened with brodinc, and the impetus of the blood towards the part annihilated by the application of the tourniquet, or by blood-letting: and also in removing the dressings proper caution ought to be observed with respect to the cicatric.

In some cases the actual cautery is the only remedy that can be employed with effect; as when the bleeding vessel is deep situated, or when from any cause no other bloody remedy can be used: for example, in hemorrhages from under the tongue, from the sockets of the teeth, &c. The actual cautery is therefore a remedy which certainly deserves to be more frequently used than is generally done, especially in the irritation and pain which it occasions are by no means so great as is generally supposed. See Hemorrhage.

The actual cautery is moreover used in cases and enlargements of the bones; in caries of the teeth; in excrencences, especially of the gums; and in wounds produced by the bites of mad dogs, or venemous animals. Consult on this subject the dissertations of Mr. Le Cat concerning the use of fire in chirurgical diseases, and that of Mr. Spiritus concerning fire considered as a chirurgical remedy, Götting, 1784.

To this head belongs also the cauterisation with morsa, cotton, gun-powder, burning-glasses, or live coal. The morsa is prepared from the plant termed Artemisia vulgaris. It must lie for a very long time, even for whole years, in the shade to dry, after which the leaves and superior extremities are pounded and rubbed between the hands till they form a sort of cotton. For the purpose of perfuming it, the Chinese sometimes mix morsa with the ashes of the wood of aloes with the Artemisia. When this cotton has been purified from all coercive and foreign substances, it is rolled between the hands till it acquires the form of a cone, pointed at the top and broad at the base, like a pyramid. This pyramid is fastened with saliva to the skin, and set on fire; and when it has quite burnt down, it leaves an eschar upon the skin.

The cylinders of cotton, or Mr. Pantaleo's bougies, are prepared in the following manner. Take carded cotton, and form it, without twirling it close together, into cylinders four inches long, and one in diameter. The cylinder is next wrapped round with a piece of fire linen, four inches broad and three long, and the two ends are laid over each other and sewed together, so as to form a small plug. This is then cut through the middle with a pair of scissors, so as to form two cylinders. The rod of the cotton, which projects either at the top or bottom, is to be cut off with the scissors, close to the edge of the linen. In using these cylinders, the lower extremity is placed upon the skin, moistened a little with saliva, to make it adhere. The upper end is then kindled with a wax taper, and kept: burning by means of a fan or bellows, till it has quite burnt down. As soon as the heat penetrates it to the skin, the cotton is made to stick still farther to the part by means of the augmented perspiration.

The method proposed by Mr. Pfafel is still more convenient. The cotton having first been boiled in a strong solution of nitre, the cylinder after being once lighted, burns till it is quite consumed, so that there is no necessity for fanning or blowing the flame. If we confine the cylinder in a wide tube of strong pallboard, we may hold it between our fingers whilst it is burning, so as to prevent its falling down or injuring the neighbouring parts.

Of such cylinders we may apply one, two, or more, according to the circumstances, and yet the operation of the fire will never penetrate deeper than the skin. When the operation is finished, the burn part may be covered with ung. resin. flav. or balsamin spread upon a pledget. When the heat does not penetrate quite through the skin, and into the cellular sub stance, we frequently fail of our intention, on which account we must always see to it, that the cylinder burns down to its very last particle, as the end of the combustion is the most efficacious.

Cauterns have been employed with advantage in various diseases, but they are chiefly useful in arthritic and rheumatic pains, in which cases the pyramids of morsa, and especially the cotton cylinders, are preferable to the actual cautery. But before we proceed to the use of these applicatrix, we ought first to have tried every other proper remedy, and when these produce no benefit, we must employ the cautery. We ought always to place these substances exactly upon the part at which the pain is most violent. When the pain[L.19] flits, we must follow it with the cylinder whenever it seems itself. However, this method of cauterising is properly applicable only when the pain has actually seated itself in some particular part; for, as long as it is fugitive, we merely make it shift from its temporary seat to another, without suddenly removing it. Its most speedy and surprising effect is in the lumbago.

It is further useful also in cases of ulcers, and in lymphatic swellings of the joints. However, it is necessary that particular attention should be paid to the nature of the circumstances in applying it. When, for example, the white swelling is combined with a deep seated and violent pain, when there is cause to believe that the ligaera are attacked by an arthritis, rheumatic, or vesicular acenty, cauterification might tend to increase the evil; which might be the case in a still greater degree if the bones were enlarged and catious, or whenever the lymphatic tumour is the effect of some violent constitutional disease. It is most useful when the tumour is of a primary nature. But powerful as the effects of these cauterising cylinders are, there are some cases in which it is necessary to employ them repeatedly before the pain yields to their operation.

The method of burning with gun-powder is as follows: when (for example, after a person has been bit by a mad dog) the actual cautery cannot be employed, either on account of the irregular shape of the wound of the tear of the patient, gun-powder is sprinkled into the wound, and set fire to, as often as may be necessary.
CAU

The ancient surgeons with justice placed great dependence upon cauteries; only they are in some degree to be repre- hed for the abuse they sometimes made of them; as are the moderns also, for their too great neglect of these very efficacious remedies.

Actual cauteries are distinguished, according to their degrees of strength, from cauties; which are termed potential cauteries. The difference between the actual and the potential cautery consists in the circumstance, that though cautics produce an ulcer or crust, they do it in a much slower manner, and not till several hours have elapsed: whilst the actual cautery produces its effects instantaneously. The potential cautery is therefore applicable in none of those cases which require the actual cautery. See the article Caries, fab fucc.

CAUTING GUNGE, in Geography, a town of Hindoostan, in the country of Bahar, on the north side of the Ganges, opposite to Bar.

CAUTING Iron, among Farriers, an iron instrument, with wherewith they cautersite and tear the parts of a horse which require burning.

CAUTIO, in the Civil Law, denotes an assurance or securitie given or taken for any thing trusted.

CAUTIO, in Military Language, is an explanation given before the word of command, by which the attention of the soldiers is called to the regular and correct execution by all of them at the same time of the movement they are about to be directed to perform.

CAUTIOE, admitting, in Common Law, a writ which lies against a bishop who holds an excommunicated person in prison for contempt, notwithstanding he offers sufficient caution or security for obeying the commands of the church for the future. Reg. Orig. 66. And if a man be excommunicated, and taken by a writ of "significavit," and after offers caution to the bishop to obey the church, and the bishop refuseth it; the party may sue out this writ to the sheriff to go against the bishop and to warn him to take caution, &c. But if he has reason to doubt whether the sheriff will deliver him by that writ, the bishop may purchase another writ, directed to the sheriff, reining the cafe, &c. When the bishop hath taken caution, he is to certify the same in the chancery, and thereupon the party shall have a writ unto the sheriff to deliver him. New Nat. Brev. 143.

CAUTIORITY TOWNS, places of strength, which one prince or power puts into the possession of another as a security either for the payment of a debt, or performance of some other matter stipulated between them. Thus, when a profusion of expense was incurred by the elevation of the duke of Buckingham in the reign of James I. which was too great for his moderate revenue, the cautionary towns were delivered up to the Dutch, A.D. 1626. In the preceding reign, queen Elizabeth, when she lent the revolted Hoolanders large sums of money, required of them a proper deposit, as security for payment. The Dutch, in compliance with this demand, put her into possession of the three important forts of Flushing, Brille, and Rancekins. But James, in his present exigence, agreed to evacuate these fortresses, upon being paid only a third part of the money which was due; this measure occasioned a very general discontent.

CAUTORY, or FIRE-JUXTA, in Scots Law, denotes the obligation by which one person becomes engaged as security for another, that he shall either pay a sum or perform a deed. A cautoner for a sum of money may be bound, either simply as cautoner for the principal debtor, or conjointly and severally for and with him. The word has, by custom, the "hen chicum ordinis," or of dedication: by which the creditor is obliged to defend the proper debtor, before he can unite for payment against the cautoner. Where a per-
C-au, in Geography, a river of the island of Cuba, which runs into the sea, 20 miles N.W. of Hayamo.

Cauturier, in Anatomy, a name given by the French writers to a muscle of the leg; called by the old writers, primum felodentum tibianum; and by the latter writers, Cowper, Albains, &c. Jartorius; by Rioli, Jaturius.

Cauver, in Geography. See Cauveri.

Caux, a country of France, in Normandy, so called before the revolution, about 50 leagues in circumference, lying between the Ocean and the Seine. Vexin, Normandy, Picardy, and the country of Bray. The land is fertile in grain, hemp, fruits, &c. The coal abounds with fish, and the forests with game. Cauver is the capital.

Cavy, in Zoology. See Cavia.

Cavy, myq, of Pennant's quadrupeds, is the Mus pilores of Pallas, and other late writers. See Mus pilores.

Cavy, Cape of Pennant, is Hyrax capensis, which see.

Cawpoor, in Geography, a town of Hindoostan, in the Soukab of Oude; 37 miles S.W. of Lucknow, and 98 N. W. of Allahabad.

Cawood, a town in the well riding of Yorkshire, England, seated on the banks of the navigable river Ouse, over which there is a ferry from this town into the east riding. Here was formerly a castle, some ruins of which still remain. This was given by the Athenians to the archbishops of York, and was the birth-place of bishop Mountaine, who is buried in the church at this place. The castle suffered materially in the civil wars. Here are a weekly market on Wednesdays, and two fairs yearly. The town contains 247 houses, and 1,025 inhabitants, the greater number of whom is employed in agriculture. Cawood is situated 12 miles S. of the city of York, and 187 N. from London.

Cawston, a small market town of Norfolk, England, is held by the Duchy of Lancaster in free socage. It is situated on the river Bure, and has a small market on Wednesdays, and three annual fairs, one of which is well supplied with sheep. Cawston is eleven miles N.W. of Norwich, and 112 miles N.E. from London. Here are 176 houses and 846 inhabitants.

Cax, in Commerce, a little coin made of lead, mixed with c мира of copper; struck in China, but current chiefly at Bantam, in the room of the island of Java, and in some of the neighbouring islands.

It is somewhat smaller than the French double, and has a square hole through the middle: by means whereof, several of them are hung on the same string: this string, which they call fanta, usually contains two hundred caxas, equivalent to nine French deniers, or somewhat less than three farthings English. Five caxas tied together, i.e., a thousand caxas, make a fajpanor. Nothing can exceed the brittleness of the caxa; a string never falls to the ground without breaking at least ten or twelve pieces. Leaving them at night deepened in salt-water, they clung so firm to one another, that they are not to be separated without breaking one half of them. The Malays call them cac; and the fajpanor.

The caxas are of two kinds: great and small; the small are those which we have been speaking of: three hundred thousand whereof are equal to fifty-six lives five pounds, French money. The large are old caxas; fix thousand whereof are equal to the piece of eight, or four shillings and six pence English. There are near 2,000 pieces with the caxas of China, and the caxas of Japan.

Caxa Mino, an appellation distinguishing those mines of gold and silver in the province of Quito in South America, which are contained and confined, as it were, between two natural walls; in contradiction to those in which the metals are found dispersed and mingled with earths of different species. In these mines, generally speaking, the silver and gold are intimately united with other bodies; and, therefore, it is necessary to separate the grains from the earth by running conduits of water. After having undergone the operation of the quicksilver, which their quality renders indispensible, the fulness is washed in order to separate the remaining filth. After the last operation the amalgama is pure, confining entirely of quicksilver, and gold or silver, according to the species which has been worked.

Caxamaraca, in Geography, a jurisdiction of South America, in the country of Peru, and diocese of Truxillo, lying to the eastward of Truxillo, and extending along a vast interval between the two Cordilleras of the Andes. This jurisdiction is fertile in all kinds of corn, fruit, and excellent vegetables, and also in cattle, sheep, and especially hogs, of which they sell a great number to the farmers in the valleys, who, after fattening them with maize, sell them to the markets in the large towns. The farmers of the valley of Chinea, and others, in particular, carry on a considerable trade in these creatures at Lima, Truxillo, and other flourishing places. The Indians throughout this jurisdiction weave cotton for ship-linen, bed-curtains, quilts, and other uzes, which are sent into the other provinces. Here are also some silver mines, but of little consequence. The principal town is of the same name, and was formerly a royal city, where the emperor Atalla was put to death, after having been defated and imprisoned by Pizarro: about 70 miles from the Pacific Ocean. S.lat. 8°, W. long. 76° 10'.

Caxamarquilla, or Cosamarquilla, called also Patera, a jurisdiction of South America, in the diocese of Truxillo. It lies among the mountains at a small distance S.W. from Caxamarca, and from its different situations has a variety of products; but it is particularly remarkable for gold mines. The chief commerce consists in exchanging that metal for current money, especially silver coin, which is the more esteemed here on account of its scarcity.

Caxatambo, a jurisdiction of South America, in the circuit of Lima, commencing 23 leagues N. of Lima, and extending about 20 leagues, and partly among the mountains, so that the temperature of the air is very high; but the whole territory is very fertile in grain. It has also some silver mines, which are wrought; and the Indians have manufactories of guns, which constitute part of the trade of this jurisdiction.

Caxcaxtototi, of Ray, in Ornithology. See Sturmis mexicanus, Cand.

Caxines, Cape, or El Acen-natar, in Geography, a cape on the north coast of Africa, in the Mediterranean, forming the west point of the bay of Algiers. N. lat. 37° 15'; E. long. 3° 30'.

Cauxou, in Metallurgy, a word used to express a chalk of ores of silver, or any other metal, that has been burnt, ground, and washed, and is ready to be refined.

Caxton, in Biography, devolves to be recorded as the first person, who, according to some writers, introduced the art of printing into England, or who, according to others, improved and perfected it by the use of fustie types. He was born about the latter end of King Henry the IVth's reign, who died in the year 1412, in the Weald of Kent; and, after having been well instructed by his mother in reading and writing, he was apprenticed to Mr. Large, an eminent mercer in London, lord-mayor of the city, in 1430, with whom he resided till his death. In the year of his master's death, 1441, he was sent abroad by the mercers' company, as their agent and factor in the Low Countries, where he continued in the management of their concerns for about 23 years. His conduct in this department of public trust had been so satisfactory to his employers, and so highly reputable to himself, that he was joined
in a very honourable commission, granted by king Edward IV, in 1494, for the purpose of continuing and confirming the commercial treaty subsisting between his majesty and Philip Duke of Burgundy, or, if necessary, of negotiating and establishing a new treaty. Afterwards he appears to have held some office in the household of lady Margaret of York, the sister of king Edward, who, in 1468, was married to the duke's son, Charles, then duke of Burgundy. By his long residence in these countries, as well as by an inquisitive and industrious disposition, he became acquainted with the new invention of printing, which was then practised in Holland and Flanders; and he seems to have been actuated by the laudable ambition not only of acquiring the art, but of introducing it into his own country. At the instigation of the duchess of Burgundy, by whom he was probably employed in some literary department; having attained by his diligent application a competent knowledge of the Latin and French languages, he translated from the French a work, which he entitled "The Recuyell of the Hystorys of Troye," the first book suppos'd to have been ever printed in the English tongue. Having laboured for three years in the translation of this work, which he began at Bruges, in 1468, and finished at Cologne, in 1471, he undertook the task of printing it in this city, having, as he himself says, "practised and lerned at my grete charge and dispence, to ordyne this sayde book in prynte." Its date is 1471. After having published "The Book of Troy," he proceeded in printing others; and, at length, having provided himself with presses, types, and all other printing materials, he came over to England, in 1472; and, in a printing-room at the entrance of Wellminter Abbey, whence a printing-room is to this day called a "chapel," he produced, in 1474, the first book that was ever printed in this country, which was the translation of a French work, and entitled "The Game and Play of the Cheffe," &c. For other claims to the introduction and practice of printing in England; see the article PRINTING. The next works, printed by Caxton, in the order of time, were "The Hystory of Jafon," suppos'd, though without a date, to have been printed in 1473; "The Dicts and Sayings of the Philosophers," printed at Wellminter in 1477; "The Moral Proverbes of Chrylyme of Par," printed in the following year; "The Corday," printed in the same year; and after printing began to make its first appearance at Oxford in 1479, three books, entitled the "Image of the World," "Ovid's Metamorphoises," and the "Chronicles," with a "Description of England," all printed in 1480. Such was his indefatigable industry, even in the decline of life, that in the space of 20 years he produced between 50 and 60 specimens of his skill and labour, most of them being translations, by himself, from the French, and judiciously selected with a view to the promotion of a taste for literature, and of good morals. Caxton died in 1491, and was buried in St. Margaret's church, Wellminter. Although Caxton had no great pretensions to literature, nor to the reputation of an original writer, and though he does not appear to have made any improvement in the typographical art, he is entitled to respect and gratitude for the share he had in introducing and establishing an invention of the highest importance in his own country, and in facilitating and extending the practice of it. He printed, and in some cases translated, what he had undoubtedly great merit in, and contributed in a very considerable degree, not only to the perfection of the art of printing, but to the diffusion of useful knowledge. The specimens of his talents and performances as a poet are found in the rhyming introductions and epilogues, with which he frequently decorates his books, and in a poem of considerable length, entitled the "Work of Sapience." This comprehends not only an allegorical fiction concerning the two courts of the castle of Sapience, in which there is no imagination, but a system of natural philosophy, grammar, logic, rhetoric, geometry, astronomy, theology, and other topics of the fashionable literature. Although Caxton appears, by the preface, to be the author, yet Mr. Warton, (Hist. of Poetry, vol. ii. p. 194,) thinks it not improbable, that he might on this occasion employ some professed versifier, at least as an assistant, to prepare a new book of original poetry for his preëx. The writer's design is to describe the effects of wisdom from the beginning of the world; and the work is a history or knowledge or learning. Bkg. Brit.

CAXTON, in Geography, a small market town of Cambridgeshire, in England, has no other claim to publicity than from having been the birth-place of that respectable old historian, Matthew Paris, and the supposed birth-place of William Caxton, who introduced the art of printing into England. This ancient printer, we are informed by himself, was a native of Kent. In his "Recuyell of the Histories of Troye," he thus informs us. "In France was I never, and was born and learned myne English in Kente in the Weald, where English is spoken broad and rude." This town is fested on a Roman road, and at present derives its principal support from being situated on a modern public road. The houses are small and mean, and the inhabitants mostly occupied in husbandry. It has a small market on Tuesdays, and two fairs annually.

CAY, a town of China of the second rank, in the province of Pe-chë-leh; 125 miles S.S.W. of Peking. N. lat. 39° 3'. E. long. 115° 20'.

CAY, in Geography, a river of Spain, which runs into the Guadaisa, near Badasco.—Also, a river of Spain, in Catalonia, which runs into the Mediterranean, near Tamarit.

CAYAHOGA, or CAYUGA, a river of North America, in the state of Ohio, which discharges itself, by a mouth 83 yards wide, into the lake Erie at the fourth bank, 40 miles easterly of the mouth of Huron; having an Indian town of the same name on its banks, 30 miles S. of lake Erie. N. lat. 41° 30'. W. long. 81° 20'. It is navigable for boats 60 miles to the portage, which is 7½ miles to the head-waters of the Tuckarawa branch of the Mahoning; and it is also navigable for sewers for fifteen miles without any falls or rapids; but at the mouth there is a bar like that of Grand river. In the vicinity of this river are fine uplands, extensive meadows, oak and mulberry trees fit for ship-building, and walnut, chestnut, and poplar trees adapted to domestic uses. Near the mouth of this river are the celebrated rocks which project over the lake. They are seven miles in length, and rise 40 or 50 feet perpendicularly out of the water. Some parts of them consist of several strata of different colours, lying in a horizontal direction, and so exactly parallel that they resemble the work of art. The view from the land is grand; but the water presents the most magnificent prospect of this sublime work of nature; it is attended, however, with great danger, for
for, if the leaf from arised, the force of the sun is such, that no vessel can cleanse being dashed against the rock. The heathen Indians, when they pass this impending danger, offer a facsimile of tobacco to the water. Part of the boundary line between the United States of America and the Indians, begins at the mouth of Cayahoga, and runs up along the same to the portage between that and the Tul- carawa branch of the Maumee.

The Cayuga Indian, confiding of 500 persons, 200 of whom are warriors, 40 being resident in the United States, and the rest in Canada, receive of the State of New York an annuity of 2,500 dollars, besides 50 dollars granted to one of their chiefs, as a consideration for lands sold by them to the State, and 500 dollars from the United States, agreeably to the treaty of 1784.

CAYAMBE, a village of South America, in the province of Quito, and jurisdiction of Otabolo, seated in the middle of a spacious plain, about 12 leagues N. of Quito. In this place M. Couplé, one of the French mathematicians deputed to measure the length of an arc of the meridian, died on the 17th of September, 1736, after an illness of two days.

CAYAMBURO, a mountain of South America, in the province of Quito, seated at the extremity of the plain of Cayambe, about 12 leagues N.E. from Quito. It is one of the largest mountains of the Cordilleras in this part of the country, being nearly equal in height to that of Chimborazo, that of the latter above the ocean being 19,395 English feet, and that of the former 19,391 feet. Its altitude is so great that it may be seen from the city of Quito. Its summits are covered with snow and ice; and its vicinity renders the whole plain of Cayambe cold, which is increased by the violence and continuance of the winds. It exhibits no appearance of having ever been a volcano, nor is there any tradition to that purpose. Several rivers flow from it, from which those from the west and north run either into the river of Emeralds or that of Mira, but all fall into the South Sea; while those from the east discharge themselves into the river of the Amazonas.

CAYANG, in Botany, a leguminous plant, cultivated in the Mogul dominions for food. It is a kind of coarse pulse, of which the Europeans use great quantities on shipboard in the East Indies. It is a species of the cajifer, called by the Indians tiffy. Pol. Déc. Com.

CAYAO, or CALAO, in Ornithology, a name by which the Linnean cuceros bicorns, or Philippine hornbill, is described in the Transactions of the Royal Society, v. 23, p. 1794.

CAYBOBO, in Geography, a town of the island of Ceram, in the East Indian Sea.

CAYBOROUGH, a river of America, being one of those rivers, which fall into the channel of Amerys, or north-west branch of the river Amazon; but, though navigable, it is useless for want of towns and inhabitants to trade.

CAYEAC, a sweet scented wood which grows in Siam; the Siamese and Chinese burn it in their temples. It is one of the commodities exported from Siam for China.

CAYENNE, or French Guiana, in Geography, a province of South America, is noted, but erroneously, for the island of Cayenne, which was not only an uncomfortable part of it, but bounded N. and E. by the Atlantic Ocean, S. by a line not altogether; and W. by Dutch (now French) Guiana, and Surinam. It extends from the mouth of a small river called Arama, W. to another called Ara- cama, E., though an attempt was lately made to extend the limits at the expense of the Portuguese, to the ciphers of the Maranon; its whole extent not exceeding 370 British miles in length by 245 in breadth. The French formed their first settlement in Guiana about the year 1645; and having abandoned it soon after, they were succeeded by the English; but again took possession of the country about the year 1664, and retained it ever since. The coast is low and marshy, and subject to inundations from the number of rivers, which run down the mountains with great impetuosity. The soil of this colony is in many parts uncommonly fertile; and the productions are on the whole of an excellent quality, and it is easy to gain a subsistence. The Cayenne pepper is a noted produce of this country, and the inhabitants using it to excess, a considerable quantity is always imported from Peru. The other products of the colony are sugar, cocoa, coffee, and indigo, which, with maize, cassia, and vanilla, form the chief anti lies of its commerce. The interior parts, though much neglected, and remaining obstruted by thick forests and underwood, feed, not seldom, a great number of horses, sheep, goats, and cattle, which roam at pleasure: the beef and mutton are reckoned excellent. The climate is much more salubrious than that of any of the Antilles; but as the situation of the town is ill chosen, in a swampy fcl. its disadvantages have been lately ascribred to the whole territory. The opinion that has been entertained of the unhealthfulness of this climate partly took its rise from the unfortunate expedition to Kourou, 12 leagues below Cayenne, which between 30 and 40 years ago was undertaken by command of the late duke of Choiseul, then prime minister of France; who sent 10,000 persons, very much unp诱导ed with the most necessary articles, and in the most rainy season of the year, to people the immense deserts of French Guiana. This multitude of new colonists, after encountering in their voyage, and on their arrival, numberless inconveniences and hardships, pretleness vanished, falling victims, as it was, to the inhuman climate. Hence an erroneous opinion prevailed in France, which ruined the colony of Cayenne, by preventing the government from paying the least attention to that country, and discouraging a number of European inhabitants of the West Indian islands from settling in Guiana. In this colony there are, properly, only two different feaons, the dry and the rainy season. The former generally continues from the beginning of June until the end of September, during which time the heat is very oppressive: the air is almost always serene, and leared, a few drops of rain descend to purity and cool the atmosphere. The heavy falls of rain begin in the month of October, and are very frequent in December, January, February, and March, at which time they begin gradually to decrease until the dry season sets in. During the rainy season, that is, for seven or eight months, the heat is as moderate as can be expected to near to the equator; they, the negroes sometimes complain of cold; and, upon the whole, the state of health is as good there as in Europe. However, at the time when stagnat waters are dried up and corruated by the heat, fevers prevalent for about two months, which, though not contagious, prove very destructive. The inhabitants of French Guiana are principally occupied with all the requisites of a good life, but they generally prefer salt meat to fresh provisions. Being also much addicted to the use of every kind of food that is highly seasoned, they cultivate certain sorts of pepper for culinary purposes, however bad, and purgatif they may be. The Caribs prefer the calabash, which is a large round cake, about three lines thick, made of coarse flour of manioc and highly baked on a tin plate, to the salt and fresh sorts of bread. Besides
Besides the other articles of subsistence common to Guiana and other colonies, they have a dish called "catatoli," which is prepared of the fruit of a plant denominated "Combua," which is in frequent use. At every meal a negro prefers to the guests a glass of rattia, as soon as the first course is removed. This liquor is as transparent as Cayenne: it is purest spring-water; it is very wholesome, and acquires a more pleasant flavour the older it grows; especially since the colonists have applied themselves to distil it over newly gathered cinnamon. The dregs of the male sex confits in white pantaloons and a linen jacket, and the women spend most of their time in a hammock, a piece of furniture much valued in Guiana, and serving both for ornament and convenience. All hammocks are made of cotton; they are in general from five to seven feet in length, and nearly as broad; they are fastened on both ends by a number of small cotton fringes; which join, at each end, a large rope of the same stuff. The whole burden is supported by these ropes, which are fastened to the walls of the room by means of large hooks. The hammocks are commonly suspended in the corners of the room, where they hang, like swags, in the form of a garland. Very fine hammocks are made at Cayenne; but the most beautiful are imported from Peru in Brazil, situated on the right banks of the river Amazon. The latter are made of variegated cotton, after various designs, ornamented with borders, tussels, and fringes, and sold about 50 dollars.

CAYENNE, the capital of the above colony, which is the seat of government, and of the courts of justice and the military. It is seated close to the sea, on the right bank, and near the mouth of a river of the same name, which is there about a league in width. The town is small; the houses are badly constructed of wood; and it is surrounded by a swampy moat, and wretched walls, which form a fort of irregular hexagon. The fort, which commands the town, is constructed of earth, and tolerably strong towards the sea, especially for this reason, that, from the want of depth of water, ships of a middle size only can approach it within gun-shot. The palace of the government, and the ancient mansion of the Jefuits, are the only buildings which deserve particular notice. They form two large temples, forming the place of parade, which presents a pleasing prospect. Cayenne, on a hill, with two rows of orange trees of the largest size, which exhale an exquisite fragrance, and are crowded with colibris skimming from branch to branch. The population of the town of Cayenne, having of late years increased, and its circuit not admitted of a proportionate enlargement, a new town has been built on the neighbouring savannah, separated from the former merely by a ditch. This new town, which is already more considerable than the ancient city of Cayenne, and is daily increasing, is constructed on a regular plan: the streets are wide, admitting the free access and circulation of air, and contain some elegant houses, the beautiful appearance of which becomes more striking from the obvious marks of poverty and wretchedness exhibited by every thing about them. Cayenne, the metropolis of the whole colony, is also the capital of the island of the same name. Cayenne is celebrated on account of the experiment made by M. Richer, by order of the Academy of Sciences at Paris, in 1772, upon the pendulum; for an account of which, see Pendulum. N. lat. 4° 56'. W. long. 56° 15'.

CAYEUX, a town in France in the department of the Somme, and district of Abbeville; 34 leagues N. of Montdidier.

CAYUCOS, a town of Spanish America, in the province of Tabasco; 30 miles N. of Tabasco.

CAYLAR, Le. See CAILAR.
CAYLOMA, or CALLOMA, a jurisdiction of South America, in the country of Peru, and district of Aracuana, at the distance of about 30 leagues east from the city of Aracuana, famous for a mountain of the same name, and the silver mines it contains. The produce of these mines has been very considerable; and in the principal cities of the same name there are a governor and offices appointed for receiving the king's fifths, and sending the quicksilver to the metalliferous department. The cold in the greater part of this district is so intense, that the inhabitants are obliged to have recourse to the neighbouring provinces for the fruits of the earth. In some parts there are wild alleys.

CAYLUS, ANN-CLAUDE-PHILIPPE DE TUBIERS, DE GRIMMOARD, DE PETITIE, DE LEVY, prefect of, in Biography, an illustrious amateur of the arts, was descended from one of the most noble families of France, and born at Paris in 1692. Having entered at an early age into the military service, he distinguished himself in Calabria in 1711, and at the siege of Fribourg in 1713. But the peace of Rastadt terminated his military career; and from this time he devoted himself to those antiquarian researches, to which his love of the arts powerfully prompted him. In 1715 he joined the train of the French ambassador to the Porte, and visited the ruins of Ephesus, Colophon, and other places in Asia Minor and Greece. Availing himself by his garb and effort of those measures for his security, which prudence suggested, he viewed scenes that had been rarely contemplated by Europeans, and returned to France, in 1717, with a rich collection of drawings and descriptions. He afterwards visited London and other countries of Europe. Having concluded his foreign rambles and researches, he devoted himself to the inedited study of the elegant arts in all their branches. He was a practitioner in music, drawing, painting, and engraving; and the labours of the pencil and graver were aided by his pen in the illustration of classical antiquities. By his encouragement the public obtained a magnificent work, describing the sculptured gems in the king's cabinet, with the figures by Bouchardon, and the explanations by Marquet. In 1731, he was admitted a member of the Academy of Painting and Sculpture; and in return for this honour he composed the lives of the principal artists that had belonged to it; and he collected in three works all the new subjects for painting, which had occurred to him in his perusal of the writers of antiquity. He also founded an annual prize for the best drawing or model after nature of a head, expressing some particular passion; and he also, at his own expense, caused to be engraved the beautiful coloured drawings of Pietro Santo Bartoli, made at Rome after ancient paintings. In 1740, he was appointed one of the honorary members of the Academy of Inscriptions and Belles Lettres: and thus distinguished he was led to prosecute diligent inquiries into the Egyptian mode of embellishing, the preparation of the papyrus, the transportation of enormous blocks of stone from one extremity of Egypt to the other, and several other curious subjects of ancient art. He also elucidated many difficult passages in the elder Pliny, relative to the arts, and by the affilation of a chemist revived the secret of tinging marble and of encaustic painting, which he. His academical dissertations amounted to more than 40 in number; and he instituted a prize for a disputation, explaining the callotums of antiquity from monuments, with a view to the improvement of artists in the knowledge of costumes. By his various labours he acquired a reputation which extended throughout Europe, and which induced the principal learned academies to associate him with their members. He was justly deemed the Maximus of talents and literature; and by his own eccentric mode of living, he was enabled to indulge his taste both as a collector and a patron. His moral character was amiable: cheerful, good-humoured, polite, briskly just, an enemy to flattery, and indifferent to honour, he was a true practical philosopher. His health was preserved to an advanced period; and he died at Paris, after a short confinement, in 1674, aged 77 years. His principal work is a "Collection of Egyptian, Etruscan, Greek, Roman, and Gothic Antiquities," 7 vols. 8to. of which the last appeared in 1705, with an eloge of the author by Mr. le Peau. Of his other works are, "The History of the Techean Hercules, taken from various Authors," 8vo. 1758; "A Discourse on Ancient Pictures," and several romances and fairy tales, the productions of his hours of relaxation. Now. Dict. Hist. Gen. Biog.

CAYLU, in Geography, a town of France, in the department of the Lot, and chief place of a canton in the district of Montauban. 7 leagues N.E. of Montauban. The place contains 5131, and the canton 10,473 inhabitants; the territory comprises 1555 kilometres and 9 communes.

CAYMAN, in Zoology, the common name of the alligator in America. Bonitus, in his History of Java, calls it Crocodylus caimanum. See Alligator, see Alligator.

CAYMANS, in Geography, three small islands of the West Indies, in the bay of Honduras, 55 leagues N.W. of the island of Jamaica, called Great Caymans, Little Cayman, and Cayman Brock. The former is the most southerly, about 11 miles long, and a mile broad, and inhabited by about 160 persons, descendants of the old Buccaneers. It has no harbour for ships of burden, and only a tolerable anchoring place on the S.W. The climate and soil are very fabulous; and the people, who are vigorous, live to a great age. The produce is more than sufficient for the use of the inhabitants. Their chief employment is that of piloting vessels to the adjacent islands, and felling for turtle; with which they supply Port Royal and other places in great quantities. It is situated in N. lat. 19° 20'. W. long. 81° 40'. The other two islands are uninhabited.

CAYMANUM LAPIS, in Natural History, the name of a stone found in the beds of rivers in many parts of America, and of a yellowish colour, veined with red and white. The Indians have an idle tradition, that it is originally found in the Romach of a crocodile, which, in their language they call caymenes; and hence authors have named it lapis caymanum. The natives of America pretend that it has great virtues in medicine, and particularly that it cures quartans by being applied to the warts; and, to enhance its value, they pretend to take it from the crocodile.

CAYMITES, in Geography, three islands near the coast of St. Domingo, in the West Indies, the largest being about 12 miles in circumference; 56 miles W. from cape Donna Maria.

CAYNE, a river of Wales, which runs into the Severn, 4 miles W. from Newtown in Montgomeryshire.

CAYO, or, a town of the island of Cuba; 80 miles E. of Santo Santo.

CAYONNE, a river of the island of St. Christopher, in the West Indies; which falls into the sea from the W.S.W. near Little Bay, half a mile S.E. of Madan's point.

CAYOPOLLIN, a town of Boulin, and Fernand. Nov. Hisp., in Zoology, a quadruped of the Didelphis genus, described by Peninnat under the name of the Mexican opollon. Sprecher calls it Didelphis cayopollin, which fece.

CAYRES, in Geography, a town of France, in the department of the Upper Loire, and chief place of a canton in the
the district of Le Puy; 8 miles S.S.W. of Le Puy. The place contains 638 and the canton 3556 inhabitants; the territory includes 130 kilometres and 6 communes.

CAYS, a general denomination applied in the West Indies to small islands or rocks, or other banks above water. The English feamen improperly give them the name of Keys.

CAYSTER, in Ancient Geography, now Minderfonte, and called also by the Turks Couteaux-mindre, that is, the Little Meander, or the Black Meander, a river of Asia Minor, which had its two sources N. and S. of the mount Tmolus, and having bathed Lydia, and traversed the plain between the mountains Galleius and Corillus, it discharged itself into the Igean sea near Ephesus. This river was celebrated by the poets for the swans that frequented its banks, and the lakes formed by it on the plain. To this purpose Virgil says:—

"Jam varias pelagi volucres, et quae Asia circum,

Dulcis in italicis rimantur prata Caylirii."  

Georg. i. i.

It is also said to have almost as many windings as the Meander itself. From this resemblance several of our modern travellers have been led to mistake the one for the other.

CAYSTRUS CAMPUS, or CAYSTRUM, a plain of Asia Minor, in Ionia, between mount Galleus to the north and mount Corillus to the south, on which was seated the city of Ephesus. The Cayfer traversed it from the city to the sea, a distance of 36 miles. Pliny says that this plain was formed by the successive depositions of the river.

CAYSTROPEDUM, a very populous city of Asia, in Phrygia; where Cyrus remained five days and was joined by Epyaxa, wife of Synneas, king of Cilicia.

CAYUGA, in Geography, a beautiful lake in Onondaga county and state of New York, in America, from 33 to 36 miles long, about 24 miles wide, in some places 6, abounding with salmon, bass, catfish, eels, &c. It lies between Seneca and Oswego lakes, and at the north end empties into Cayuse river, which is the south-eastern part of Seneca river, whose waters run to Lake Ontario. The reversion lands of the Cayuga Indians lie on both sides of the lake at its northern end.

CAZAL, a town of Arabia, 80 miles N.E. of Medina.

CAZALLA. See CAZALLA.

CAZALS, a town of France, in the department of the Lot, and chief place of a canton in the district of Cahors; 3 leagues S.W. of Gourdon. The place contains 1000, and the canton 7974 inhabitants; the territory comprehends 1424 kilometres and 7 communes.

CAZARES, a town of Mexico. See ANGELO.

CAZ Aubon, a town of France, in the department of the Gers, and chief place of a canton in the district of Condom; 6 leagues W. of Condom. The place contains 3275, and the canton 12174 inhabitants; the territory includes 2875 kilometres and 18 communes.

CAZ-DAGLI, or CAZ-DAGLI, a district of Asia Minor, lying between Anatolia and Caramania, which the Turks believe to have been the country from which the English first drew their origin, and on this account, it is said, that they never fail to claim kindred with the English wherever they meet, especially if they stand in need of their aid.

CAZEA, in Ancient Geography, a maritime town of the Tauric Chersonesus, between Panticapae and Theodosia, according to Arrian. Vol. VII.

CAZEMATE, in Fortification. See CASEMATE.

CAZENOVA, in Geography, a new and thriving township of America, in Herkimer county and state of New York, 45 miles westward of Whitefield. By the late census of 1790, 374 of its inhabitants are electors.

CAZERES, a town of France, in the department of the Upper Garonne, and chief place of a canton in the district of Muret; 2 leagues S.W. of Rieux. The place contains 2023, and the canton 10978 inhabitants; the territory comprehends 2242 kilometres and 20 communes.

CAZERMES, in Fortification. See CASEMATES.

CAZES, Peter-James, in Biography, an eminent French painter, was born at Paris in 1670, and having discovered an early inclination for design, he was placed under the instruction of P. Bertin and afterwards of Houasse senior. The mode of Houasse being too mechanical for his taste, he received lessons of Boulogne the elder, and became his fellow scholar. He had obtained several academical prizes. In 1703 he became a member of the Royal Academy of painting, and from this time began to distinguish himself. His first performances were fabulous subjects in the gallery of the marquis de Clerambaut; but his reputation was established by a large picture displayed at the church of Notre Dame every 1st of May, representing the Woman with an Urn of Blood. He then opened a school, which was much frequented. Being of mild and polished manners, and of an enlarged understanding, he acquired the friendship of several persons of taste. By the Academy he was so much noticed, that he was advanced through the gradations of adjutant, professor, governor, and director, to that of chancellor. His particular work of painting was that of history; and his compositions are grand and well-flushed, derived from elevated conceptions, large and flowing draperies, correct drawing, and a good style of colouring. In his church pictures there is much dignity, and grace in his fabulous subjects; and he equally excelled in great and small works. He is principally deficient in expression, and in some of his later pieces, especially the coldness of age is perceptible. He lost his faculties some time before his death, which happened in 1754. His works are numerous in Paris, and its vicinity, and they are also found at Amiens, Montauban, and other places. His easel works are met with in several cabinets. The king of Prussia has two excellent ones, which for their beautiful finish are compared to the works of Correggio and Argenville. Gen. Biog.

CAZES de MENDONARD, in Geography, a town of France, in the department of the Lot and district of Montauban; 3 miles S.E. of Lauzerte.

CAZIC, or CAZIQUE, a general title given by the Spaniards to the petty kings, princes, and chiefs of the several countries of America, excepting the emperors of Peru, who are styled CAITARAT. The French call them CAESIERS, a denomination which they also give to the chiefs of the Tartarian hordes.

The cazies in some places do the office of physicians, and in others of priests, as well as captains. The dignity of cazie among the Chichis, a people of South America, does not descend to children, but must be acquired by valour and merit. One of the prerogatives annexed to it is, that the cazie may have three wives, while the other people are only allowed one. Mexico comprehended a great number of provinces and islands, which were governed by lords called CAZIQUE, dependent on and tributary to the emperor of Mexico; thirty of these CAZIQUE or valess are said to have been so powerful, that they could each of them bring an army of an hundred thousand men into the field.
CAZIMI, among the Aralim Africani, denotes the
dice of the fun. A planet is said to be in causim, when it is
not distant from the center of the sun more than 16°, the
semidiameter of the fun's dice.

CAZOLS, in Geography, a town of France, in the de-
partment of the Herault, and district of Beziers; 5 miles
N.W. of Beziers.

CAZZOLA, a small island in the Adriatic, near the
coast of Dalmatia. N. lat. 43° 8'. E. long. 16° 44'.

CAZZONI, in Rural Economy, a term provincially ap-
plicated to signify the dried dung of cattle, which is employed
as fuel. It is a fort of fuel frequently made use of in some
parts of Yorkshire, as about Holkerness.

CEA, in Geography, a town of Portugal, in the province
of Beira, 7 leagues S.S.E. of Vifho.

CEADAS, or CEADAS, in Ancient Geography, a name
given by Paulianus and Strabo to a place of Peloponnesus,
in the vicinity of Sparta, in which was a deep cavern, into
which they precipitated those who were condemned to
death for very atrocious crimes.

CEANIDES, or CEANTIDES, in Natural History, a
name given by many of the ancients to the thorne more gene-
 rally known under the name of encehjumites. It was
the same with our sparry incrustations on the walls and roofs
of subterranean caverns: and, from the opinion of the times,
that these stones brought forth young ones, which was
founded on their finding little ones daily produced among
them, it became a custom to give this internally to women
in labour, as a thing that would, by a fort of lymphody,
hail the time.

CEANMIARRA, in Geography, a hill in the Scots
island of Tiree, remarkable for numerous caves, to which
sea-fowl, eagles, and ravens retort; some of the caves are
more than 35 yards deep.

CEANOPHUS, in Botany, xanthiob, Gr. a name given
by Theophrastus to a prickly plant, supposed by Columba
to be ferrugina arvensis of Linnaeus, but by Adanson to be
Ord. Dunoa; Linn. Rhamn.; Juss. Rhamnoidae; Vent.

Gen. Ch. Cal. Perianth one-leafed, top-shaped, perma-
nent, five-cleft; segments acute, nearly closed. Cor. Petals
five, equal, clawed, awl-shaped, inserted into the calyx be-
tween its divisions. Stam. Filaments five, awl-shaped, erect,
opposite to the petals, the length of the corolla; anthers
roundish. Pfl. Germ superior, trigonous; style cylindrical,
semitrifid, the length of the flaments; stigma obtuse. Peric.
Capule (dry berry; Linn.) obtruse, three-grained or three-
celled. Seeds solitary, egg-shaped.

Eff. Ch. Calyx five-cleft. Petals five, clawed, cowled,
opposite to the flaments. Capsules three-grained, three-
celled.

Willd. 1. Lam. Ill. pl. 129. fig. 1. Garot. tab. 106. fig. 4.
(Celastrus; Gr. Vinr. 23. Evonymus; Com. Hort. tab.
86. Pluk. alm. tab. 28. fig. 6.) New Jersey tea. "Leaves
egg-shaped, acute, serrated, three-nerved at the base; pan-
cles axillary, on long peduncles." A shrub, three or four
feet high. Stems several, slender; branches cylindrical,
smooth, reddish. Leaves alternate, deciduous, on short
petioles. Flowers small, white, very numerous. Capsules
about the size of a pepper-corn. A native of New Jersey,
Virginia, Carolina, and other parts of North America.
An infusion of the dried leaves is used by the common people
instead of tea; particularly in the southern states, where,
from its Indian name, it is commonly called goongee tea.
It flowers from July to October, and from the profusion of
its blossoms is a very ornamental shrub. 2. C. macrocarpus
Willd. 2. Cav. i. 3. p. 38. tab. 276. "Leaves cordate-
rondish, obtuse, three-nerved; corlybms axillary." Fruit
noding, large. Sufficently diffused from the preceding, and
both, in its influence, and its leaves. A native of New Spain.
3. C. mucrophyllus, Lam. Illfl. 2681. "Leaves oblong-
epipetals, dilated toothed, small; petiole terminal, com-
poced of alternate peduncled cymes." Stems about nine
inches high, flender, much-branched. Found by André
Mart. 2. Lam. Enc. 2. Illfl. 2682. Pl. 129. fig. 2. Willd. 3.
(Rhamnus africicus; Poiret in Eneeye. Art. Nerprun. Gouilfa-
Burn. zeych. iii. tab. 48. Kattap; Rheed. Mal. tab.
Fert. prod. 111. gen. p. 33. tab. 17.) "Leaves egg-
shaped, somewhat serrated, three-nerved at the base; pedun-
cles axillary, branched, many-flowered, shorter than the
leaves." Lam. A shrub of a moderate size. Branches fluff,
cylindrical, perfectly smooth. Leaves alternate, obliquely
nerved, veined, smooth. Flowers in axillary racemes; most
of them abortive. A native of the Eait Indies, and the
isle of France. 5. C. reclinatus, Mart. 4. Lam. Illfl.
Hort. Kew. R. venetus; Poir. Enceye. 25. R. inermis;
Swartz. prod. 50. Fl. ind. 1. p. 457. R. arboreocephal;
Brown Jam. 172. tab. 29. fig. 2.) "Leaves egg-shaped,
quite entire; branches dependant; cymes axillary, shorter
than the leaves." Lam. A shrub. The young branches,
petioles, peduncles, and calyxes cloathed with light yellow-
ish down. Leaves alternate, acute; a little villous under-
neath when young; smooth and bright green above.

Flowers in small, axillary corymb; peduncles branched
at the summit into thort, thick pedicels, petals shorter than the
divisions of the calyx, almost linear. A native of Jamaica
and St. Domingo. 6. C. cubensis, Linn. Illfl. 2684.
(Rhamnus cubensis; Linn. Sp. Pl. 8. Mart. 16. Poiret
R. arboreocephal; Brown Jam. 2. p. 176. Arbor baccifer;
Com. Hort. 1. p. 175. tab. 90.) "Leaves elliptical, quite en-
tire; petioles, peduncles, and calyxes cloathed with a ferra-
ginous down." Lam. A tree, twenty feet high in moun-
tain woods; only seven or eight in coppices on the coast.
Branches spreading horizontally. Leaves alternate, acute,
smooth and shining above. Flowers greenish, in short ax-
illary racemes. A native of the West Indies, called by the
French bois couleenre, or frake-wood. In Cuba, according
to Jacquin, the down is stillery, but in the other islands it is
always ferruginous. 7. C. cubensis, Lam. Illfl. 2685.
Willd. 15. Jacc. Hort. 3. tab. 49.) "Leaves egg-shaped,
obtuse, quite entire, wrinkled, tomentous on both sides;
cymes axillary." A small upright tree seven feet high, in
habit approaching to viburnum lantan. Leaves alternate,
petioled. Petals, examined under a magnifier, ciliated.
Cliff. 73. Alaternus; Pluk. tab. 126. fig. 1. Alaternoides;
Comm. prael. 6t. tab. 11. Ricinoides; Sek. Thef. 1. p. 35.
fig. 22. fig. 6.) "Leaves lanceolate, obtuse, serrated; liti-
pules roundish." Lam. A shrub from fix to nine feet high,
evergreen. Branches smooth, reddish brown. Leaves al-
ternate, smooth, flowering, dark green above, on very short
petioles; flippces embracing the item. Flowers small, in
axillary and terminal racemes. Fruit about the size of a
large
large pea, globular, surrounded on its lower part by the calyx, which, having lost its divisions, resembles a little cup. A native of Africa. C. circumcissiflora, Mart. 5. Gart. tab. 106. fig. 4. (Rhamnus circumcissiflora; Linn. jun. Sup. p. 152. Poir. in Ence. 10. Wildl. 32. Lyciun. Pluk. Amst. tab. 426. fig. 3.) *Prickly; leaves nearly opposite, in two rows; prickles solitary, recurved opposite to the leaves.* A shrub. Branches simple, opposite, widely spreading, angular, with an even surface. Prickles solitary, opposite, fixed, horizontal, recurved, permanent. Leaves petioled, irregularly heart-shaped, obtusely toothed; stipules two, very minute, caducous. Flowers small, lateral, in axillary corymbs; pedicels four or five, very short, thick, placed near the summit of the peduncle; calyx campanulate, with five small sharp teeth, which fall off as the fruit advances, and leave the body of the permanent calyx apparently cut round; petals of a beautiful white colour, nearly heart-shaped, ciliated, involving the anthers; filaments a little shorter than the calyx; anthers upright, oblong, style short, permanent; stigma, maroon. Fruit three-celled; Linn. jun. two-celled, two-seeded in the specimens sent to La Marche by Sonnerat. A native of the East Indies and Ile de France. We have followed Garré in referring this plant to the present genus, on account of its having a dry fruit opening with pressure by two or three regular valves, although La Marche has left it under Rhamnus. 10. C. effusiflora, Mart. 5. Lam. III. Forli. Flor. Aufl. p. 18 n. 212. *Leaves ovate-cordate, acuminate, serrated; capsules three-valved.* Forli. A native of Oatheie.

Propagation and Culture. The first species was cultivated in England, by bishop Compton, at the beginning of the last century. It was soon lost, but, in Mr. Miller's time, was re-imported from America, and is now not uncommon in nurseries. It may be raised either from seeds or by layers of the young branches; but the first method is to be preferred. The seeds should be sown in autumn in small pots, which must be kept during the winter in an old hot-bed, and well sheltered from frost, but occasionally exposed to fresh air in mild weather. In March the pots should be plunged into a moderate hot-bed, and when the plants have gained a little strength, they should be exposed in a sheltered situation till autumn, but must be placed under a hot bed frame to screen them from the frosts of the ensuing winter, with a free allowance of open air in mild weather. In the following spring, they should be transplanted before they begin to shoot, come into separate pots, and others into the nursery bed in a warm situation, where they may remain for a year or two, and then be removed to the places where they are designed to remain. They require a dry soil and a sheltered situation; in stiff cold land they put out late in the spring, and their young shoots are consequent ly so full of sap in the autumn, that they are commonly hurt by the first frosts, and die nearly down to the ground. When propagated by layers, the young shoots should be laid down in autumn, and the surface of the ground covered with decayed manure taken from an old hot-bed, to fence them from frost, and to prevent the winds from drying the mould too much in the spring. In a light soil they will put out roots in about a year; but as the shoots are tender, they are apt to rot if they be more than very moderately watered.

The fourth species may be propagated either by layers or cuttings, but requires the protection of the bark-dove.

The seeds of the fifth species should be sown on a hot-bed in the spring; and when the plants are fit to remove, they should be placed separately in small pots, filled with light sandy earth, and treated like other tender exotic plants.

The eighth species is best propagated by cuttings, which should be planted in spring, in pots filled with good kitchen garden earth, and plunged into a very moderate hot-bed. In about two months, if only moderately watered, they will have taken root, and may be treated like the other species. Miller.
which does not seem to be consistent with the tenets of the
cSocratic school. Scornful, he mentions the Peripatetic
school, which arose in Greece long after the time of Cebes;
and, thirdly, he uses several expressions, which, as Meiners
thinks, were not in use among the early Socratic writers.
The learned Brucker, in his account of Cebes, (Hist. Crit.
Philol. t. i. p. 573. ed. 2. 1767,) has made several obser-
vations, which, if they do not entirely remove these objec-
tions, diminish, at least considerably, their force. Some
interpolations have been supplied by the learned to have got
into the text, perhaps from marginal notes in the MS.; and
the passage from which professor Meiners deduces his first
and most important objection, has, with no faint appearance
of evidence, been confided by Fabricius as corrupt and
skeptical. The professor, however, maintains, that this
passage is not closely connected with what precedes and what
follows, that the insertion of any addition or interpolation is
entirely groundless. Be that as it may, all the learned
ancients, with one voice, attribute this philosophical table
of Cebes, and, most certainly, both with respect to beauty of
composition and excellence of matter, it is worthy of the
manner flourishing period of Athenian philosophy and litera-
ture. The editions of this table in various languages have
been innumerable. The first complete edition of it was
published from a MS. in the king of France's library by
J. Gronovius, in 1687. 8vo. It is now usually printed
with the Enchiridion of Epictetus, as a manual for students
Bib. Græc. t. i. p. 591.

CEBESSUS, in Ancient Geography, a town of Asia, in
Lybia.

CEBESTUS, a town of Asia Minor, in Lybia, according
to Quintus Curtius.

CEBRENA, a town of Asia Minor, in the Troade, and
in the country named Cebrenia, a level country below,
and parallel to, Dardania. It is mentioned by Strabo, Thucy-
dides, Plut. and Sevay.

CEBRINUS, a river of Asia Minor, in Cebrenia, men-
tioned by Herodius.

CEBRUS, a place of Lower Lybia, according to the
Itinerary of Antoninus. It was situated to the north-west,
on the right bank of the Damub, below Ritharia, at the
mouth of a river of the same name.

CEBU, in Geography, an island of the East-Indian Ocean.
See ZEBA.

CEBU, SEBO, or SUTO, a river of Africa, in the em-
pire of Morocco, which runs from mount Atlas, through
the provinces of Fez and Algar, and in its course cuts its
way through two deep rocks of prodigious height near
the mountain of Beni-yazga, and falls into that sea near Manor,
a city destroyed by Almanzor, about 20 miles N. of Saller.
The mountaineers convey themselves from one side of this
dreadful wall to the other, by leaping themselves in a
strong balist, that runs by a pulley along a float cable,
which is fastened at both ends to two beams fixed in the
rock, and is drawn by the people on the opposite side; so
that if the balist or any of the tackle chance to break, as
it has sometimes done, by the weight of the passengers,
they fall into the river from a height of above 1500 fathoms.
This river is reckoned the largest in Mauritania, and
abounds with excellent fish, which has been harnessed by the
emperor at above 20,000 ducats.

CECCO, D'ASCOLI, whose proper name was Fran-
cisco de gli Stabilis, in Biography, was born at Ascoli,
about the year 1557; and acquired eminence, according to
the age in which he lived, in poetry, theology, medicine,
and mathematics. By his mechanical skill, he proposed to
the people of Ascoli to bring the Adriatic under their wall,
through an interval of six leagues. He seems to have had
for some time an intimacy with Dante, which was inter-
rupted by his free remarks on the Commedia of that author;
and it is probable that by the severity of his criticisms and
by other parts of his conduct he made himself many ene-
gies at Florence. He was invited to Avignon by pope
John XXII. in order to be his first physician; though his
medical reputation probably depended chiefly on his pro-
posed skill in astrology. In 1322, he was appointed
professor of astrology and philosophy at Bologna, and
there published his "Commentaries on the Sphere of John
de Sacrobosco." An accusation against him before the in-
quisition of Bologna was founded on this work, because he
had taught that Invocation and certain other wonderful feats
might be effected by means of demons inhabiting the sphere;
and the inquisition pulled a sentence enjoining penance, and
depriuing him of the right of ever again reading lectures on
astrology. From Bologna he removed to Florence, and
became astrologer and physician to Charles, duke of Cala-
bria, who governed that city. Here again the inquisition
took cognizance either of his pretended prophecies or heret-
ical opinions concerning the influence of the stars on the
human character and conduct; and the power of his ene-
gies prevailed against him to such a degree, particularly
that of Dino del Garbo, a famous physician, who had
attacked his commentaries, and who was probably jealous of
his influence at court, that he was capitally condemned
and brought to the stake at Florence in 1337. Dino himself
died a few days after, distressed by the reflection that he had
been instrumental in promoting this cruel event. Cecco
was vain, fraudulent, and superstitious, and licentious in his
practice. Besides the commentaries which occasioned his
condemnation, he wrote a poem in Sylvia, called "L'acerba,"
which was a medley of physics, morals, theology, and judicial
astrology, without much poetical merit; and yet the temporary
reputation of the author caused it to pass through 19 editions;
and the last year of its publication was 1546. Tarabosteh.

CECIL, William, lord Leithage, an eminentstates-
man, was son of sir Richard Cecil, master of the robes to
Henry VIII. and was born at Born in Lincolnsire in 1520.
from St. John's college, Cambridge, where he completed
his education, he was removed to Gray's-Inn, for the study
of the law. In consequence of a dispute with two Irish
priests concerning the power of the pope, which he con-
ducted with credit, he was introduced to the king; who
conferred upon him the reversion of the place of "Culfos
Brivium"; and he was then encouraged to push his fortunes
at court. His first wife was the sister of sir John Cheke, who
recommended him to the favour of the earl of Hertford,
afterwards so powerful in the reign of Edward VI. under
the title of the duke of Somerset. Soon after the com-
 mencement of that reign, having left his lady, he married
the daughter of sir Anthony Cook, director of the king's
studies; and thus supported, he rose in 1548 to the post of
master of requests, and in 1548, to that of Secretary. Some
court intrigue occasioned his loss of this place, and his being
committed, with some others of the duke of Somerset's
friends, to the Tower; whence, however, he was soon liber-
ated. In 1551, he was reinstated in his office, with an in-
crease of favour, knighted, and sworn a member of the privy
council. So wary was his conduct amidst the collis-
ion of parties, that he fled secrer when his patron, the
duke of Somerset, fell; and such was his personal influence
with the young king, that the haughty duke of Northum-
berland treated him with respect. Upon the death of Ed-
ward he pursued the fame cautious conduct, and thus secured a favourable reception from queen Mary; but refusing to change his religion, he forfeited his office. In 1555, he attended Cardinal Pole and other commissioners to the conclave in order to treat of a peace with France. On his return, he was deputed to parliament by the county of Lincoln, and distinguished himself by his opposition to a bill brought in for confining the estates of fugitives or account of religion. His prudent counsels were also of singular service to the princess Elizabeth in her critical situation; and they were duly acknowledged on her accession in 1558, when, in the arrangement of her first ministry, he was appointed privy councilor and secretary of state. The settlement of religion was one of the first acts of the new reign, in which Cecil took the lead, and in which he manifested great prudence and moderation; and in the recovery of the coin from its debased state he also successfully engaged. With regard to foreign affairs, it was his great object to guard against the dangers impending from the catholic powers; and with this view he thought it of great importance effectually to guard the reformed religion in Scotland. As he was one of the commissioners who accomplished the convention of Leith and the treaty of Edinburgh, which were eminently advantageous to the English interest, he was advanced, in recompense of this service, to the post of master of the wards in 1561. His systeim of politics, which was prudential and cautious, corresponded, in a considerable degree, with the inclinations of his mistrels; and he thus maintained a regular and permanent influence through the whole of his ministry. For his wisdom and activity in suppressing the northern rebellion, he was raised by Elizabeth to the peerage in 1571, by the style of Baron of Burleigh, and in the following year he was made knight of the garter and lord high treasurer. His lenient and clement opposition to the machinations of the papist party, drew upon him the rancorous hatred of the Jihuits, and emissaries of Spain; and their rancour was further inflamed by the part he took in the unhappy fate of Mary, queen of Scots; whom he is charged with having driven from the throne, and kept as a prisoner in England, and whom he considered as the invertebrate foe of Elizabeth, so that he never ceased urging her trial and condemnation. Burleigh shared with other actors in the catastrophe of her execution the stained remembrance of Elizabeth, and it was with some difficulty that he recovered his former credit. At the time of the threatened Spanish invasion, he drew up the plans of defence, and his eldest son served on board Lord Howard's fleet. Soon after this period he sunk into a state of melancholy, in consequence of the death of his wife, to whom he was affectionately attached, and wished to withdraw from public business. However, he was persuaded to retain his employments, and he was diligent to the last in fulfilling the various duties of his station, so that he was regarded as at the head of Elizabeth's councilors. One of the last services in which he engaged was an effort to bring about a peace with Spain; but being vehemently opposed in his proposed scheme of pacification by the earl of Essex, he contented himself with pointing out to his lordship in a prayer-book the following words, "Men of blood shall not live out half their days." Having attained an honourable age, Lord Burleigh died in 1588, after having completed his 77th year. Cecil may be justly reckoned the animating soul of queen Elizabeth's ministrv, and to his counsels may be attributed, in a very great degree, the singular prosperity of that period in the history of our country. Possessing no distinguished genius, he had other qualities, such as the knowledge of mankind, the wisdom of experience, invincible resolution and indefatigable application, which qualified him for encountering the difficulties and performing the services, which the critical circumstances of the times presented. Particular emergencies demanded corresponding measures of policy; and it must be allowed, that they offer an apology for some of those adopted by lord Burleigh, who always approved himself a faithful servant of his royal mistress. In his character as a courtier he combined that degree of probity which could not infrequently be found in him, of that learning, piety, and decorum, which in that age usually accompanied elevated stations. His manner of living was splendid and yet economical; and though he raised a considerable fortune, it was by no means greater than the various ports which he occupied might justify. His whole life was that of a busy statesman; and therefore he had not much leisure for literary avocations. However, he is said to have been the author of a few Latin verses, and of moral and historiical tracts. Several of his letters on buisines are still extant. Diog. Brit.

CECIL, ROBERT, earl of Salisbury, was the second fon of the former, and born about the year 1550. As his constitution was feebler and his form distempered, he received the first rudiments of learning at home, under his learned mother and an excellent tutor, and finished his education at St. John's college, in the university of Cambridge. By his father, however, he was instructed in the arts of an accomplished courtier and statesman. He began his political career as attain'd to the earl of Derby, embassador at the court of France, and in 1595, was appointed by queen Elizabeth second secretary of state with Sir Francis Walsingham; and when that minister died, he became principal secretary, which post he occupied as long as he lived. He acquired also other offices of profit and honour, for which he seems to have manifested a greater degree of industry than his father. His advancement, indeed, was enormously opposed by the earl of Essex; and for this reason he was a principal instrument in the disgrace and unfortunate end of that eminent nobleman. By the regular correspondence which he attentively maintained with foreign courts, he was enabled to counteract and defeat many conspiracies against his sovereign and his country. Whihl he contributed to support the declining years of Elizabeth by his vigour and prudence, he was not regardless of the favour of her successor. Accordingly he held a secret correspondence with him, and adopted the necessary measures for his quiet inheritance of the crown at the queen's demise; and for these services he was continued as prime minister at the acception of James; who advanced him to the peerage; creating him baron of Efiffden in 1623; viscount Cranbourn in 1624, and earl of Salisbury in 1625. In this last year he was appointed chancellor of the university of Cambridge, and admitted to the order of the garter. His politics were altogether adverse to the Spanish interest, which was powerful at court; he steadily opposed the papist party, and placed himself at the head of the protestant cause, in much that he was reproached with the appellation of puritan. He was indispensably necessary to James; and therefore, though the king did not love him, he was chosen, in 1609, as the fittest person to succeed the lord high treasurer, the earl of Dorset, at his death. The king's profession rendered his post very delicate and trying; and in order to fulfil the royal office, he is said to have had recourse to various methods that have been deemed arbitrary and opprobrious. The good of the nation was, however, the object at which he aimed; and he justly merited the praise of the ablest minister in that reign. By his application to business, he injured his health; and as he had a weakly constitution, his life terminated by a decline, in 1612. He died at Marlborough in his return fromloth, and was buried...
buried at his magnificent seat at Hatfield in Hertfordshire; which manor he had obtained from the crown, in exchange for his seat of Thetford near Cheffam.

Lord Salisbury is characterized as a man of more subtle and acute genius than his father; and he was thus led, as some have said, to pursue a more crooked and treacherous system of policy, so that those who were concerned with him in public affairs could repose no confidence in him. The death of Sir Walter Raleigh is a great degree charged upon him; and he is also reproached with having adopted arbitrary maxims of government, in order to gratify himself with his weak mullet. He was also selfish and avaricious in making lucrative bargains with the crown, and thus aggrandizing his own fortune. His natural temper was mild, gentle, and courtly; and though in the height of power, he met death with philosophical tranquillity. "Easie and pleasant," said he in his last illness, "quae to hear of death; but my life, full of cares and miseries, deitribre to be dissolv-ed."

As a writer, he was the author of a work against the papists, of several letters, dispatches, and parliamentary speeches, and of some notes in Dr. Dees discourse on the reformation of the calendar. Biog. Brit.

Cecil, in Geography, a county of America, in the state of Maryland, situated on the shore of Chesapeake-bay, and containing, by the estimate of the population in 1792, 77,949 inhabitants. — Also, a township of Washington county in the state of Pennsylvania.

Cecilia, Saint, in Biography. Musical historians have found it very difficult in the lives and legends of saints, to authenticate the claim which this holy personage has to such divine honours and annual celebrations from the wicked foes of Apollo, the divinity whom she had abandoned.

It was natural to expect to find in the "Legenda Aurea" of Jacobus Januensis, and in Chaucer's account of this saint in his second "Nonestale," that some mention would have been made of her musical powers and promise of protection to the art; but neither in Chaucer, nor in any of the histories or legendary accounts of this saint, which we have been able to consult, does any thing appear that can authorize the religious veneration which the votaries of music have so long paid to her; nor is it easy to discover whence it has arisen.

Chaucer's account is almost literally translated from the life of St. Cecilia, in the "Legenda Aurea" of Jacobus Januensis. Bede, in his Ecclesiastical History (lib. v. cap. 2), mentions her church at Rome, as the place where Vitaliod was ordained pope in 666; and in his Martyrology, he tells us, that her intended spouse, Valerian, and his brother Tiburtius, suffered martyrdom in the time of the emperor Alexander Severus. Mabillon (De Liturgia Gallicana, p. 175.) has proved, that the festival of this saint was celebrated in France before the time of Charlemagne, by a Gallican Mifiai, which he has published, and which must have been in use before the Gregorian chant was received in that country. (Cardinal Bona, "De divina Poffition," says, that the MS. of this mass, which was in possession of the late Chirifina, queen of Sweden, had belonged to the learned Petrusius, and was written in the 6th century, as it was discovered by the learned from the square form of the letters, and the capitals.) Fortunatus of Potiers (lib. vii. cap. 4.), the most ancient author who speaks of her, says, that she died, or rather suffered martyrdom in Sicily. Fortunatus wrote at the end of the 6th century; but even this was at too remote a period from that in which tradition tells us the saint lived, as Alexander Severus reigned from 194 to 211.

There was a great festival at Rome in 1599, during the pontificate of Clement VIII., for the finding the body of St. Cecilia among other relics. Cardinal Baronius, who was himself a witness of this translation, has left an ample account of it. (Voyez la Vie de Saints, tom. 51. 3 edit. fol. p. 60, Par. 1715.)

The earliest notice of her as the titular saint and protector of music seems to have been in the works of the great painters of the Italian school, some representing her in performing on the harp, and others on the organ. Raphael, in his celebrated portrait of the saint, has placed in her hands a column of organ pipes, or rather the front of a portable instrument called the "Regale," which in Roman Catholic times used to be carried by one person and played by another in processions. But when her birth-day first began to be celebrated by assemblies of musicians, we have been able to discover no instance earlier than the latter end of the 17th century, when there was a rage among the votaries of music for celebrating the birth-day of this saint, not only in London, but in all the considerate cities and provincial towns in the kingdom where music was cultivated.

We meet with no such constant annual celebrations of this feast on the 2d of November in other countries. In the "Dramaturgia" of Leo Allatius, indeed, 13 dramas, tragedies, and oratorios are recorded, of which this female saint is the heroine.

The first composition expressly produced for a music meeting in England on St. Cecilia's day, was called "A musical entertainment performed November 22d, 1683, on St. Cecilia's day," printed in score by John Playford, with a dedication to the gentlemen of the musical society, and particularly the stewards, written by Henry Purcell, composer of the music."

But whoever wishes to trace the celebration of this pious patroness of music in our country from this period, will find an ample account detailed in the life of Dryden, by the diligent and accurate Mr. Malone, who has not only gone over the same ground as the musical historians, but taken a much wider range in search of materials for the life of this saint, and the honourable titles conferred upon her by the sons of Apollo.

The history of this nominal patroness of music is involved in some obscurity, it not very clearly appearing how she became entitled to this honour. She is supposed to have been born in the reign of the emperor M. Aurelius Antoninus, and to have suffered martyrdom in that of Septimius Severus, in the beginning of the third century; and, according to the legend, she was a noble Roman lady of distinguished piety, who from her infancy had been bred in the Christian faith; notwithstanding which, she was married by her parents to a young Pagan nobleman, named Valerianus, who, on claiming the rights of a husband, was told by her, that she was venerated nightly by an angel, who was enamoured of her, and would destroy him if he presumed to approach her. He replied, that he would do it, if he were permitted to behold his rival, and he should prove an angel; but if he were a mere mortal, as he feared, he would put them both to death; to which Cecilia answered, that he should be indolent in what he desired, provided he became a convert to Chrifianity. To this requisition Valerianus agreed; and after having been baptized by bishop Urban (afterwards pope Urban I.), repaired to his wife's chamber, where he found her at prayer, with the angel by her side, in the form of a beautiful youth, clothed with celestial brightness. The angel had in his hand two crowns, or wreaths, the one of lilies, the other of roses, which he had brought from Paradise; one of them he presented to Cecilia, and the other to her husband, informing him at the same time, that as a reward for his piety, whatever he asked should be granted him. Valerianus replied, that he had a brother named Tiburtius, whom he wished to be made par-

Cec
taker of the same grace which he had received. The angel having granted his request, told him that they both should be crowned with martyrdom; and then vanished. They accordingly were put to death for their faith; but Cecilia was informed, that she should be spared, if she would offer sacrifice to Jupiter. Not choosing to preserve her life on such conditions, she suffered martyrdom, by being flung up in a dry bath, beneath which a large fire was made for the purpose of slowly consuming her. (According to other accounts, she was thrown into boiling water. Fortunatus of Poitiers, who lived in the sixth century, says, the sufferer martyrdom in Sicily.) Finding, however, that the fire had no effect, her tormentors put her to death. Malone's Life of Dryden, vol. i. pt. tit. p. 255.

"If (says Mr. Malone, as Dryden and others seem to have thought, she had been the inventress of the organ (obi supra, p. 257) an instrument to happily adapted to religious worship, that circumstance might have entitled her to a place, though not to so extraordinary an elevation, among the improvers of the musical art.

All this adoration of the faint seems "to have arisen from a tradition that she was a skilful musician, and that the angel who visited her was drawn from the mansions of the blessed by the charms of her melody; a circumstance to which Dryden has alluded in the conclusion of his ode."

Mr. Malone has been at the trouble of tracing all the great Cecilian festivals held in London, from the year 1683 to about the year 1743. And Mr. M. in his very agreeable book has given a chronological list of all the odes written expressly for the celebration of this faint, specifying by whom they were written, and by whom set to music.

Cecilia, in Ancient Geography, a town of Syria, near the Euphrates, according to Ptolemy; probably the same with Ceciliana.

Cecilia Gemellina, a town placed by Ptolemy in Lusitania; perhaps the same with Ceciliana, or Cairo Cecilia.

Cecilian, a town of Alia in Syria, seated on the western bank of the Euphrates, S.E. of Hierapolis.

Cecilonicum, a place of Spain, marked in the Itinerary of Antonine, between Capara and Ad Lippus.

Cecina Fluvius, a river of Italy in Etruria, which ran from the coast to the well and discharged itself in the sea.


Gen. Ch. Malo. Calyx common. Spathe egg-shaped, burbling, caduous; containing many fusculated, cylindrical aments, imbricated with numerous flowers. Cal. proper. Scales top-flapped, compressed-quadrangular, obtuse, with a double perforation at the tip. Cor. none. Stam. Filaments two, capillary, very short, from the perforations of the scales; anthers oblong, quadrangular. Female. Cal. common. Spathe oblong, obtuse with a point, burbling longitudinally, deciduous; containing four cylindrical, imbricated aments. Cal. proper funnel-flapped, oblong, erect, bifid at the tip; segments roundish, obtuse, concave, erect, small. Cor. none. Stam. none; but there are two very small, caduous bodies on the divisions of the calyx, which have the appearance of barren anthers. Pist. Germs numerous, imbricated, compressed, quadrangular, obtuse; styles solitary, very short; stigma somewhat capitate, lacerated. Peric. Berry the form of the germ, one-celled, one-seeded. Seeds oblong, compressed.


Sp. C. peltata, trumpet-tree, or snail-wood; Linn. Sp. Pl. Lxxiu. n. 272. Jacq. Obf. 2. tab. 46. fig. 4. Amer. piæt. 126. tab. 262. fig. 66. (Ambaba; Marq. bras. 91. Pfl. brus. 147. Yaroum Oviedi; Sloan jan. tab. 88. fig. 3. tab. 89. Ficus furaminata; Pluk. alh. tab. 243. fig. 5. C. ilotapalus; Brown jan. n. 1.) A tree, about thirty feet high. Trunk a foot in diameter, hollow, flapped from space to space with membranous flaps, which form wing, annular marks on the surface, branched only at the summit. Leaves in clusters at the ends of the branches, large, peltate, green and seafellow above, downy-white underneath, deeply divided into nine or ten oblong lobes, on long petioles. Berries in flavour somewhat resembling the common raspberry.

The wood when dry easily takes fire by attrition; and is employed by the native Indians for kindling their fires in the woods. The bark is strong and fibrous, and used for cordage. The smaller branches, when cleared of their membranous divisions, are employed for wind instruments. Both trunk and branches yield a great quantity of fixed fat, with which the French distill and granulate their sugars. A native of the West Indies, Guiana, and other parts of South America. It may be propagated by seeds brought from its native country in sand, and requires the same treatment as other tropical plants.

Cecropia, in Ancient Geography, one of the first names given to the citadel of Athens, and also to the whole city. See Athens.

Cecropia, a burgh of Greece in Attica, between Mount Cegalus and the village of Acharnes, according to Thucydides. A tribe of the same name belonged to it.

Cecropius Mons, a name given by Seneca the tragedian to a mountain of Greece, in Attica, in the vicinity of Athens; probably the eminence on which was erected the Acropolis, which afterwards bore the name of Cecropia.

Cecrops, in Biography, the first king of Athens, whose holy life ascends into the fabulous times, is said to have been an Egyptian by birth, and to have brought a colony from the city of Sais in Egypt, whom he conducted after a tedious voyage to the shores of Attica, and settled on the rock, that became afterwards the site of the city of Athens. The period to which this point is referred is, according to the Egyptian chronicle, about 1556 years B.C. On this spot Cecrops built a fortres, called Cecropia; and having taken possession of a country inhabited by a barbarous people, divided it into districts, introduced laws, agriculture, and the arts, social polity, and religion; and, on this account, deserved to be reckoned the founder of the Athenian state. Such was the beneficial effect of the regulations which he established, that Attica was soon peopled by 20,000 inhabitants, who were divided into four tribes. From respect to his memory, the Athenians affirmed the appellation of "Cecropides," which they retained to the time of Erechtheus. Cecrops died after a reign of 50 years. He had espoused Agraulis, the daughter of Aegeus, one of the principal inhabitants of Attica, by whom he had a son, who died before him, and three daughters to whom the Athenians afterwards decreed divine honours. His tomb was long preferred in the temple of Minerva; and his memory was perpetuated in the foundation of Aquarius, which was consecrated to him. After Cecrops, reigned 17 princes, during an interval of about 565 years, the seventh of whom was called Cecrops, and the last Codrus. Travels of Amacharys, vol. i. See Attica.

CECRY-
CECYPHALEA, in Ancient Geography, a prominent of Peloponnesus, near which the Athenians gained a naval combat against the Eginetans, according to Diodorus Scullus and Thucydides. This has been tempered to be the site of Cecypaethus, which Pliny has placed near the Peloponnesian Epitaurus. Part of the sea which bathed the island and prominent of this name was called "Cecypaethos mare."

CEDAR, Barbados bearded, in Botany. See Cedrela.

CEDAR, bardard. See Bueronia Guineana.

CEDAR, Bearnian. See Juniperus Bemudiana.

CEDAR, Carolina. See Juniperus.

CEDAR of Lebanon. See Pinus Cedroides.

CEDAR, Lyrian. See Juniperus Lyra.

CEDAR, Phenician. See Juniperus Phoenicia.

CEDAR, red, or Virginian. See Juniperus Virginiana.

CEDAR, white. See Cupressus Thyoides.

CEDAR, or Kedar. In Ancient Geography, a portion of Arabia, near Judea. The Arabs in this district had black tents. See the Song of Solomon, ch. 1, ver. 5.

CEDAR, in Geography, an island of America, on the coast of Virginia. N. lat. 37° 57'. W. long. 76° 43'.

CEDAR, a river of Canada which runs into the lake Michigan. N. lat. 47° 36'. W. long. 86° 57.'

CEDAR, a lake of North America. N. lat. 52° 30'. W. long. 100° 5'. The entrance into this lake is through a small channel on the left, formed by an island. Banks of rocks appear at intervals, in the approach to it on either side; the rest of the country is low. This is the cote along the fourth bank of the lake and the islands, which is the north is level throughout. This lake runs first west four miles, then as much more W.S.W. across a deep bay on the right, then five miles to the Point de Livre, and across another bay again on the right; then N.W. 6 miles across a still deeper bay on the right; and 7 miles parallel with the north coast, N.N.W. through islands, 5 miles more to Fort Bourbon, situated on a small island, dividing this from Mud lake. The Cedar lake is from 4 to 12 miles wide, especially of the bays. Its banks are covered with wood and abundant in game, and its waters produce plenty of fish, particularly the sturgeon. The river Saltkatchewi will probably, in a course of time, by the depopulation of earth and land, convert the whole of the cedar lake into a forest.

Mackenzie's Voyages, Intro. p. 68.

CEDAR, cast, a fall spring in the state of Tennessee, America, 19 miles from Nashville, 4 from Big Spring, and 6 from Little Spring.

CEDAR, Point, a port of entry in Charles county, Maryland, on the coast side of Patowmac river, about 12 miles below Port Tobacco, and 60 by W. of Baltimore. Its exports are chiefly tobacco and Indian corn, and in 1704 amounted in value to 15,393 dollars. Also a cape on the west side of Delaware bay, in St. Mary's County, Maryland.

CEDAR-cups, a sort of wooden ware brought from the West Indies. They are made out of the wood of the bastard cedar, and appear of a very close and firm grain; but they are really so porous, that when any liquor is poured into them, it runs out at the bottom.

CEDEBRATUS, in Ancient Geography, a town of Asia Minor in Lydia.

CEDEYRA, in Geography, a town of Spain, in the province of Galicia; 5 leagues north of Ferrol.

CEDIAS, in Ancient Geography, an episcopal town of Africa.

CEDILLA, in the Spanish and French languages, denotes a sort of small $, to the bottom of which is affixed a kind of virgula, as $, to denote that it is to be pronounced like $.

CEDOGNA, in Geography, a town of Naples, in the province of Principato Ultra, the site of a bishop, fullranged of Conza, at the foot of the Appenines, in a decayed state: 12 miles N.W. of Melito.

CEDRELIA, in Ancient Geography, a town of Asia Minor in Caria. Steph. Byz.

CEDREI, CEDRENS, or CEDERNIANS, a people of Arabia Deferta, in the vicinity of the Nabateans, mentioned by Pliny. They dwelt in tents, and commonly occupied the southern part of Arabia Deferta, north of Arabia Petraea and Arabia Felix.


Gen. Ch. Col. Perianth one-leaved, campanulate, very small, fattedoth, withering. Cor. petalopalous, funnel-shaped; tube belted below; petals linear-oblong, obtuse, erect, adnate to the receptacle a third of their length. Stam. filaments five, awl-shaped, seated on the receptacle; shorter than the petals, adnate to the receptacle. Lam. short, culitise. Jull. united into a tube half their length. Vent. : anthers oblong, bent outward at the tip. Pet. Receptacle proper, five-corned; germ globular, (elevated on a yellowish receptacle which rises within the flower. Lam. placed at the top of a flaps which has the flaments inserted into its upper part and the petals into its lower, Jull. supported by the tube formed by the union of the flaments, Vent.) style cylin- drical, the length of the flaments; stigma capitulate, de- pressed. Peric. capule woody, roundish, five-celled, five-valved; valves deciduous. Schreb. Lam. (dihcuteent from the tip, fixed at the base, not ceduceous, Gert.) Seeds numerous, fleshy, imbricated downwards, terminated by a membranous wing. (Compressed; upper ones elliptical; middle ones oblong-ovate; lower ones obovate-lanceolate; all of a ferruginous-cinnamon colour, with a ruellus at the top, and a membranous wing beneath, Gert.) Receptacle central, very large, woody, pentagonal, five-angular.


Sp. C. odorata, Linna. Sp. Pl. Brown. Jam. tab. 10. fig. 1. Lam. III. 313. (Cedrus barbadeniun, Pluk. aln. tab. 155. fig. 1. Pruno forte affinis. Sloan Jam. 162. hilm. tab. 225. fig. 2. Acasajoyer apalanches, Nicol. St. Dom. p. 15.) "Flow- ers paniced." "A straight tree feventy or eighty feet high. Wood folt, light, reddish, of a pleasant smell; bark smooth and ash-coloured when young, rough as it advances in age; having, when fresh, an unpticatle taste and very offensive smell resembling that of affodita. Leaves sometimes near the foot long, wings with fifteen or eighteen pairs of leaves without an odd one, with a smell like that of the bark. Flowers whitish flesh-colour, small, very numerous, in much-branched racemes or panicles: branchlets alternate,
in embalming was forced out of it by fire, and called in Syria corium. His words are, “Cuius tanta vis ebullit in Egypto corpora hominum defunctorum co perfusa ferventur.” Diodorus calls it the life of the dead, ropa man. See Phil. Trans. vol. iv. p. 12.

CEDRINUM (Tremus), cedar wine; of which there are several sorts, whose qualities are said to be heating, ductile, and gently adjointing; but the laurusmum, or bay-tree wine, is remarkably heating.

CEDRIPPA, in Ancient Geography, a place of Spain, in Betic.

CEDRIS, a river of Sardinia, which flowed towards the East into the sea.

CEDRON, or Kedron, a town of Palestine, on the borders of the Philistines, in the way to Jerus. It was rebuilt by Cæcubens, according to the book of the Maccabees.

CEDRON, Kidron, or Kedron, a brook or torrent of Palestine, in a valley on the east side of Jerusalem, buttwixt it and mount Olives, which discharged itself into the Asphaltite lake. Our blessed Lord passed over this brook into the garden where he was betrayed. (John, xvi. 1.)

David also, when he fled from Absalom, crossed this brook, (2 Sam. xxv. 27.) See also Jer. xxxi. 40. Jerome calls it a torrent or valley, and Josephus denominates it a deep valley. Into this valley was conveyed the blood poured out at the foot of the altar, which, as the blood made the river look black, derived its name from this circumstance, the word "Kidder," denoting blackness. Others deduce its name from the cedar-trees planted on each side, whence, say they, it is still named in the plural, as by the LXX, (Jer. xxxi. 40.), in cepha, from these cedar-trees.

CEDRONELLA, in Botany, Comm. Hort. See Dracaena.

CEDROPELUS, in Ancient Geography, a country of Thess, where, according to Aristotle, they trained hawks for the chase.

CEDROSIAS. See Cedrosia.


Sp. C. guianensis, Mart. Wild. (Aniba guianensis, Aubl. Gen. tab. 126. Lom. Illust. fl. 268.) A tree, forty feet high, two feet thick. Wood yellowish, aromatic, heavy when green, becoming light when dry; bark thick, unequal, wrinkled, full of clefts. Branches near the top of the trunk, numerous. Leaves about seven inches long, two broad, either opposite, or in whorls of three or more together, oval-acuminate, entire, thin, smooth, on short pedicles. Flowers small, green, loosely racemed, on a long, weak, axillary peduncle; pedicels slender, generally bearing three sessile flowers. A native of the forests of Guiana. The inhabitants call it cedar-wood, and use it for making their pipes. It is said also to be fit for nails.

CEDRUS. See Cedrela, Juniperus, Pinus, and Swietzria.

CEDRUS, or CEBRUS, in Ancient Geography, a small river of Myia, according to Dion Callus.

CEESTER, in Geography, a town of Germany, in the duchy of Holstein; 12 miles W. of Pinnenberg.

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CEI

CERESTER-MHlle, a town of Germany, in the duchy of Holstein; 13 miles W. of Pinnenberg.

CEFALENSIS, in Ancient Geography, an episcopal see of Africa, in the Proconulinar province.

CEFALU, in Geography, a sea-port town of Sicily, in the valley of Demona, on the north coast of the island, the site of a hilltop, the ruins of Messina. The harbour will not contain more than 30 or 40 vessels. The number of inhabitants is about 5000; 14 miles E. of Termini. N. lat. 38° 5' E. long. 14° 5'.

CEGINUS, in Astronomy, a fixed star of the third magnitude, in the left shoulder of Bootes, marked γ by Bayer.

CEGLIA, in Geography, a town of Naples, in the province of Bari; 5 miles S.S.E. of Bari.

CEGLIAE, in Natural History, a name by which some authors have called the lapis Judaeicus, or Tegolis of the ancients.

CEILOTL of Ray, in Ornithology, the Mexican pigeon, celebrated by Gmelin under the title of columba mexicana, which fee.

CEIBA, in Botany, Plut. tab. 32. See Bombax celiu.

CEILA, or KEILAH, in Ancient Geography, a city of Pala
tine, in the tribe of Judah. Joshua, xv. 44. It was attacked by the Philistines in the time of Saul; but refused by David. Eueelius places it 17 miles from Eileutheropolis, on the side of Hebron. Szechmen says, that the tomb of the prophet Habakkuk was found in this place.

CEILANEOSE GODS. See Budn and Sarrade-wenda.

CEILING, in Architecture, the upper part or interior covering of any room or apartment.

Ceilings are in general composed of a coating of laths and plASTER, or flucco applied upon the under side of a vault or timber framing; accordingly they are either flat or coved in various manners; they are also either plain or ornamented. The usual method of ornamenting ceilings is to dispose them into compartments or panels forming various geometrical figures, either flat or into the ceiling, or being flush with its surface, and surrounded with one or several moldings. The compartments frequently receive ornaments of various kinds, foliage, figures, or grotesques, and executed in relief with flucco or plaster, or painted in colours, or chiaro oscuro. Thus the ceilings have frequently constituted the greatest ornament of palaces, and other splendid buildings, and have employed the talents of the greatest artists.

In England, the custom of ornamenting ceilings has greatly declined, and indeed is fearely at all practised in private buildings. The use of an inferior covering to the flooring-timbers of a house is considerable, as it preserves a greater equality of temperature in the apartments, and prevents the transmission of sound from one story to another. These advantages are so well understood in this country, that we see none but the oldest and meanest habitations unprovided with plaster ceilings.

Ceiling, in Sea Language, denotes the inside planks of a ship.

CEIMELIA, from κειμέλιον, to lie lat' up, in Antiquity, denotes choice, or precious pieces of furniture or ornaments, reserved or laid up for extraordinary occasions and uses.

In which sense, sacred garments, vellies, and the like, are spoken of the ceimela of a church. Medals, antique figures, manuscripts, records, &c. are the ceimelia of men of letters.

CEIMELIARGHUM, the repository or place where ceimelia are preferred.

CEIMELIOPHIALAX, from κειμελιόπηλαξ, τος, the keeper or curator of a collection of ceimelia; sometimes also denominated ceimelarchi.

The ceimelarchi, or ceimelosphialax, was an officer in the ancient churches or monasteries, answering to what was otherwise denominated chartophylax, and &iopis archibiborum.

CEINTURE, MILITIARE, a military cincture, girdle, belt, or loath. This term, however, has been generally employed to denote a broad leather belt, which was worn round the waist, and was ornamented with gold and silver plates. The chevaliers put on in even jewels and precious stones, as is manifest from the representations of their chevaliers on ancient tombs and monuments. These cinctures must have fatigue them, and particularly their sides, and much have required good handles to support them, when furnished with all their military appendages and trusses; for there were attached to this cincture the two swords for combat, the great epees, or rapier, and the bracquier, or strong short cutting sword; as also the shield or buckler, when the cavaliers were not in the act or attitude of fighting.

The marshal de Bourgogne, in 1441, left by his will to the church of St. Vincent de Chalons two cinctures, one of gold and the other of silver, to be wrought up into sacred vases. These ferts of cinctures, which ceased to be in use after armour of hammered or beaten iron made its appearance, constituted part of the cavalier's armament of honour.

The armament d'honneur, or armament of honour, consisted of those pieces of a warrior's armament, to the loss of which shame or disgrace was attached. A cavalier who lost through cowardice or misconduct in battle his sword or his buckler, was disgraced or dishonoured. Dishonour was equally attached to his losing his military cincture.

The conqueror in disposing his adversary of his cincture thereby manifested a complete victory over him. It was the mark or token of liberty as long as it was carried by one under arms, to which it was very that of servitude or slavery succeeded. For he who deprived another of it had power or authority to bind him with it.

Honour was so much attached to the military cincture, that the grand fiers took it much delight in enriching them, and among the other ceremonies observed at the degradation of a chevalier, that of depriving him of the cincture was one.

Cinctures were in use before the time of Charlemagne. A young chevalier, on first taking that ornament, received it from the hands of an old one. The ceremony observed on such an occasion was a sort of introduction to the profession of arms. When cinctures came to be laid aside, they were succeeded by silies, bands, and bandoliers.

CEINTURE, in Ornithology, the French name of the yellow lark, Alauda flavus. Ceinture de prêtre ou alunoz de Sibérien, Buffon. The plumage of this bird is rufius, varied with fuscous grey above; beneath white; front, chin, and throat yellow; tail-feathers black, edged with grey; the exterior ones edged with white. Length five inches and three quarters. Inhabits Siberia, and is very rare.

CEINTURE d'argent, in Ichthyology, the name given by French authors to the fish called by Linneus Thaenius lepturus, which see.

CEINTURON, a waist-belt generally of leather, which succeeded the bandier, or shoulde belt, and was smaller and lighter than it. The cinturon a d bandier have, indeed, at times, replaced each other. The shoulde-belt is most common, and certainly gives the folder a more military and graceful appearance than the waist belt.

CEIRI,
CEIRA. in Ancient Geography, a cavern in the country of the Getæ, in the vicinity of the Danube. Dion Cassius says, that Caestius stopped the avens of this cavern in order to compel the inhabitants of the country who had taken refuge in it, to surrender.

CEIRA, in Geography, a town of Portugal, in the province of Beira; one league S.E. of Coimbra.

CEIRA, a river of Portugal, which runs into the Mondego, about a league S.E. of Coimbra.

CEIXUPIERA, in Ichthyology. The fish described by Mareograte under this name cannot easily be ascertained from the account left us by that writer. He says it is a native of the American seas, and is esteemed a fine and delicate fish, though of an enormous size. Its growth to nine or ten feet long, and to the thickness of a man's body, but is chiefly eaten while young. The body is oblong; and the head flattened. The mouth is small for the size of the fish, and it has no teeth in the jaws, but the whole mouth is thickly set with small tubercles. Its back and sides are black, and the belly of a fine bright white. Its fins are all black except the belly ones, which are white, with a rim of black at their edge.

CEIZERIAT, in Geography, a town of France, in the department of the Ain, and chief place of a canton in the district of Bourg. The place contains 1106, and the canton 8865 inhabitants; the territory comprehends 140 kilometres, and 14 communes.

CELADON, in Ancient Geography, a small river of Peloponnesus, in Arcadia; which had its source in Mount Lycon, and discharged itself into the Alpheus, according to Pausanias.

CELADONE, a town of Greece, in the Locride.—Allo, the name of a small river of Spain, called also Celadus or Celandus.

CELADUSA, one of the names of the small island of Rhenea, situated in the vicinity of that of Delos.

CELADUSSE, an island of the Adriatic Sea, mentioned by Mela and Pliny.

CELÆNE, a large town of Aetia, in Phrygia, where Cyrus had a palace and a park filled with wild beasts. The river Meander traveled this town, and also the Marisias. Xenicles retired to Celaena after his defeat, and built the castle and fortresses. Xenophon mentions this city. Cyrus the younger sojourned here 30 days, and was joined by Clearchus, when exiled from Lacedæmon.—Allo, a place of Greece, on the confines of Attica and Boeotia. Sinsus.

CELÆNUS, a mountain of Aetia, placed by Ptolemy in Galatia. It was also called Celenus tumulus.


CELAMA, a village of Africa, in Mauritania Caesariensis. It lay in the interior of the country, S.W. of the grand promontory, and S.E. of Artigata.

CELANIDINE, in Botany. See Chelidonium majus.

CELANDINE. See Ranunculus ficaria.

CELANTINE tree. See Bocconia.

CELANO, in Geography, a town of Naples, in the province of Abruzzi Uitra, seated near the north shore of a lake of the same name, and the head of the earldom that comprehended at one time the greatest part of the country of the Maris. This was the ancient name of the people that inhabited the environs of the lake, allowed by the Romans to be the most intrepid soldiers of their legions, when in friendship, and the most formidable of their enemies, when at variance. It was a common saying, that Rome could neither triumph over the Maris, nor without them. In the 662d year of Rome, B. C. 92, they put themselves at the head of the Social war, one of the most obstinate and dangerous oppositions ever made to the progrefs of the Roman power, which was terminated by a grant of the privileges for which they contended. Their name still subsists in that of the diocese, for the prelate is styled bishop of the Maris. In ancient times, the Lake was called Fucinus, and was under the protection of a god of the same appellation, whose temple stood on its banks. According to the testimony of ancient authors, it was subject to extraordinary incendes and decrepit. The actual circumference is 47 miles. (more than 30 miles, says Sir William Hamilton, ubi infra;) the breadth, in the width for the bay, it is covered, 41 its depth, on an average, 12 feet. But these measures have been subject to great variations. Two miles up the plain, beyond Avezzano, the fragments of boat, shells, and other marks of its ancient extent, have been casually discovered; and, on the contrary, there are people who remember when it did not flow nearer than within two miles of Avezzano. An immense tract of land is lost at every increase of its level; and if any means could be devised for draining it, or, at least, reducing its size, the value of the ground recovered for cultivation would be more than an equivalent for any expense incurred in the works. Round this lake rises a circle of grand mountains covered with snow, some of which are the highest in Italy, if we except the Alpes; the most elevated is the Rocca di Cambo. At the foot of these are many villages, and rich, well-cultivated farms. In summer this country must be a delightful residence, for the environs of the lake are well enclosed, and the sides of the hills covered with fine woods; its waters abound with fish of various kinds, though not of the best quality, and hitherto, at the Walter leasons, repair innumerable flights of wild fowl. In the shallow water on the borders of the lake, Sir W. Hamilton saw thousands of water-faunes, porpoising and playing upon a little fish like our thornbacks, but much better armed, though their defensive weapons seemed to avail them but little against such ravenous foes. The necessaries of life are good, plentiful, and cheap. About 1 mile from the town is the emigration or opening made by order of Claudius Caesar for the discharge of the waters into the Liris, now the Garigliano, which runs in a deep valley on the other side of the hills. In a line from it, now choked up, up the slope, are six perpendicular wells, and two oblique grooves to the canal, which was driven into the hill into the opposite valley, and there had a vent at Capitrelli, two miles from the lake. As the swelling of this lake was attended with incredible damage, the Maris had often petitioned the senate to drain it; Julius Caesar would have attempted it, if his life had been prolonged. His successor declined the project, till, at length, Claudius, who delighted in expulsive, difficult enterprises, undertook it. During the space of eleven years he employed 30,000 men in digging a passage through the mountain, and when every thing was ready for letting off the water, he exhibited a superb naval spectacle on the lake, consisting of an engagement between condemned criminals, who, in separate fleets, acted the parts of Rhodians and Sicilians, and who destroyed one another for the amusement of the court, and of a multitude of spectators that covered the hills. When the emigration was opened, at the close of this savage diversion, the emperor himself, with difficulty escaped being hurried away and drowned by the sudden rushing of the waters towards this vent. However, through either the ignorance or negligence of the engineers, the work did not answer expectations, and Claudius did not live long enough
C E L

enough to complete it. Sir W. Hamilton went with torches into the eminence of Claudius as far as he could. It is a covered under-ground canal, three miles long, and great part of it cut through a hard rock; the other parts supported by masonry, with wells sunk to give air and light. In its present state, though filled up with rubbish and earth in many parts, and of course useless, it is a magnificent monument of antiquity. Nero abandoned the scheme projected and partly executed by Claudius, through envy. Adrian is said to have let off the waters of the Pecunus; but none now escape except through hidden channels formed by nature, but liable to frequent obstructions. As three considerable streams run into the lake, the old oblong to a discharge main raise the level. Swinburne’s Travels, vol. iv. p. 374. Phil. Trans. vol. lxxxv. p. 503.

CELANO, a river of Italy, which runs into the sea of Tarento, 1 miles from its mouth.

CELERANT, in Logic, a denomination given by the Peripatetics to the Galenicus synolytix; otherwise called 

CALENTES.

CELERANT, among Logicians, a mode of syllogizing, wherein the major and conclusion are universal negative propositions, and the minor an universal affirmative. L. gr. CE

None whereunder understanding is limited can be omniscient.

LA

Every man’s understanding is limited.

RENT

Therefore no man is omniscient.


Obf. Gartnur affirms that there is no solid generic distinct between this genus and evonymus, a difference in the number of cells and valves being, in his judgment, of no consequence, except to the mere carpologist.

* Without thorns.

† Leaves entire.


†† Leaves ferrated or toothed.


CEL.
Callery's Sycamore

Leaves egg-shaped, acute, remotely toothed, petioles, flowers axillary. A native of the Canary Islands, flowering in August and September, introduced into England by Maffin in 1779.


† Leaves serrate or toothed.


Celastrus sagamosus, See Senacia sagamoides.

Celastrus myrtifolius, Wild. See Senacia myrtifolia.


Celastrus, in Gardening, comprises some plants of the evergreen, and deciduous shrubby kinds, as the fluted or evergreen Virginia flax-tree (C. bullatus); the climbing flax-tree, or baldwood euonymus (C. scandens); the pyracantha-leaved flax-tree, or Athiopian box-thorn (C. pyracanthus); and the box-leaved flax-tree (C. buxifolius); of which the first in its native situation rises to the height of eighteen feet, but in this climate few of these shrubs are much more than half that height. It generally puts out two or three stems from the root, which divide upward into several branches being covered with a brown bark: the flowers come out in loose spikes at the end of the branches, and are white; the capsule is of a scarlet colour, let full of small protuberances. It flowers in July, but seldom produces good seed here.

In the second foot several woody flasks are sent out which are inedible, and twill themselves round trees and shrubs, or round each other to the height of twelve and fourteen feet or more, girding trees so closely as in a few years.
years to a bow. They are about three inches long, of a lively green above, but pile on the under side; the flower, produced in small bunches towards the end of the branches, are of an herbaceous colour, and succeeded by roundish three-cornered capsules, which are red when ripe, spreading open and disclosing their seeds in the same manner as the spindle-tree. It flowers in the beginning of June, and ripens its seeds in the autumnal fallow.

The third rife, with an irregular stalk, three or four feet high, issuing out of several side branches covered with brown bark; the leaves are about two inches long, and more than half an inch broad, some pointed and others obtuse; they are quite free, of a rich green, coming out irregularly from the branches in loose tufts, many from one point, on long peduncles, and of an herbaceous white colour; the fruit is of a fine red colour, opening into three cells, containing an oblong hard seed. It flowers the greatest part of the summer.

The last rife, with a slender woody stalk to the height of ten or twelve feet, is full of joints, armed with long spines, upon which grow many small leaves; the branches are slender, armed also with spines at every joint; but the whole plant is so weak as to require support: the leaves come out in clusters without order, are shaped somewhat like those of the box-tree, but longer, and of a looser texture; the flowers are on peduncled cymes from the axils, and the fruit globular. It flowers in May and June, and sometimes a little later.

Method of Culture. The two first sorts are capable of being raised either by seeds or layers, but the latter is the more ready method. And in the first mode, the seeds should be sown upon light sandy earth, either in beds or pots, as soon as they are procured from abroad, keeping them perfectly free from weeds till the plants are of sufficient growth to be planted out in nursery beds, watering them occasionally when the weather is dry. They are mostly fit for this in about two years. But in the latter method, layers from the young shoots should be laid down in the autumn, setting them at a joint on the under sides. They may sufficiently root and be taken off and planted out in the nursery rows by the succeeding autumn. The latter of these sorts succeeds better on a moister loamy soil.

In the last two sorts the culture may be in the same methods; but they should be in pots in order to their being placed under the protection of frames or other contrivances, when the weather is severe. After they have had a twelvemonths’ growth, they may be removed into other pots separately. And cuttings made from the young shoots in all the sorts may likewise be sown in the early spring months in pots exposed to a hot-bed heat. These may be planted out in the following autumn, either in pots separately, or where they are to remain according to their kinds. But these sorts should not be treated too tenderly, as they are apt to be rendered weak in their branches and leafy verdant.

The first two sorts are of a hardy nature, being well adapted to the borders and clumps of pleasure-grounds in mixture with other shrubs of the more tall growths. The first should, however, have a warm aspect and rather dry soil. The latter succeeds in wilderness quarters, under the shade of tall trees where it wind: itself about them to a great height, producing a fine effect in the autumn by the fine colour of its fruit.

The other two sorts are more tender, requiring to be kept in pots, as has been seen, to have the protection of the greenhouse in winter, where they afford variety in embellishment with other plants of the more hardy nature.

CELA, in Military Antiquity, from the Latin word celatus, signifying concealed. It is of the same import as kamae, which is derived from the German, and was used to denote a helm, casque, or helmet for covering not only the head, but also the whole face, having an opening only opposite to the eyes, which were secured by cross-bars or lattice-work of iron, forming a sort of visor. It has served for several centuries as an ornament on arms armorial, and is still preferred in heraldry as a distinguishing mark of nobility. It was worn not only by the chevaliers or knights when they went to war, but also at tilts and tournaments. Various applications have been given to this piece of armour, such as laclierement de tete, or covering for the head, casque, helmet. Under Francis I. it was distinguished by the name of armet. At tournaments it was assigned as the prize to him, who behaved best on the part of all those who presented themselves at the barrier of a tournament, and held against all those that might enter the lists, as the first piece of defensive armour: in the same manner as the sword was given to him, who distinguished himself most on the side of the assailants, as the first arm of offence. Formerly they used to label, call, or cry out an armet, as they now do aux armes.

CELOV, in Geography, a town of the department of Lianme (island of Corfica) and chief place of a canton in the district of Ajaccio. The canton contains 4060 inhabitants.

CELAVIA, in Ancient Geography, a small island of Greece, on the coast of the Peloponnesus. It belonged to the Troezentians, and was situated before the port called "Pagon" by Strabo. In this island was a magnificent temple of Neptune; and the tomb of Demosthenes, who lived here, is not one of the least of its ornaments. His memory was long held in great veneration on this island, and, in the time of Paulyasian, strangers, as well as the inhabitants of the island, rendered distinguished honour to this illustrious defender of the liberty of Greece.

CELEBRIDGE, in Geography, a small town of the County of Kildare, Ireland, pleasantly situated on the river Liffey, where the cotton manufacture has been carried on extensively; and also a manufacture of ship hats, which was for some years much encouraged. It is 10 miles west from Dublin.

CELECIKENS, in Ancient Geography, a people of Spain, who inhabited the town of Celica, seated on the banks of the Ebrus, according to Piny.

CELE, in a general sense, denotes any tumour, but more particularly that proceeding from a rupture or hernia.

CELE, in Ancient Geography, a town of Sicily, S. of Phlius. Here were celebrated in every fourth year, the mylerics of Ceres, who had a new pine at every return of the festival, so that the priesthood lasted only four years. In a temple of this city was suspended from the roof a car, which was said to be that of Pelops.

CELEBANDICUM jugum, a promontory of Spain, in the Mediterranean sea.

CELEBATE, or CELEBACY, the state of a person who lives out of marriage.

Scaliger derives the word from the Greek κοφάον, bed, and λαγός, lingua, i. e. have; others say, it is formed from cella, a little cell, q. d. the chambers of honey.

Among the Spartans, though very weighty reasons might persuade them not to marry, yet in old age they could not expect to be treated with the same respect as the other citizens. As a proof of this X nopi' (1. Hist. Gr. l. 3. p. 42., as also Plut. in Lycurg. T. 1. p. 48.) relates an anecdote of Dercyllidas, who had commanded some with so much glory. That general came one day into the assembly,
bly, when a young man said to him: "I shall not rise to you, because you will leave no children who may one day rise to me." Those who lived in celibacy were also subject to other humiliations. They were not allowed to be present at the exercises in which the girls engaged half-naked: the magistrates might also, in the midst of winter, command them to strip off their clothes, and go round the forum, flogging lascivious verses on themselves, in which they acknowledged that their disobedience to the laws merited the chastisement they suffered.

The ancient Romans used all means imaginable to discourage celibacy. Nothing was more usual than for the censors to impose a fine on old bachelors. Dionysius Halicarnassius mentions an ancient constitution, whereby all persons of full age were obliged to marry. But the first law of that kind of which we have any certainty, is that enacted under Augustus, A. U. 752, called "Lex Julia de maritandis ordi-
nibus." It was afterwards denominated "Papia-Poppaea," and more usually "Julia-Papia," because of some new function and amendments made to it under the consuls Papia and Poppaeus. By this law, divers prerogatives were given to persons who had many children; penalties imposed on those who lived a single life, as that they should be incapable of succeeding to an inheritance, except of their nearest relations, unless they married within 100 days after the death of the testator; and that they should not receive an entire legacy. What they were thus deprived of in certain cases fell as an ephedra (caducum) to the exchequer or prince's private purse.

The celebate of the clergy, which is still rigorously kept up among the Romanists, is of a pretty ancient foundation. It was first proposed by the council of Nice, but without passing; it was, however, in some measure, admitted by the western councils of Elvira, Arles, Tours, &c. and enjoined by the thirty-third canon of the council of Elvira, held about the year 360, though it does not appear that it was either generally or rigorously observed. In the year 360 it was decreed in the council of Arles, that no man in- cumbered with a wife, should be admitted into holy orders, unless he promised, with his wife's approbation and consent, to abstain for ever from the conjugal duty. From these citations it appears, that those writers are mistaken who affirm, that celibacy was first imposed upon the clergy by Sycius; and that it was not required of the ministers of the gospel by any council, but by the popes, in appellation to all councils which allowed the priests to marry. Among the priests as-signed themselves on the faculty of conscience, took the hint; infomuch that, towards the close of the fourth century, there were few but made profession of a voluntary celebate.

Sycius issued a decree in 385, obliging all priests and deacons to observe celibacy: and it was soon after enjoined by the synods of each particular nation, and observed in most of the western churches. In 441, the council of Orange ordered those to be deposed who did not abstain from their wives; and Leo the Great, in a letter written about the year 442, extended the law of celibacy, which was confined by the decree of this council to deacons, and by the letter of Sycius to deacons and prebendaries, to sub-deacons likewise: but it was Gregory the Great, in 591, who first brought ecclesiastics to admit the celebate as a law. In the council of Trent, it was proposed to let the clergy at liberty again from the yoke of celebate; and this was even made an article of the Interim of V.; but the pope could not be induced to acquiesce.

In Britain the celibacy of the clergy does not seem to have commenced till the arrival of Antoninus in the 6th century. About the middle of the tenth century, in the reign of Edred, who surrendered himself to the guidance of Dunstan, commonly called St. Dunstan, abbot of Glastonbury, a new order of monks, called Benedictines, had sprung up in Italy, and was introduced into this country by Dunstan. These monks made a merit of the most inviolable chastity; and their principles and practices were greedily embraced and promoted by the policy of the court of Rome.

The Roman pontiff, who was every day making great advances towards an absolute sovereignty over the ecclesiastics, perceived, that the celibacy of the clergy alone could break off entirely their connection with the civil power, and depriving them of every other object of condition, engage them to promote, with unclosing industry, the grandeur of their own order. He was sensible, that so long as the monks were indulged in marriage, and were permitted to rear families, they never could be subjected to strict discipline, or reduced to that slavery under their superiors, which was requisite for procuring to the mandates issued from Rome a ready and zealous obedience. Celibacy, therefore, began to be extolled, as the indiennable duty of priests; and the pope undertook to make all the clergy throughout the western world renounce at once the privilege of marriage. The undertaking was difficult, as he had the strongest propensities of human nature to encounter; and it is therefore no wonder that this master-stroke of policy should have met with violent contradiction, and that the interests of the hierarchy and the inclinations of the priests, being now placed in this singular opposition, should, notwithstanding the continued efforts of Rome, have retarded the execution of that bold scheme during the course of near three centuries. In the year 1167, during the reign of Henry I., a synod was held by the mitigation of pope Pausal II. and archbishop Anselm, at Wellminster, which enjoined the celibacy of priests; and which enacted, that even laymen should not marry within the seventh degree of affinity. By this contrivance the pope augmented the profits which accrued to him from granting dispensations, as well as those from divorces. Another synod was convened at London in 1129, under the pontificate of Honorius, at which prefixed William archbishop of Canterbury, with the character of the pope's legate, and where all the bishops of the kingdom were present. This council was assembled chiefly for the purpose of enforcing the observance of the canons issued by the councils concerning the celibacy of the clergy, and of which many amongst the priests as- signed themselves on the faculty of conscience, took the hint; infomuch that, towards the close of the fourth century, there were few but made profession of a voluntary celebate.

CELEBES, called also Macassar, in Geography, an island of the East Indian Ocean, situated under the equator, between Boromo on the west, and the Molucca islands on the east; or between 1° 20' N. lat. and 5° 40' S. lat. and 119° and 124° E. long. The form of this island is very irregular, so that it is not easy to ascertain its dimensions, as to length and breadth,
C E L E B E S.

breadth, in miles; but it has been usually reckoned about 700 miles long, and 350 broad; taking those parts whose dimensions are of the greatest extent. It is divided into a number of small kingdoms and states, most of which however depend on the two great kingdoms of Macassar and Boni. The king of Tarutane also, has extensive powers, which occupy almost the whole of the northern and eastern part of Celebes. The two most powerful kings, those of Dutch, by the preponderance of their arms, assumed allies, are the kings of Macassar and Boni. The king of Tello and Sandakani are in alliance with the kingdom of Mantaya; and that of Sopping, Locho, and Tanete, is with that of Boni. Some small states, such as Wajo, Mandub, &c. are independent. Although the kings of Macassar and Boni are allies of the Dutch, they are always shown enemies to each other; and the policy of the Dutch has continued to derive great advantage from the discord of these eastern princes. The kingdom of Mantaya, or Goach, lies on the western side of the island, of which it occupies the greater part. The king of Goach, and that of Tello, both bear the title of Macassar, though each has a distinct kingdom; they sally the talks of Goach and Tello from their places of residence.

Celebes is surrounded by a variety of islands, all of which may be denominates the Celebrian isles. See Macassar, Goach, Telly, Boni, Sandakani, Sopping, Lephoi, Tanete, Mandbar, Cebelula, Wajo, Tophrette, Toulkadi, Cajeelie, Torokcian, Bonton, Sumbara, Maros, Lacsali, Galicmond, Bonton, Dolem, Comba, Beke, Salye, Bonapatte, Calalwe, Tanakeke, &c. &c. According to an ancient tradition, the Macassars, like many other nations, deduce the origin of their princes immediately from the gods. Once, they say, after the death of the first sovereign of the kingdom, a beautiful female descended from heaven, descended from a golden chain. This celestial beauty, named Toematoong, was immediately chosen by the Macassars to be their queen. She afterwards married a king of Bantam, and, after being pregnant three years, she brought forth a wonderful child, capable of speaking and walking as soon as it was born, but very ugly and deformed. This young prince was named Tooma-Salangabarang. When he attained to manhood, he broke the golden chain, which his mother had brought with her from heaven, and the mother and her husband instantly disappeared, and left to the son the kingdom, together with one half of the chain. This chain, which, as it is styled, was sometimes light and sometimes heavy, and sometimes appeared of a pale colour, was long preserved as a valuable part of the regalia of the crown, until it was lost, with various other rarities, during the warlike commotions which took place in this kingdom about the middle of the last century. This Tooma-Salangabarang is considered as the chief of the family of all the kings of Goach. The Dutch were involved in violent disputes with these sovereigns before they were able to establish themselves in their kingdom. In 1778, Goach, the capital, was taken by force and destroyed; and, in 1781, the sovereign Pundiraci Sir, Sultan Abdul Hadja, was placed on the throne by the government of Batavia. The king of Goach does not possess unlimited power, but is subject to certain laws, which he is obliged strictly to observe. He can undertake no measure of importance without the consent of his council; nor can he inflict arbitrary punishment on criminals, who must be punished according to the laws. His privy-councillors are called Tomani Calangs; and every village is under the direction of a particular chief or governor, distinguished by the title of Galarang. The Portuguese visited this island about the beginning of the 16th century, and obtained, from the sovereign then on the throne, (viz. in 1512,) permission to form an establishment. The face forms of this prince introduced the weights and measures now in use, fixed the prices of merchandise, manufactured gunpowder, and planted the first artillery on the walls of Goach. He also not only allowed the Malays to settle in his states, but to erect a Mahometan temple. This religion made rapid progress in the island, that, about the year 1527, disputes were set to bring from thence a brada or priest, to instruct the Macassars in the doctrine of Mahometanism, which, in 1565, was established throughout the whole kingdom, under the name of Sultan Allah Ouden; and three years afterwards they forced the people of Boni equally to subscribe to the doctrines of the Koran. The power of Macassar was at its height about the middle of the 17th century; when its princes not only ruled over almost the whole of Celebes, but had likewise subdued Lamo, Mandalay, Bima, Tabamba, Dempo, and Singar, tributary to them, and had conquered Bonton, Burgay, Gori, the Xiwi islands, &c. The advantages which the government of Batavia derived from the government of the Foelen, which had been given to Macassar by Basul Uddah, king of Terutane; they were in strict alliance with the inhabitants of Bali, and coined the first gold coins, which were probably the gold "Mas," of the value of sixty Dutch flours. About that time also, the alliance between Goach and Tello was renewed; and these two states were soon united together, that it was a common saying that there were "two lords, but one people." By the articles of union it was settled, that all taxes and contributions from conquered provinces, &c. should be divided into five parts, two of which were to be given to Goach, and two to Tello; while the fifth should fall to the share of the eldest of the two kings, that the eldest of the kings should always exercise the office of regent or prime minister, to his junior colleague; that they should both be equal in dignity; and, lastly, that they should both enjoy the title of "Sannabo," signifying as much as emperor. The empire of Macassar has lost by so much declined, under the influence of the powerful arms and artful policy of the Dutch company, that the king of Boni is now much superior to Goach, both in extent of territory and number of subjects; although in war a Macassar is better than three Boaghees, on account of their martial character, and undaunted courage, which, notwithstanding all the adverse events that have befallen them in the course of a century, were never subdued, till the year 1775; when a finishing stroke was given to the independence, and power of reliance, of Goach. A rebellion having been raised by the mother of the king, who governed during his minority, with a view of emancipating the country from the yoke of the company, her forces were vanquished, the city of Goach taken by assault, its fortifications razed; and the government new modelled, conformably to the views of the conquerors. The kings of Macassar have a new name given them after their death, and their successor must be nominated before their interment. The Dutch East India Company possesses the castle of Batavia, which is called, in the language of the country "Adjong Pandang," together with the surrounding district, in consequence of a treaty which they entered into with the prince of Celebes. But as the boundaries of their possessions were, perhaps, not accurately defined, the company always endeavoured to enlarge, and the Macassars, on the other hand, to confine them. The company possess also a peninsula extending from this place towards the north, and a large flat district, which, on account of its fertility, is con-
considered as the granary of Celebes, together with several places lying between this plain and the mountains, and likewise a great many villages among the mountains. These places border on each other, and are bounded on the west by the sea, on the north by the kingdoms of Tannets and Maros, on the east by Tamarri, and on the south by the kingdom of Macasser.

The road of Macasser is one of the most beautiful in India, and at the same time safe for ships at every season of the year. The islands of “Great Ly Ly,” and “Little Ly Ly,” with their reefs, defend it from south-west to north; and there is a safe anchorage close under “Great Ly Ly,” in the bad monsoon, and when the N.W. winds blow violently. The entrance of the road is between the above-mentioned island of “Ly Ly,” and a sunken rock, which lies half a quarter of a league S. of the point of the reef of “Ly Ly.”

The environs of Macasser are very pleasant. They consist of an extensive plain, reaching to the foot of a high range of mountains, situated seven or eight Dutch miles to the eastward, and dividing this part of Celebes, that lies to the westward of the bay of Boni, and south of the gulf of Tomini, into two parts. This range is called the mountains of Boni, because the southern part of it terminates in a group of that name. The plain is covered, as far as the eye can reach, with rice-fields and paddy grounds, which are interspersed, here and there, with small groves of fruit-bearing or shady trees, and watered by drains made out of the larger rivers, which descend from the mountains.

Captain Forrest (in his “Voyage from Calcutta to the Mergui, Archipelago, &c.”) informs us, that at a place called Kyly, or Kyela, N. of Macasser, and in the Mandhar division, there is a flat, a spacious harbour; and that near the harbour are hills free from wood, and covered with grass, where many sheep are bred; though they are generally scarce, whist goats are much more plentiful. There are also two or three harbours on the east coast of Celebes, and two on the north coast, Koandang and Amoran.

The seafaring in Celebes are the same as in Java. The S.E. monsoon continues from May till November, and is reckoned favourable; the N.W. monsoon, called the bad one, continues from November till May. During the former the sky is serene, and the weather dry; but continual winds and violent rain prevail during the latter. It is singular, however, that on the east side of the above-mentioned range of Boni mountains, the contrary takes place: for, when fine weather in the S.E. monsoon prevails on the west side of the mountains, hurricanes and rain are found on the east side; there the boundaries of summer and winter are other eight Dutch miles distant from each other.

As this island lies under the sun, the air is very hot; but the heat is moderated by frequent rains and cooling breezes, so that the climate is not upon the whole insalubrious. It abounds with mountains, but the soil is generally fertile. The chief production of the island is rice, on which it yields more than enough to supply its numerous inhabitants, although it is not so good as the Java rice. Cotton of excellent quality is likewise very much cultivated; and the inhabitants manufacture it for the women’s dresses, which are held to be the finest in all India. These garments are called “Cambas;” they are red-checked, mixed with blue, but dull-coloured; they reach from head to foot, and are often fold from 6 to 10 Spanish dollars apiece. The Bougineese often import cotton from the island “Bali,” both raw and spun into yarn. They also manufacture beautiful silk belts, in which they fix their krisis; also a kind of paper, from the inner bark of a small tree, in which they wrap their fine cambas; this paper they often dye of various colours, and export much of it to Manila, and several other places; it resembles the cloth of Othaitte. They make fire-arms, but cannot make gun-locks; they also cast small brass guns, which they call “ranteckx,” the larger being about six feet long, and carrying a half-pound ball. They are curious in silk-agree work, both in gold and silver. Captain Forrest was informed, that they failed in their Takuars, or pros, to the northern parts of New Holland, probably Carpentaria bay, to gather tea-faual (bieche de mer), which they fell to the annual Chinese junk, at Macasser; but they did also that gold was to be obtained there. In this island cocoa-nut trees, mangos, bananas, melons, and oranges are cultivated in abundance, together with yu, a root used as food, and horse, a kind of buck wheat, which formerly was the chief food of the Iavasche before they were acquainted with the use of rice. They have also plenty of horses, oxen, buffaloes, deer, wild swine, and birds of all kinds, particularly a variety of beautiful parrots. The Dutch carry hither opium, spirits, rice, coarse and fine cloths, &c. and receive in exchange rice, wax, flaves, and gold. Here, as well as in many parts on the coast of Africa, the unfortunate beings doomed to slavery, are not prisoners taken in war, or criminals, but in general persons who have been kidnapped for the purpose of being sold; and it often happens, that relations do not hesitate, for the sake of gain, to deprive their kindred of liberty. Most of the eastern settlements, Batavia and Java, are furnished with flaves from Celebes. About 100 flaves are annually purchased at Macasser by the Dutch company, for their own service, and conveyed to Batavia; the whole remainder of this iniquitous traffic is in the hands of private individuals, and free inhabitants of the above-mentioned two places.

The island is well peopled; on the coast of Celebes alone there are said to be 56,000 inhabitants, 17,000 of whom are capable of bearing arms. Of the various nations who inhabit Celebes, the Bonians or Bougineese, called in general Buggeles by the English, and the Macassers, are the most known: the latter are the most considerable of those who have been forced by the arms of the Company to enter into alliance with them, and their lands likewise lie near those of the Company, and they are, therefore, better known in history than the more distant kingdoms and nations. See Boni and Bougineese. Several of the inhabitants of Celebes find employment in the gold mines of this island; and were it better peopled, and the islanders more industrious, these mines might supply a greater quantity of the precious metal. But the Indians who inhabit these parts of Celebes which produce gold, content themselves, like those of other places, with pursuing the gold mines in a disorderly manner. Accordingly, they obtain the metal by collecting the small particles which have been carried down by the streams, or by washing the sand which they dig up, rather than by working the mines in a regular manner. The gold mines in this island are found in the kingdom of Loochoe, and in the eastern parts; and it is partly collected for the Dutch East India Company at Gontang. The mines commence on the southern side of Bali, and the northern side of Kotboca, or Mogondo, and proceed thence to Dondo on the south-west, and Tamperana on the north-west side, at the bay of Tomini. Every where between these two distinct gold is found in a greater or less quantity. Where the land of Celebes becomes so narrow, and the mountains so low, that a person can with ease pass from one coast to the other, in a few hours, the auriferous mountains end; and on the whole coast on the other side, as far as Macasser, a single gold mine is not to be found. The villages, however, in these gold-yielding mountains are very ill-peopled; and, besides, these treasures are neglected on account of the ignorant superstition

C. C. 

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CELESTI, a river of Africa. In the kingdom of Algiers, supposing to be the ancient Carthage, which falls into the sea about 3 leagues W. of Algiers, after a short course of 15 or 20 leagues.

CELIGERI, in Ancient Geography, a people of Macedonia, according to Pliny.

CELEIA, a town of Norcia, mentioned by Pliny and Ptolemy, and appearing, by an ancient inscription of Gutter, to be the modern Cilicia in Lower Soria.

CELEATES, an ancient people of Italy in Liburnia, who, according to Livy (1. xxxii. c. 29), submitted to the Romans in the year of Rome 555, under the confidate of C. Cornelius and Q. Minutius.

CELEMANTIA, a town of Germania Magna, placed by Ptolemy in the vicinity of the Danube.

CELENDES, a burgh of the Argolid, towards the extremity of the peninsula S.E. of the Argolid, on the Saronic gulf.—Also, a sea-port town of Asia, in Cilicia.—Also, an episcopal town of Asia in Iauria, probably the same with that last mentioned.

CELENERTITIS, a small district of Asia, in Cilicia, deriving its name from Celenderis.

CELENAE, an ancient town of Italy in Campania, mentioned by Virgil in his Aeneid. It was a colony, according to a medal of Vespasian.

CELENZA, in Geography, a town of Naples, in the province of Abruzzo Citera; 12 miles E. of Civita Borelo.

CELENES, in Antiquity, a Latin word made use of to denote cavalry, so called on account of the quickness of their movements, and the swiftness with which their service was performed. They were a sort of light-horse, about 300 in number, formed by Romulus for his body-guard, chosen out of the rest of the cavalry, and approved of by the sagacity of the curie of the people, each of which furnished ten. In war they constituted the van-guard in advancing towards the enemy, generally beginning the engagement, and the rear-guard in retreating.

Though the celebes were a body of horse, yet they usually dismounted, and fought on foot: their commander was called tribune, or preifal of the celebes. They were divided into three troops, of one hundred each, commanded by a captain called centurio: their tribune was the second person in the kingdom. See Cavalry, &c.

Phutarch says, Numa broke the celebes: if this be true, they were soon re-established, for we find them under most of the succeeding kings: witness the great Brutus, who expelled the Tarquins, and who was the tribune of the celebes.

CELEBINA, in Ancient Geography, an ancient episcopal town, in the pre-Daroba Africa.

CELENUS, in Ichthyology, a name by which some authors have called the pilchard, clupea pilchardus; also aqua membras, and chalice.

CELEBRY, in Mechanics, is the velocity of a moving body; or that affection of a body in motion, whereby it is enabled to pass over a certain space, in a certain time. See Motion and Velocity.

CELEY, in Botany and Gardening. See Atrium.

CELEY, exult. Atrium anticarena, in Botany, was found in considerable quantities by Mr. (Sir Jof.) Banks and Dr. Solander on the coast of Terra del Fuego. It is like the garden celery in the colour and disposition of the flowers, but the leaves are of a deeper green. The taste is between that of celery and parsley. It is a very useful ingredient in the soup for leekens, because of its antiscorbutic quality. Hawe- worth's Voyages, vol. ii. p. 66, &c.
CELESTI, Andrea, called Cavalier Celesti, in Biography, a painter of history and landscape, was born at Venice in 1637, and acquired the principles of design and colouring from Cavalier Matteo Ponsoni. He was much applauded for a beautiful style of painting, in history as well as landscape; but he principally employed himself in the latter. His beautiful views about Venice, and other cities of Italy, were painted both in a large and small size; and his works are very highly prized, but not easily procured.

Two of his historical compositions are preferred in the chapel of Madonna della Pace at Venice; the one is St. Luke painting the portrait of the Virgin; and the other, the Adoration of the Magi, which are reckoned excellent performances. Another of his pictures in the chapel of S. Pietro, representing St. Jerome, with the Virgin and some faints, is well delineated, fault, and delicately coloured, but rather too redly. This matter used a purplish tint, referring the manner of Rubens; but he sometimes erred in the extreme. Pilkington.

CELESTIAL Globe. See Globe.

CELESTIAL Sphere. See Sphere.

CELESTINE, in Biography, the name of several of the popes.

CELESTINE I., a native of Rome and the son of one Prifus, was elected bishop of Rome, upon the demise of Boniface, in 422. Soon after his election an appeal was made to him against Anthony, appointed bishop of Tuffala in Africa by St. Aulfin; in consequence of which he concurred in the sentence of the prelates of Numidia, who deprived him of all jurisdiction on account of his scandalous conduct. On occasion of another appeal by Apiarius, prebendary of Siccia, against his bishop, who had degraded and excommunicated him for several crimes, of which he had been convicted, and which appeal had been made in a flate of fulpene during the pontificates of his two predecessors, the African bishops confirmed a canon that prohibited appeals beyond sea on any pretext, under penalty of excommunication; and Celefine thought it most expedient to give way for the present to the zeal with which they refuted the supremacy of the Roman see. In the year 428 he remonstrated, in a long letter addressed to the bishops of the provinces of Vienne and Narbonne against several abuses that prevailed in the churches of Gaul; and towards the close of the year 429 he concurred with the Gallican bishops, in sending two missionaries into Britain for the purpose of suppressing the Pelagian heresy. But the principal act of his ecclesiastical administration was the part he took in the condemnation of Neftorius. A violent dispute having commenced in 430, between Neftorius, bishop of Constantinople, and Cyril, bishop of Alexandria, concerning the distinction of two natures in Christ and the refusal of the title of mother of God to the Virgin Mary, an appeal was made by both the disputants to Celestine. The Roman bishop convened a council at Rome; which condemned the opinions of Neftorius, as heretical, degraded him from his episcopal office, and allowed him only ten days for recantation; on the failure of which he was to be deposed and excommunicated; and Cyril was appointed to be the vice-gerent of Celestine in the execution of this sentence. An ecumenical council was afterward summoned by the emperor Theodosius at Ephesus, in order finally to decide concerning the subject in dispute. To this council Celestine sent legates, and he approved its condemnation of Neftorius; upon which he wrote a preface letter to the emperor, requesting him to banish the heresieve Neftorius to some uninhabited place, where he would have no power to spread the infection of his doctrine.

For this instance of zeal on behalf of what was then deemed orthodoxy, Celestine has been ranked among the saints of the Romish church. In 431 the pope addressed the bishops of Gaul in a letter, warmly supporting the doctrine of St. Augustine concerning grace and free will. He also sent Palladius into Ireland, in order to propagate the Christian religion among the rude inhabitants of that island; and as this first mission was not attended with much success, he employed, after the death of Palladius, in the same mission, Succathus, a native of Scotland, whose name he changed into that of Patrick, and who arrived among the Iblevi in the year 432. The success and fame of this missionary are recorded in the annals of that country; and he has been acknowledged and honoured, under the appellation of "The Apostle of the Irish," as the father of the Hibernian church. Celestine died in 432. Several of his letters relating to the Neftorian controversy are extant; and others on various subjects of discipline have been falsely attributed to him. Bower's Hist. of the Popes, vol. i. Mafheim's E. H. vol. ii. p. s.

CELESTINO II. a Tuscan, cardinal of St. Mark, and in 1140 legate of the apostolic see in France, and called before his election to the papal chair Guido de Caffello, succeeded Innocent II. in 1143. The chief act of his administration was that of abolishing the king of France from the interdict which he had been put under by Innocent. He had been a disciple of Abelard, and was respected for his humanity and other good qualities. He died in 1144, after having been in possession of the see of Rome about half a year. Bower.

CELESTINO III. was elected to succeed Clement II. in 1191, in the 67th year of his age. His name was Hyacinth, and he had been cardinal-deacon for 65 years. After some delay he contended to crown Henry V. emperor of Germany, together with his wife Constanza, the emperor having previously stipulated on oath that he would give up the lands and territories that belonged to St. Peter, and restore Tuscum to the apostolic see. He cauited the enemies of William, bishop of Ely, and high chancellor of England, who had been appointed governor of the kingdom by Richard 1. on his departure to the holy land, to be excommunicated; and the bishop to be restored to the government from which he had been excluded; and he also excommunicated the duke of Austria for having imprisoned Richard on occasion of his shipwreck in his return from the crusade. As Philip Augustus, king of France, had married Engelburga, daughter of Canutus IV. king of Denmark, within the forbidden degrees of consanguinity, he divorced her under this pretext upon the confirmation of the marriage; and the divorce was declared lawful by the Gallican bishops. The decree of the bishops assembled in council was confirmed by the pope's legates; but it was afterwards reverted on a discovery of the fallacy of the king's plea, by the pope. Philip, however, disregarding the prohibition of the pope, took another wife, and Celestine gave him self no concern in the matter. Being informed that in Poland and Bohemia most of the clergy were either married or publicly kept concubines, he sent, in 1197, a cardinal legate to reform this abuse; and he succeeded in reforming celibacy in Poland, but the opposition in Bohemia was such as to endanger his life. On the death of the emperor Henry, he granted leave to crown his son Frederic as king of Sicily, on condition of the payment of 1000 marks of silver to himself, and the same sum to the cardinals. As his intimates increased, he wished to resign the papal chair, but the cardinals would not allow him to retire. At length he died in 1199, after a pontificate of nearly seven years. By a particular
C E L

icular bull, he absolved those who had been devoted, while children, to particular monasteries, from the obligation of confirming their vows at mature age. Bower.

Celestine IV. was elected, after a contile among the cardinals, to succeed Gregory IX. in 1241. His name was Godfrey; he was of the illustrious family of Caffioli of Milan, and his mother was the sister of Pope Urban III. From his retirement among the Cistercians, he was drawn into public life, and created cardinal by his predecessor. It was his declared wish to establish a lasting peace between the church and empire, but his death, on the 18th day of his pontificate, in a very advanced age, prevented his receiving an answer from the emperor to his pacific proposal. Bower.

Celestine V. was, before his advancement to the pontifical dignity in 1264, a poor hermit, called Peter de Marrone, from the name of a mountain near Magella, who was born at Iternum in 1215, and there lived a retired and ascetic life. When he was acquainted with his election, which took place at Perugia, he at first declined the pontificate; but by the urgent persuasion of Charles, king of Apulia, and his eldest son, Charles Martel, king of Hungary, enforced by Cardinal Latinius, he was prevailed upon to accept it, and made his entry into Aquila mounted on an ass, one of the kings on each side holding his stirrup. Soon after his consecration at Aquila, he made a promotion of 12 cardinals; and before he left the city he confirmed the constitution of Gregory X. by which the cardinals were directed, on a vacancy, to be shut up in conclave till they should agree in a new election. The place of residence was Naples, which, by the recommendation of Charles, he preferred to the papal dominions, though the old cardinals wished him to remove thither. Totally unfit by his former habits for the papal office, he was persuaded by cardinal Cajetan at the close of the year of his election to resign it. His resolution to this purpose was, however, strongly opposed by Charles and the people of Naples; and a doubt was suggested, whether or not a pope could abdicate. A constitution having been established, empowering all sovereign pontiffs to resign at their pleasure, Celestine availed himself of it; and after reading his act of renunciation, directed himself to the pontifical ornaments, removed his monk's habit, and sat down at their feet. Cajetan, who succeeded him under the title of Boniface VIII., fearing his future interference, restored his ecclesiastical regalia of returning to his solitude, and carried him to Rome. He contrived, however, to make his escape, and connected himself for some time with other hermits, in a wood in Apulia, till he found an opportunity of embarking in a small vessel for Dalmatia; but being driven back by contrary winds, he was arrested by the governor of Capitanata. From hence he was conveyed by order of Boniface to Anagni, amidst the blessings of the people, who crowded round him, and plucked the hairs of the ass upon which he rode, as relics. Boniface confined him in his palace at Anagni, and after some time committed him to close custody in the castle of Fumoni, where he died in 1265, aged 81 years. Clement V. canonized him in 1313; and the religious order which he established under the name of Celestini fell into ruin. The writings attributed to him are merely collections of passages from the Scriptures, the fathers, the popes, and the canons. Bower. Du Pin. Mollheim.

Celestines, in Ecclesiastical History, an order of religious, called also the congregation of St. Damian, reformed from the Bernardins in 1224, by pope Celestine V. then only Peter de Marrone, of Iternum in Naples; and established in 1264, by pope Urban IV. and confirmed by Gregory X. in 1274. They were introduced into France by Philip the Fair, who requested a dozen of them from the general of their order, by his ambassador at Naples, in 1300. This order still flourishes in France and Italy.—It is a kind of proverb with them Voix un plaisant Celestien.

Celestini, an excellent performer on the violin, whom the late duke of Dorset brought from Rome in the year 1770. His style was pleasing, elegant, and correct; and such were his manners and conduct: so that while he remained in England, he at once did honour to his noble patron, to his profession, and to himself.

Celestes, or Celeste, from kon, a race horse, in Antiquity, denote figure or saddle horses; by way of contradiction from thosc yoked or harnessed together, called gigas, quadrigraris.

The same denomination is also given to the cavaliers, or riders on horseback; and hence some deduce celebri, the name of Romulus's guard.

Celestrum, in Ancient Geography, a small town of Greece, in the north of Illyria, fated on a peninsula, with its walls encompassed by a lake.

Celette, in Geography, a town of France in the department of the Loire and Cher, and district of Blois; 4 miles south of Blois.

Celeusma, or Celeuma, in Antiquity, the shout or cry of the seamen, whereby they animated each other in their work of rowing.

The word is formed from κελεύω, to call, to give the signal. Celeusma was also a kind of tongue or formula recited or prayed by the master or others, to direct the strokes and movements of the mariners, as well as to encourage them to labour. See Celebres.

Aquinas, without much foundation, extends the celeusma to the military shouts in land armies.

When Christianity got footing, hymns and psalms were sung in vessels by way of celeusma, in which the words amen and allelujah were frequently repeated. See Celebres.

Celeusma, in Ancient Navigation, the boatswain or officer appointed to give the rowers the signal when they were to pull, and when to stop. See Celeusma.

He was also denominated epopeus, and by the Romans porticus; sometimes simply vortos.

Celeusus, in Ancient Geography, a place of Germany between Germanicus and Arufena, at the mouth of a small river which runs into the Danube.

Celezene, a country of Asia in Armenia, according to Strabo; called Celse and Celestena by Eutropius.

Cella, a town of Italy, situate in the interior of the Peucetian district, according to Ptolemy and Strabo: thought to be the present Celga.—Also a place of Italy in Campania, taken by Quintus Fabius, according to Diodorus Siculus.

Celliac Passion, in Medicine. See Coplic.

Cellibate. See Celebres.

Cellida, in Ancient Geography, a town of Africa, placed by Ptolemy in the Cyrenaica.

Cellidographia, the description of the spots which appear on the faces of the sun and planets.
The word is formed from κελ, μακουλα, δατ, and γραφω, I describe.

Signor Bianchini has published a cedographia, or description of the spots of the fun.

CELIMEOS, in Ancient Geography, an episcopal see of Afa, under the metropolis of Edessa.

CELIMIA, in the Matrit Abadia, a name given by the modern Greeks to the calamite, or láps calaminarion. The Arabians called this substance cimeia, and sometimes calamia; and cimeia was but a very small change from this.

CELL, Cell, in Ancient Writers, denotes a place or apartment usually under ground, and vaulted; in which were stored up some foots of necessaries, as wine, honey, wheat, and the like; according to which it was peculiarly denominated cella vinaria, aleria, mellaria, panaria, &c.

The word is formed from celer, to cover. See Cells.

Cell, in Botany, (loculo-centrum), the hollow part of a pericarp in which the seeds are lodged. According to the number of these, a pericarp is said to be one-celled, two-celled, &c.

CELL, in Ancient Writers, was used for the lodge or habitation of a common woman or prostitute, as being under ground; hence also denominated fornix.

"Intravit calidum vetern centone lupanar, Et cellam vacuum." Juv. Sat. vi. ver. 128.

On which place an ancient scholiast remarks, that the names of the whores were written on the doors of their several apartments, by which we learn the meaning of inscripta cella, in Martial, lib. xi. ep. 45.

Cella was also applied to the bed-chambers of domestics, and servants; probably as being low and narrow.

 Cicero, inveighing against the luxury of Antony, says, the beds in the very cella of his servants were spred with pompous purple coverlets.

Cella is also applied to the members or apartments of baths.

Of these there were three principal, called frigidaria, tepidaria, and caldaria. To which may be added a fourth, called cella affa, a d sometimes sudatoria. See Bath.

Cella was also applied to the adytum, or inmost and most retired parts of the temples, wherein the images of the gods to whom the edifices were consecrated, were preserved. In this sense we meet with cella jovis, cella Constantia, &c. Pub. Victor calls them dolabra; and Pliny, by a more comprehensive name, edes. Hil. Nat. lib. xxxv. cap. 10.

The Roman capital, we are told by Dionysius, had three rich cella, or chapels; the middle-most of which was sacred to Jupiter, that on the right hand to Minerva, and that on the left to Juno.

Cella, is also used for a lesser or subordinate fort of monastery, dependant on a great one, by which it was erected and continues still to be governed. The great abbeys in England had most of them cella in places distant from the mother-abbey, to which they were accountable, and from which they received their supersiors.

The alien priories in England were cells to abbeys in Normandy, France, Italy, &c.

The name cell was sometimes also given to rich and considerable monasteries not dependant on any other. Such was that called cella vetus, erected by Otth, furnished the Rich, marchis of Mifinia, in the middle of the twelfth century, the most splendid abbey in that country.

CELLE, in Ancient Geography, sometimes called Celle, a town of Africa, in Mauritania.—Alfo, another town of Africa in Byzace, upon the Lefter Syrtis; called by D'Anville "Celle Picentina."—Alfo, a town of Europe, in Three, upon the Hebrus, at a small distance E. from Philadelphia.

—Alfo, a place in Macedo, between Heraclea to the north, and Edessa to the south.

CELLAR, Cellarium, in Ancient Writers, denotes the name with cella, viz. a conservatory of estables, or drinkables.

Cellar differs from vault, as the latter is supposed to be deeper, the former being frequently little below the surface of the ground.

In which sense, cellarium only differed from panus, as the former was only a store-house for several days, the latter for a long time. Thus it is, the Bactriana, a fort of ancient Cyries, are laid by S. Jerome to carry their cellar about with them. Hieron. in Math. cap. x.

CELLARIA, in Zoology, a section of the Scutaria genus, including some species which have the item crullaceae, inclining to the nature of flone, and composed of rows of cells: no vehicules, but small globules instead.

CELLARUM, in Ancient Writers, denoted an allowance of bread, wine, oil, or other provision, furnished out of the cella, to the use of the governor of the province, and his officers, &c. In which sense, the word amounts to much the fame with anonna, which fee.

CELLARIUS, CHRISTOPHER, in Biography, was born at Smaladac in 1618, and having studied at various German Universitites, was invited at the age of 20, to teach moral philosophy and the Oriental languages at the college of Weiffenfel. In 1673, he became rector of the college of Weimar, and afterwards occupied the fame poft at Zeita and Merburg. At the univerity of Halle in Saxony, founded by the king of Prufia, he was professor of eloquence and history. His affiduous application, at length, brought on the disorder of the flone, with which he was long tormented. He died at Halle in 1707, in his 69th year. His numerous publications comprised original works and editions of ancient authors. Of the former are, "Notin orbi antiqui," 2 vols. 4to. Leips. 1701. 1706, 1731, and Camb. 1703, acknowledged the best work on ancient geography extant, which brings it down to the time of Constantine; "Atlas Caleells," fol.; "Hittoria Antiqua," Jen. 1698, 12mo. an abridgment of ancient history; "De Latinitate medice et infime zetatis." The works edited by Cellarius are "Ciceronis Epist. ad Familiare," "Plini Epif.," "Corn. Nepos," "Quintus Curtius," "Ennius," "Sextus Rufus," "Velleius Paterculus," "D. Panegy. An- tq.," "Lactantius," "Mentorius Felix," "St. Cyprian," "de Vanit. Idol.," "Sedulius," "Prudentius," "Silbus Italicus," "Pici Mirandul. Epif.," "Zoeusus," "Pana- nius," the "Thesaurus of Faber," with large additions. A collection of his letters, and some other pieces, was published after his death. Nouv. Dict. Hilt.

CELLARS, in Modern Buildings, are the lowest rooms in a house, the ceilings of which usually lie level with the surface of the ground on which the house is built.

Cellars, and other places vaulted under ground, were called by the Greeks hypogea; the Italians still call them fundi delle cafe.

As to the situation of cellars, for Henry Wotton says they ought, unless the whole house be cellared, to be situated on the north side of the house, as requiring a cool fresh air.

In order to estimate the number of cubic yards in the dig- ing of cellars, multiply continually together the three di- mensions of length, breadth, and depth in feet, and divide the product by 27, the number of cubic feet in a yard; and the
the quotient will give the cubic yards. Suppose the length 54 feet, the breadth 8, and the depth 8; then $54 \times 8 \times 8 = 2160; \quad \frac{2160}{27} = 80$.

CELLARER, or CELLERER, Cellerina, or Cellalaris, an officer in monasteries, to whom belong the care and procurement of provisions for the convent. The denomination is said to be borrowed from the Roman law, where cellarius denotes an examiner of accounts and expenses. Ulpian defines it thus: "Cellarius, id est, idea praeluditis ut rationes solvere fiat." The cellarius was one of the four obedienciarum, or great officers of monasteries; under his ordering was the pellitrium, or backhouse, and the brachium, or brewhouse. In the richer houses there were particular lands set apart for the maintenance of his office, called in ancient writings, ad cellam monotborum. The cellarius was a great man in the convent. His whole office in ancient times had a respect to that origin: he was to see his lord's corn got in, and laid up in granaries; and his appointment confided in a certain proportion thereof, usually fixed at the thirteenth part of the whole; together with a furled gown. The office of cellarer then only differed in name from that of bailiff and minister; excepting that the cellarer had the receipt of his lord's rents through the whole extent of his jurisdiction.

CELLERER was also an officer in chapters, to whom belonged the care of the temporalis, and particularly the distribution of bread, wine, and money to canons, on account of their attendance in the choir. In some places he was called cellarer, in others bursier, and in others currier.

CELLE, in Geography, a town of France, in the department of the two Sevres; and chief place of a canton, in the district of Melle; 10 miles S.E. of Niort. The place contains 1,103, and the canton 8,293 inhabitants; the territory includes 167½ kilometres and 12 communes.

Celle, or Mareen Celle, a town of Germany, in the duchy of Lower Sina, on the confines of Austria, with a celebrated abbey to which the empress Maria Theresa presented a silver image of the Virgin, after the birth of the emperor Joseph III.; 12 miles N. of Pruck.

Celle for Thiers, a town of France, in the department of the Puy de Dôme; 2 leagues E. of Thiers.

Cellefrouin, a town of France, in the department of the Charente, and district of La Rochefoucauld; 5 miles N. of La Rochefoucauld.

CELLENE, in Entomology. Cramer calls the Fabrician Papilio delila by this name.

CELLENSIS, in Ancient Geography, an episcopal see of Africa in the Byzacene.—Also, another in Mauritania Sitifensis.

CELLEPORA, in Zoology, a genus of zoophytes, the animal of which is an hydra, or polype, and the coral somewhat mammaceous, and composed of round cells. The eight following species of cellepora are described by writers.

CELLEPORA camulis. This species is dichotomous, fagiulosa; with round obtuse ramifications, and very crowded calyceal. Mili. Zool. Dan. Inhabits the North Sea.


CELLEPORA verrucosa. With ovate cells in a round mass; mouth usually with three teeth. Fabr. Tubipora verrucosa. Linnaeus. Inhabits the Mediterranean and Norway seas.

CELLEPORA puncta. Dichotomous, very brittle; nearly erect, with gibbous mammate crowded cells. Reclenia puncta fovea; inhabits the Indian, Atlantic, and European seas. Paleis, Ellis, &c.

CELLEPORA ciliata. With convex cell; mouth fringed with teeth.

Fabricius describes this foreries as having seven teeth in the mouth of each cell, and the like number is mentioned by Pallis; other writers speak of them as varying in point of number in different specimens. This kind is found in the Mediterranean and North Sea.

CELLEPORA hyalinata. Cells subglobular, and diaphanous; mouth oblique and simple, or unarmed. Fabr. F. Gren. Frequent in seas, and shells in the Northern seas of Europe.

CELLEPORA nitida. Cells subcylinndrical, pellucid, and annihilated; mouth terminal and simple, or unarmed. Fabr. Inhabits the Greenland Sea.

CELLEPORA annulata. Cells oval, ventricose and annulated; mouth distinct and armed with about four teeth. Fabr. Found attached to fuci, fomes, &c. In European seas.

CELLES, in Geography, a town of France, in the department of Jemappe, and chief place of a canton, in the district of Troumary. The place contains 3,520, and the canton 12,635 inhabitants. The territory includes 15½ kilometres, and 13 communes.

CELLIER, Romi, in Biography, a learned Benedictine, was born at Bar-le-Duc in 1628; and having cultivated in early life an attachment to literature and piety in the congregation of the Benedictines of St. Vincen and St. Hidelph, he assumed the habit of the order in more advanced age, and filled several offices in it, particularly that of titular prior of Flavigny. He died in 1761. His great work was written in French (though begun in Latin), and entitled "A General History of Sacred and Ecclesiastical Authors," in 23 vols. 4to, published from 1791 to 1793. It comes down no lower than to St. Bernard. This work is an useful compilation, but rendered tedious by its diffuseness. He also published "An Apology for the Morality of the Fathers, against Barbevray," 1719, 4to. His habits were florid and reticent, and his temper singularly mild and conciliating. Dic. Nour Hot.

CELLINI, Benciavuto, a celebrated artist, was born at Florence in 1503; and though he discovered an early talent for design, was obliged by his father to learn music. Afterwards he was bound apprentice to a jeweller and goldsmith; but his temper being reticent and ungovernable, he paused throughout various vocations, and at length settled at Rome, where he was taken into the service of pope Clement VII., both as a musician and goldsmith. In the latter department he practised drawing, seal-engraving, damask-making, medallion, working in grotesque, and a variety of other ornamental arts. He was also an expert engineer, and was enticed by the pope with the promise of the castle of St. Angel, when Rome was sacked by the confederate Bourbon. On this occasion he claims the honour of having shot the contable while scaling the walls, and of directing the cannon which killed the prince of Orange. As he was employed by Clement in making lamps for the Roman mint, the coins of that period are reckoned singularly beautiful. His medals, and jewellery works, are also highly
highly extolled as the finest specimens of the art. At the
death of the pope, he returned to Florence, and was patron-
nized by the grand duke Alexander. The coins which
were struck from the heads of this duke prepared by Cellii-
ni for the mint at Florence have been held in such esteem,
that they have been preferred by the curious like ancient
medals. The raving disposition of this admirable artist led
him to visit France; but being tired of that country, not-
withstanding the gracious reception of Francis I., he
returned to Italy. At Rome he was committed to prison under
a charge of having robbed the castle of Angelo of considerable
treasure, while the Spanish army was in that city; and through
he made his escape in a wonderful manner, he was retaken,
and again confined, till at length he was delivered from the
hardships he endured by the intercession of the cardinal of
Ferrara. On his return to France, he entered into the ser-
vice of Francis, and employed himself in sculpture, and in
calling large figures of metal, by which he obtained great
reputation. But by his turbulent and quarrelsome dispo-
tion he incurred the displeasure of the favourite Mad. d'Es-
tampes, and was obliged, after a residence of 5 years, to quit
the country and return to Florence. In the service of the
grand duke Cosimo, he displayed his almonying genius, not
only by smaller works, but by some large pieces of sculpture,
particularly a statue of Pericles and Andromeda, and a cru-
cifix, which placed him on a level with the best sculptors.
In this art he had received instructions from the greatest
genius of his time, Michael Angelo Buonarroti. He wrought
in marble as well as in metal, and as he was a powerful com-
petitor to the famous Baccio Bandinelli, there subsisted be-
tween them a great degree of mutual jealousy and hatred.
He died at Florence in 1570. In 1568 Cellini published two
treatises; one on the goldsmith's art, the other on sculp-
ture, and the casting of metals. He also composed the his-
tory of his own life, which has been translated into English
by Dr. Nugent, in 2 vols. 8vo. 1771. In this work he de-
lineates his own character without disguising his faults,
whilst he makes a boastful recital of his bravery, address, and
professional skill. In the latter respect, the testimony of his
contemporary, Vafari, places him among the most ingeni-
ous men of that flourishing period of the arts. Life of Be-

CELLINO, in Geography, a town of Naples, in the
province of Abruzzo Ultra; 7 miles E. of Ternano.

CELLITES, CELLITE, in Ecclesiastical History, an order
of religious, founded at Antwerp in the beginning of the
fourteenth century, whose patron was Ambrosius, a Roman;
and therefore, in Italy they are called Alexians; but in Ger-
many, and the Low Countries, where they have monasteries,
are called people inhabiting cells. See LOLLARDS.

CELLON, in Ancient Geography, a canton of Aisa, in
the Palmyrene territory, mentioned in the history of Judah.

CELLONEZENES, a people of Scythia, mentioned by
Phavorinus.

CELLS, CELL, CELLULAR, little houses, apartments,
or chambers; particularly those wherein the ancient
monks, solitary, and hermits, lived in retirement. Some
dervise the word from the Hebrew נינ, i.e. a
prison, or place where any thing is shut up.
The same name is still retained in divers monasteries.
The dormitory is frequently divided into many cells, or lodges.
The Carthusians have each a separate house, which serves
them as a cell.
The hall wherein the Roman conclave is held is divided,
by partitions, into divers cells, for the several cardinals to
lodge in.

CELLS are also the little divisions, or apartments, in honey-
combs, where the honey, young bees, &c. are distributed:
these are always regular hexagons.

CELLULAR ADIPOSE, in Anatomy. See CELLULAR
SUBSTANCE.

CELLULAR, in the colon, a sort of spaces wherein the ex-
crements continue some time before they are voided.

CELLULANUS, a monk inhabitant, or resident in a
Cell, or cella. He is also denominated conciliarius, and cel-
lifer, by which are imported the relation of fellow-monks,
or those who live in the same cell or convent.

CELLULAR SUBSTANCE, in Anatomy, or cellular mem-
bbrane, tela cellulosa, or mucosus, of Latin writers, tela mucu-
ose of the French, is the medium which connects and supports
all the various parts and structures of the body. It is com-
posed of an assemblage of fibres, and laminae of animal matter;
connected to each other, so as to form immovable cells, or
small cavities, from which its name of cellular is derived.
This substance pervades every part of the animal structure.
By joining together the minute fibrils or of muscle, tendons or
nerve, it forms obvious and visible fibres; it collects these
fibres into larger fascioul; and by joining such fasciculi to
each other, constitutes an entire muscle or nerve. It thus
forms an investment common to the whole muscle, and be-
flows on each bundle of fibres, say, on each fibre, down to
the most minute threads, peculiar sheets, delicate and tender
in proportion to the fibribity of the fibre. It joins together
the individual muscles, and is collected in their intervals.
It surrounds each vessel and nerve in the body; often connect-
ing these parts to each other by a firm kind of capsule; and
in a looser form joining them to the neighbouring muscles, &c.
When condensed into a firm and compact structure, it con-
stitutes the various membranes of the body; which, by long
maceration in water, may be resolved into a cellular texture.
Its general consolidafion on the surface of the body con-
stitutes the cutis, or true skin. In the bones, it forms the
bals and groundwork of their fabric; a receptacle, in the
interfaces of which the earth of bone is deposited. Macer-
ation in diluted acid diffuses this earth, and leaves, if one
may use the expression, a skeleton of the bone, representing
its figure, its procusses, and its texture, in a kind of cellular
fubstancce. The only parts of the body in which the cellular
texture prevails, are the proper subfiance of the brain, the
crystalline lens, enamel of the teeth, and the insen-
tible integuments of the body; viz. the epidermis, nails,
and hair. As the cellular subfstance is entirely soluble in
boiling water, it is asberbed by chemicals to the peculiar mo-
dification of animal matter, termed gelatine. Its watery
solution sluitens, when cold, the appearance of jelly; and, after
a particular mode of preparation, confluents glue.
The interfaces of the cellular subfstance are lubricated and
moistened by a serous or watery fluid, poured out from the
exhalent arteries, and again taken in by the absorbents. It
thus acquires a pliancy and softness, which adapt it particu-
larly to serve as a connecting medium for parts, which have
motion on each other. The importance of this property will
be felt understood by observing the effects of its loss.
Inflammation or abscess often causes an induration and con-
solidation of the cellular texture, by which the inter-
guments are fixed to the muscles; the muscles are firmly united to each
other, and to the surrounding parts; in short, a kind of an-
cystolous fubstancce, by which the motions of the whole are con-
iderably impaired.

From the universal extent of this cellular texture, two
conclusions may be drawn. 1st. It forms the bals of the
whole animal fabric, in such a way, that if we conceive every
part removed, except this, the form of the whole would still
be expressed in cellular subfstance. 2dly. It forms a connexion

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tion and passage between all parts of the body, however remote in situation, or dissimilar in structure. For the cells of this substance everywhere communicate; as we may collect from facts of the most common and familiar occurrence. The air in emphysemata spreads rapidly from the chest to the most remote parts of the body; it has been known in such a case to gain admissio into the eye-ball. (Lettre in Mem. de l'Acad. des Sciences an. 1742.) A similar diffusion of this fluid may be effected by artificial inflation, which is commonly practised by butchers on the carcasses of calves. In anasarca, or prerenal accumulation of fluid in the cellular substance, the most depending parts are the most loaded; and sclerelastic in the same drain the water off from the whole body.

The structure of the cellular substance varies considerably in different parts; it is very delicate, and possesses peculiarly short fibres, where it unites the different coats of the hollow visceras of the body; also where it joins the minute fibres of muscular fataculi. It is very loose in the serosa, and integuments of the penis; and it is found in every intermediate stage. In these various states of density and looseness, it bellows upon every part the required degree of firmness and strength, and gives its form, and determines its mobility.

A peculiar power of contraction is attributed to the cellular substance; and it is mentioned by Blumenbach, under the term contrafluitas. (Institut. Physiol. Sect. 4.) This is widely different from irritability, and confints in a flow and gradual motion, which is exemplified in the corrugation of the serosa, and in the similar effect produced by cold on the surface of the body in general.

The cells of the cellular substance, in many parts of the body, are divided for the reception of a fluid termed fat, adipos, or adip us viscellae. This fluid is of a viscous nature, inodorous, lighter than water, usually inodorous, and generally transparent, similar to the vegetable oils. In addition to the carbon and hydrogen, which it possesses in common with these oils, it abounds with oxygen, and a peculiar acid termed the fatty acid. It is white in young animals, and becomes yellower as they advance in age. It is always more or less fluid in the living subject; in carnivorous animals and in man it retains much of its oily appearance after death; but in herbivorous animals it constantly assumes a concrete form.

Dr. Hunter gave the name of adipose to that portion of the cellular substance which contains the fat; and distinguishes the rest by the term reticular.

As the fat is deposited in cells, it assimiles, in general, a kind of granular form. It varies considerably in consistence. That of the orbit is the softest in the body. The fat about the kidneys becomes particularly hard after death, and is called fett; the globules or portions of this are very large, and it contains on the whole less cellular substance than any fat in the body. There is, generally speaking, a layer of fat under the skin; whence a membrana adiposa has been sometimes enumerated as one of the common integuments of the body. This is connected to the subjacent muscles by a portion of the reticular substance. Some parts of the body never contain fat; even in subjects, who have the greatest accumulation of this fluid. This is the case with the serosa, the integuments of the penis, and the eyelids; it is obvious that the functions of these parts must be completely destroyed, if they were subject to the enormous accumulations of fat, which occur in the other parts of the body. Several of the vissera also never contain any of this substance, probably for the same reason, viz. the brain and lungs.

The quantity of fat varies according to the age, the state of health, and the peculiar habit or disposition of the individual. It is not found in the early periods of fetal existence; and cannot be distinguished with any certainty, sooner than the fifth month after conception. In the fetus, and for some time after birth, the fat is confined to the surface of the body; it is only found in a fluid under the skin. It begins, however, gradually to be deposited in the intervals of the muscles, and on the surface of some vissera. In old subjects, however thin they may seem on an external view, there is always much fat, penetrating even the substance of the muscles; the bones are greasy throughout; the heart is more or less loaded, as are also the parts in the abdomen. Hence a young subject should always be inspected for field anaatical preparations. There is considerable difference in the quantity of fat in different individuals; and in some there is a propensity or disposition to its accumulation. A sedentary life, copious food, and tranquil state of the mind are particularly favorable to the increase of fat, which sometimes proceeds to such a pitch, from the continuance of these causes, that it must be considered as a disease, and is attended with the greatest inconvenience to the individual. General diatheses of the frame are commonly attended with an absorption of the fat from the cellular substance: acute diseases cause a very rapid emaciation. In no case is the adipous substance more completely removed from the whole body than in anasarca, where its place is supplied by a ferous fluid.

Dr. Hunter thought that the fat was contained in cells peculiar to itself and different from those which are distributed by water in anasarca; and he distinguishes the two kinds of cells by the names of adipous and reticular cellular substance. C. A. a Bergen had already made a similar distinction (Diff. de Membrana Cellularis in Haller's Diap. Anat. tom. 3.) He observes, in proof of this opinion, that fat is never accumulated in certain parts of the body, which parts are the most particularly dilated by the water of anasarca. He thinks that the cells of the adipous substance do not communicate together like those of the reticulum; because the fluid fat does not drain into the depending parts like the water of anasarca; nor does the skin pit where fat is collected under it.

The fame great anatomist also thought that there was a glandular apparatus for secreting the fat. "Wherever there is fat in the human body, I apprehend that there is a particular organization, or glandular apparatus super-added to the reticular membrane, consisting of vessels, or bags for lodging the animal oil, as well as vesicles fitted for its secretion; so that I would compare the narrow in the bones to the glandular or follicular parts of the fat or adipous membrane; and the network of bony fibres and laminae, which support the narrow, to the reticular membrane, which is mixed with, and supports the adipose." (Medical Obs. and Inquiries, vol. ii. p. 33.) Malpighi terms to be the first who ascribed the secretion of fat to a glandular apparatus: he has described the follicles or cells, in which this structure resides; and even tubes, which he considers as excretory ducts of his glands. (De Omento et adipos DEuctibus.) His opinions were adopted in a greater or less extent by several anatomists; as Glisson, Havers, Perotin, Fonton, Littre, and even Morgagni. It appears to us more probable, that the fat is a simple secretion from the arteres, like the fercous fluid of the cellular membrane. We cannot differ anything deserving the name of gland in the adipous substance of the body. We subscribe, in short, to the opinion of Haller: "Simplicissima et facilissima secretions adipose historia.—Inter arterias, et adiposos loculos, nullum alium receptaculum interesse. Neque oculus, aut microscopium in tenuissimis laminis cellulosis efficiat.
CELI

"silquum particularum different, quam pro glanduli habet." (Elem. Physiol. tom. i. lib. i. sect. 4.) We see preter-
natural collections of fat, (forming fatty tumours,) in those parts which are naturally the most free from adhes; can we suppose that glands are formed or created in this case? Is it not more congenial to our opinions on the formation of

tumours in general to ascribe the phenomena to a peculiar

action of the arteries?

The ues of the fat seem to be, in part, common to it with the cellular substance: it connects contiguous parts, and at the same time prevents their coalition. It admits of their moving on each other with freedom and facility. Its deposition under the integuments gives a roundness and convexity to the surface, on which the beauty of the human form principally depends. Indeed, its accumulation in particular situations immediately influences the outline of the part; viz. the orbit, the cheek, and the buttocks. The effect of its loss is most disagreeably manifested in the jowl cheek and hollow eye of an emaciated patient. The fat is also said to defend the surface of the body from cold; and, indeed, it is accumulated very copiously under the integuments of fuch animals, as are exposed to the rigour of high northern latitudes; as the whale, the seal, &c. It has been likewise supposed that the fat, which is absorbed under cer-
tain circumstances, is applied to the nutrition of the body.

When we consider the extent and importance of the cell-
ular substance in the animal body, we shall perhaps be sur-
prised that there have only been ascertained within a com-
paratively short period of time. With the exception of a few vague notices in preceding writers, Malpighi, Ruyfch, Dougla5, and Winlow, gave the first correct descriptions of this substance in particular parts. It is to Haller that the merit belongs, of first giving the whole of the facts which it has in the composition of the body in general, and particu-
larly in the formation of membranes. The reader will per-
fume with advantage on the whole of this article, the first book of Haller's "Elementa Physiologiae." He may likewise confute "Bordeau Recherches sur le tilia muqueux et l'orgecellulaire," Paris, 11mo.

CELI, in Geography, a town of Spain, in the province of Galicia, on the river Lima; 6 leagues south of Montef-

tura.

CELIUS, in Ancient Geography, a river of Britain, mentioned by Ptolemy, and supposed to be the river Spay, in the shire of Elgin.

CELON, a town of Asia, supposed to have belonged to the Persian empire, and to have been situated towards Media.

CELONIA, in Geography, a town of Naples in the prov-

ince of Capitanata; 5 miles N.W. ofVolturara.

CELORICO, a town of Portugal, in the province of Beira, containing three churches, and about 1100 inhabi-

tants; three leagues N.W. of Guarda.


Gen. Ch. Cel. Perianth of two or three leaves, lance-

olate, acute, dry, thinning, permanent. Car. Petals five, lance-

olate, acuminate, erect, distinct, rigid, resisting the leaves of the calyx. Nect. surrounding the germ, quinquelocular. Stam. filaments five, awl-shaped, conjoined at the base to the plaited nectary; authors verificate. Fil. Germ globular; fstyle awl-shaped, sliglraigh, the length of the filaments; ligla-

mas one, two, or three. Peric. Capsule globular, surrounded

by the corolla, one-celled, separating transversely into two

parts (circumferentially). Stalk several, roundish, crumglate.

Eff. Ch. Calyx two or three-leaved; leaves similar to

those of the five-petalled corolla; laminas conjoined at the

base to the plaited nectary; capsule opening horizontally.

Obst. Juffieu, Ventenat, La Marek, and Gartner under-

stand the fructification differently. According to them the

plants of this genus have no corolla, a five-leaved calyx, and

an involucrure of two or three scales resembling the leaves of

the calyx. It is nearly allied to Amaranthus and Gom-

phrena; differing from the former chiefly in its hermaphro-

dite flowers, and from the latter in having more seeds than

one.


lanceolate; filipules somewhat falcate; peduncles angular; spikes scarious." 6. "Leaves nearly linear." Thera bel-

utta, Rheed. tab. 79. Root annual, whitish, fibrous. Stems

alnicl-woody, green, smooth, fissured; branches, slender. Leaves alternate, narrow, often very acute, entire, smooth, narrowed into a petiole; filipules caducous, narrow. Flowers in a terminal, oblong spike, either simple or closely branched, of a white silvery colour, sometimes reddish at the summit; leaves of the calyx thin, transpar-

ent, shining; anthers red. Seeds three or four in each capsule, small, obicular, flattened, smooth, shining. A native of China and the coast of Malabar. 2. C. al-


65. tab. 25. fig. 1.) "Leaves linear-lanceolate; item without filipules; spikes egg-shaped; bracteoles the length of the corolla." Poiret doubts whether it is sufficiently different from the preceding, and supposes that by bractes Willdenow means the leaves of the calyx. A native of the East Indies. 3. C. margaritacea, Linn. Sp. Pl. 2. Mart. 2. Poiret 2. Willd. 3. (Amaranthus simplici panicula, Bach. pin. 12.) "Leaves egg-shaped; filipules falcate; pedicels angular; spikes scarious." This also is scarcely more than a variety of C. argentea. It has thicker stems, broader and shorter leaves, and shorter spikes; in other respects not different.


Gart. tab. 128. fig. 8. Lam. Illi. Pl. 108. fig. 1. (Amaran-

thus panicula conglomerata; Bach. pin. 22. A. vulgaris,

Rumph. ambit. 5. tab. 84.) Cock's comb. "Leaves lance-

olate-egg-shaped, recurved, somewhat waved; pedicels angular; spikes oblong, crenated." Root annual. Stems angular, fissured. Leaves alternate, acute, various in breadth in differ-

ent plants, narrowed into a petiole at the base, sometimes a little curved. Spikes sometimes branched at the base, vari-

ous in their form and size as well as colour, which is yellow, or yellowish white, red, or purple, and sometimes va-

riiegated with two or three colours. A native of Asia. 5.


"Spike cylindrical, cometa; leaves lanceolate." Stem up-

right, naked, branched. Leaves quite entire, smooth. Spikes
cylindrical, barren in the upper part, often much divided, con-

fining of minute, imbricated bractes. Flowers solitary, longer

than the bractes, riling among them at some distance from each other. Style slightly trifid, permanent, twice as long as the petals. Capsule obovate, containing two seeds. A

native of the Eail Indies. 6. C. paniculata, Linn. Sp. Pl.


major farmentosa, Brown Jam. 1779.) Blitum album majus

scandens, Sloan jam. 49. illuf. i. tab. 91. fig. 2. "Leaves

evate-oblong; item rising, panicked; spikes alternate, ter-

minal, remote." Root annual. Stems leafless, prostrate, cy-

lindrical,
Ichneumon, branched. *Leaves* alternate, acuminate. *Flowers* alternate, distinct; filaments shorter than the corolla; stigma tridentate.* A native of dry rocky ground in Jamaica. 7. *C. nitida*, Wildl. 7. Vahl. Symb. 2. p. 44. (Amaranthus fruticosus erectus, Sloan. illus. 1. tab. 91. fig. 1.) "Leaves ovate-deltoid, attenuated; spikes terminal, branched; flowers distinct; stamens somewhat whitish." In habit resembling *Achyranthes* spinifera, but placed by Vahl under colophon, on account of its calyx, corolla, and the number of its seeds. A native of the West Indies. Poiret suspects that it is one and the same plant with the preceding. But his doubt appears to have arisen from a blunder made by Willdenow, in quoting at full length, as a synonym of both, the *amaranthus fruticosus erectus*, spica virida lata & drigola of Slane, which belongs only to the present species; Linnéus having referred the preceding to another of Slane's plants. Willdenow indeed under nitida refers to pl. 91. fig. 5, not fig. 1. as it stands in Vahl, but this, as Poiret observes, must be an error of the press, there being no fig. 5 in that plate. 8. *C. coccinea*, Linn. Sp. Pl. 5. Mart. 5. Poir. 5. Wildl. 8. (Amaranthus punctatus incurva, Balf. p. 131.) Scarlet or China oak's comb.* Leaves* egg-shaped, flat, not auriculate; stem furrowed; spikes manifold, ciliated.* Root* annual. *Stems* four or five feet high, branched. *Leaves* very large, narrowed into a petiole, ending in a long point, a little waved at the edges, smooth, entire, soon falling off. *Spikes* axillary and terminal, large, branched, tufted, of a beautiful scarlet colour; filaments shorter than the corolla. A native of the East Indies. 9. *C. crenifera*, Linn. Sp. Pl. 4. Mart. 6. Poir. 6. Wildl. 9. (Amaranthus crenatus; Cam. Epit. 792. A. minor. Barrelle ex. tab. 1192. Bocc. Misc. 2. tab. 69.) "Leaves lanceolate-ovate, marked with lines, very much acuminate; stipules falcate; spikes ciliated." *Root* annual. *Stems* erect; branches axillary, almost from the bottom to the top of the stem. *Leaves* alternate, petiolate, smooth, marked underneath with reddish veins; stipules two, sessile, embracing the stem. *Spikes* slender, axillary, sometimes a little branched. A native of the East Indies; leaves beautiful than many of the other species. 10. *C. monophylla*, Wildl. 10. Poir. 10. Mart. 12. Hort. Kew. 1. p. 288. Retz. Obsf. 2. p. 13. (Illecebrum monophylla; Linn. jun. Suppl. 161. Amaranthoidea; Pluk, alm. tab. 334. fig. 4, Amal. tab. 357. fig. 4.) "Leaves awl-shaped, whorled; item branched; spatulate, ciliate, compact, cylindrical." *Root* annual. *Stems* prostrate, branched, ending in more elongated branches, s'pan long, and hoary. *Leaves* a small crowd into a tuft. *Spikes* opposite and terminal, reddish and whitish, very beautiful. A native of the East Indies. 11. *C. cynoides*, Linn. Sp. Pl. 7. (excluding; according to Willdenow, the last two synonyms, which belong to *Achyranthes* corymbosa.) Wildl. 11. Retz. Obsf. 2. p. 13. (Paronychia; Burm. zeyl. tab. 65. fig. 2.) "Leaves linear, whorled, smooth; flowers corymbous-dichotomous." *Root* perennial. Willdenow affirms that it may easily be distinguished from *Achyranthes* corymbosa by its item ascending at the base, by its broader leaves and longer stipules, and by its flowers; but Poiret is of opinion that the difference is very problematical. 12. *C. trigyna*, Linn. Mant. 212. Mart. 7. Poir. 6. Wildl. 17. Jacq. Hort. 3. tab. 5. Lam. Illust. 168. fig. 2. "Leaves egg-shaped, acuminate, flat; item herbaeaceous; raceme loose; bracts scarious; petifil trilobium." *Root* annual. *Stems* a foot and a half high; erect, simple; somewhat angular, striated, stiff. *Leaves* alternate, petiolate, even, acute; stipules in pairs, cresent-shaped, horizontal, embracing the stem. *Flowers* in terminal racemes, a few clustered together at different distances, white, on short peduncles; bracts silvery, egg-shaped, dillant; calyx two-leaved; petals egg-shaped, acute, scarios, permanent; filaments purplish, only slightly connate at their base, shorter than the petals; germ globular; style very short; filaments longer than the style, purple. *Cypsiella globularis.* Seeds three. A native of Senegal. 13. *C. cayacata*, Wildl. 12. Vahl. Symb. 2. p. 21. (Amaranthus paniculatus; Forstl. 2. p. 48. "Leaves egg-shaped; racemes compound, loose, very long; petifil bifid; item without stipules." Poiret thinks it only a variety of *C. trigyna.* A native of Arabia Felix. 14. *C. virgata*, Poir. 11. Wildl. 14. Jacq. loc. cit. 2. tab. 339. Collec. 2. p. 279. "Leaves egg-shaped, acuminate, waved; item somewhat whitish; raceme loose; bracts membranous; petifil trilobium." *Root* perennial. *Stems* four feet high, almost woody, smooth, preferring its various all the year; branches slender. *Leaves* four or five lines long, petiolate, alternate, quite entire; upper ones falcate, lanceolate; stipules acute, falcate. *Flowers* greenish, in short axillary and terminal spikes; bracts resembling the foliages of the calyx, which are shorter than the corolla, whitish, and end in a blackish point; petals lanceolate, acute, a little concave. *Cypsiella membranous.* Seeds about six, lenticular. After impregnation the calyx and corolla unite to make the fruit, giving it a conical form. Native country unknown. 15. *C. papillaris*, Forstl. 14. Poir. 13. Wildl. 17. Retz. Obsf. 2. p. 13. "Leaves egg-shaped, item truncate, item ciliated, item spinulose, item long-pilose, item loose, item trisegmentose, item spinulose, item jucundus; flowers trigynous." *Root* perennial. *Stems* herbaeaceous, item upright, item filiform. *Leaves* obtuse, petiolate, alternate, falcatus; *Racemes* consisting of alternate, remote, sessile, even, generally two-flowered, little chilid. *Cypsiella* pitcher-shaped, with a contracted mouth covered by a lid, longer than the calyx, many-seeded. 16. *C. madagascariensis*, Poir. 14. "Seeds somewhat fornmentosus, item lanceolate, item concave, item obtuse, item flowers raceme-spiked." *Stems* furrowed, item branches dilatate. *Leaves* petiolate, item alternate, item smooth. *Flowers* small, cinnereous white. Gathered in the isle of Madagascar by Commeron and J. Martin, and describec from a dried specimen in the herbarium of La Marek, but too imperfectly preferred to make it quite certain that the plant belongs to this genus and not to *Achyranthes.* 17. *C. bacata*, Mart. 14. Poir. 15. Wildl. 16. Retz. Obsf. 5. p. 23. "Leaves heart-shaped, acuminate, item racemes spiked, item, flowers trigynous, item fruit berried." *Stems* upright. *Leaves* alternate, item. *Flowers* small, on very short peduncles; calyx-leaflets two, small; petals oval, a little concave; stipules dilated at the base, entirely surrounding the germ. *Fruit* a blackberry kind; not corresponding with the generic character. *Seeds* three, large, item, convex, item concave, item on the other. A native of the East Indies. 18. *C. ghaphthaecus*, Mart. 9. Wildl. 17. Linn. jun. Suppl. p. 161. "Shrubby, woolly; leaves opposite, ebook-shaped, white underneath; head globular, pedunculated. Found by Thouin in Brazil. Poiret suspects it to be an *illecebrum.* 19. *C. madagascariensis*, Linn. Sp. Pl. 8. Mart. 10. Poir. 12. Wildl. 18. Retz. Obsf. 4. 24. p. 75. Jacq. Hort. tab. 98. (Amaranthoidea; Burm. zeyl. tab. 5. fig. 5, Pluk. Alm. tab. 153. fig. 2.) "Leaves wedge-shaped, item rather acute, item spikes globular, lateral." *Root* annual. *Stems* angular, grooved, even. *Leaves* like those of *pumila,* obtuse with a point, item entire, smooth, on very short petioles. *Spikes* solitary, item petiolate, item pedunculated; item peduncles commonly shorter than the leaves. Instead of the calyx there are from one to three linear bracts; item filaments fixed to the nectary at the base; stigma twin-capsitate. *Seed* single; item lens-shaped. It varies 1. with oblong leaves and peduncled heads; 2. with short roundish leaves ending in a point and sessile heads; the frill from Sumatra; the second from Malabar. Retz. According to this.
this description it is surely an achyranthes. It is also a native of the island of Crete.

_Celosia lanata_, Linn. Sp. Pl. 7. See _Illecebsum jervicarium._

_Celosia procumbens_; Murray Jac. See _Comptrella interrumpa._

_Celosia_ Grown. _viz._ See _Ireece celsofides._

_Celosia_, in Gardening, comprehends some flowery ornamental annual plants, as the amaranth, or cock's-comb.

The species commonly cultivated are the crested amaranth, or cock's-comb (_G. crflata_); the pearly-spiked celosia, or cock's-comb (_G. margaritacea_); and the feckled celosia or Chinese cock's-comb (_G. coccinea_); and the woolly celosia (_C. lanata_). Of the first sort there are many varieties, differing in form, magnitude, and colour, from the same seed. In the dwarf kinds, they vary, with large purple heads of flowers, with red heads, with scarlet heads, and with yellowish heads; in the giant kinds, with very large purple heads, with red heads, with scarlet heads, with yellowish heads, with white heads, and with variegated heads; and in the branching kinds, with purple, with red, and with buff-coloured flowers. And the able editor of Miller's Dictionary has raised great varieties from seeds from China and other countries, but generally found them after a few years, notwithstanding great care was taken in sowing the seeds. The principal colours of their heads were red, purple, yellow, and white, but he has had some white heads that have been variegated with two or three colours. He also raised some, he says, from seeds from Peria, whose heads were divided like a plume of feathers, and were of a beautiful scarlet colour, but which degenerated in a few years. Linnæus has found it to vary, with narrow and broad leaves; and Thunberg affirms that the crests or heads of flowers are often a foot in length and breadth in Japan, and extremely beautiful, but that they degenerate in other situations.

In the second sort there are varieties with oblong spikes of equal thicknesses, with pyramidal spikes, with entire white spikes, and with white and red spikes of flowers.

The third kind also varies, with crested spikes, with incurved crested spikes, and with plumed spikes of flowers.

Method of Culture.—It is observed that in order to produce fine flowers of this sort, it is necessary to be particularly careful in collecting the seed, so as to have it good and well ripened. In regard to the method of raising all the different sorts, it is by sowing the seeds of each separately in the early spring, as in the beginning of March, either upon a hot bed, or in pots to be planted in one; in the first case, the surface being covered with fine, light, dry mould; four or five inches in thicknesses. When the plants have attained a few inches in growth they shoild be carefully taken up, and pricked out upon another hot-bed prepared and moulded for the purpose, at the distance of six inches; and should remain in this situation till they begin to be crowded, which is molly the case in six or seven weeks. At this period another hot-bed should be put in readiness, with very deep frames.

Where the plants have been raised without pots on the beds, as many as are necessary should now be put in pots, care being taken to remove them from the former bed, with good balls of earth about their roots, by means of a trowel, placing one in each pot without disturbing the mould about them, filling up the spaces about them with good rich earth. Some water should then be given, and the pots be plunged to their rims in the bed, and as close together as possible, the openings between the pots being filled up well with mould to prevent the rising of Ream so as to injure the plants.

And the glasses in these cases should be so managed as to preserve the heat in such a frame as may keep the plants in a constant vigorous state of growth, being matted up in the night, and having linings applied when there may be occasion for it from the state of the weather. When the weather is fine and calm, air should, however, be admitted freely by lifting up the ends of the frames, and water be moderately sprinkled over them as there may be occasion for it.

For the large sorts, the frames should have sufficient depth to draw them up to three or four feet in height, being raised, when necessary, as the plants advance in growth; but for the dwarf kinds the common frames are sufficient, as their heads should be constantly kept near to the glasses. See _Hot-bed and Garden Frame._

As the summer advances the plants should be gradually hardened by more free admission of air, till the glasses are wholly removed, and the plants set out where they are to remain, in which it is proper to support the top forms by handsome sticks. In this situation water should be freely given every day, to prevent the leaves from shrivelling and keep the flower-heads full and fine. It is remarked that plants of these sorts may be removed from the second hot bed into the beds, clumps, or borders; but that they never grow so strongly as in the above method.

The seeds in all different species become in a state of perfection about the beginning of the autumn, when attention should be had to select them from the best and finest plants of each kind, sheltering the heads when necessary from rains, &c. and keeping the different sorts of seed separate and in a dry situation.

The perfection of the cock's-comb chiefly consists in its having a regular, upright, straight stem without any side branches, but well furnished all the way with leaves, and large flower-head erect, close, and regular, in its form. These are all plants of the fine ornamental kind, which have a good effect in the more conspicuous parts of gardens or pleasure grounds in mixture with others of the flowery kinds. The cock's-combs are well calculated to be placed in the courts and other places about the house, from the variety of effect which is afforded by their fine showy heads of flowers.

_Celosia_, in _Ancient Geography_, a town of Hither Spain, towards the south-west, leated on the Iberus. It was a Roman colony, and had a port on this river. Ptolemy says erroneously placed this town at the foot of the Pyrenees.

_Celosia_, in _Geography_, a town of Naples, in the province of Principato Cita; 25 miles S.W. of Cagnano.


Gen. Ch. _Cel._ Perianth five-parted; segments lanceolate, permanent. _Cor._ monopetalous, wheel-shaped; tube very short; border flat; segments roundish, unequal. _Stam._ Filaments four, capillary, a little inclined, unequal, bearded; anthers roundish. _Pf._ Germ superior, roundish; style filiform, the length of the filaments; stigma obtuse. _Per._ Capsule, roundish, compressed at the tip, acuminate, furrowed at its base by the calyx, two-valved, two-celled; partition simple, contrary to the valves. _Seeds_ numerous, small, angular.

D d 2

Eff. Ch.

Sp. 1. C. orientalis. Linn. Sp. Pl. Mart. 1. Lam. 1. Wild. 1. Gard. ed. 3. p. 56. 7. Linn. Hort. Pl. 53. (Verbascum Sphagianum) Tournefort. Linn. Syst. 8. Buxb. Cent. 5. p. 17. Blattaria; Buxb. Cent. 1. tab. 26. "Leaves bipinnate." Linn. Root annual. Stem a foot and half high, upright, lvs. bipinnatifid, simple or furnished with short branches, hairy from the bottom. Leaves alternate, scattered, bipinnatifid, not bipinnate as they are described by Linnaeus in the specific character, green, entire smooth; segments slender toothed: those from the root oblong, finely divided almost to the midrib, lying flat on the ground. Flowers pale yellow, small, solitary, sessile, axillary; segments of the calyx narrow, sometimes broad or trifid. A native of the Levant, flowering in June, is not far from Paris from Armenia by Tournesfort, in 1719, and cultivated in Chelsea-garden in 1739. 2. C. arcturus, Murray Syll. Veg. p. 460. Vahl symb. 5. p. 79. Mart. 2. Lam. 2. Wild. 2. (Verbascum arcturus; Linn. Sp. Pl. v. humble cicutum: Buxb. pin. 240. Alp. exot. tab. 123. Colum. cephr. p. 88. "Root-leaves lyrate; upper ones oblong; peduncles longer than the bracteas; segments of the calyx linear, quite entire." Vahl. Root biennial. Stem a foot high or more, slender, weak, often simple, leafy, villous. Leaves generally alternate, sometimes opposite, petioled, toothed, a little viscid, dark green. Flowers yellow, in a loose spike on the upper part of each stem: peduncles from thin to bare, moss long; filaments covered with red or purple hairs. A native of Campania, first cultivated at Kew about 1753. 3. C. campanulaeefolia, Wild. 3. Vahl Symb. 5. p. 79. "Root-leaves lyrate; lvs. one-shaped peduncles shorter than the bracteas; segments of the calyx linear-oblong, quite entire. Root annual. Flowers distinct about the size of those of C. arcturus. A native of the East Indies. 4. C. recta. Linn. Synth. Veg. p. 46. Linn. jun. Supp. p. 281. Mart. 3. Lam. 3. Wild. 4. (Verbascum; Mill. Ic. tab. 273. Blattaria; Mor. 2. 488.) "Root-leaves lyrate; lvs. one-oblong; flowers nearly febly, the length of the bracteas; segments of the calyx egg-shaped, fertilar." Vahl. Root biennial. Stem two feet high, herbaceous, simple, upright, cylindrical, pubescent. Leaves alternate, embracing the stem, wrinkled, fertilar, pubescent underneath. Flowers large, yellow, with a conspicuous spot at the base of each of the upper divisions; in a long terminal raceme; bracteas heart-shaped, acuminate, somewhat acutely fertilar, one-florewed; segments of the calyx pedicellate on the outside; two upper lvs. very short, with a dark purple board, and kidney-shaped anthers; two lower ones the length of the corolla, smooth, inclined, with linear anthers. A native of Campania and the East Indies. 5. C. barbatus, Wild. 5. Desf. th. 2. p. 38. (Blattaria; Dodart. ic. Shaw afr. 4. 38.) "Leaves ovate-oblong, wrinkled, febly, lvs. angulate, shorter than the pedicellae." Root biennial. Stem two or three feet high, erect, somewhat hairy, generally branched; branches slender, bearing the flowers. Leaves alternate, smooth or slightly hairy, obtuse, usually ovate, slightly hairy, obtuse, often pilose near the base; upper ones febly, embracing the stem, lanceolate, acute, toothed. Flowers yellow, with a dark purple spot at the base of each of the two upper divisions; segments of the calyx egg-shaped, acute, nearly equal, fertilar or entire; two upper lvs. shorter, hairy; two lower ones smooth, decumbent, incurved upwards. Capsule roundish, covered with the calyx. A native of warm ground about Algiers.


Propagation and Culture.—If the seeds of the first species be sown on a warm border as soon as they are ripe, the plant will come up and live through the winter provided the soil be poor but in rich ground they are generally destroyed by the first frosts, or rotted in rainy seasons. They do not bear transplanting, and require only to be thinned, and kept free from weeds. Plants grown in the spring seldom produce ripe seeds. The second and the fourth species require the protection of the green house. Millar.

Celsina, in Ancient Geography, an island situate between Italy and Sicily, according to the Itinerary of Antonius.

Celsinus Mons, a mountain supposed to have been in the isle of Chios.

Celsia, a small town of Spain, in Bética.

Celsitan, a people placed by Pliny in the island of Sardinia.

Celsus, in Biography, an early admirer of Chrillianity, is supposed to have been the chief of the reign of Emperor, who died A. D. 159; and is placed by Dr. Lardner, with his friend Lucian, in the year of Christ 176, not far from the end of the reign of Marcus Antoninus, who died in March, A. D. 160. Although he sometimes recites to Plutonic and Stoic modes of reasoning, he is expressly ranked by Lardner, who incribed to him as Alexander, or "Pseudamans," as well as Origens, who wrote against him, among the Epicureans; and this supposal bell accounts for the violence with which he opposed the Chrillian religion; for an Epicurean would of course reject, without examination, all pretensions to divine communications or powers. The book which he wrote against the Chrilians was entitled sapg, or "The True Word." Of this work we have no other remains besides the quotations made by Origens in his repetition of it. The extracts from his writings, prefixed by Origens, have given occasion to various opinions concerning his talents as an author toCHRILLIANITY. Celsus, says Molesheim, was a trifling cavalier, as is manifest from the anfwer of Origens; nor to his writings against Christianity serve any other purpose than to show his malignity and illiberal turn of mind. Cave observes, that Origens has powerfully refuted the futile cæsarsius and arguments of Celsus; On the other hand, Dc Pin reckons him one of the most artful and acute of the opponents of Chrillianity; and Brucker says, that while the extracts of Origens prove him to have been an inveterate enemy to Chrillianity, they shew that he was not destitute of learning and ability. The answer of Origens was written at the desire of his friend Ambrose; and was published, as some think, in the year 350, and according to others 249. It was greatly esteemed and celebrated, as an excellent work, not only by Eusebius and Jerome, but also by many judicious moderns, particularly De Pin; who says, it is polite and philosophical; not only the best work of Origens, but the complete and best written apology for the Chrillian religion, which the ancients have left us. Origens's apology consists of eight books, which have been divided by the Benedictines into sections for the convenience of perusal and reference. As Celsus, performing a Jew, undertook a labourous argument against the Chrilians, and wrote lately as the time of Marcus Antoninus, when the Chrilians were openly persecuted, and their affairs were better known by the perfection itself, and by the apologies then made for them; we may reasonably expect to find in his work many things that are useful to us in the vindication of our religion; and his testimony to the books of the New Testament is peculiarly valuable. From several paffages in Celsus, it appears, that the Jewish expectation of a Messiah was a thing well known; and that this
this expectation fulfilled before the appearance of Jesus in the world. And, indeed, they having such an expectation in the time of Celsus, is an argument that they had it before the coming of Jesus; for they would not have taken up such a notion from his followers. Many passages are cited by Lardner from Celsus, which contain references to the books of the New Testament. To the cavils of Celsus, grounded on the passages which he has cited, Origen has given very satisfactory answers. To the facts recorded in the New Testament, Celsus has borne testimony; though he has misrepresented and perverted them. With regard to the miracles of our Lord, it is not easy to determine whether Celsus believed them or not. But it is not more easy to see how he could disbelieve them; and he was at a loss how to account for them. "I think," says Dr. Lardner, "Celsus could not or would not allow our Lord's great works to have been done by the power of God, because he would not admit the consequence, which was, that Jesus had a divine commission, and acted by authority from heaven; and rather than admit that just and necessary conclusion, he has recourse to shifts and evasions, which are absurd and inconsistent." Accordingly, Origen says, "Celsus not being able directly to deny the great works which Jesus is recorded to have done, alberth them, and calls them juggling tricks." With regard to the moral doctrine of the New Testament, it appears, from passages of Celsus, that no just exception could be made to it. Although he does not allow it to have any superior excellence above the doctrine of the philosophers, he does not deny it to be like their doctrine, and equal to that of the best part of the philosophers. From other passages it sufficiently appears, that Celsus allowed the progress and spread of the Christian religion; and that he acknowledges the sincerity and steadiness of those who embraced it amidst the difficulties and hardships to which they were subject. As to his charge of magic against the Christians, this affords an argument, that there were some uncommon things done by them at this time, as Origen and other ecclesiastical writers have often asserted, but not to the detriment of mankind, as Celsus infinuates, but for their benefit. From passages relating to Christian worship, it appears, upon the authority of Celsus, that they worshipped the one God, creator of all things, and had a high veneration for Jesus Christ; nor would they worship demons, or join in the public festivials and festivals of heathen people. Celsus likewise speaks of Christian preachers; though they had not then any altars, or temples, nor other impassioned buildings to meet in. He also reproaches them with holding their religious assemblies privately, and contrary to law; nor was it without reason that they aimed at privacy; for, as he owns, they were then fought for to be put to death. Celsus appears not to have been unacquainted with the absurd opinions of some who went under the Christian name; whom he introduces with a view of calling the greater reproach on those who were more rational in their behalf. All the attacks of Celsus are against the more sober part of the believers: those others were fought for in order to disparage and expropate them, if possible. It is well known, that, soon after the rise of Christianity, the followers of Jesus were loaded with many calamities: they were said to kill infants, and eat them; and when the lights were put out, to pratique profanecious lewdness in their assemblies. Celsus, in whose time these charges were not extint, seems, however, to have thought them absurd and incredible; and to mention them with any marks of countenance and approbation, he suppos'd would be a prejudice to his argument. But though he has omitted these, he has introduced divers in-
perfect knowledge as he appears to have had of the dressas of the different sects of physicians, or would have been able to
describe the diseases he treats of with much accuracy, or
laid down the most approved methods for curing them that
were then known. All this he has done; it is therefore
reasonable to suppose he practised the art, in which he was
so complete a proficient. Friend, whose opinion we may
safely follow in every thing relating to the early history of
medicine, and its professors, produces, as a proof that he
practised surgery, a passage from that part of his work, where
he treats "De Oculorum Vitius," reproducing the method used
by Heracleides in curing adhesion of the eyelids; "Ego feci
restitutum effe neminem munus."

Friend agrees with Le Clerc, that Celsius was a Roman by
birth, probably of the Cornelian family; that he was born in
the latter part of the reign of Augustus Caesar, and was
living in the time of Caligula. The work by which he has
been rendered famous is entitled "De Medicina Libri Oeto." The great number of editions this book has passed
through sufficiently indicate the high esteem in which it is
held. It contains, in an epitome, every thing that is valuable
in the works of Hippocrates. In medicine he seemed to
have approved and followed the doctrine of Alcmaeonides; but
the most valuable part of the work is that which treats of
surgery, in which we find methods of practice laid down, and
modes of performing several operations described, in the man-
ner usual. The language also in which the precepts are
contained, is so pure and elegant, as to have contributed in
no small degree to the celebrity of the work. He is said to
have written on rhetoric and on other subjects, but his works
on those subjects, if they ever existed, are lost. Le Clerc,
Ant. Circ. Med. in which most of the editions of the
"De Med. Medicina Libri..." are noticed. The earliest was
at Florence, 1478, fol. One of the best is Almeloveen's,
edited at Padua, 1722, 8vo, by Vulpius, and reprinted in
1750. There have been also translations of Celsus into
French, English, and other modern languages. The short
abridgment of rhetoric, which has been attributed to him by
some, was printed at Cologne in 1560.

CELTES, CONRAD, named also PROTUCUS, and ME-
ISSEL, a modern Latin poet of some eminence, was born at
Schweinfurt, in Franconia, in 1439. After having acquired
a large stock of literary and scientific knowledge in his
studies at Cologne and Heidelberg, he visited many of the
German universities, and supported himself as a private lec-
turer. He was thus enabled to make a tour for improvement
through all the principal cities and universities of Italy. The
reputation he thus gained was the means of introducing him
to the elector of Saxony; and the emperor Frederic III.,
whom he was recommended by the elector, conferred upon
him the poetical laurel at Nuremberg in 1491. Having ter-
minated his rambles, he settled at Vienna; where he was
made professor of eloquence and poetry, and librarian to the
emperor Maximilian. Here he died in 1508. Celtes de-
serves to be ranked among the refiners of polite literature in
Germany. Of all the various writings which he left, the
poetical were the most distinguished. Whilst he possessed
fanciful vigour of imagination and brilliancy of expression,
he was deficient in good taste and correct judgment. Some
of the best of his pieces, containing amatory elegies, odes, ep-
graves, &c., were published at Stralsburg in 1515, by the
care of a literary society of which he was the founder. He
wrote also a poem on the manners of the Germans, on the
river Vistula, an historical account of the town of Nuremberg,
the collography of Ariostello and Apulius, orations, and

CELTI, in Ancient Geography, a place of Spain, between
Albita and Regiana, according to the Itinerary of Antonine.
Pliny makes it the chief of the towns in the jurisdiction
of Hispaliu.

CELTIBERIA, the ancient name of a country of Spain,
in the Parragonenides, and to the eall of Carpentania,
according to Pliny and Ptolemy. The latter places in it 18
towns. It was originally of large extent; but the wars of
the Romans reduced it to a narrower compass.

CELTIBERIANS, a powerful and celebrated people
who occupied the greatest part of the interior of Spain.
Polybius, when he relates that T. Gracchus had subdued
300 towns in this country, seems to have exaggerated
the number, in order to flatter the vanity of Gracchus, who
had made this conquest in the year of Rome 575. Livy makes
the fame report; but Strabo very justly oberves, that these
authors had raised mere villages to the rank of towns.
According to this author, Celtiberia produced a great
number of plants, the roots of which served the purposes of
dyeing. He adds, that the part of it which was near the Medi-
terranean abounded with vines, olives, figs, and other trees
which yielded excellent fruits. Their principal towns were
Catalanum, Turiafo, Bilbilis, Ergovica, and Valeria. The
Celte-
berians, according to Diodorus Siculus, were a people com-
posed of two nations, the Ilbians and the Celtes. Accord-

CELTI, in Ancient Geography, a place of Spain, between
Albita and Regiana, according to the Itinerary of Antonine.
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of Hispaliu.
CELTICA, a spacious country, which, according to Plutarch, extended from the ocean and the northern climates as far as the Palus-Mecedotes to the call, touching on one side on Pontic Scythia.

CELTICI, a people of Spain, who, according to Strabo and Pliny, dwelt on the confines of Lusitanian.

CELTICI Mirbregienses, were, according to Pliny, the inhabitants of Mirbridge, a town of Spain.

CELTICO Nereus, a people of Spain, placed by Pliny on the promontory of Nereus, the present Finisterre.

CELTICO Praevenarii, a people of Spain, in whose country were the rivers Tamaris and Sars.

CELTICUM Promontorium, a name given to the promontory of Artabrum, called allo Nerion, on the western extremity of Spain, to the N.W., now Finisterre.


Gen. Ch. Hermaphroditic. Cal. perianth one-leaved, five-parted; segments egg-shaped, spreading, withering. Cor. none. Stam. filaments live, very short, at frift concealed by the anthers, but after the shedding of the pollen growing longer; anthers oblong, thickish, quadrilateral, marked with four furrows. Pijl. germ superior, egg-shaped, at least as large as the calyx; styles two, spreading, variously inflexed, awl-shaped, pubefcent, very long; filaments free or bident.


The two kinds of flowers are sometimes separate, and sometimes on the same raceme; in the former case the male flowers are situated below the others.


A tree. Trunk from 40 to 50 feet high; branches numerous, spreading, long, flexible, pubefcent near the summit. Leaves near four inches long, and about two broad in the middle, dark green, serrate, obliquely narrowed, veined, rather scabrous above, slightly villous on both sides, especially when young; stipules rather long, linear, narrow, caducous. Flowers axillary all along the branches, small, an herbaceous colour, perishing before the leaves have attained to half their size; pedicels solitary, generally simple, about three-fourths of the length of the young leaves; stigmas villous, bifid. Fruit about the size of a small cherry, blackish, round, a little flabby. A native of the north of Europe. The flowers open at the beginning of April. The fruit comes to maturity in the ensuing January, and continues on the tree till the sap rises in spring; it is rather astringent, and is eaten not only by birds, but by children, in Spain. Its wood is of a dark colour, remarkably hard, compact, and heavy; tough and flexible, and therefore excellent for making the shafts of carriages and hoops of barrels and tubs; next to ebony and box in durability, strength, and beauty; capable of receiving a fine polish, and, when sawed obliquely, is said to be a good substitute for the fattening wood of America. The ancients used it for flutes and other musical instruments, and as it is not subject to crack, it is particularly fit for the purposes of the carver. The root is less compact than the trunk, but of a darker colour, and suitable for the shafts of knives and other utensils. Sapodilla obtained from the express feeds an oil with a flavour similar to that of oil or sweet almonds. As an ornamental tree, it merits the attention of the planter, having a fine regular spreading head of a cheerful green colour, coming out in early March, and retaining its leaves late in the summer. It has not, however, been much cultivated in England, and is less common than the next species. 2. C. occidentalis, Lam. Sp. Pl. 3. Mart. 2. Lam. 2. Gartt. tab. 77. fig. 3. Lam. Illuf. Pl. 844. fig. 1. (C. fruticu fructufruits.) "Leaves obliquely egg-shaped, serrate, acuminate; fruit solitary. B. "Leaves more slender, less acuminate." A tree. Trunk straight; in young trees even, and of a dark colour; in older ones rough, and lighter green; branches spreading. Leaves alternate, broader and florifer than those of the preceding species, tender, quite entire at the base and tip, serrate in the middle, obliquely serrated, veined; pedicels slightly villous from three to six lines long. Flowers opposite the leaves; segments of the calyx oblong, obtuse, concave, spreading, pointed at the edges; flaminas nearly the length of the calyx; germ conical, surrounded at its base by a ring of fine, short, whitish hairs, which continue on the young fruit Fruit the size of a small cherry, oval, appearing like a berry, of a deep purple colour and sweet taste; stone globular, not dividing, white, hard, a little wrinkled. A native of Pennsylvania, first brought into England by John Tradescant; flowering in May, and ripening its fruit in October. There are many large trees of this latter species in the English gardens, which, in favourite climates, ripen a great quantity of fruit; and there are few years in which the fruit is not sent from America. It comes out late in the spring, but retains its leaves longer than any other deciduous tree. Its wood is tough and pliable, and esteemed by joiners and plategenerators for the frames of their carriages. The variety a is a native of Louisiana, and was cultivated in the royal garden at Paris, but as it was killed down to the root every winter by the frost, La Marec never saw its fruit or flowers, and, therefore, could not determine whether it be merely a variety or a distinct species. 3. C. crassifolius, Lam. 3. "Leaves somewhat heart-shaped, serrate, acuminate; pedicels often with two flowers." Branches woody, cylindrical, pubescent in the young shoots, with a reddish brown bark. Leaves in young plants five inches long, and three or a half broad, alternate, petiolated, generally enlarged on each side with a kind of roundish edge, as to appear somewhat heart-shaped, but, with the inequality, observable in the other species, rough on both sides, with short hairs, especially on the upper surface; pedicels short, slightly villous. Pedicels axillary, generally two or three-flowered, longer than the petioles. Fruit round, smooth, about the size of a small cherry. A native of North America: cultivated at Paris; and described by La Marec from a living plant. 4. C. americana, Mart. 4. Plum. Cat. 18. "Leaves oblong-egg-shaped, obtuse, serrate, smooth above, brown underneath. Trunk near twenty feet high, covered with a grey bark, and divided at the top into many branches. Leaves near four inches long, two and a half broad, rounded at their extremity, of a thick texture, very smooth on their upper surface, and on their under, of a lucid golden colour. Fruit round and red. Found by Pluemer in the French West India islands, and by Houtlon in Jamaica, and cultivated by Miller. Nearly allied to the preceding, if not the same species, differing chiefly in the surface of the leaves. 5. C. Tournefortii, Lam. 4. (C. orientalis minor, Tour. Cor. 41. Voyage, vol.
about branches from Lam. moderate panicles fertile very small, 26. native Loti clothed, loufl petioles Rhamnus villous fome.

"Leaves ovate-lanceolate, finely ferrated, very fbruous; racemes axillary, small." Branches cylindrical, cinctuous, smooth; smaller ones clothed with numerous, up-right, awl-shaped, short hairs, which render their surface a little feabrous. Leaves an inch and half or two inches long, about half an inch broad, alternate, on short peduncles, narrow, acute, conicous, firm, light green; sprinkled on both surfaces, but especially on the upper one, with a multitude of small whitish tubercles, each terminated by a short stiff hair, which render their surface as rough as a file or the skin of a shark; the intervals between these tubercles are smooth and shining, appearing as if they were varnished. Flowers very small, on short pedicels; in axillary, nearly simple racemes, either solitary, or two or three together, furnished at each of their divisions with a short bracte. Fruit, when young, green, smooth, surrounded at the base by the permanent calyx. Described by La Marek from a dried specimen sent from Martineau by Joseph Martin. The identity of Swartz's plant appears dubious. According to him it is fifteen feet high. Trunk straight, with a smooth, reddish or light brown coat, and several branches spreading towards the top. Leaves alternate, innately decurrent, indistinct from each other, two inches long, and half as broad near the base, dark green, petiolar. Flowers axillary, small, greenish. Fruit orange-coloured, not bigger than a pin's head, oval, insipid, having an orange-coloured pulp and a black round stone within. 9. C. trimorpha, Lam. 8. "Leaves egg-shaped, ferrated, three-nerved, nearly smooth; flowers fascicled; fertile one with a longer pedicel." Branches cylindric, greyish, slightly villous at the extremities. Leaves two inches, or two inches and a half long, little more than an inch broad, alternate, slightly acuminate, soft, thin, of a fine green colour; petioles about two lines long, pubescent. Flowers small, greenish; from three to fix together, on a common axillary, solitary peduncle, much shorter than the petiole; generally only one fertile flower in a fascicle; fr axes scarcely longer than the calyx; styles slightly villous. A native of St. Domingo. 10. C. integrifolia, Lam. 9. "Leaves roundish, ovate, acuminate, quite entire; styles hid." Branches alternate, cylindrical, slightly villous. Leaves about two inches and a half long, an inch and half broad, alternate, firm, thickish, slightly feabrous above, green on both sides but paler underneath; with four or five elevated, branched, longitudinal nerves proceeding from their base; clothed, when young, with a few short hairs, which gradually disappear, and finally remain only on the nerves; petioles a quarter of an inch long, villous like the nerves, slightly channelled on the upper side. Flowers small, greenish; in dichotomously branched panicles, solitary, or one or two together from the axil of the leaves; the male ones with very short pedicels. Fruit when young villous. Brought from Senegal by Adanson. 11. C. acutata, Mart. 6. (Rhamnus rigidus, Jacq. am. 74. 1. strictus, Jacq. 1. ziziphus swartzii, Mart. 1.) "Leaves cordate-egg-shaped, blunt at the tip, almutit entire, very smooth; branches prickly; styles hid." An insipid little tree. Branches very long, plant, reclining, not much divided, frequently with alternate, dilith branches the whole length; the upper ones gradually shorter. Leaves commonly three or four, sometimes eight inches long, alternate, dilith, smooth, petiolar. Spines in the axils of the leaves and branches, awl-shaped, very sharp, strong, and short, recurved, solitary, or in pairs. Flowers small, yellow; in small axillary racemes, growing one, two, or three together; segments, with hardly any tube and no scales; in the male flowers instead of the pithil, there is an oblong truncate body only half the length of the calyx. Fruit yellow, double the size of a pea, containing a sweet pulp.
pulp which is eaten by the natives; bone or nut wrinkled, thick, bony, white, once-celled. A native of the Caribbean islands, and the neighbouring continent. Swartz observes that Rhamnus ignatinus of Linnaeus should be placed in this genus on account of its calyx without petal-like scales, its two styles, and its fruit; but he doubts whether it be the ignatinus of Jacquin here described. It derived its trivial name from its growing in rocky places frequented by the Iguana.

Propagation and Culture. These trees are all propagated by seeds, and most of them are hardy enough to endure the open air in England, when they are become strong; but for the first two winters after they come up from seeds they require to be protected from frost. It is best to sow the seeds in autumn soon after they are ripe; and they ought by all means to be sown in pots or boxes, that they may be shifted into different situations according to the season. In the following spring they may be removed into nursery beds prepared for the purpose, in a sheltered situation, and if possible in a gentle loamy soil. If the surface of the ground be covered with old man or rotten dung, it will keep it moist, and prevent the drying winds from penetrating to the roots of the plants. After the plants have remained in the nursery beds two years they may be transplanted to the situations where they are intended to remain.

CELTO-GALATIA, in Ancient Geography, a name given by Ptolemy to Celtic Gaul; and which he divided into four provinces, viz. Aquitania, Lugdunensis, Belgica, and Narbonensis. See Gallia.

CELTO or CELTS, a marsh or lake which seems to have been loft in the Euxine sea, according to Lycophron. Ortelius conjectured, that it was one of the marshes at the mouth of the Danube.

CELTS, or CELTS, in Ancient History, the name of a very ancient people, whose descendants were the aboriginal inhabitants of Gaul and Britain. It was, however, more particularly given to a part of the Gauls, whose country, called Gallicia, was situated between the Seine and Marne and the Garonne.

The remoteness of their early history, and the obscurity in which it rests, make every effort to elucidate the first origin of the Celts of no avail. The opinions both of the ancient and the modern writers who have mentioned them, are equally vague and indeterminate; and it is perhaps enough to say, they appear to have been the most ancient inhabitants who can be traced in this quarter of the globe. Herodotus (II. 145), speaking of the Danube, says, "it commences with the Celts, who, except the Cynetes, are the most remote people in the west of Europe.

The little knowledge which the earlier Greek and Roman writers had of the barbarous nations round them, and the small pains they took to gain accurate information about their peculiar differences and distinctions, led many of them to confound the Celts, the Gauls, and the Sarmatians. Strabo (Geogr. lib. ii. p. 95) particularly states, that the writers before his time were both ignorant and uncertain in all that they related of those countries which formed the more immediate residence of the Celts. Nor can we allow more credit to the writers of a later date, who have rather guessed at the ancestry of the Celts, than given authentic materials for their history. One of the earliest on the continent was Ptolemy, whose work "De Prima Cels copia," appeared at Paris in 1556. The next writer of authority was Reinecke, who, in the second volume of the "Hisoria Julia," treated amply of them, as far as they were supposed to be related to the Gauls and Germans. Van Steeck was the next, who in the early part of the 17th century wrote ex-prefaly on their origin. Another writer was Peizton. The hallucinations, errors, and etymologies of the generality of those who followed, with the exception perhaps of Keyser, appear almost to have involved their history in fable. It was refuted by Pelautier. Yet though some of the most authentic and curious particulars in this article are obtained from his work, we cannot acquiesce in one of his leading features. This will appear presently.

The great source of mistake and confusion to many learned writers on the history of Europe has been the idea that the ancient Gauls and Germans, Britons and Saxons, were originally but one and the same people; thus confounding the antiquities of the Gothic and the Celtic nations. This idle opinion was long maintained with uncommon exhibition. Cluverius, in his "Germania Antiqua," and Keyser in the "Anti-quitates Selectae Septentrionales," etc., incautiously adopted it, and even Pelloutier, in the last and bell work which has appeared on the history of the Celts, has endeavoured to confirm it with great diligence and skill. In short, Bayle, bishop of Percy (Pref. to the North, Antiqu. p. 84), so much learning and ingenuity have fearfully ever been more perfectly or erroneously applied, or brought to adorn and support a more groundless hypothesis.

The ancient and original inhabitants of Europe, according to these writers, consisted only of two distinct races of men; the Celts and the Sarmatians. The Sarmatians, or Sarro- matics, they make the ancestors of the Sclavonian tribes; and represent the old inhabitants of Gaul, Germany, Scandinavia, Britain, and Spain, as the uniform descendants of the Celts. The last they state were all included by the ancients under the general name of Hyperboreans, Scythians, and Celts; having all the same common language, religion, laws, customs, and manners.

From Herodotus we have already shewn, that the source of the Danube, in the Black Forest, in Subbia, was originally among the Celts; and it seems probable that at that remote period the Sacae and the Maflagatae, the probable ancestors of the Saxons and the Goths, had not penetrated so far westward as they did afterwards. The Sarmatians are spoken of by the same writer as a Persian people (in Asia). It may likewise be worthy of observation, that, having mentioned the commencement of the Danube, he adds, "This river passes directly through the centre of Europe, and by a certain inclination enters Scythia." In this passage he seems expressly to distinguish the Scythians from the Celts; although it is no proof they were not confounded by frequent historians, or that the fluctuation of opinion might prove a consideration which would in fact reconcile the different information.

Cluverius, Keyser, and Pelautier have uniformly supported their hypotheses by obscure quotations from ancient authors, and arguments derived from etymology, leaving the precise and positive testimony of Cæsar relating to the Celts, and of Tacitus, relating to the Germans, almost entirely neglected. Cæsar, in the very first page of his Commentaries, expressly affirms us that the Celts, or common inhabitants of Gaul, in his time, differed "in language, customs, and laws" from the Belgae, on the one hand, who were a Teutonic people, and from the inhabitants of Acquitania on the other, who, from their vicinity to Spain, were probably of Iberian race. His words are remarkable: "Gallia est omnis divisa in partes tres: quarum unam incolumem Belgas, ab aqua Aquitanica, tertiam, qui ipsorum lingua Celtis, nolit Galli appellantur. Hi omnibus, linguas, institutis, legisibus, inter se different. Gallos ab Aquitanis, Garamum, Belgas ab Aquitanis, et Sequana dividit." The text here quoted is Oudendorp's; but in a note subjoined, Cæsar's words corrected, and the theory of Cluverius admitted. T. D.
But in the sixth book of his Commentaries, Caesar is still more particular; and his remarks are worth minute attention. He draws the characters of both nations at length, in an exact and well finished portrait, and states every essential difference by which the Gauls were distinguished in their laws, their customs, and their religion from the Germans; and closes with an observation, which we cannot but repeat, as we gain from it by inference that both nations had a separate origin. There was a time, he observes, when the Gauls were inferior to the Germans in valor; when through the increase of their tribes or the fecundity of land they sent colonies across the Rubicon. (Cesar de Bella Gallico, lib. vi. c. 24.)

Such appears to be the true history of the Celts. The love of what is ancient, however, or the belief of fable, has led the historians of almost every period into the labyrinths of more remote antiquity. They have considered Celts as the generic name of a vast people, known in different tracts of territory by a variety of names and characters. Of Cymmerians, Cyprians, or Carmarians, by which they relate them to have been sometimes called in the north of Europe, they have made Goemarians, and pretend to trace them even to Genier, the grandfoul of Noah. (See Pezron Antiquites de la Nation et de la Langue des Celtes. Ancient Univ. Hist. vol. iv. p. 180. Davies’s Celtic Refereches.) The folly and the fallacy of such inquiries need hardly be exposed; they are only equalled by the history of their migrations from Asia to Europe; and the chronology of the Titan princes. They who would indulge their curiosity farther on the subject may consult Mr. D. Jones’s translation of Pezron, published in this country, 1766; whence it may not only be learnt “that Saturn, the son of Uranus, was the first king of the Titans;” but “that the Titans were true Celts.”

In the difference of opinions which has been already mentioned, it is not easy to fix the exact boundaries which have at all times divided the Celts from the other inhabitants of Europe: it is on this account that we cannot but consider the work of Pelloulier, otherwise so excellent, as a perpetual source of mistake and confusion: in consonance with this idea he confines [liv. i. ch. vii. &c.] not only the Germans, but all the people settled along the banks of the Danube to the Black Sea, the Goths, the Dacians, Baffatians, (or Germans beyond the Vistula) Visigoths, Huns, and other tribes, to have been Celts. The ancient inhabitants of Greece, according to him, were either Celts or Scythians; under the same denomination he includes the Ligurians and the people between the Alps and Apennines. The Venetians, he says, were originally Gauls; and the Romans half Celts, half Greeks.

After such affirmations, we shall probably err very little in confining ourselves to the testimonies of Caesar, and a few of the more rational historians; who, without torturing etymology, afford us facts; and, though they may confine the territory of the Celts, at least give us something which may be relied upon as history.

Mr. Pinkerton, in his “Difleration on the Origin and Progress of the Scyphians and Goths,” has discriminated them from the Celts in a very clear and manly manner. Cluverius, Keyler, and Pellouier, have undoubtedly made many quotations from the ancient classics, which seemed to give their theory indisputable countenance. To produce all their authorities would be to fill a volume. From Herodotus to Caesar, passages may be found with very little trouble, which shew the uncertain and confused ideas of the ancients, in regard to the nations which lay round them. Arrian (book i. ch. 1) particularly mentions the warlike tribes on the banks of the Danube; ter mina Kelatica, “and especially the Celts.” But he describes them in a manner which shews he included the Tustiae tribes; and expressly enumerates the Macedonians and the Quadi, so particularly spoken of by Tacitus. (De Morib. Germ. cap. xli. xlii.) Snidas also, who lived so late as the 1st century, makes Kelt to have been the general appellation of the German tribes. There is a passage, however, in Dio- dorus Scaliger, one of the best informed and most judicious of the Greek historians, (who not only wrote after Caesar, but profited by his biographers,) which the modern antiquaries on the continent ought to have consulted. He tells us (De juxt. Scil. lib. v. p. 354, ed. Woffeling), “it is particularly necessary, in describing the Gauls, to make a distinction, of a high the generality of the world court ignorant.” That the people who inhabited the country from above Mareilles, and at the Alps, and then on the side the Pyrenean mountains, were called Celts. But that those who inhabited beyond this region and the parts towards the south, and situated on the ocean, and those toward the Hercynian mountains, and all onward, even to Scythia, were called Gauls; a name, he adds, which the Romans gave generally to all those nations.

We give the passage in the original. Χρησμον, δε λογισθείς το περί τοις προσφερομένοις τάξεσιν και τούς Τάτας, επι τον ταύτας ατύπους, επι τον ταύτας εμπεσομένους, ΚΕΛΑΤΟΥΣ ορισθέντες το αυτό της τετράκης της Κέλαιας: το τρίτον άδυνα τουτής μεγάλη της τον κατά τινα έπερεικα, κατά τινα δε μεγάλη, Σεγατών, ΓÅΛΛΑΤÇS πληρώθηκαν και τον Ρώμην παλιν παλιν τον έτη πληρώθηκαν και τον έτη των μεγάλων Σκοτών, ΚΕΛAIÀS ακολουθήσας, κατά της τούτης θελήσας, Σκοτών, ΓÅΛΛΑΤÇS πληρώθηκαν και τον Ρώμην παλιν παλιν τον έτη πληρώθηκαν και τον έτη πληρώθηκαν κατά της τούτης θελήσας, Σκοτών, ΓÅΛΛΑΤÇS ακολουθήσας.

Diodorus, says Mr. Pinkerton, (Duffett, on the Scyth. p. 125,) no doubt knowing that the Celts were not those Gauls celebrated in Roman history, but quite a different people, posifting the inner or further part of Gaul, with propriety puts them as different nations. Indeed Polybius, by the very enumeration of the different tribes, which one Rome was pilled over Bremen, convinces us that those Gauls were Belgium; and that their irruptions have nothing to do with any history of Gallia Celta. Caesar, observes Mr. Pinkerton, (Duffett, p. 125,) by showing the Celts to be confined to such small bounds, palpably marks that other nations had gained ground on them, so as to confine them to such a contracted space. Of their early history then, we are still in that uncertainty which we seem to have inherited from the first writers among the Greeks and Romans; and excepting what we gain from Caesar and Diodorus, we know but little of their manners. The region they retained at that period was small. And even in Britain, an island which may, perhaps, rank among their earliest possessions, they seem to have been in part exterminated by their Belgic neighbours. The Belgic, as Caesar shews, had all the south end of present England. (See Caesar de Bella Gallico, lib. v. c. 12, and Pinkerton’s Dufett, p. 121.)

After these preliminaries, we proceed to their more special history, as it is detailed by Caesar. In the account of his second expedition into Germany (lib. vi. c. 7,) he draws the contrail we have already mentioned between the Germans and the Celts: a picture which, with the addition of a few touches from the pens of other masters, will be found the most correct, in regard to the Celts, we are poffed of. Previous to his time we have nothing that can be called authentic information.

The Gaul, says Caesar, are, every where, from provinces to families, divided into factions. On his first arrival the Amuonis, wi whom the Autouonis, and the Seguni, who lived in
in Upper Burgundy, were at variance. The latter had always been the weakest, and the former the strongest tribe: "quod summa auctoris antiquitas erat in Adiuli."

(Bell. Gall. lib. vi. c. 12.) But the Sequani, assisted by the Germans, defeated their opponents; while the Adiuli sought the friendship of the Romans. Caesar changed the face of affairs. He restored the Adiuli to their lost preponderance, and, by artfully employing one faction against another, was enabled to reduce them all. This, upon his own authority, is the introduction to the contraband.

Throughout Gaul, he says, (and it was the fame in Britain,) there were only two orders of men in any high degree of honour or esteem: the Druids and the Nobles. The common people were nearly all upon a level: fo submissive to the will, and fo dependent on the power of the nobles, that their condition was little better than that of slaves. In the lowest rank, were such as had been taken in war, or by some other means reduced to actual slavery. These persons were the property of their respective masters.

The Druids had the supreme and sole direction in everything relating to religion. By them, as the favourites of the Gods, and the depositories of their councils, the people offered all their sacrifices, thanksm and prayers; they educated the greater part of the youth; were held in the highest honour; and determined all causes and controversies, whether of a public or a private nature. (See also Diod. Sic. lib. v. § 31.) If any crime was committed, or a murder perpetrated; if any disputes arose either about the division of inheritances, or the boundaries of cities; they alone dispensed both rewards and punishments. Whoever refused to submit to their decrees, whether tribes or individuals, were interdicted from the sacrifices: and the interdict of the Druids was most dreadful. They against whom it was pronounced, were held in universal detestation, as impious and abominable; their company was avoided as dangerous and contaminating; they were declared incapable of any trust or honour; put out of the protection of the laws; and exposed to injury of every kind.

Over all these Druids, one, who had the greatest authority, presided. On the demise of the Arch-Druil, if there was any one more eminent than the others in the ordinary chais, he succeeded: but, in general, the high priest was elected from among the remaining Druids by a plurality of votes: though sometimes this office was an object of ambition; not obtained but by the force of arms. Once in the year, at a certain appointed time, they assembled on a conflagrated spot, in the country of the Carnutes (the Paits Chastreis), which was thought the centre of Gaul. Hither all who had law-suits came, and implicitly submitted to the decision of the Druids.

The doctrines of Druidism, it was the received opinion, had their origin in Britain; and were thence transferred to Gaul. And even in Caesar's time, they who were delirous of becoming adepts in its mysteries, went to Britain for the purpose.

The Druids were exempted from taxes and military services; and enjoyed many immunities. Numbers, allured by the honours and privileges of the profession, embraced the discipline of their own accord; while many more were dedicated to it by their parents. The Druids were fain to commit an infinite multitude of verses to memory; and some of them paled no less than twenty years in becoming living repositories of their doctrines; since it was not lawful to entrust them to writing; though, in almost all other public transactions, and private accounts and computations, they made use of Greek letters.

The immortality of the soul, and its transmigration into other bodies, were among their leading doctrines; by which they excited an undiminished courage, and a sovereign contempt of death. Before these, they entered into disquisitions and disputations in their schools, concerning the stars and their motions, the form and magnitude of the universe in general, and the earth in particular; on the operations of nature; and on the powers of the immortal gods.

The second description of men, enumerated by Caesar, were the Nobles, who, in war time, appear to have assumed the command of their respective tribes. They were skilled in the arts of fighting, and were readily followed by their dependants into actual service.

From the mention of these, he proceeds to the religious principles and opinions which the Celts maintained. Gaul, as a nation, he says, was addicted to superstitious. They who laboured under diftance, or expected to be called to battle, either offered, or promised the future sacrifice of human victims. For it was an article in their creed, that nothing but the life of man could atone for the life of man.

For this purpose they used the minister of the Druids. At more important times, however, they formed colossal images of warriors, filled them with victims, let fire to them, and destroyed the whole. On these occasions, such as had been guilty of theft, robbery, or other crimes, were deemed the most acceptable offerings to the gods. But when criminals were fearss, the innocent supplied their place.

Mercury, according to Caesar, was regarded as their chief deity; they honoured him with images, and ecstatic him as the inventor of arts, and as the protector both of the public ways and commerce. After him, Apollo, Mars, Jupiter, and Minerva were worshipped; of whom their notions, he says, were much the same with those of other countries. They considered Apollo as the curer of diseases; Minerva as the guardian of works of art; Jupiter as the governor of heaven; and Mars as the god of war. To Mars, before they entered on a war, they usually vowed a great part of the expected spoil; and when they had sacrificed all the animals taken, they deposited the rest apart. In many of their flates, says Caesar, these flopes are seen piled in heaps in their consecrated groves. Nor did it often happen that any one neglected the performance of his vows, or secreted his flare of spoil, or having once devoted it, withdrew it. Such persons were punished with the severest tortures.

The Gauls considered themselves as the progeny of Dis, to the common people were told by the Druids; and on this account they reckoned time not by days but nights. In the institutions of ordinary life, they differed materially from other nations in this respect; that till their children arrived at a manly age they were not suffered to appear in public before their parents. It was accounted a shame for a father to be seen in company with his son.

Whatever fortune the wife brought, the husband was obliged to equal; and the principal and produce of both were laid up for the survivour. The husband had power both of life and death, not only over his children but his wife. When any one of distinction died, his nearest relations were assembled, and if there appeared any cause of fulmination as to his death, they had power to put the wife to the same torture as the meanest slave, and if found guilty, she was burnt to death in the most execratory manner. The funerals of the Gauls, he adds, considering their circumstances, were sumptuous and magnificent. It was their custom to throw into the funeral pile on which the body was burnt, those things, and even those animals, in which they deceased had most delighted; at a remoter period, however, they throw into the flaming pile such of his servants and friends as had been
CEITS.

been his greatest favourites, and all were reduced to ashes together in the same fire.

With those flates which were esteemed the belt admis-
tered, it was a law, that whoever should receive intelligence from any neighbouring state, of public importance, should communicate it only to a magistrate; lest they who might be alarmed by rumours, should, by rash resolutions, raise a ferment. The magistrates concealed what part of the in-
ligence they pleased; informing the public of the rest. Except in the general assembly, it was not allowable to talk of
state affairs.

Thus far we have the direct words of Cæfar. From a
few other writers we obtain additional points of information, which throw as much, if not more light upon a large portion of the early inhabitants of Britain, as upon the Celtics in gen-
eral. The particular history of the Druids will form a
separate article hereafter. Helius, according to Boxhorn (Orig. Gall. c. i. p. 41.), was the name by which Mars was
worshipped by the Gauls and Britons, although there appears some reason to believe, that he does not mean the Cætus but the
Belie Gauls. Didst answer to the Pluto of the Greeks. The
fun is said to have been worshipped under various names, prin-
cipally expressive of the nature and properties of light and heat.
To this object of idolatrous worship, the circles of stones de-
terred by Dr. Stukeley and others, are supposed to have been
chiefly dedicated. Saturn, of the worship of whom in the west-
etern parts of Europe we have the evidence of some of the clas-
cic writers, is flated to have been another of their deities (see
Henry's Hist. of Britain, vol. i. p. 107,); and others are in-
ditinctly mentioned by Roman apppellations, of whose history
we have no clear intelligence. It is to be regretted that
Cæfar did not give us the Celtic names of the several deities
worshipped in Gaul, as well as the names in use among the
Germans. In some resemblance of the attributes ascribed to
Helius and Tereuta, the Greeks and Romans saw Mars and
Mercury, and thence inferred that their own modes of
worship extended to barbarous nations. "The Greek and
Roman travellers and conquerors," says Mr. Hume (Hist. of
Natural Religion), "without much difficulty found their
own deities every where; and said, this is Mercury, that
Venus; this is Mars, that Neptune; by whatever title the
strange gods might be denominated."

What were the hymns either of the Gauls or Britons we
are ignorant. The Druids, as we have already seen, in-
structed their disciples in a poetical system of divinity; but as
their verses were never committed to writing, they were lost.
Their offerings, which constituted so important a part of
their religion, have been described by Cæfar; and their arts
of devotion, with some minuteneus, by Diodorus Siculus
(lib. v. c. 35). Pliny, in his Natural History (lib. xvi. c. 44),
says, the Druids held nothing so sacred as the milletoe of the
oak. As it was very scarce, when any of it was discovered
they went with great pomp and ceremony on a certain day
to gather it. When they had got every thing in readines-
under the oak, both for the sacrifice and the banquet which
they made on this great festival, they began by tying two
white bulls to it by the horns. Then one of the Druids,
clothed in white, mounted the tree, and with a knife of gold
cut the milletoe, which was received in a white flagon. This
done, they proceeded to their sacrifices and fealtings. The
Druids, he adds, had so high an esteem for the oak, that they
did not perform the leaf religious ceremony without being
adorned with garlands of its leaves. They believed that
every thing that grew upon it came from heaven, and that
God had chosen that tree above all others. There are,
however, one or two circumstances which lead us to doubt
whether Pliny here describes the Celtic Druids.

The sacred groves in which their religious ceremonies were
performed, was surrounded by a ditch or mound, to prevent
the intrusion of improper persons. In the centre of this, a
regular area was inclosed with one or two large rows of
columns. This was the temple. Close at hand was the car-
rue, or sacred mount; the cromlech, on which the sacrifice
was prepared; and all other things which were necessar-
for their worship. Stonehenge, if it really was a Druid
 temple, is the most magnificent of all that are remain-
ing.

In regard to the state of society and government among
the Celts, we find that both Gaul and Britain were divided
into petty states, each composed of two, three, four, or even
more clans or tribes. The king of which was commonly
the head of the chief clan of which the state was composed.
(See Henry's Hist. of Britain, vol. i. p. 161.) Thofo into
which Britain was divided need hardly be enumerated here.
The rule of succession to the throne is supposed to have been
hereditary; as well among the Celtic as the Belgic Gauls.
(Compare Cæfar de Bell. Gall. lib. v. c. 20. Stien. Vit.
Calig. c. 44. Tacitus Hist. lib. iii. c. 45. and Dio Cassius,
l. ix.) And the chief prerogative of the Celtic kings was
that of commanding the forces of their respective states in
time of war. In every thing else they seem to have been in-
ferior in their power to the Druids.

The little knowledge which we have of their theology,
philosophy, and jurisprudence, is gathered with difficulty,
and only from the scattered notices of ancient writers.
Strabo informs us, (lib. iv. p. 157,) that it was one of their
physiological opinions that the universe should never be
entirely destroyed or annihilated, but should undergo a suc-
cession of great changes and revolutions, which were to be pro-
duced sometimes by the power and predominance of fire, and
sometimes by that of water. They were acquainted with a
year, apparently exact enough for the purposes of life, but
not fitted for astronomical calculations. Pliny (Nat. Hist.
lib. xvi. c. 44,) says, "they began both their months and
their years not from the change, but from the sixth day of the
moon." The particulars and extent of their knowledge in
this part of astronomy are not farther preferred. If they
used Greek letters in their ordinary calculations, as Cæfar
has recorded, we must conclude they were acquainted with
arithmetic; and the rockings-stones alone are sufficient to
evince that they had some knowledge of mechanics. The
houses of the Britons, as Cæfar faw them, are particularly
described to us in the Commentaries. (De Bell. Gall. lib. v.
c. 2.) They were like those of the Gauls, though little
more than wretched cabins. (Zonaras, p. 189.) Their
clothing was usually a fawn (Bell. Gall. lib. v. c. 14,) cast
about the shoulders like a mantle. "Thofo," says Diodorus
Siculus (lib. v. p. 147,) "whom dwell near the promontory
Belorium (or Land's end), are very hospitable, and, by their
great intercourse with foreign merchants, much more civi-
lised in their way of living than the other Britons. They dig
tun ore out of their mines, and prepare it with great dexterity
and art. Though this ore is naturally of a hard substance,
like stone, yet it is mixed and incorporated with much earth,
from which they separate it with great care, and then melt and
cast it into blocks or ingots of a square form like dice." This
was the only metal they were acquainted with as the produce
of the island. In the art of war all the young men among
the Celtic nations were regularly trained; and their troops,
though they appeared, were chiefly composed of infantry.
The military cars of Britain (the Effides of Cæfar, and the
Covini of Tacitus) feem rather to have belonged to the Belgic
than the Celtic inhabitants. War-chariots, says Mr. Pinkerton,
were not known among the Celts. Their early trade was with
with the Phenicians (the foreign merchants spoken of by Diodorus Siculus), who appear to have laboured with a very anxious care to conceal the knowledge of their commerce. A singular anecdote of their jealousy of this exclusive trade is mentioned by Strabo. Afterwards, however, the Greeks, and latterly the merchants of Gaul, obtained a share, whose information finally led to the Roman expeditions. Polybius, who was by birth a Greek, and flourished near 200 years before the Christian era, is said to have written a distinct work concerning Britain; which appears to have been first described, about 130 years earlier, by Pythis of Marseille. What was the general medium of exchange, or what were the coins of the Celtic nations, it is impossible at this period to say. The principal of those which are acknowledged by our antiquaries as British, are not of Celtic but Roman origin. They have almost all the Roman letters, and many

of the Roman deities. Of the manners, virtues, vices, remarkable customs, or diversions of the Celts, our information is extremely scanty. Nor are we certain that the peculiar characteristics of the Britons, spoken of by Cæsar, attach either inclusively or exclusively to the Celtic population of the island.

The last subject to be mentioned here is the language of the Celts, which is now no longer doubted to have been one of the original dialects of Europe. What it was at a remote period we have no means to ascertain, but we are assured by Tacitus that, even in his time, the ancient British differed very little from the Gaulish. Sermo haud multis diversus. (Vit. Agr. cap. xi.)

Bishop Percy, in the Preface to Mallet's Northern Antiquities (p. xxx.), has given the following genealogical table of the languages descended from the Celtic.

**CEAL**

CEL

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**CEM**

CENTIC.

The study of the Welsh language was first encouraged in this country by Henry VIII. But the best body of materials for the knowledge of the Celtic dialects will be found in Llwyd's Archaeologia Britannica.

CELYDNUS, in Ancient Geography, a river of Macedonia, in the Oreliide territory. It had its source in the Cecroceanian mountains, and served as a boundary between Oreliide and Chaonia, according to Ptolemy.

CEMA, a mountain of the Gauls, forming a part of the chain of the Alps. "Annae Varus," says Pliny, "ex Alpium monte Cemá profusus." The mountain whence this small river flows, is at present called Cailole.

CEMAS,
CEMATES, Cema Setenian et Herodoci, in Zoology, synonymous with Antipe Rupicabra of modern writers, Bochart, &c. Belon conceives the Cemas, or Cemias of the Greeks to be this species.

CEMBALO, Italian, in Music, at present implies a harpsichord; but in the time of Boccaccio, it was the title given to the tambour de buffe: *infrumento da donne*; which in the Cufca dictionary is defined, *infrumento da fiore*; because a cercu d'alle fottile alla largozza d'un rumino, &c.—covered with parchment like a drum, surrounded with bells or bits of tin, and beaten with the hand.

Madonna, *Più offio un Cembalo, in dire, &c.*

We not only meet with *Arpiera* and *Clavizicula* in Zarino, 1566, but among keyed instruments, described by Ottomar Lutamino in 1574, under the three several Latin names of *Clericiiuthem*, *Claviziculum*, and *Clavizicula*; but in the courts wooden cants by which he represents them, the shape seems only that of a spinet or virginal; which for.

In Varchi, the contemporary of Zarino, the harpsichord is called *Gravicembalo*. And in another Italian writer of a more early period, we are told, that Tintoret the painter had a daughter called Marietta, who, besides other accomplishments, played on the *Gravicembalo*, or harpsichord, and painted extremely well. See *Organs, Harpsichord, Spinet*, and *Piano Forte*.

CEMBANI, in Ancient Geography, a people of Arabia Felix, who dwelt in the vicinity of the Agreens, according to Piny.

CEMBRA, in Botany. See *Pinus Cembra*.

CEMELANUM, or *Cemenelum*, or *Cemenelium*, or *Cemelum*, and *Cemiers*, in Ancient Geography, a town of Gallia Narbonensium, N. N. W. of Nicaea, and near it. It continued to be the capital of the Maritime Alps to the close of the 4th century, and was very considerable for the number and quality of its inhabitants, and the beauty of its edifices. The first officers of this province made this the place of their residence. It had three colleges, one of which was probably that of the priests; and a senate which allowed an assembly for deliberating on the conclusion of a monument in honour of M. Aurelian Meculus, president of the Maritime Alps. This Roman had supplied the city with corn in a time of famine, and re-establish the ancient aqueducts, the ruin of which had occasioned a want of water. The town of Cimiez was destroyed by the Lombards towards the year 737. The inclination of its amphitheatre is still in good preservation. It was the capital of the Vedastus, and was situated on the Aurelian way. M. D'Aunville discovered this ancient name in that of the church, called *Notre-Dame de Cimiez* to the right of Paillon, and 1/2 mile N. of Nice.

CEMENTATION, in Chemistry. *Cementiren*, Germ. This term is applied to a procéd in the dry way, similar to digestion in the moll, and means the exposure of any substance to a regular furnace-heat in a crucible, if stratified or otherwise covered with some kind of powder which is intended to produce a chemical change. Thus iron bars are converted into steel by being cemented with a powder of bone, and other materials: copper into brass by cementation, with a powder of calamine and charcoal; and the like. The powder is, in this case, called *Cement powder*.

CEMENT-COPPER. The copper procured from the sulphur by precipitation with iron is so called. See Copper.

CEMENTS and LUTES. Under this article may be mentioned the receipts for preparing some of the most useful substances of this kind, that are required in common chemical operations.

The use of lutes and cements are either to close the joints of chemical vessels to prevent the escape of vapours and gases during the processes of distillation, sublimation, and the like, or to protect vessels from the action of the fire which might crack, or fuse, or calcine them; or sometimes to repair flaws and cracks, and for a variety of other smaller purposes.

The subject of *calcareous cements*, such as mortar, tarsas, and other substances used to close the joints of bricks or flumes in buildings, will be mentioned in the following article.

When a lute is applied over the whole surface of a vessel, (as to a gale retort when it is intended to be heated red hot) the procéd is termed, *luteum; or luting*. Iron furnaces are also lined or coated on the inside with earth, to prevent the iron from being destroyed by the conductive action of the fire.

From the vast variety of receipts for lutes and cements of different kinds, the following may be selected, which will answer most of the purposes of the experimental chemist.

To prevent the escape of the vapours of water, spirit, and liquors not corrosive, the simple application of slips of moistened bladder will answer very well for glass, and paper with good paste for metal. Bladder, to be very adhesive, should be soaked some time in water moderately warm, till it feels clammy; it then sticks very well. If smeared with white of egg, instead of water, it adheres still closer.

Another very convenient lute is linseed meal, moistened with water, to a proper consistence, well beaten, and applied pretty thick over the joints of the vessels. This immediately renders them tight, and the lute in some hours dries to a hard mass. Almond paste will answer the same purpose.

The use of the above lute is so extensive, that no other is required in closing glass vessels in preparing all common distilled liquors; and it will even keep in ammonia, and acid gases, for a longer time than is required for most experimental purposes. It begins to sear and spoil at a heat much above boiling, and therefore will not do as a fire lute. It is still firmer, and dries sooner when made up with milk, or lime water, or weak glue.

A number of very coheitive cements impervious to water and most liquids and vapours, and extremely hard when once solidified, are made by the union of quick-lime with many of the vegetable or animal mucilaginous liquors. The variety of their is endless. We may best mention the following, as it has been extensively employed by chemists for centuries. Take some whites of eggs with as much water, beat them well together, and sprinkle in sufficient flaked lime, to make up the whole to the consistence of thin paste. The lime should be mixed by being once dipped in water and then suffered to fall into powder, which it will do speedily with great emission of heat, if well burnt. This cement should be spread on slips of cloth, and applied immediately, as it hardens or sets very speedily. While hardening it may be of use to sprinkle over it some of the lime in fine powder. This cement is often more firmly and as conveniently managed, by smearing slips of linen on both sides with white of egg, and when applied to the joining of the vessels shaking some powdered lime over it. It then dries very speedily.

Another lute of the same kind, and equally good, is made by using a strong solution of glue to the lime instead of the white of egg. It sets equally soon, and becomes very hard. A mixture of liquid glue, white of egg, and lime, makes the
the lut d'aer, which is so firm, that broken vessels united with it, are almost as strong at when found. None of these lutes, however, will enable these vessels to hold liquids for any great length of time. Milk or flarch, with lime, make a good, but his firm lute.

A very firm and singular lute of this kind is made by rubbing down some of the poorer skimmed milk cheese with water, to the confidence of thick soups, and then adding lime, and applying as above. It answer extremely well. Lime and blood, with a small quantity of brick-dust, or broken pottery, flinted in, is used in some places as a very good water cement for cellars and places liable to damp.

Paris-plaster, mixed with egg, milk, glue, flarch, or any mucilaginous liquor, also makes a good lute.

Some artists mix other earths with the above materials. Thus a very good cement is made with equal parts of clay and lime, about $\frac{1}{2}$ of flour and white of egg; or, as is used by many of the aqua fortis-makers, a mixture of colchoal lime and white of egg.

All the above-mentioned cements, with lime, become very hard, by drying, insomuch that they cannot be separated from glas vessels without the help of a sharp knife and some violence; and hence delicate vessels, and long thin tubes cemented with it, are apt to break, when the apparatus is taken down, and sometimes even by the mere force of contraction in firing. It is a great advantage, however, that they may be applied immediately to any accidental crack or failure of the lute already on, notwithstanding a stream of vapour is bustling through; and in large dilutions it is of advantage always to have some of the materials at hand.

These lutes will not confine very corrosive acid vapours perfectly, for a great length of time, but will answer for other purposes, particularly where a complicated apparatus is to be kept readily united and air tight. They will bear nearly a red heat without material alteration.

Another kind of lute, which is the most perfect for confining acid vapours for any length of time, and which never hardens to an inconvenient degree, is the fat lute, as it is called. This is made by taking any quantity of good clay, tobacco-pipe clay, for example, thoroughly dry, but not burnt, powdering it in an iron mortar, mixing it gradually with a little fine oil, and beating them together for a long time to the confidence of thick palm. Much manual labour is required, and it should be continued till the mass no longer adheres to the pelle. Then make the edges of the glas or other vessel, where it is to be used, perfectly dry, and apply the lute carefully, and it will stand the longest prows without failing. This grows firm enough to retain its place, and to hold the vessels together, but may readily be separated by a knife. This lute much improves in adhesiveness by long keeping, which should be in a covered pan in a cool cellar. When wanted, it regains sufficient ductility, merely by beating for a minute or two, or by the help of a few drops more of the oil. Good glassers pity, which is made of chalk, beat up with drying linseed oil, much resembles the fat lute in quality.

Another species of lute is that which is commonly applied round glas retorts, when distillation with a full red heat is wanted, to protect them from the sudden action of the fire, and to give them firmness, and to enable them to bear this heat without flattening or falling together, when red-hot, or melting with the fuel. A glas vessel, to be prepared, with a thick earthen coating, may be considered as an earthen vessel glazed on the inside. The substance used is a mixture of sand, with just sufficient clay to make it adhere together, beat up with some kind of fibrous matter, so as mechani-}

ically to increase the tenacity. A natural earthy mixture of the kind is Windsor-lime, or an equally good one may be formed with coarse sand and clay, or better with fragments of pottery coarsely ground, (the fine part being separated by sifting, and rejected,) mixed with more or less clay, according to the quality, so that it will just mould together when wet. For the porous matter, some use horse-dung, which appears to be the best, others chopped straw or chaff, others chopped horse, or cow-hair, or tow, all of which answer the same purpose. A small quantity of these will suffice. Beaumé recommends about an ounce of cow's hair to five pounds of the earthy mixture. A good deal of water should be added, when the materials are mixed, and much manual labour is required to diffuse the heat equally through the mixture. To apply it to a glas vessel, a retort, for example, take a sufficient quantity of the lute, spread it out flat on a table, lay the bottom of the retort on the middle of the mass, and then turn up the edges of the flat cake, and bring it over the roll of the glas, pressing it down with the fingers, till it applies uniformly and closely. By this method the lute is without seam, and is much more likely to dry in the fire without cracking. Or else, bring the lute, with sufficient water, to the confidence of thick soups, dip the retort in, and it will come out thinly coated. Turn it round before the fire, and, when dry, dip it again in the lute, to give a second coating, and so on, to the required depth of thickness, which may be from $\frac{1}{2}$ to $\frac{1}{4}$ an inch. A lute similar to this is used as a lining to iron furnaces, to confine the fire, and prevent the iron from consuming by the constant heat. This lute is just so fusible as to begin to amalgamate in a full red heat; and hence, if it remains found till thus hot, it will form an impermeable coating to the glas within, from which it cannot afterwards be detached. The covers of crucibles and other vessels intended to bear fire may be luted with this earthy mixture. It is rendered still less liable to crack on the fire-heating, if, when thoroughly dry, it is smeared with linseed oil.

Sometimes, however, a still more fusible compound is wanted, particularly where very volatile and penetrating substances are distilled from an earthen vessel. These vessels are necessarily porous, to a certain degree, independent of any casual cracks, from which the larger earthen vessels are seldom entirely free. When phosphporus, for example, is prepared, by strongly heating charcoal and phosphoric acid in one of these retorts, the vapour of the phosphporus penetrates through the pores, when thoroughly red hot, and much of it is boil. Nor will the latt-mentioned luting entirely prevent this, so that it is a great favour to cover the retort with a thin coat of a fusible glazing, which will melt on the surface as soon as red-hot, and close every opening. This glazing may be made by a variety of fluxes added to the proper dose of clay and earth, and mixed into a thin paste and applied to the retort with a brush. The following management is recommended by Mr. Willis, a practical chemist, (Repertory, Vol. i.) in dilution with large earthen retorts. Dilute one ounce of borax in half a pint of boiling water, and add as much fluxed lime as will make it into a thin paste. Spread it over the retort with a brush, and, when dry, apply over the whole a lute of fluxed lime and linseed oil, beaten till it is perfectly plastic. This becomes dry in a day or two, and is then fit for use. Stone retorts may thus be used several times with safety, (always renewing the oil and lime-lute); whereas, in the common way, and even with the clay and hair-lute, they generally crack when cooling, or on being heated a second time. If, during the operation, the retort should crack, Mr. Willis advises to spread some of the oil compulsion thickly on the part,
part, and sprinkle some flaked lime over the whole, which will prevent the further escape of the penetrating vapour of phosphorus, and may be applied even when the retort is red hot. When prepared somewhat thicker, it is very proper as a general lute for a variety of purposes, and will never harden so as to break the vessel.

Often a lute is required to join the covers to crucibles, or for similar purposes, so as to keep them air-tight when hot. A very valuable composition of the kind is made of glafs of borax, brick-dust and clay finely powdered together, and mixed with a little water when used. No very great nicety is required in the proportions, but about a tenth of borax is quite sufficient to bring the earths to that state of firmness or viscosity which is desired. Litharge may also be used instead of borax, but the latter is by far the best, as it promotes that thin spreading fusion which is best calculated to be equally applied over an uneven surface; and besides, if a portion of the litharge lute were to drop into the crucible it might possibly be reduced, and lead introduced into the results of the experiments.

A cement, said to be useful to stop cracks of iron vessels intended to be strongly heated, is made of six parts of clay, one of iron filings, and linseed oil enough for the mixture.

Another species of cement is what is termed by the French Magisth chaud, and consists of different kinds of oily and resinous substanse, liquid when hot, and which become more or less solid by cooling. They are useful for a variety of miscellaneous purposes, for experiments with gasses over water or mercury, and others where only a very moderate warmth is used, and where it is of importance to keep out air and water. There will also confine acid vapours, but not the vapours of alcohol, turpentine, or essential oils, which diffuse most resinous substanse. Most of them will stick very well to glafs. Common feeling-wax is one of the most useful of these cements. A cheaper and less brittle cement is made simply by melting bees wax with about one eighth of common turpentine. This may be made up into flicks to be used when wanted, being filled melted or spread evenly with a hot iron. A greater proportion of turpentine renders this lute softer and more flexible, but somewhat pliable.

A very firm cement is made by four parts of rosin, one of bees wax, and when melted, one part of fine brick dust, stirred in. This adheres with extreme firmness. Table knives are cemented to their handles by this mixture, and turnips are a familiar composition in some fine works to fix them to the lath.

Chapital found, after many trials, that the penetrating vapours of sulphurous acid in the manufacture of alum were completely confined in a wooden chamber lined very carefully with a mixture of equal parts of pitch, turpentine, and wax boiled till all the effluent oil was diffipated (which was known by the effusion of the bubbles) applied melted to the wood, and spread with a hot trowel over the joints. Vintners stop leaks in their casks with melted fat rubbed over when cooling with fitted wood ashes, or previously mixed with the ashes in melting.

The use of gum arabic dissolved in water, for cementing paper labels to bottles, and a great variety of miscellaneous purposes, is known to every one. A still better cement for the same use is glass dissolved in vinegar to a pretty thick consistency when warm. This congeals on cooling, and before it is used it should be gently warmed.

Many of the varnishes and oil paints are employed in rendering vessels air and water tight. Thus when car vas bags are fastened to a stop-cock tube for air-holders, the joining is made perfectly tight by tying over it flaps of cloth or bladder soaked in spirit varnish.

The following cement is said to be very useful in joining together glafs or text. Take of mallich five or six bits as big as peas, dissolve in as much alcohol as will render them liquid. In another vessel dissolve as much filings (previously soaked in water) in brandy or rum, as will make two ounces by measure of a strong glue, warm it, and incorporate with it by rubbing two or three small bits of gallnut or ammoniacum and then the mallich solution. Keep the cement in a bottle well stopped, and gently warm it before use.

Those fusible metal compounds used to unite pieces of metal form another totally distinct species of cements. These are termed Solders, under which they will be described. See CEメント.

CEMENTS. calcarceous. In this article it is proposed to give an account of the various cements used in building, into which lime enters as an essential constituent part; and in order to treat the subject with a degree of clearness, in some measure corresponding to its importance, it will be advisable to arrange every kind of calcarceous cement under one or other of the following three divisions: first, simple calcarceous cements: secondly, water cements: thirdly, mallich and malth.

§ 1. Simple calcarceous cements.

This section includes those kinds of mortar which are employed in buildings on land, and generally consist of lime, sand, and fresh water.

It is well known that calcarceous earths are converted, by burning, into what is called quick lime, which substanse being wetted with water falls into a powder with great extrication of heat, and then acquires the property of uniting with sand, and various other substanse, and forming a solid mass which becomes as hard and durable as most building flones. We have no means of ascertaining by whom, or at what time this valuable property of lime was discovered; but among the nations of antiquity the Romans appear to have made the most use of it, and to have been most skilful in cementitious building.

The various kinds of marble, chalk, and lime-stone, as far as regards their use in cements, may be divided into two species; the first being pure or nearly pure carbonat of lime; the second containing besides from $\frac{1}{4}$ to $\frac{1}{3}$ of clay and oxvd of iron. Previous to burning or calcination, there are two extraneous substanse by which the simple lime-flones can be distinguished from the argillo-ferruginous ones; but the former, whatever may have been their colour in a crude flate, become when calcined of a white colour, while the latter possess more or less of a light ochre tinge. The brown lime is by far the best for all kinds of cements; but the white varieties being more abundant, and allowing of a larger proportion of sand, are generally made use of. It was an opinion of the ancients, and is still commonly received among builders, that the hardest lime-flone, ceteris paribus, furnishes the best lime; but mortar was laid to grow as hard as the lime-flone of which it was composed, and hence marble was considered as superior to common lime flone, and this latter to chalk. The experiments of Dr. Higgins and Mr. Smeton, however, show that this is entirely a mistake; common chalk, and the hardest Plymouth marble, when similarly treated, affording cements of equal firmness.

When carbonated lime has been thoroughly burnt, it is deprived of its water, and of all, or nearly all of its carboinic acid; if, in this state, it is plunged into water, and immediately taken out again, the water which it has absorbed will
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will occasion the mass to crack and become excessively hot, and at length to fall into an impalpable powder, much of the water being carried off in the form of steam during the process. When lime has been thus flaked, if it is beaten up with a little water into a very stiff paste and allowed to dry, it will be found that the white limes, whether from chalk or marble, never acquire any degree of hardness, that the brown limes become considerably indurated though not so much as when mixed with sand, and that shell lime (procured by calcining sea shells), concretes into a firm, hard cement, well qualified for dry buildings, although it falls to pieces in water.

Lime-flone loses about 4 of its weight by burning, but shrinks in an inconsiderable degree; upon quenching, when fully burnt, it falls freely, and will produce somewhat what more than double the quantity of powder or flaked lime, in measure, that the burnt lime-flone confided of.

Quick-lime, by exposure to the air, absorbs carbonic acid with greater or less rapidity, as it is of a close and hard, or soft and spongy texture; thus it gradually loses its cementing properties and at length becomes totally unfit for the purposes of mortar. Hence, though lime-flone and chalk-lime are equally good, when perfectly burnt, and used fresh from the kiln, there is an important practical difference between them, as the chalk lime absorbs carbonic acid with much the greatest facility.

A proper selection of sand is of great importance in the composition of mortar; the sharper and coarser it is the better; as it requires a smaller proportion of lime, and makes a stronger cement than when fine-grained and round sand is used of. Sea sand requires to be well washed in fresh water to dissolve out the salt with which it is mixed, otherwise the cement into which it enters never becomes thoroughly dry and hard.

The most advantageous proportions of lime and sand in the composition of mortar is a point by no means settled. The Roman builders were accustomed to allow three parts of pit sand, or two parts of river or sea sand to one of lime. In general, it may be affirmed, that it will be advantageous to use the largest quantity of sand that can be introduced, preserving the necessary degree of placticity. Mortar, in which the sand predominates, requires less water in preparing, and therefore sets sooner; it is harder and also less liable to crack on drying than that in which lime prevails. Smecaton observes, that there is scarcely any but what, if well burnt and beaten, a load or measure of unfaked lime will take two loads or measures of sand. On pursuing this subject he soon found that, by good botating, the fame quantity of lime would take in one measure of tarras and three of clean sand, which seems to be the greatest useful proportion, for on a further increase of the quantity of sand, the mortar required so much more beating to bring it to a proper consistence and toughness, that the labour became of more value than the saving of materials. These observations agree very nearly with the experiments of Dr. Hutton.

The weakness of modern mortar compared to the ancient is a common subject of regret, and many ingenious men taking for granted, that the process used by the Roman architects in preparing their mortar is one of those arts which are now lost, have employed themselves in making experiments to recover it, instead of attending to the directions left us in the works of Pliny and Vitruvius, which, when illustrated by the actual practice of builders in various parts of Europe, seem to have little or no doubt on the subject.

The characteristics of all modern arts, builders among the rest, seems to be to spare their time and labour as much as possible, and to increase the quantity of the articles they produce, without much regard to their goodarts; and perhaps there is no manufacture in which this is so remarkably exemplified as in the preparation of common mortar, especially in London and its neighbourhood.

The peculiar badness of London mortar is to be attributed, both to the faulty nature of the materials, and the careless and hasty method of using them. The lime employed is the soft chalk-lime of Edex and Kent, which insufficiently burnt at first, is conveyed a distance of ten or twenty miles and kept many days, without any precautions to prevent the access of the external air; and thus before it is used, it has time to absorb so much carbonic acid as nearly to lose its cementing properties. It has been before observed, that though chalk, when perfectly burnt, is equally good as the hardest limestone, it possesses some practical disadvantages; it will fall into a coarse powder on the application of water, when it is only partially calcined, which lime-flone will not, and the cores or unburnt lumps may be broken down by a blow with the spade, and are therefore very seldom rejected as they ought to be.

Sand, which is scarce and dear in London, is equally defective. This is pit sand, but very different from the kind recommended by Pliny and Vitruvius; instead of being clean, large-grained, and sharp, it is composed of small round grains, and filled with a large mixture of clay. Its fine nerfs and smoothness cannot be amended, but by washing it well in running water the clay might unquestionably be got rid of, and this would be no trifling improvement, for Smecaton has shown, by direct experiment, that mortar of the best quality, when mixed with a small proportion of unburnt clay, never acquires that hardness and dryness which, without this addition, it would speedily have attained. Screened rubbish and the scrapings of the roads, consisting chiefly of gravel reduced to fine powder, are also used as substitutes for sand with still greater inappropriety.

The method of preparing common mortar is also extremely imperfect. The lime being flaked by the addition of water, and the unburnt lime being broken down and mixed with the rest, a quantity of dirty sand is added, and the whole being incorporated by means of a spade, is reckoned to be fit for use; thus the principal point in the making of mortar, namely, beating the ingredients together, so as to mix them thoroughly, is flung over in a hasty careless manner, and the refit, as might be expected, is a crumbling mass scarcely fit for use. The Roman builders, on the other hand, after they had mixed together the materials, employing for this purpose a smaller proportion of water than is customary at present, put the mafs into a large wooden mortar, and beat it till it ceased to adhere to the heavy wooden or iron paffle which was used on the occasion; a practice, which has long been followed by the Dutch with complete success, as will be shown in the next section.

Fresh made mortar, if kept under ground in considerable masses, may be preferred for a great length of time without injury; and the older it is before it is used the better; the builder taking the precaution to beat it up again, previous to using it; for it not only sets sooner, but acquires a greater degree of hardnes, and is less apt to crack. A fact related by Mr. Smecaton, remarkably illustrates these points. Having had occasion to take up a large flat stone of a cluse grain, of about five feet square, that had probably lain above a century at the bottom of a malt cistern, he found that it had been well bedded in mortar, which had become coagulated to the consistence of cheese; but having never come to a perfect dryness, it so far retained its natural humidity, that he found it might, with some pains, be beaten up to mortar without
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Without any addition of water; and afterwards being suffered to dry in the air, it set to a flinty hardness, and appeared as good mortar as any which that part of the country produced. Pliny informs us, that the ancient Roman laws prohibited builders from using mortar that was less than three years old; and to this circumstance he expressly attributes the remarkable firmness of the oldest buildings in the city. A similar custom prevailed, and we believe still prevails in Vienna, requiring the mortar to be a year old before it is employed. But there is nothing which shows, in so striking a point of view, the advantage and necessity of beating mortar, and that the effect produced is owing to something more than a mere mechanical mixture of the ingredients, as the preparation of great, or liquid mortar. This differs from common mortar only in containing a larger quantity of water, so as to be sufficiently fluid to penetrate the narrow irregular interstices of rough stone walls, and is generally made by diluting common mortar with water, either cold or hot. It not unfrequently happens, that this great refuses to set, and at all times it is a long while in acquiring the proper hardness; but if, instead of common mortar, that which has been long and thoroughly beaten is employed, the mortar will set in the space of a day, and soon after acquires a degree of hardness much superior to what is made in the common manner.

§ 2. Water Cements.

Although a well made mortar, composed merely of sand and lime, if allowed to dry, becomes impervious to water, so as to serve for the lining of reservoirs and aqueducts; yet if the circumstances of the building are such as to render it impracticable to keep out the water, whether fresh or salt, a sufficient length of time, or the use of common mortar must be abandoned; for lime and sand, if mixed together in any proportions, and put, while soft, into water, will in a short time fall to pieces.

Among the nations of antiquity the Romans appear to have been the only people who practised building in water, and especially in the sea, to any great extent. The bay of Baie, like the fathomable watering places, was the summer retreat of all the wealthy in Rome; who, not content with erecting their villas as near the shore as possible, were accustomed to construct mole, and form small islands, in the more sheltered parts of the bay, on which, for the sake of the grateful coolness, they built their summer houses and pavilions. They were enabled to build thus securely in the water by the fortunate discovery, at the neighbouring town of Puteoli, of an earthy sublimate, which, from this circumstance, was called Puteolanus (powder of Puteoli.) Putulan powder, or as it is now denominated puzzolana, is a light, porous, friable mineral, of a red colour, and is generally supposed to derive its origin from concreted volcanic ashes. The source of it is near Veluvius, near to which mountinous district of Puteoli is situated. It consists chiefly of a ferruginous clay, baked and calcined by the force of volcanic fire, and when mixed with common mortar, not only enables it to acquire a remarkable hardness in the air, but to become as firm as stone, even under water. The only preparation which puzzolana undergoes, is that of pounding and fitting, by which it is reduced to a coarse powder; in this state being thoroughly beaten up with lime, either with or without sand, it forms a mass of remarkable tenacity, which speedily sets under water, and becomes at least as strong as good freestone.

It has been before observed, that a composition of pure lime and sand alone will not harden under water, but leaves containing a portion of clay possesses this property in a considerable degree, and are therefore generally used in water building. The cement used by Mr. Smecaton, in the construction of the Eddystone light-house, was composed of equal parts by measure of flaked Aberthaw lime and puzzolana. The peculiar difficulties of this undertaking, exposed to the utmost violence of the seas, rendered these proportions advisable; but for works that are less exposed, such as locks and basins for canals, &c., the quantity of puzzolana may be considerably diminished. A composition of this kind, which has been found very effectual, is 2 bushels of flaked Aberthaw lime, 1 bushel of puzzolana, and 3 of clean sand; the whole being well beaten together will yield 45 cubic feet of cement.

The Dutch have practised building in water to a greater extent than any other nation of modern Europe; and to them is due the discovery of a cement admirably well adapted for this purpose, and called tarras or trafs. This is nothing more than wakke, or cellular basalt, and is procured chiefly from Bockenheim, Frankfort on the Maine, and Anvers, whence it is transported down the Rhine in large quantities to Holland. This sublimate, being, by grinding and mixing, reduced to the consistence of coarse sand, is used in the composition of mortar, with the blue argillaceous lime from the banks of the Scheldt, in the following method. They take of the quick-lime about the quantity which will be wanted during a week, and spread it in a kind of bason in a stratum of a foot thick, and sprinkle it with water. It is then covered with a stratum of about the same thickness of tarras, and the whole suffered to remain for two or three days, after which it is very well mixed and beaten, and formed into a mass, which is again left for about two days; it is then taken in small quantities, as it is wanted for daily consumption, which are again beaten previous to using. Thus is composed the celebrated tarras mortar with which the mounds and other constructions for the purpose of protecting the lowlands of Holland against the sea are cemented.

Tarras is frequently used in this country, being imported from Holland for that purpose. The proportions of the materials of the tarras mortar generally used in the construction of the belt water works is the same as the Dutch practice. One measure of quick-lime, or two measures of flaked lime in the dry powder, is mixed with one measure of tarras, and both very well beaten together, to the consistence of a paste, using as little water as possible. Another kind, almost equally good, and considerably cheaper, is made of two measures of flaked lime, one of tarras, and three of coarse sand; it requires to be beaten a longer time than the foregoing, and produces three measures and a half of excellent mortar.

When the building is constructed of rough irregular stones, where cavities and large joints are to be filled up with cement, the pebble mortar may be most advantageously applied; this was a favourite mode of construction among the Romans, and has been used ever since their time in those works in which a large quantity of stones is required. Pebble mortar will be found of sufficient compactness if composed of two measures of flaked argillaceous lime, half a measure of tarras, or puzzolana, one measure of coarse sand, one of fine sand, and four of small pebbles, screened and washed. It is only under water that tarras mortar acquires its proper hardness; for if suffered to dry by exposure to the air, it never sets into a sublimate so firm as if the same lime had been mixed with good clean common sand, but is very friable and crumbly. Ash mortar is reckoned to be superior for works that are sometimes wet and sometimes dry, but tarras has the advantage when constantly under water. Tarras mortar when kept always wet, and consequently in a state most favourable to its cementing principle, throws out a

1. Sublimate
Substance something like the concretions in limestone caverns called stalactites, which substance acquires a considerable hardness, and in time becomes so exuberant as to deform the face of the walls.

Although the cellular basalt is the only kind admitted into the preparation of Dutch terras, yet it appears from some good experiments of Moreau on the subject, that the common compact basalt, if previously calcined, will answer nearly the same purpose. Great Britain is at a considerable annual expense in purchasing terras from Holland; it may be worth while, therefore, to point out some of our domestic treasures of the same material. The compact basalt abounds in all the districts where coal is raised, and may therefore be procured easily, and calcined with the refuse coal, so as to be sold at a cheap rate. The Calton hill, adjoining to Edinburgh, consists almost entirely of cellular basalt, and being shot from a short distance from the port of Leith, offers an inexhaustible abundance at a small cost.

In some parts of the Low Countries coal ashes are substituted for terras with very good effect; of which the valuable cendree de Tournay is a striking instance. The deep blue argillo-ferruginous limestone of the Scheldt is burnt in kilns with a flaky kind of pit-coal that is found in the neighborhood. When the calcination of the lime is completed, the pieces are taken out, and a considerable quantity of dust and small fragments remains at the bottom of the kiln. This refuse conglutining of coal ash mixed with about one-fourth of lime dust, is called the cendree, and is made into a mortar with lime in the following method. About a bushel of the materials is put in any suitable vessel, and sprinkled with water just sufficient to slake the lime; another bushel is then treated in the same way, and so on till the vessel is filled. In this state it remains some weeks, and may be kept for a much longer time if covered with moist earth. A strong open trough, containing about two cubic feet, is filled about two-thirds full with the cement in the above state, and by means of a heavy iron pelle, suspended at the end of an elastic pole, is well beaten for about half an hour; at the end of this time it becomes of the consistence of soft mortar, and is then laid in the shade from three to fix days, according to the dryness of the air. When sufficiently dry, it is beaten again for half an hour as before, and the often it is beaten the better will be the cement; three or four times, however, are sufficient to reduce the cement to the consistence of an uniform smooth paste; after this period it is apt to become refractory on account of the evaporation of its water, as no more of this fluid is allowed to enter the composition than what was at first employed to slake the lime. The cement thus prepared is found to possess the singular advantage of uniting in a few minutes so firmly to brick or stone, that still water may be immediately let in upon the work without any inconvenience, and by keeping it dry for 24 hours, it has nothing further to fear from the most rapid current.

A composition very similar to the preceding in materials, which are coal cinders and lime, though seldom prepared with any attention, is the blue mortar, commonly used in London for setting the coping of buildings, and other works much exposed to the weather.

A blue mortar is used in some parts of England. It is prepared by taking two bushels of freth burnt mangre lime, and mixing it accurately with three bushels of wood ashes; the mass is then tied into a bag and left to stand over night. In this state it will keep a considerable time without injury, and even with advantage, provided it is thoroughly beaten twice or thrice before it is used.

The scales of blast-iron, which are detached by hammering red-hot iron, and are therefore to be procured at the forges and blacksmiths' shops, have been long known as an excellent material in water cements; but we believe that Mr. Smeaton was the first person who made any accurate experiments on their efficacy, compared with other substances. The scales being pulverized and sifted, and incorporated with lime, are found to produce a cement equally powerful with puzzolana mortar, if employed in the same quantity. It is, however, to be used in greater proportions than either terras or puzzolana; two bushels of argillaceous lime, two of iron ore, and one of sand, being carefully mixed, produce 3½ cubic feet of cement fully equal to terras mortar. If the common white lime is made use of, it will be advisable to employ equal quantities of all the three ingredients.

With respect to the water used in the preparation of water cements, that of rivers or ponds where it can be had easily, is to be preferred to spring water; but for works exposed to the action of the sea, such as piers, light-houses, &c., it is usually more convenient and equally advantageous, in other respects to use salt water.

Pumice stone, brick, and tile dust, are also recommended for water cements, but their only advantage seems to be an absorbent quality, which causes the mortar made with them to set sooner, and therefore acquire a greater hardnèss in the same time, than mortar composed of sand and lime alone, for they have no power of hardening under water.

The Loriot mortar is a composition which has acquired considerable celebrity in France, and has been employed in some large works. It was invented about 40 years ago by Mr. Loriot, who imagines that he has discovered the process used by the Romans. The principle of this invention consists in adding to any quantity of mortar made in the usual way with lime and sand, but prepared rather thinner than usual, a certain proportion of quick lime, in powder. The lime powder being well incorporated with the mortar, the mass heats, and in a few minutes acquires a consistence equal to the best Paris plaster, and is as dry at the end of two days, as an ordinary cement after several months. It also, when the ingredients are well proportioned, sets without any cracks. The quantity of lime powder to be added, varies from 1/4 to 1/3 of the other materials, according to the quality of the lime; too much burns and dries up the mass, and with too little, it loses its peculiar advantages; thus the proportions, a point of the utmost importance, can only be determined by experiment. It is its speedy dehydration which renders the Loriot mortar useful as a water cement, for under water it has only the common properties of a composition of lime and sand of equal solidity; indeed for this purpose various substances, commonly used in cements, are recommended to be added, such as brick and tile powder, and forge scales. The following is an approved receipt. One measure of bricks exactly pounded, two measures of lime river sand, old blistered lime in sufficient quantity to make a mortar in the usual manner and sufficiently liquid to quench the lime powder which is added in about the same quantity as the pulverized brick. It is extremely extraordinary, that a proceeds, perfectly similar to that of Mr. Loriot, is described in a "Tentoon over Building in Water," by George Sempere, printed at Dublin, 1776. In describing the good qualities of the road-lime of Ireland, M.'s Sempere remarks, that, "it has some useful qualities not much known among the generality of workmen, as, for instance, our lime-stone will make exceeding good terras for water-works, for which purpose, you are
to prepare it thus. Get your roach-lime brought to you hot from the kiln, and immediately pound, or rather grind it, with a wooden maul on a dry, boarded floor, till you make it as fine as flour; then, without loss of time, sift it through a coarse hair or wire sieve, and, to the quantity of a hod of yoursetting mortar, (which, on this account, ought to be poorer than ordinary,) put in two or three handfuls full of this fine flour of the roach-lime, and let two men, for expedient sake, beat them together with such beaters as the platter make use of, and then fuse it immediately. This, I can assure you, will not only fland as well, but is really preferable to any tarras." The memoir of M. Loriot was published in 1774, only two years previous to this treatise of Semple, who appears to have been a man rather of practice and experience than of reading; and, besides, in the book quoted from, he expressly, though incidentally, mentions his ignorance of the French language.

We are justified therefore, in flattering, that the knowledge of the advantages of mixing quick lime powder in mortar was not confined to M. Loriot, though it might be an original invention in him, and he was the first who drew public attention to the process, and used it in any considerable works.

§ 3. Matsha, or Maslah.

Under this term we include those calcareous cements of a more complicated kind, whose hardens appears to depend on the oily or mucilaginous substances that enter into their composition. The use of thee is at present very limited, at least in Europe, but they were highly esteemed by the ancients, especially for stucco. The malta of the Greeks seems to have been more ample than that employed by the Romans architects; at least we are informed that Pammenes, the brother of Phidias, lined the inside of the temple of Minerva at Ellis with a stucco, in which the usual ingredients, sand and lime, were mixed up with milk instead of water, some saffron being also added to give it a yellow tinge. The Roman maltha, according to Pliny, was prepared in the following manner. Take fresh burnt lime, flake it with wine, and beat it up very well in a mortar with hog's lard and figs: this cement, if well made, is exquisitely tender and pliable, and, in a short time, becomes harder than stone the surface to which it is to be applied is to be previously oiled, in order to make it adhere. Another kind, almost equally strong, and considerably cheaper, was prepared by beating together fine flaked lime, pulverized iron- scales and bullock's blood.

In the preparation of malthas, as well as of every other kind of mortar, so much depends on the maniplation, and especially on the care which is taken to incorporate the ingredients by long beating, that those countries in which labour is of the least value polish, in general, the best mortar. Hence, no doubt, principally arises the unequalled excellence of the mortar made by the Timoanians and other inhabitants of the northern coast of Africa, which, according to Dr. Shaw, is prepared in the following manner. One measure of sand, two of woodashes, and three of lime, being previously sifted, are mixed together, and sprinkled with a little water; after the mass has been beaten some time a little oil is added: the beating is carried on for three days incessively, and, as the evaporation in that hot climate is considerable, the cement is kept at the proper degree of foment by the alternate addition of very small quantities of water and oil. The cement being completed, is applied in the usual manner, and quickly acquires a firm hardens. The half species of maltha that we shall mention is the celebrated chunam of India, where it has been used from time immemorial. The method in which it is prepared at Madras is as follows.

Take 1½ bushels of pit sand, and 1½ bushels of stone-lime; flake the latter with water; and when it has fallen to powder, mix the two ingredients together, and let them remain untouched for three days. In the mean time dissolve 2lbs. of malolates in water, boil a peck of gramm (a kind of pea), to a jelly, boil a peck of mirabolan also to a jelly, mix the three liquors, and incorporate part of the mixture very accurately with the lime and sand; so as to make a very fluid cement: some flour is now to be beaten very well into it, and it is then fit for use. The bricks are to be baked in as thin a layer as possible of this mortar; and, when the workmen leave off, though but for an hour, the part where they recommence working is to be well moistened with some of the above liquor, before the application of any fresh mortar. When this is used for stucco, the white of four or five eggs, four ounces of butter or felamum oil, and a pint of butter milk, are to be mixed up with every half bushel of cement, and the composition is to be applied immediately.

It is to be regretted, that no experiments have been instituted to ascertain the cause of the induration of calcareous cements. It is attributed by Dr. Higgins to the absorption of carbonic acid; but several circumstances contradict this supposition. In numerous instances the cement hardens long before the lime is satu rated: in the different kinds of maltha the lime combines with the albumen, mucilage and oil with which it is in contact, and in all probability takes up little or no carbonic acid; and, if it be true, that the lime in old mortar cannot by burning be re-converted into quick lime, this would imply a chemical union of the ingredients; and it may reasonably be questioned whether, even in the simple calcareous cements, carbonic acid acts so important a part as is usually attributed to it.

Cemetery, Cemeterium, a dormitory, or sacred place set apart for the burial of the dead.

Chorier observes, that under cemeterium, kameitrio, from κημήτρων, I sleep, anciently was comprehended, not only the strict dormitory, or place where the dead were disposed; but all the lands which accompanied the parish churches, and were contiguous to the real churches.—Perhaps it might be added, that all the church domains were comprised under this notion. There will be reason enough for that confusion of the cemeteries, charged on Valerian.

In the early ages, the Christians held their assemblies in the cemeteries, as we learn from Eusebius and Tertullian, the latter of whom calls those cemeteries where they met to pray, oeces. Valerian seems to have connoted the cemeteries and places defined for divine worship, which were restored again to the Christians by Gallien. In the reft of that emperor, which is preserved by Eusebius, cemeteries and places of worship are used as synonymous terms. It being here the martyrs were buried, the Christians chose those places to have churches in, when leave was given them by Constantine to build. And hence some derive that rule which still obtains in the church of Rome, never to consecrate an altar without putting under it the relics of some saint. See Burial.

The heathen writers frequently upbraid the primitive Christians for their meetings in cemeteries; as if they served other purposes besides those of religion. The council of Elvira prohibits the keeping of tapers lighted in cemeteria, during the day-time; and by another canon, the woman from passing the night, watching in cemeteria.

The practice of consecrating cemeteries is of some antiquity: the bishop walked round it in procession, with the crosier, or pallorial staff, in his hand, the holy water-pot being carried before, out of which aspersions were made.

Cemeninus, in Ancient Geography, the name of a mountain.
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mountain, which, branching from the Pyrenees, advanced far into Gaul, according to Strabo. It was the mea of mountains which Prolemy calls "Commnen montes," and which, he says, was inhabited by the Seguani, found in that chain which formed the Cevennes.

CEPSI, a people of Spain, who occupied the foot of the Pyrenees, according to Dionysius Puegrietes.

CENA, a small river of Sicily, which at present bears the name of "Fiume della Cane."

CENABUM. See GENABUM.

CENAEUM, a promontory on the island of Euboea towards the west and opposite to Thermopylae, according to Strabo, Pliny, and Poltemy, fertilized on the Malinc gulf; now called Cape Litar, or Canina. It had a temple of Jupiter Cencus.

CENAPATAM, in Geography, a town of Hindoostan, in the country of Myfore; 34 miles N.E. of Seriingapatam, and 28 S.W. of Bangalore.

CENCHRE, a town of Apha Minor, in the Troade. Suidas says that it was the country of Homer.—Aifo, a town of Italy. Step. Byz.

CENCHRAMIDIA, in Botany, Pluk. See Clusia pectera, and Datura guineensis.

CENCHRES, in Ornithology, one of the names given by authors to the small busting, Embiriza nigrella.

CENCHREA, in Ancient Geography, a port of Corinth, situated on the bay of Saron. This was a fortress built on the frontiers of Arcadia, towards the source of Phryxus, and S.W. of Argos. It defended the way that led from Argos to Tegea. Near this place, towards the south-east, lay the tombs of those Argrians, who, according to Pausanias, challenged an army of Lacedemonians near Hybre, under the archonate of Pithirata.

CENCHREA, a port town of Corinth, which lay towards the east upon the Gulf. It derived its name from Cenchreas, the pretended son of Neptune, when his brother Lecheus had given his name to Lecheum. These were the only two havens; and indeed the only two cities of any note, next to Corinth, that belonged to this territory. They were so well situated for naval commerce, and so near the metropolis, that they made ample compensation for the barrenness of the soil. Thee two naval roads, which opened a way into the Ionean and Aegean seas, might easily have gained them a superiority, if not a command over all Greece, if this advantageous situation had not inclined them more to commerce than war. That Cenchreas was a distinct city from Corinth, at least in St. Paul's time, we may infer from Acts xviii. 18, and from his epistle to the Romans, ch. xvi. 1; though it had the epithet of Corinthiaca in the poets, from its being one of the havens of that little state, as Corinthiaca had that of Bimaris, from its being so conveniently situated between two seas. Upon the road from Cenchreas across the illithus there was a mile of Diana, and at Cenchrea a temple of Venus, with a fine statue. At the end of this road was a Neptune in bronze; and on the other side of the port were two temples, one of Neptune, the other of Isis. In the vicinity was a spring of hot water, said by Pausanias to be ful, and called the bath of Helena. The water fell from a rock, and precipitated itself into the sea. Along the coast, towards the north-east, there was another port, mentioned by Strabo and Poltemy. Pliny and Strabo lay, that it was situated in the most secure place of the illithus.

CENCHREA was also a name given generally to the illithus of Corinth, distant 70 furlongs from it, where were celebrated the Ithian games: whence the apollate in his epistle to the Corinthians so frequently alludes to these games. See 1 Epil. vi. 2 Epil. iv. 7, 8, 9.

CENCHRES, a small island of Greece, towards the bottom of the Saronic gulf, according to Pliny.

CENCHRES, in Ornithology, a name given by Gesner, Aldrovandus, and others, to the kind of hawk known in England by the title of Keffle, Stranel, or Windhover hawk, Falco Tinnunculus of Linnæus.

CENCHRES, in Zoology, the name of a species of Boa that inhabits South America, and which is distinguished by having 265 abdominal plates, and 57 caudal. Linn.—Boa flavipes ochelli olivoidi, ride grisea, Bodduert.

Boa cenchres is a species of large size, though inferior in this respect to either the boa constrictor, or the spotted boa. The prevailing color is yellowish-tawny, darkened on the back, where it is marked by a continued series of very large blackish circles extending from the head to the tail: the sides are marked with a number of kidney-shaped blackish spots, many of which are occluded with whitish: the head is of a lengthened form, and is marked by a black longitudinal and two lateral bands.

CENCHRIUS, in Ancient Geography, a river of Apha Minor, in Ionia, which had its course through the territory of the city of Ephesus, according to Tactius and Pausanias.


Gen. Ch. Col. involucre variously divided, often ciliated, containing from two to four flowers; or, if wanting, the defect compensated by ciliated calyx-glymes; calyx-glymes lanceolate, concave, acute, shorter than the corolla, generally about two-flowered; one of the flowers often male. Cor. Glumes concave, lanceolate, acuminate, awnless; one shorter than the other. Stam. filaments three, capillary, the length of the corolla; anthers arrow-shaped. Pfl. gam. roundish; style filiform, the length of the flaminus; style two, hairy, oblong, spreading. Scida roundish, enclosed in the permanent corolla.

Eff. Ch. Involucre variously divided, often ciliated; or, if wanting, the defect compensated by ciliated calyx-glymes; style one, biund.

* With an involucrum.


"Spice oblong, conglomerated." Root annual. Stems from eight to ten inches high, bent at the lower joints, smooth, flattened, compressed, almost angular. Leaves from four to five lines broad, long, smooth, fringed: leaves long, smooth, slightly tomentous at their office. Spike two or three inches long; simple, upright: spikelets on short peduncles, scattered or alternate, at a small distance from each other; involucres large, entire at the base, cut at the edge into several small, awl-shaped, fetaecous, yellowish or somewhat violet segments; flowers from two to four in each involucre, very small. Scidae almost elliptical, flat, a little convex, without a furrow. A native of Jamaica and the coast of Barbary, described by Poiré from a living plant in the botanic garden at Paris, cultivated in England by Doody, in 1691. It is one of the most common graves in the open purlieu of Jamaica, and is esteemed a wholesome and pleasant food for all sorts of cattle. 2. C. tribuloides, Linn. Sp. Pl. 5. Mart. 8.
CEN

CEN

**Without an involucre.**

12. *C. inflexus*, Poir. 9. “Leaves lanceolate, villous; racemes lateral, inflexed, on long peduncles; spikelets sessile, spiklets in aingle row.” Stems branched, cylindrical. Leavers entirely covering the stem, an inch and half long, about four lines broad at their base, lanceolate, almost heart-shaped, finely villous, most villous on the sheath and at the edges. **Peduncles from the axes of the upper leaves, five or seven inches long, simple, smooth; each terminated by a spike of sessile flowers, so curved at its insertion as to make nearly a right angle with the stem; spikelets lanceolate, narrow, very acute; calyx one or two-flowered; outer ovary echiuated with spiiny points, ciliated at its edges, very acute; inner one short, villous, corolla one-valved, much shorter than the calyx, flat, smooth, obtuse. Seed naked, shining, oblong, cylindrical. A native of Cayenne. Described by Poiret from dried specimens in the herbarium of Jussieu and La Marck, but not so perfect as to make him quite certain that the plant may not more properly be referred to some other genus. On account of its one-valved corolla, it appears to us to be truly an alopecurus, and might have been placed very conveniently next to *A. monspesicus* of Linnæus, if that plant had not been described by Schrebcr and Dr. Smith to have really a two-valved corolla, and therefore removed to pleumum. Its racins resembles that of *paspalum*, 13. *C. ovatus*, Poir. 8. Lam. III. 838. fig. 2. “Leaves quite smooth, rather firm; spike densely egg shaped.” **Stems stiff, smooth, cylindrical. Leaves stiff, acute, rolled in at their edges; sheat cylindrical, long, narrow, enveloped at its orifice with a small tuft of fine whitish hairs. Flowers in a thick branched spike; outer calyx-valves echiuated with stiff, whitish hairs; flowers smooth, oval, mucronate; two or three in each calyx. Gathered by Sonnerat at the Cape of Good Hope, preferred in the herbarium of La Marck.” 14. *C. remotifolius*, Poir. 9. “Leaves tomentous-white on their upper fr., eflated underneath; spike obtuse, egg shaped.” **Stems upright, smooth. Leaves stiff, narrow, flat, a little...
a little rolled in at their edges; sheaths cylindrical, flattened. Spike very close, sometimes interrupted at its base; outer valves of the calyx echinate with short, stiff, unequal points; florets three or four in each calyx, oblong; valves very acute. A native of the Cape of Good Hope, preferred in the herbarium of La Mareck. 15. C. carthamnus, Wait. Flor. Car. p. 79. "Spike glomerate; glumes globular, muriated with spines, even."

Obf. In conformity with Poirret's ideas on the subject, we have extended the generic character so as to include the last four species, which would be excluded by it, as it was originally contrived by Linnaeus; without, however, being perfectly satisfied that they may not be better otherwise disposed of. 16. C. frutescent, Linn. Sp. Pl. 6. Mart. 9. Willd. to. (Arundo gracile, Linn. It. Alp. exot. tab. 164. Gram- men orientale, Echium fruticosum, Linn. spec. echinatus in capitulum congens; Tournefort, cor. 39.) "Heads lateral, fiddle; leaves mucronate; stem shrubby." Linn. Root perennial. A native of Armenia. La Mareck affirms, on the authority of Tournefort's speciments preferred in the herbarium of the museum at Paris, that its leaves have no sheaths, and that therefore it cannot be a gramineous plant. He has no doubt, notwithstanding the singularity of its habit, of its being really an eryngium. See Encyc. vol. iv. p. 756, and vol. vi. p. 53.

CENCRUS capitatus; Linn. Mart. Willd. Poir. See Echinaria.

CENCRUS lappaceus; Linn. Mart. Willd. Poir. See PANICUM lappaceum.

CENCRUS racemofus; Linn. Mart. Poir. See LAPAGO.

CENCRUS granularis; Linn. Mantilla. Mart. See MAISURIS.

As these four plants are destitute of an involucrum, they are improperly placed by Linnaeus under his cenchus; and as they have not an echinated calyx glume, they are equally excluded from our second section.

CENDEVA, in Ancient Geography, a marsh of Asia, in Phœnicia; placed by Pliny at the foot of Mount Carmel.

CENEDA, in Geography, a town of Italy, in the Trevisiana, belonging to the state of Venice, the eve of a bishop, suffragan of Udine, destroyed by the Huns and Goths; 20 miles of Trenigo.

CENDRILLARD, in Ornithology, the name given by Buffon to the St. Domingo Cuckow. Cuculus dominicus. Gmelin.

CENDRILE, the cinerous Lark, Alauda cinereus of Gmelin, is so named by Buffon in his Nat. Hist. d. Oise.

CENGOLD, in the Saxon Antiquities, an expiatory mullet, paid by one who had killed a man to the kindred of the deceased. The word is compounded of the Saxon eon, i.e. cognatio, relation, and gild, foliation, payment.

CENENOTLATOTLI, in Ornithology, the name by which Nieeremberg described the Polyglot or American mocking Thrush; a bird celebrated for the different modulations of its notes, which excel those of the nightingale in melody.

CENERIUM, in Ancient Geography, a small town of the Peloponnesus, in the Elide, according to Strabo.

CENEPOLIS, a name given by Polybius to a town of Spain.

CENESTAM, a town placed by Ptolemy towards the middle of the island of Corifica; which was an episcopal see.

CENETE, a town of Venetia, N. of Tarvisium.

CENGOTTO, in Geography, a small island in the Mediterranean; 24 miles N.N.W. of Candia. N. lat. 36° 1'. E. long. 4° 15'.
himself to them. That the inhabitants may not excite upon strangers, the king has fixed an order to regulate the price, which is generally stuck up in the poll-houses. From Laufnebourg to Novalea are two roads, the old and new; the last is the worst, but the shortest, and always chosen by those who travel on mules or in chairs. The Laufnebourg chairs are very active and expeditious in performing their labour; but notwithstanding their alertness and the extreme fatigue, that seems to attend it, they attain, in the use of the most simple diet, a considerable longevity. In order to betther to secure their footing, their shoes are without heels, and the soles are rubbed with wax and rosin. The machines in which travellers are carried down hill are a kind of draw chairs, with low back, two arms, and instead of feet a little board hanging down by a cord for supporting the traveller's legs. The feet, which is made of bark and hones twisted together, is looked to two poles, and carried, like a sedan, with broad flaps.

On the summit of mount Cenis is a plain, of rather a long uneven valley betwixt very high mountains, whose tops, even in summer, are covered with snow; and in winter and spring, when vast quantities of snow fall from the hills into the valley, the journey over mount Cenis is rendered not a little dangerous. There are lakes built up and down along the mountain for the herdmen, who come lither in summer with their cattle; fine grasses and several sorts of flowers being produced here, in the months of July, August, and September. This mountain, like some other parts of the Alps, abounds with chamois, wolves, marmottes, and hares. Half-way up the mountain is a lake about a league in circumference, which is said to be in the middle almost unattainable. In this lake is fine trout, some of which weigh 16 pounds. It is constantly fed up with water from springs issuing from the adjacent eminences, which are always covered with snow, and often with clouds; and out of it flows a river, which being augmented by other springs falls down in very delightful cascades; this river is by some called Senar, by others St. Nicholas; and near Suca it leaves itself in the Petite Doire or Dura. Kefler erroneously affirms, that the mountain of Roche-melon, on the left hand of Cenis, betwixt Pertiere and Novalea, is reckoned the highest of all the Italian Alps; it is 11,977 English feet above the sea; and little mount Cenis is 9,875; whereas mount Rosa exceeds 15,302, and mont Blanc is, according to Sir George Sackborough, 15,624; and according to De Luce 15,504. Kefler's Travels, vol. i.

Cenna, in Ancient Geography, a mountain of Africa, in Mauritania Cezariensis.

Cenning, Ceninga, or Ceninga, in our Ancient Books, denotes notice given by the buyer to him of whom he had bought, that the thing purchased was claimed by another, that he might appear and avow, or warrant his bargain. "The word is formed of the Saxon cennan, authore adducas; to call an author. Du Cange.

Ceno, or Zeno, in Geography, a river of Italy, which runs into the Tarso; 8 miles S.S.W. of Parma.

Cenobite. See Coenobite.

Cenomani, in Ancient Geography, a people of Transalpine Gaul, belonging to the Aulerci, whose country corresponded to the diocese of Mans. The Cenomani also were a people who originally came from Gaul, where they inhabited the country called by moderns le Maine, and settled themselves in Italy, a little after the year 600 B.C. Their principal towns in Italy were Brixia, Cremona, Mantua, and Verona.

Cenotaph, composed of κένο, empty, and τάφος, tomb, an empty tomb, or a monument without a body under it; erected only by way of honour to the deceased; and distinguished from sepulchre, in which a corpse is actually deposited.

Cenotaphs are honorary tombs, erected either to perform buried in another place, or to those who have received no burial, and whose relics cannot be found, as being killed in battle, lost at sea, or the like. Among the ancients the same privileges and religious regard were allowed to these common tombs & honoraria, as to real tombs. Card. Norris has a treatise express on the cenotaphs of the Cenars, Cains, and Laurus, which are still seen at Ptia. Lampud, in Alex. cap. 15.

Censal, in the Mediterranean parts, denotes a regula or established broker, authorized to negotiate between merchant and merchant.

Censer, in Antiquity, a kind of vessel where incense was burnt to the gods.

Censer is chiefly used in speaking of the Jewish worship. Among the Greeks and Romans it is more frequently called thurible, thuris, and auranum, which see.

The Jewish censer was a small sort of chafing-dish, covered with a dome, and suspended by a chain. Josephus tells us, that Solomon made twenty thousand gold censers for the temple of Jerusalem, to offer perfumes in, and fifty thousand others to carry fire in.

Censer, the same with Ara.

Censio, in Antiquity, the act or office of the censor. See Censor. Censio included both the rating or valuing of a man's estate, and the imposing of mulcts and penalties.

Censio balsarum, a punishment inflicted on a Roman soldier for some offence, as laziness or luxury, whereby his bals, or spear, was taken from him, and consequent his wages, and hopes of preeminence dropped.

Censitius, a person cenfled, or entered in the cenfual tables. See Census.

In an ancient monument found at Ancyra, containing the actions of the emperor Octavius, we read, "Quo ultero civium Romanorum Cenitae sunt capita quadragesima Centum milia & sexaginta tria.""
ceived at the census. M. Ruttilius was the first; who, having been twice consul and once dictator, in the year 402, demanded his census. The custom was to elect two, or the one of a patrician family, the other a plebeian; and upon the death of either, the other was discharged from his office, and two new ones elected; but not till the next lufrum. In the year 414, a law was made, when Publius Philo was dictator, appointing one of the cenfors to be always elected out of the plebeians; which held in force till the year 622, when both cenfors were chosen from among the people, viz. Q. Cæcilius Metellus, surnamed Macedonius, and Q. Pompeius; after which time, it was shared between the senate and the people.

The last cenfors, viz. Paulius and Planerus, under Augustus, are said to have been private persons; not, indeed, that they had never borne any public office before; but of a dilution from the emperor; all besides him being so called.

This office was so considerable, that none aspired to it till they had passed all the rei; so that it was looked on as surprising, that Crassus should be admitted censor, without having been either consul or praetor. The term of this office was at first established for five years; but that institution only lasted nine; M. Marcius Eumadius the dictator, in the year 325, made a law, restraining the censorship to a year and a half; which was afterwards observed very strictly. Thus, Rome was regularly without cenfors 33 years; for the lufrum did not cease by the end of the year. But this order was often interrupted, either by wars abroad, or domestic divisions, or some other particular reasons. Sometimes five years expired without the creation of any cenfors; on other occasions cenfors were created more than once during the space of a lufrum, if those who had been first chosen had not been able to complete the census.

The power of the cenfors was at first very limited; but afterwards it became very extensive. All the orders of the state were subject to them. Hence the cenfrian ship is called by Plutarch (in Cat. Maj.) the whim of all pretenders, "omnium honorum apex, vel fastigium;" and by Cicero (in P. 4.) "magistra pudoris et modelliz." The title of cenfor was esteemed more honourable than that of consul; as appears from ancient coins and statues; and it was reckoned the chief ornament of nobility to be sprung from a cenforian family.

The sentence of cenfors only affected the rank and character of persons; and it was therefore properly called "ingnomia," and in later times had no other effect besides putting a man to the blufis, or, as Cicero expresses it, "nihil feri damauto offerbatur prator ruborem." It was not fixed and unalterable, like the decision of a court of law; but might either be taken off by the next cenfor, or rendered ineffectual by the verdict of a jury, or by the suffrages of the Roman people. Thus we find C. Geta, who had been excluded the cenfor by the cenfors, A. U. 659, the very next lufrum, chosen himself cenfor. Sometimes the cenfors added force to the forbe sentence of the cenfors, by their decree, which imposed an additional punishment. When the cenfors acted improperly, they might be brought to a trial, as they sometimes were, by a tribune of the commons. Two things were peculiar to the cenfors: 1. No one could be elected a second time to that office, according to the law of C. Marius Romanus, who refused a second cenforship when conferred upon him, hence named "Conforinum." 2. If one of the cenfors died, another was not substituted in his room; but his surviving colleague was obliged to resign his office. The death of a cenfor was deemed ominous, because it had happened that a cenfor died, and another was chosen Vol. VII.

in his place, in that lufrum in which Rome was taken by the Gauls. Before the cenfors began to exercise their office, they swore that they would do nothing through favour or hatred, but that they would act uprightly; and when they resiged their office, they swore that they had done so. Then going up to the treasury, they left a bit of the same which they had made "ex ara." A record of their proceeding was kept in the temple of the Nymphs, and it is said to have been preserved with great care by their descendants.

The bufiness of the cenfors was, to register and value the effects, &c. of the Roman citizens; and to impose taxes, in proportion to what each person possessed. Cicero reduces their functions to the numbering of the people; the correction and reformation of manners; the eliminating of the effects of each citizen; the proportioning of taxes; the superintendence of tribute; the exclusion from the temples, and the care of the public places. They had also a right, senza eicere, to expel from the senate lurch of the members as they judged unworthy of the dignity; as well as to break and calum the knights who failed in their duty, by taking from them the public horfe, epum adinere.

There are many examples of cenfors expelled by the cenfors, generally for good reasons, yet sometimes through mere perversity, envy, or revenge: but in such cases, there was always the liberty of an appeal to the final judgment of the people. So that the cenforian power, properly speaking, was not that of making or unmaking cenfors, but of expelling only those whom the people had made; and of insulting their manners, and animadverting upon their vice; over which they had a special jurisdiction delegated by the people. Their rule of cenfuring feems to have been grounded on an old maxim of the Roman policy, rejoicing, "that the senate should be pure from all blemish, and an example of manners to all the other orders of the city;" as we find it laid down by Cicero in his "Book of Laws," which were drawn, as he tells us, from the plan of the Roman constitution.

Besides the talk of enrolling the cenfors, and inspecting their manners, it was a part likewise of the cenforian jurisdiction to let out to farm all the lands, revenues, and customs of the republic; and to contract with artificers for the charge of building and repairing all the public works and edifices, both in Rome, and the colonies of Italy. Now in this branch of their office it is certain that they acted merely under the authority of the people, and were prohibited by law to let out any of the revenues, except in the rostra, under the immediate inspection and in the very presence of the people.

In the general census and review of the city, held by them every five years, though every single citizen was particularly summoned and enrolled by name in his proper tribe, as a freeman of Rome, yet that solemn enrolment, as Cicero tells us, did not confirm any man's right to a citizenship, but signified only that he had palled for a citizen at that time, because the proper power of determining that right resided always in the people. (Cicer. pro Arch. 5. Jan. 52. Middleton of Rom. Sen. p. 50, 68, 70, 81, &c.)

When Rome had extended her conquests, and founded many colonies, or given the freedom of the city to many of her neighbours, the functions of the cenfors became proportionally more extensive. Officers, who were also called cenfors in those colonies, and municipal cities, gave the cenfors of Rome an account of the condition of those cities, of the number of their inhabitants, and of their riches; and their reports were registred in the books of the cenfors. The power of the cenfors continued unimpaired to the ...

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bishops of Clodius, A. U. 695, who procured a law to be enacted, ordaining that no senator should be degraded by the censors, unless he had been formally accused and condemned by both censures; but this law was abrogated, and the powers of the censurship reverted soon after by Q. Metellus Scipio, A. U. 722.

The office continued to the time of the emperors, who allowed the authority of it to themselves, but without the name, calling themselves, instead of censors, magistri prefelli; though Vespasian and his sons took a pride to be called censors, and put among their other titles on their coins. Decius attempted to restore the dignity to a particular magistrate. After this we hear no more of it till Constantine's time, who made his brother censor: the last, who seems to have enjoyed the office.

The necessity of appearing at certain times before the tribunal of the censors, to give an account of their conduct, imposed universally on all the citizens, and from which neither birth, services rendered to the state, nor the most important offices previously exercised, as those of consul and dictator, exempted any one, must have been a powerful check upon licentiousness, and disorder. There are, says the author of "Confederations upon the Caesars and Declension of the Romans," bad examples, which are more pernicious even than crimes, and more states have been ruined by corrupting their manners than by violating their laws. At Rome, whatever might introduce dangerous innovations, change the sentiments or inclinations of the good citizen, and prevent their perpetuity; in a word, all disorders of a public or private nature were reformed by the censors. If luxury and avarice, the usual causes of the ruin of states, were introduced too late at Rome; if poverty, frugality, simplicity, and moderation in the table, buildings, furniture, and equipage, were so long in honour there, this extraordinary felicity ought, without doubt, to be ascribed principally, or in a great degree, to the inexorable severity of the censors, rigidly attached to the ancient manners of their country, from which they well knew how important it was not to depart. The authority of the censurship produced at Rome the same effect, in respect to manners, as the severity of the military discipline did in the armies with respect to the support of subordination and obedience. And there were the two principal causes of the Roman greatness and power. Whatevers victories are gained, whatever provinces are subdued, if purity of manners do not prevail in the different orders of a state; if the administration of justice, and the power of the government, be not founded upon invariable equity and a sacerore love of the public good, however powerful an empire may be, it cannot subsist long. (Val. Max. i. ii. c. 9.) The fanciety of oaths was no where so much respected as at Rome. This was, as Cicero remarks, (Offic. l. iii. c. 3.), because no crimes were so severely punished by the censors, as breach of faith and contempt of oaths. Upon the whole, we may observe, that upon the office of censurship depended, in a great degree, the good order, regulation, discipline, conformity of the manners, and administration of the revenues of the commonwealth. See on the subject of this article, Dion. Hal. Dion. Cassius. Livy. Cicero. Val. Max. Suetonius. Tacit. Annal. &c. &c.

The republic of Venice has at this day a censor of the manners of their people, whose office lasts six months.

Censors of books are a body of doctors, or other officers, established, in divers countries, to examine and give their judgment of all books, before they go to the press; and to see they contain nothing contrary to the faith, and good manners. In England we had formerly an officer of this kind, under the title of licenc of the press; but since the revolution the press has been open.

At Paris, the faculty of theology claimed the privilege of censuring, as granted to them by the pope; and it is certain they have been in possession of it for many ages: but in the year 1624, a new commission of four doctors was created, by letters patent, the sole public, and royal censers, and examiners of all books; and answerable for every thing contained therein. The faculty, however, still maintained their claim, by taking occasion, now and then, to give their approbation to books.

In the year 1678, when public censers were appointed without their consent, whom the faculty opposed, they flouted the antiquity of their right to be 300 years. For they said, "It is above 300 years since the doctors of Paris have had a right to approve books without being subjected but to their own faculty, to which they are not able for their decisions."

Many centuries before the invention of printing, books were forbidden by different governments, and even condemned to the flames. See Burning of Books. Authors, at this early period, submitted their works, before they were published, to the judgment of their superiors. This was principally done by the clergy; partly to secure themselves from censure or punishment, and partly to manifest respect for the pope or bishops. This, however, does not appear to have been, on their part, a duty, but a voluntary act. In 508, Ambrosius Autpert, a Benedictine monk, sent his exposition on the book of Revelation, to pope Stephen III., and begged that he would publish the work, and make it known. On this occasion, he says expressly, that he is the first writer who ever requested such a favour; that liberty to write belongs to every one who does not wish to depart from the doctrine of the fathers of the church; and he hopes that this freedom will not be leisened on account of his voluntary submission. Soon after the invention of printing, laws began to be made for subjecting books to examination; a regulation proposed even by Plato; and which has been wished for by many since. It is, indeed, very probable, that the apprehensions of the clergy, lest publications should get abroad prejudicial to religion, and consequently, to their power, contributed not a little to hale the establishment of book-censers. The earliest instance of a book printed with a reprobation from government is commonly supposed to occur in the year 1480; but professor Beckmann mentions two books, which were printed almost a year sooner than 1479, with the approbation of the public censor. The oldest mandate for appointing a book censor, that has occurred to him, is that issued by Berthold, archbishop of Metz, in the year 1486. In 1501, pope Alexander VI. published a bull, which contains several prohibitions and regulations, with regard to the printing of books, and decrees all catalogues and books before that period to be examined, and those which contained any thing prejudicial to the Catholic religion to be burned. In the council of Lateran, held at Rome in 1515, it was ordered, that in future no books should be printed but such as had been inspected by ecclesiastical censers. Beckmann's Hist. of Inventions, vol. iii.

CENSORIAL, Censorius, something that relates to the office of censor. In which sense we meet with cenforia nota, or animadverfio, cenforia virgula, &c.—cenforia lex, denoting a law palied or enacted by the censors:—bemo cenforius, a person who has borne the dignity, and served the office of cenfor:—virgula cenforia, which, among the ancient Grammarians, and Critics, denoted a note or mark of reproduction, affixed to those passages of a book or writing, which the critic disapproved or condemned.
CENSORINUS, in Biography, a learned grammarian, is supposed to have been of the Martian family, and to have been eminent at Rome in the times of Alexander Severus, Maximian, and Gordian. In the first year of the emperor Gordian, A.D. 238, he wrote his famous book "De Die Natali," which has been of great use to chronologers by connecting the principal years of various events of antiquity. It was dedicated to Q. Cerelius, of the equestrian order, and has been often cited with commendation by Sidonius, Cassiodorus, Priscian, and others. This work has passed through a great number of editions. It was printed at Hamburg, in 1614, with a perpetual commentary, by Lindenbroc; at Leyden, with additional notes, in 1642; at Cambridge in 1695; and by Havercamp in 1743. Censorinus also wrote a book "On Accents," Fab. Bib. Lat. vol. ii.

CENSUAL, Books, libri convenales, those wherein the census was taken down.

CENSUALES, in a substantive sense, denoted the clerks or public scrivens who wrote the censual books.

CENSUALES, in Ecclesiastical Antiquity, denoted also a class of the oblates, or voluntary slaves of churches or monasteries; or those who, for procuring the protection of the church, bound themselves to pay an annual tax or quit-rent out of their estates to a church or monastery. Besides this, they sometimes engaged to perform certain services. Robertson's Ch. V, vol. i. p. 326.

CENSURE, Censura, is popularly used for a judgment, whereby any book, person, or action is blamed or condemned; more particularly for a remand made by a superior, or perfun in authority.

Censure is also a custom, in several manors in Cornwall and Devon, whereby all the recipients above the age of sixteen are called to swear fealty to the lord, to pay two-pence per poll, and a penny per annum ever after, as rent-money, or common fine.

Censures, ecclesiastical, are the public menaces which the church makes, or pains and penalties incurred by disobeying what she enjoins; or rather the pains and punishments themselves; as interdiction, excommunication, &c.

Till the time of the Reformation, the kings of England were subject to the censures of the church of Rome; but the kings of France have always maintained themselves exempt from them.

The canonists distinguishes two kinds of censures; the one de jure, and the other de facto, or by sentence.

CENSUS, among the Romans, was an authentic declaration made upon oath by the several subjects of the empire, of their respective names, and places of abode, before proper magistrates in the city of Rome, called cenfori; and in the provinces, cenfrors, by whom the name were registered.

This declaration was accompanied with a catalogue, or enumeration, in writing, of all the estates, lands, and inheritances they possessed; their quantity, quality, place, value, tenants, domestics, slaves, &c.

Those who neglected to conform to this regulation were deprived of their estates, beaten with rods, and publicly sold for slaves, as persons who had deemed themselves unworthy of liberty.

The census was instituted by king Servius Tullius; to be held every five years; and this prince took the census four times during his reign. Tarquin the Proud neglected this useful institution. After the expulsion of the kings, the cenfors were charged with this care till the establishment of the censors. Each census terminated with a ceremony called lystrum, which fee.

There had been ten censuses, or lystra, before the first taken by the cenfori, which was the eleventh. See Censor. Servius, having by this regulation ascertained the valuation of the estates of the citizens, divided them into fix classes, and each class into a certain number of centuries. See Curty. By thus ascertaining the number of citizens and the value of their estates, Servius undertook to ease the poor by increasing the burdens of the rich, and, at the same time, to pleade the latter, by augmenting their power and influence. The census was taken anciently in the forum; but after the year 320, in the villa publica, which was a place in the Campus Martius; but the census was sometimes held without the concluding ceremony of the lystrum. The census comprehended all the ranks of people, though under different names; that of the common people was called census, or lystrum; that of the knights, censio, recensio, recognition; that of the senators, tetrio, rebellio. Hence, also, cenfus came to signify a person who had made such a declaration; in which sense it was opposed to insufficient, a person who had not given in his estate, or name, to be registered.

The census among the old Romans was held, as is commonly thought, every five years; but this must not be taken to be precisely true; on the contrary, Dr. Middleton has shewn, that both the census and lystrum were for the most part held irregularly and uncertainly, at very different and various intervals of time. See Lustrum.

The census was an excellent expedient for discovering the strength of the state; by it they learnt the number of the citizens, how many were fit for war, and who for offices of other kinds; how much each was able to pay of taxes towards the charge of the war.

The census, according to Salmusius, was peculiar to the city of Rome. That in the provinces was properly called prospeffio and propeffio. But this distinction is not everywhere observed by the ancients themselves.

In the provinces, the census not only served to discover the substance of each person, but where, and in what manner and proportion, tributes might be levied imposed.

Census was also used for the book or register wherein the professions of the people were entered. In which sense the census was frequently cited and appealed to, as evidence in the courts of justice.

Census is also used to denote a man's whole substance or estate.

Censura, the patrimony of a senator, which was limited to a certain value; being at first rated at eight hundred thousand sesterces, but afterwards, under Augustus, enlarged to twelve hundred thousand. Sueton. in Car. cap. 41.

Census equit. the estate or patrimony of a knight, rated at four hundred thousand sesterces, which was required to qualify a person for that order, and without which no virtue or merit was available. Suet. in Car. cap. 37. Hor. lib. i. sat. 30. vers. 57, 58, 70.

Censura was also used for a person worth an hundred thousand sesterces, or who was entered as such in the census tables on his own declaration. In which sense, cenfus amounts to the same with claflu, or a man of the first class; though Gellius limits the estate of those of these clafs to an hundred and twenty-five thousand sesterces. By the Vocijan law no census was allowed to give by his will above a fourth part of what he was worth to a woman. Aus. Celt. Not. Att. lib. viii. cap. 17. Cic. in Ver. 3.
**Census** was also used to denote a tax or tribute imposed on persons, and called also capitation. See Capita cens.

*Census dominicus*, in *Writers of the Lower Age*, denotes a rest due to the lord.

*Census decipher*, a double rent or tax, paid by vassals to their lord, on extraordinary or urgent occasions; as expeditions to the Holy Land, &c.

*Census ecclesiae Romanae*, was an annual contribution, voluntarily paid to the see of Rome by the several princes of Europe.

*Census focus*, that paid in money.

*CENT*, in *Commerci*, an abbreviation of the Latin *centum*, which properly signifies a hundred. It is applied when expressing the profit or loss upon any commodity.

*CENT* is also used in the trade of money, and signifies the benefit, profit, or interest of any sum of money which is laid out for improvement. Thus we say money is worth 4 or 5 per cent. upon exchange; that is, it brings four or five pounds profit for every 100 laid out.

*CENT* is also used with regard to the draughts or remittances of money, made from one place to another. Thus we say it will cost 2½ per cent. to remit money to such a city.


**CENTALLO**, in *Geography*, a town of Italy, in the principality of Piedmont; 2 miles N. of Conti.

**CENTAUREA**, in *Botany* (κένταυρες), or κένταυρος βάτος, herb centaur; κένταυρος, Theophr. Diocr. 4. 1. κένταυρος, Theophr. so called from Chiron the Centaur, who is said to have employed one of its species to care for himself of a wound accidentally received by letting one of the arrows of Hercules fall upon his foot.) *Linn. gen. 504. Schreb. 1771. Willd. 1789. Clays and ord. fingnenta polygamia fragrans. Nat. Ord. Compositae. Linn. Charophylla. Juss. Vent.*

Gen. Ch. *Centaurea*, common, imbricated, roundish; scales variously terminated. Cor compound, flaccular; florets differing in form; those of the disc florid, numerous; those of the ray fewer, looser, larger, funnel-shaped, constantly abortive; tube of the hermaphrodite florets filiform; border bellvory, oblong, erect, terminated by five linear erect segments; tube of the abortive florets tender, gradually enlarging, recurved; border oblong, obtuse, unequally divided. Stem. of the hermaphrodite floroes: filaments five, capillary, very short; anthers united into a hollow cylinder, the length of the petal; of the abortive florets none. Pyl. of the former: germ small; style filiform, the length of the filaments; stigma very obtuse, projecting in a point, in many species bifid; of the latter, germ very small; style scarcely any; stigmas none. Seeds of the fertile florets solitary; down in most species feathered or capillary; recept. briliy.


This extensive genus was formed by *Linnæus* as a kind of common receptacle for such plants as would have been placed under some other genus of compound capitae flowers, if they had not had a ray of abortive florets, which, by the principles of his system, obliged him to place them in this third artificial order, at a distance from their natural congers. It contains centaurea majus of *Tournefort*; *jacea* and *cyannus of Tournefort* and *Vaillant*; *celestrap*, *celestraposides*, *rhaponticum*, *rhaponticoides*, *amnerboi*, and *crucilum* of *Vaillant*. Molts of these have been revised by *Juddic* as separate genera, with some alterations, and are retained by Venticat.
CENTAUREA.


CENTAURIA.

rous, somewhat heart-shaped, on long pedicels; stem-leaves few, on short pedicle; sometimes pinnatifid. Flower purple, solitary, large, without any barren florets; La Marek on that account has discarded it from his genus, and Gart-ner has referred it to Scrophularia. 25. C. babylonica, Linn. 


Morif. hist. tab. 28. fig. 10.) "Calyxes conical, hard; 

seeds fix or seven feet high, simple, upright, winged, a little woody. Root-leaves very large, a foot and a half long, upright, petioled; stem-leaves diminishing in size from the bottom to the top, giving the plant a pyramidal form, rough to the touch. Flowers yellow, nearly sessile; in a very long, upright, terminal raceme, growing in bunches three or four together along the raceme; calyx almost smooth, made rough by the little expanding points which terminate the foliaceous. A native of the Levant. 26. C. alata, Lam. 10. 

Matt. 60. Wildl. 58. Vahl. symb. 22. "Calyxes egg-shaped, smooth, five, a few, somewhat curved at the tip; leaves greenish, deciduous, united; radical ones lyrate." Root perennial. Stems four feet high, smooth, a little angular, branched near the top, forming neither a spike, nor a raceme. Root-leaves considerably less than those of the preceding species, 

narrow, very little downy; stem-leaves narrow. Flowers bright yellow; calyx scales slightly saccate at the tip. Willdenow attributes it to ferrate; and Vahl, ciliated calyx-scales. Described by La Marek from a living plant, in the royal garden at Paris, where it had long been cultivated, supposing it to be a native of Tartary. 27. C. glafifolia, Linn. Sp. Pl. 33. Matt. 36. Lam. 11. Wildl. 71. Curt. Bot. mag. 62. (Centaureum majus incanum humile, capitae pinni, Tourn. 449. Jacca incana capitae pinni, Bauh. pin. 272. Morif. hist. tab. 29. fig. 19. Chamaeleon non aculeatum; Lob. ic. 2. p. 7. Stæhle, Barr. ic. 38.) "Leaves tomentose; root ones lanceolate; stem ones pinnatifid; stem simple. Stem fix or eight inches high, upright, frilled, cottony. Leaves greenish above, very white and cottony underneath. Flower very large, purple, terminal, branched; calyx shaped like a pine-cone, very taper at the top, where it closely surrounds the florets; only one a little above it: several fringed, transparent, the upper ones red. A native of the north of Europe. 29. C. membranacea, Lam. 16. Cucuru undi- 

flor, Linn.? "Calyces membranous; leaves pinnatifid, toothed." Nearly allied to the preceding. Stem a little taller. Leaves deeply pinnatifid. Flower large, purple; calyx shorter than in C. conifera; scales whitish with a pale brown tint, rounded at their fummat. Inerated at their edges. A native of Siberia. 111. Rhiptentica. Calyx-scales dry and saccate, ciliate-ferrat. (Khaponticum; Linn.)

3°. C. fulcérina, Wildl. 59. "Calyx scales egg-shap- 

ed, acuminate, ciliate-ferrate; leaves hoary underneath; root ones pinnatifid; stem ones lanceolate." Root perennial. Stem a foot high, quite simple, one-flowered, cylindrical, upright, tomentose. Root-leaves two inches long, petiolate; 

segments lanceolate, entire, terminal one very large; stem leaves an inch and half long, entire. Flower purple; the ray twice the length of the disc; lower calyx-scales snow-white; upper ones brownish. A native of the East. 31. C. Bulb- 

niflata, Lam. 26. Wildl. 51. (Carduus orientalis compl. hortennis folio; Tourn. Cor. 32. Itin. 2. p. 439.) "Calyces ciliate-fringed with straight, rigid, white bristles; leaves oblong, a little toothed; flower yellow, without a ray." Lam. "Seals egg-shaped, ciliate-ferrated, awned; leaves oblong, undivided, nearly entire, ferraceous, nucrinated. Wildl. Stem two feet high, frilled or angular, slightly villous, leafy; branches upright, one-flowered. Root-leaves oblong, acute, petioled; stem leaves scattered, feathery, lanceolate, a little toothed, whitish green. Flowers yellow, terminal; barren florets smaller than the fertile ones; calyx globular; scales beautifully fringed with rather long, stiff, whitish bristles. La Marek, from a living plant, in the royal garden at Paris, raised from seeds gathered by M. André in Syria or Armenia. Stem erect, cylindrical, smooth; very feathery. Leaves feathery, green; higher ones a little hoary; root ones oblong, acute; stem ones lanceolate-oblong; lower ones somewhat toothed, rather acute; upper ones quite entire, ending in a long bristle-shaped point. Flowers yellow, without a ray; calyx-scales yellowish, terminated by a long bristle, ciliate-ferrated at the edges. Wildl. from a dried spicemen. He quotes La 

Marek, but it appears dubious whether they have not referred different plants. 32. C. macrocephola, Wildl. 52. "Calyx-scales roundish-egg-shaped, ciliated; leaves oblong-lanceolate, undivided, very ferraceous, acute, ferrated." Branches the thickest of a swan's quill. Leaves three inches long, an inch and a half broad at the base, embracing the stem. Flowers yellow, without a ray. A native of 

Iberia. 33. C. calendulacea, Lam. 31. "Calyxes ciliate- 

hairy; inner scales ligulate, ferrate, ferrated at the tip; stem-leaves pinnate; those on the branches simple. Stem a foot and a half high, angular, frilled, much branched, panicled. Flowers yellow, terminal; fertile florets few, small; barren ones large, ligulate, flat, four or five toothed; inner calyx-scales long, narrow, toothed at the fummet; the other shorter, ciliated with long reddish hairs. A native of Armenia; discovered by M. André; described by La Marek from a living plant. 34. C. atrapurpurea, Wildl. 53. Wildl. 59. and Kitaib. pl. rar. Hung. 2. p. 127. tab. 116. "Calyx-scales ovate-lanceolate, ferrate-ciliated; leaves bipinnatifid; segments lanceolate." Flowers dark purple; calyx-scales black, fringed with white. A native of Hungary among calcareous rocks. 35. C. orientalis, Linn. Sp. Pl. 23. Matt. 27. Lam. 44. Wildl. 54. (Cyamus; Hall. Act. Angl. 1743. vol. 43. p. 94. tab. 4.) "Calyx-scales pinnatifid-ciliated; leaves deeply pinnatifid; segments linear-lanceolate." Lam. Nearly allied to C. lechobis, but distinguished from it by the color of the flower, and the structure of the calyx. Root perennial. Stem a foot and a half or two feet high, frilled, branched, downy near the fummet. Leaves petiolated, large, green. Flowers bright yellow, large, terminal; calyx-scales yellowish white, roundish, downy at the base, ciliated with long pinnatifid hairs. A native of Siberia and Tartary. 36. C. fimbriata, Matt. 72. Scop. infr. 38. tab. 32. "Calyxes ferrate ciliated; leaves dotted underneath, pinnate; pinnae lanceolate, scalaris, erect." Nearly allied to the preceding. Root perennial. Root-leaves entire. Flowers pale yellow, feathery; calyx-scales twice as large as in C. orientalis, not at all downy at the base; lacked all round; down of the seeds very apparent. 37. C. flavi- 

CENTAUREA.

fibrius; Curt. vol. ii, p. 383.) "Calyx scales egg-shaped, obulb.; ciliate; leaves downy on both sides, pinnatifid and undivided; stem declining." Root perennial. Stem from six to nine inches high, quite simple, rarely furnished with a single branch, somewhat furrowed, pubescuent. Leaves lanceolate; root ones generally pinnatifid; lobes turned upward, entire, terminal one very large; stem leaves mostly five or fix. the uppermost generally undivided. Flowers purple or flesh-colored, often single, with a large ray of barren florets; calyx, dwelling. A native of Siberia. 38. C. pefilitis Willd. 55. "Calyx scales ciliate-ferrated; flowers ciliate, leaves pinnatifid, hairy; stem none." Root perennial. Leaves an inch and a half long, petioloed; segments lanceolate, rather obtuse, quite entire in the upper part, arched toward the base with an oblong tooth; terminal one larger, egg-shaped, somewhat toothed. Flowers purple, five or fix. ciliate on the crown of the root, not at all pedunculated; calyxes oblong. A native of Armenia. 39. C. voragiza, Willd. 57. Schouboe Moroc. p. 199. "Calyx scales fearious at the tip, ferrated; leaves scarious at the edge; root ones oblong toothed; stem ones lanceolate, somewhat decurrent, quite entire." Root perennial. Flowers pale violet; side twice the length of the ray; calyx egg-shaped; lower leaves toothed at the tip, mucronated; upper ones encased with a fearious toothed scale. A native of Barbary. 40. C. fruticosa, Willd. 59. "Calyx scales ciliate; leaves linear, downy, fove-nerved, quite entire; stem erect." Stem downy; branches few, fagitate, one-flowered. Leaves an inch or an inch and a half long. Flowers purple. A native of Siberia. 41. C. nigrescens, Willd. 28. "Calyx scales fearious; root leaves oblong toothed; lower leaves somewhat toothed at the base, upper ones undivided, quite entire." Root perennial. It differs from C. nigra, in having a radiate flower, and calyx scales ciliate, not fothered; from C. jacea in having a ciliate calyx, root leaves often obliquely pinnatifid, and the lower stem ones often deeply toothed at the base. A native of Hungary and Austria.

IV. Cym. Calyx scales ciliate-ferrated, not fearious. (Cyanus and Jacc. Jull.)

42. C. Tryumfettii, Mart. 67. Willd. 29. Alib. ped. n. 379. (Cyanus; Triumf. Obfl. 26. Mcl. taur. 5. p. 68.) "Calyx ferrated; leaves foseille, downy, lanceolate, pinnatifidim" Willd. "Calyx ferrated, with white ciliate; leaves decurrent, deeply pinnatifid; pinnae generally two." Alibon. Root perennial. Stem simply or branched; branches one-flowered. Lower two inches long. Flowers purple. A native of mount Cenis. 43. C. ceterambifolia, Willd. 50. Phytoz. 12. n. 42. tab. 7. fig. 2. (Cyanus orientalis, angulifolius, incanus; filo magno, citrino; Tourn. Cor. 32.) "Calyx ferrated; leaves downy; root ones pinnatifid; stem ones foseille, linear, somewhat toothed; stem one-floree-ed." Root perennial. Flowers yellow, with a large ray; calyx scales fimbriated at the edges. A native of Armenia. 44. C. schraderi, Willd. 31. (Cyanus orientalis, flose maximo, citrino; Tourn. Cor. 32.) "Calyx ferrated; leaves oblong, ferrated, decurrent, and undivided." Root perennial. Flowers pale yellow, twice as large as those of C. montana. A native of mount Caucasus. 45. C. atrata, Willd. 32. (Cyanus orientalis folio fimbriato dentato; flore magno; Tourn. Cor. 32.) "Calyx ferrated, fimbriated; leaves lanceolate, foseille, smooth, toothed." Root perennial. Stem seven or eight inches high. Leaves an inch and a half long, green; younger ones woolly at the edge. Flowers blue; calyx scales black, with white teeth. A native of Armenia. 46. C. variegata, Lam. 29. (C. axillaris, Willd. 33. C. fennana, Villars delph. 5. p. 52. Suter helv. 2. p. 205.) "Calyx ciliated, variegated; leaves foseille, linear, downy; stem one-flowered." Lam. "Calyx ferrated, leaves hairy, lanceolate, decurrent; lower ones linear-toothed at the base; peduncles axillary and terminal." Wild. Root perennial. Stem from five to seven inches high, quite fimbriate, cymose. Leaves about three inches long, two lines broad, entire, a little umbellated, cymose, and whistled on both sides; flowers has a little fimbriated; upper ones shorter, more distant from each other. Flowers fine blue, large, terminal; calyx scales smooth, green at their base, blackish at their edges, furnished with large, palmated, brilliant, fimbriate ciliis. Lam. A native of mountains in the south of Europe. 47. C. montana, Linn. Sp. Pl. 13. Mart. 14. Lam. 28. Willd. 31. Pot. Mag. 77. (Cyanus, Bauh. pin. p. 273. n. 1. Bouq. D.S. 2. p. 25. tab. 2. Halli. helv. n. 192.) "Calyx ferrated; leaves fuscumfif; lanceolate, quite entire, decurrent; stem simple." Root perennial. Stems upwight, simple, when cultivated often a little branched, entire, decurrent, soft. Flowers blue, purple, or white, resembling that of the next species, but larger, terminal; calyx scales light green, black at the edges, with short, black ciliis; thole at the tip longer, brownish, a little recurved. A native of mountains in Germany, Switzerland, and the south of France. 48. C. Cyamus, Linn. Sp. Pl. 11. Mart. 15. Lam. 30. Willd. 35. Eng. bot. 277. Curt. Flor. Lond. Tab. 62. Mart. Flor. bull. 3. (Cyanus fegetum, Bauh. pin. p. 273. n. 2. Tourn. p. 440. Cyanus vulgaris, Linn. 1c. 340. Backw. tab. 275. Halli. helv. n. 191.) Corn blue-bottle. "Calyx ferrated; leaves linear, quite entire; lower ones toothed; stem branched, many-flowered," Lam. Root annual, fbruis, black. Stem erect, much branched, somewhat woolly. Leaves linear-lanceolate, acuminate, somewhat woolly; root leaves entire; lower stem leaves often pinnatifid or toothed; upper ones always entire. Flowers terminal, solitary, pedunculated; florets of the disc purplish red, angular; anthers black; florets of the ray funnel-shaped, always blue when wild, but when cultivated it varies with almost al colours except yellow; calyx egg-shaped; scales lanceolate. Seeds even; down many-leaved, unequal, scabrous, reddish. A well known weed growing in corn fields in the south of England and many other parts of Europe, and for its beauty often cultivated in gardens. A blue water-colour is easily prepared from the exprefsed juice of the neutral florets, mixed with a little cold alum water; but it is not durable if exposed to the action of light. A water is also distilled from them in France, which is said to remove inflammations of the eyes. 49. C. vingata, Lam. 37. Willd. 36. "Calyx ciliated, small, somewhat cylindrical; scales narrow-lanceolate, colored at the tip; branches slender, long, red-like," Lam. Branches somewhat scabrous, fimbriated. Leaves small, cinereous-green; lower ones half an inch long; segments narrow, linear, revolute at the edges, sometimes with one or two teeth; upper ones linear, entire. Flowers purple, small florets of the ray shorter than those of the disc. A native of Armenia. 50. C. ovina, Willd. 37. Pallas. "Calyx ciliated; scales oval-lanceolate, spreading at the tip; lower leaves pinnatifid, lanceolate-linear; upper ones pinnatifid; stem branched, divaricate." An intermediate species between the preceding and following. Whole plant green, woolly-pubescent. Florets of the ray longer than those of the disc. A native of Mount Caucasus. 51. C. paniculata, Linn. Sp. Pl. 15. Mart. 16. Lam. 36. Willd. 38. Jacq. Aufl. tab. 320. (C. meranthius, Gmel. it. 1. tab. 23. fig. 1. Stu,bc, Bauh. pin. p. 275. n. 3. Jaca folia calycanthus, Tourn. Inll. p. 444. Morii. hist. tab. 25. fig. 15.) "Calyx ciliated, egg-shaped; scales flat, clove-shaped; lower leaves pinnatifid; upper ones pinnatifid; stem branched, divaricate." Root annual. Stem a foot and a half high, angular,
Centauraea.

Angular, hard, slender. Flowers small, purple; petals white. A native of the utmost France, Austria, Italy, Spain, and Siberia. 52. C. maculosa, Lam. 39. Gmel. Sib. 2. p. 69. n. 79 and 83. Tab. 42. fig. 1. 2. "Calyxes ciliated, ovate-rounded, beautifully spotted; leaves flannel, bipinnatifid; flower a little pinnated." Stem from eight to ten inches high, spatulate, white. Lower whorl, more finely cut than the usual of the preceding species; lower ones oblong, bipinnatifid; upper ones larger, densely pinnatifid; segments linear.


V. Cyanoida. Calyx-scales bristly-ciliated; bristles recurved or erect. (Cyanus & Jacea, Jutt.)

68. *C. philoxia, Lam. Sp. Pl. 8. Mart. 7. Lam. 19. Wild. 15. (Jacea, n. 7. 8-9. Bauh. Pin. Cyanus. Hall. Helv. n. 188.) "Calyces recurved-flaethy; leaves oblong, undivided, febrown, mucronate-serrulatus." Root perennial. Stem a foot and a half high, somewhat hairy, angular, fringed, pubescent, branched towards the summit. *Leaves* greenish, rough to the touch; root-scales long, lanceolate, toothed, narrowed into a petiole towards the base; *stem* ones embracing the stem, lanceolate, toothed, with a longer tooth, appearing like an ear, at the base. *Flowers purpurea*, terminal, solitary; calyx-scales oblong, smooth, yellowish, in a brown, lanceolate lamina, two or thrice as long as the scales themselves, and two rows of frous cutie, having the appearance of a reflected leaf. A native of Germany, Switzerland, and the south of France. 69. *C. salisifolia, Wild. 16. "Calyces recurved-flaethy; stem long, pubescent, toothed, ending on once toothed, greenish, Mart. 5. Stem a foot and a half high; *Leaves* greenish, quite round, without a neutral ray; leaves hairy, lanceolate, remotely toothed." Root perennial. Stems simple, one-flowered, hairy. *Leaves* one to a half inch long, not downy, but clothed on each side with numerous, short, erect hairs. *Flowers purpurea*. The habit of the preceding species, but differs in the leaves and flowers. A native of Italy. 77. *C. trichoccephala, Wild. 23. Gmel. Sib. tab. 45. fig. 1, 2. "Calyxes recurved-flaethy, pubescent; leaves lanceolate, somewhat toothed, downy." Root perennial. Stem a foot and a half high, simple, cottony, one-flowered. *Leaves* narrow lanceolate, cottony, whitish, soft to the touch, some entire, others thinly toothed. *Flower* purple, large, terminal, febrown, surrounded by bracts at its base. A native of the South of Europe. 76. *C. floalba, Wild. 22. "Calyxes recurved-flaethy; flowers without a neutral ray; leaves hairy, lanceolate, removly toothed." Root perennial. Stem simple, one-flowered, hairy. *Leaves* one to a half inch high, not downy, but clothed on each side with numerous, short, erect hairs. *Flowers purpurea*. The habit of the preceding species, but differs in the leaves and flowers. A native of Italy. 77. *C. trichoccephala, Wild. 23. Gmel. Sib. tab. 45. fig. 1, 2. "Calyxes recurved-flaethy, pubescent; leaves lanceolate, quite entire, febrown." Root perennial. Stem febrown. Nearly allied to the next species, but larger. A native of Ruffia about the Volga. 78. *C. linifolia, Lam. Mant. 117. Mart. 19. Lam. 21. Wild. 24. (C. linifolia; Lam. 23. Jacea hispanica pura, leuca folio; Tourn. 445. Bar. ic. 162.) "Calyces recurved-flaethy, smooth, leaves linear; quite entire, hairy." Root perennial. Stems several, from six to eight inches high, more or less upright, much branched, panicled, hairy. *Leaves* acute, small, numerous, febrown, whitish, rough to the touch. *Flowers* purple, terminal, febrown, feitious, solitary. A native of Spain and Italy. The linifolia and linifolia of La Mare appear to be the same plant. He described the former from the living, but the latter from a dried specimen, and was doubtful to which the synonym from Tournabout should be referred. 79. *C. levypofolia, Wild. 23. Vahl. Symb. 1. p. 75. (Stebe, Barr. ic. 366.) "Calyces recurved-flaethy, pubescent; flowers without a neutral ray; leaves linear, quite entire; stem somewhat hairy." Root perennial. Stem about half a tooth high, cylindrical, somewhat febrown, branched from the bottom. *Leaves* febrown, crowded, half an inch long, flilf, pale green, spreading at the tip, ending in a white point. *Flower* purple, egg-shaped, nearly febrown, terminal. A native of Spain. 80. *C. coronafolia, Lam. 25. Wild. 26. (Jacea orientalis anara coronopus. floo flore luto; Tourn. Cor. 32.) "Calyces erect-flaethy; flowers without a neutral ray; lower leaves pinnatifid; upper ones linear; all quite entire; stem panicled." Root annual. Stem about a foot high, upright, slender, nearly smooth. *Leaves* clothed on both sides with short hairs. *Flowers* yellow, terminal, solitary; calyx-scales lanceolate, bristly-ciliated, ending in a long, flilf, expanding awn. A native of Spain. 81. *C. nigra, Lam. Sp. Pl. 11. Mart.
Centaurea.

Mart. 12. Lam. 18. Willd. 27. Eng. bot. tab. 178. Mart. Flor. Ruft. tab. 130. Flor. dang. 906. (Cyanus niger, Gart. tab. 161. fig. 4. Jacae nigra laciniosa, Bauh. pin. 271. Tourn. 443. Lob. ic. 541.) Common knap-weed, knobby, horse-knops, or hard-heads. "Calyxes erect-feathered; leaves oblong; root ones sometimes pinnatifid, item ones entire or slightly toothed." Root biennial. Linn. Lam. Willd. But in England it is certainly perennial, woody, and somewhat creeping; whole plant rigid, hard, febracious. Stem branched, angular. Lower-leaves often lyrate-angular or toothed, upper ones egg-shaped. Stalk annual. Calyx-calyx, two, terminal, solitary, fiddle, calyx glabrous; scales black, egg-shaped, entire, bristle-shaped, brown; inner scales unequal, all florets most generally equal, regular, all fertile. Seeds hairy; down short, confiding of numerous scales. Dr. Smith. In the north of England it is almost always without a ray of barren florets; but in the western counties it is said by Ray and other botanists, to be frequently found with it. According to La Mark it has always, in France, an evident ray of barren flowers larger than the others. Are there not two distinct species, one biennial with a ray, the other perennial without one?

VI. Stokes. Calyx-scales with palmated spines at the tip.

(Serolia; Jufa.)

82. C. jaceafolia, Linn. 35. Mart 38. Lam. 49. Willd. 73. (Carduus maritimus, Tourn. 441. Jacae laciniosa folia, Bauh. pin. 272. Pluk. tab. 39, fig. 1. 1. Pluk. tab. 94. fig. 1.) "Calyxes palaese-pinnatis; spines reflexed; leaves oblong, smooth, embracing the stem, half-dentured, repaid-toothed; teeth prickly." Root perennial. Stem a foot high, simple or sometimes a little branched, green, slightly downy near the top. Lower-leaves petioled, undivided, lanceolate-egg-shaped; upper ones fiddle, toothed towards the base; uppermost somewhat dentured, lanceolate. Flower purple, large, terminal, solitary; calyx-scales green; spines yellowish. A native of the coast of the Mediterranean.

83. C. feridus, Linn. 36. Mart 39. Lam. 50. Willd. 74. (Carduus hispanicus, Tourn. 442. Jacae foenis feridis, Bauh. pin. 272. J. Linn., Pluk. tab. 38. fig. 1.) "Calyces palaese-pinnatis; spines reflexed; leaves oblong, hoary, embracing the stem, half dentured, toothed, cut at the base; teeth rather prickly." Root perennial. Stem about a foot high, inclining a little branched. Leaves thick, fleshy; lower ones near a foot long, finnated like those of dandelion. Flowers very large, with a purple ray and whitish disk; calyx-scales nine or more, yellowish. A native of Spain. 84. C. farina, Linn. 37. Mart. 40. Willd. 75. (Jacea, Zan. hist. tab. 42. Cyanaus, Barr. rar. tab. 52.) "Calyxes palaese-pinnatis; leaves dentured, not prickly; root ones pinnatifid, terminal lobe very large." Linn. "Calyces palaese-pinnatis; spines reflexed; leaves lanceolate, fiddle, dentured, hairy, fuscous, not prickly, finely toothed; root-leaves lyrate." Root annual. Linn. biennial, Miller; perennial, Willd. Stems three feet high. Flowers large, red; calyx strongly armed with spines. Mill. A native of the Campania of Rome. Cultivated by Miller in 1768. 85. C. napuldana, Linn 40. Mart. 43. Lam. 51. Willd. 86. (Cyanus napuldana, Gart. Jacae, Herr. par. tab. 189. Pluk. tab. 94. fig. 2. Moril. hist. tab. 26. fig. 20.) "Calyces palaese-pinnatis; leaves dentured, finnated, somewhat prickly; root-leaves lyrate." Linn. "Calyces palaese-pinnatis; Rem-leaves lanceolate, toothed, dentured; root-leaves lyrate, obtuse." Willd. Root annual. Stems three feet high, branched. Lower-leaves not much unlike those of a turnip, rounded at the end, cut at the base into many segments, diminishing gradually to the top of the stem and winged. Miller. Stems a foot and half high, weak, much branched. Root-leaves lyrate; terminal lobe very large, roundish-oval, finely toothed; item-leaves small, oblong, narrow. Flowers purple, terminal, barbare flowers hole, large; calyx-scales small, very weak, always reflexed. Lam. from a living plant. A native of Candia. Cultivated by Miller in 1759. La Mark is of opinion that this and the preceding are the same species, and that one is not even a variety of the other. But as both are said to have been cultivated by Miller; and as Wilkenow appears to have formed his specific characters of both from living plants, we apprehend that this eminent French botanist must have fallen into an error, from having seen only one of them.

86. C. ferox, Willd. 76. Desfont. Atl. 2. tab. 242. "Calyces palaese-pinnatis; spines reflexed, larger than the calyx; leaves hoary, oblong, fiddle, dentured, pinnatifid; teeth not prickly." Root perennial. Stem procumbent. A native of the coast of Barbary. 87. C. foillisatia, Linn. 46. Mart. 55. Lam. 59. Willd. 77. Eng. bot. tab. 243. (Carduus illatius, Bauh. Pin. 387. n. 4. Tourn. 440. n. 7. Rai Sm. 166. n. 16. Jacca, Moril. tab. 34. fig. 20. Caletrapa, Hill. Helv. n. 153.) St. Barnaby's thistle. "Calyces palaese-pinnatis, terminal, solitary; spines straight; leaves lanceolate, dentured, not prickly; root ones lyrate." Root annual. Stems near two feet high, alternately branched, winged by the decurrent leaves. Leaves slightly cottony, whitish; item ones small, narrow, a little finnated or toothed; root-ones four or five inches long, deeply finnated or pinnatifid; with a large, more or less triangular terminal lobe. Flowers bright yellow, terminal, scarcely ruffled, calyx, like the rest of the plant, clothed with a cotton-like web; spines yellowish; the middle one considerably longer and stronger than the others. A native of the north of Europe, very rare in England. 88. C. vernum, Linn. 52. Mart. 56. Lam. 60. Willd. 111. Gouan Illust. 73. Jac. Ec. Rar. 1. tab. 178. "Calyces palaese-pinnatis; middle spine very long; lateral ones short; root-leaves finnated-pinnatifid; item ones lanceolate, quite entire, decurrent." Root annual. Stem from one to three feet high, upright, winged, with a few simple branches near the top. Lower-leaves lyrate. Flowers yellow, large, terminal, solitary, fiddle, fuscous, pubescent; spines yellowish. La Mark is inclined to consider it as only a variety of the preceding, although placed by Linnaeus and most other authors in a different division. 89. C. melitensis, Linn. 47. Mart. 51. Lam. 62. Willd. 78. (Cyanus melitensis, Gart. Carduus melitensis capitulis congestobatis, Tourn. 442. Jacae, Bosc. Sic. tab. 35. Moril. Hist. iii. p. 145.) "Calyces palaese-pinnatis; terminal ones cuttered, selliell; spines straight; leaves lanceolate, fuscous, decurrent, not prickly; lower item ones a little toothed; root ones finnated." Root annual. Stem from five to ten inches high, a little woolly, simple, or with only a few short branches. Leaves oblong, finnated, their terminal lobe obtuse, not angular, as in C. foillisatia; lower item-leaves not decurrent. Flowers yellow; axillary ones single; terminal ones cuttered, two or three together, nearly fuscous; calyx-scales brownish; the middle one not above one-third the length of that in foillisatia. A native of Malta and the south of France. This species was cultivated in the English gardens under the name of foillisatia, till Dr. Smith pointed out the mistake in the Linnean Transactons, vol. ii. p. 256. 90. C. Adami, Willd. 79. "Calyces palaese-pinnatis, solitary; spines straight; inner scales scarios at the tip; leaves downy, lanceolate, decurrent; lower ones finely toothed, pinnatifid at the base." Root annual. Stem a foot high, branched, near the top, hoary. Leaves hoary on both sides. Flowers yellow, terminal; calyx-scales egg-shaped, green;
middle spine longer than the others; florets of the ray shorter than those of the disc. A native of Iberia. 91. C. _falcis_, Lam. 43. Mart. 52. Lam. 65. Willd. 80. (Cardus melitenus cruce folio, Tourn. 44.) Jacea cichorii folio, Doc. Sie. 15. Morif. Hill. tab. 28. fig. 26.) "Ca-lyx palmate-flominous; spines spreading; leaves few- or _fem-leaves lanceolate_, a little embracing the stem, finely toothed; root _eves lyrate." _Root perennial. Stem a foot and a half high, angular, branched, slightly villous. _Flowers_ yellow, terminal; middle spine of the calyx longer than the others, brown. A native of Sicily. 92. _C. phae-rocephalus_, Lam. 38. Mart. 41. Lam. 5. Willd. 81. (Jacea, Morif. Hill. tab. 27; fig. 9.) "Ca-lyx palmate-flominous; leaves ovate-lanceolate, petioled, toothed._Linn. _Root annual. Stem_ from one to two feet high, feebly, dividing at the top into a few branches. _Leaves_ woolly; root ones petioled, a little flattened or laciniated, _fem_ ones sessile, oblong, simply toothed. _Flowers_ purple, terminal, solitary, often with one or two branches. A native of the coast of Barbary and Spain. 93. _C. caesifrons_, Lam. 75. Cyril Rar. Notp. tab. 8. Vahl Sym. ii. 93. "Ca-lyx palmate-flominous; leaves lanceolate, lower ones petioled, upper ones half embracing the stem." _Root perennial, woody, dry, perpendicular, black on the outside. Stem from one to two feet high, thickish, round, pubescent, frayed; dividing from the bottom into numerous procumbent branches. _Leaves_ slightly pubescent, teeth mucronate, but not prickly. _Flowers_ purple, terminal, solitary, of a strong disagreeable smell; surrounded at the base of the calyx with an involucre of four to six concea inflexed leaves, irregularly toothed, lanceolate-egg-shaped at the tip. A native of Italy, on the coast near Naples, forming thick tufts in the sand. Willdenow supposes this and the preceding to be one and the same species. 94. _C. hiardi_, Lam. 39. Mart. 42. Lam. 52. Willd. 82. (Caletraposoides, Bocc. Paris. 1719. tab. 9.) "Ca-lyx palmate-flominous, solitary, sessile; leaves lanceolate, a little embracing the stem, pinnaatifid-toothed. _Root perennial. Stem_ ascending, about a foot long, commonly square, hairy, furrowed, branched. _Lower leaves_ four or five inches long, scabrous, especially at the edges; lobes rather prickly; upper ones smaller, often entire, or a little toothed. _Flowers_ purple, terminal; calyx egg-shaped, smooth. A native of the island of Jersey, and other parts of the south of Europe. 95. _C. fricator_, Willd. 84. (C. proflora, Vahl. Hort. Cell. tab. 74. C. glomerata, Vahl Sym. ii. 93. C. acutifolia, Vahl. Descr. 153.) "Ca-lyx palmate-flominous, terminal, sessile, glabrous, leaves _fem_ petioled, pinnatifid, cut-toothed." _Root annual. Stemlefs in its natural wild state; but when cultivated it has a short stem. 96. _C. polyacantha_, Willd. 83. Ca-lyx palmate-flominous; leaves embracing the stem, runcinate, pinnaatifid, prickly toothed; root _eves lyrate." _Root annual. Stem fix or seven inches high, erct, slightly villous. _Root-leaves_ hispid-febraceous, lyrate; segments oblong, toothed; terminal one large, roundish. _Flowers_ purple; ray twice the length of the disc. Native country unknown. 97. _C. heterophyla_, Willd. 87. "Ca-lyx palmate-flominous; spines three; _fem-leaves linear-filiform, quite cutine; root ones lanceolate, toothed towards the base." _Root probably annual, simple, perpendicular. Stem fix or seven inches high, _erct_, scabrous, pubescent; branches simple. _Leaves_ hispid-febraceous; root ones rather acute, eltening into a pe-ctile; _fem_ ones alternate, rather crowded, revolute at the edges. _Flowers_ purple, rayed, terminal, solitary; calyx- _scales egg-shaped, close; spines yellow, awl-shaped, spreading, equal. A native of Spain. 98. _C. aspera_, Lam. 41. Mart. 44. Lam. 48. Willd. 88. (Stebe iquamis asperis, Baut. Pin. 27.) _Jacea, Bace. Muf. ii. tab. 26.) "Ca-lyx palmate-flominous; spines three or five; leaves lanceo- late, felate, toothed. _Root perennial. Stem_ from one to two feet long, procumbent when young, reddish, frayed, rough to the touch, branched, diffuse. _Root-leaves_ oblong, flattened; _fem_ ones small, narrow, rough. _Flowers_ bright purple, small; calyx-spines very small, yellowish, or reddish. A native of the south of France, Italy, Spain, and Por-ugal.

VII. Calitrapa. Calyx-flominous compound or branched. (Caletrapa, Jaff.) 99. _C. benedicta_, Lam. 43. Mart. 45. Lam. 54. Willd. 89. Woody Muf. Bot. tab. 42. (Canceus benedictus, Gartner. tab. 102. fig. 5. Cinclus veficifrons hurutous; five cardus benedictus, Bahl. pin. 378. Tourn. 490.) Bocc. tape. "Ca-lyx doubly flominous, woolly, involucrated; leaves half-decurrent, toothed-flominous." _Root annual, cylindric, white-fil. _Stems_ several, a foot and a half high, reddish, woolly, branched. _Leaves_ oblanceolate, toothed, villous, bright green, with a white rivever; lower ones flattened; almost runcinated. _Flowers_ yellow, terminal; involucre of ten leaves; five outer ones larger; calyx-spines pinнатed; yellowish; florets of the ray small, trid. A native of the south of France, Spain, and the Levant, flowering from June to September. This plant obtained the name of beneficent, or blessed, from its supposed extraordinary medicinal virtues. It has an intensely bitter taste, and disagreeable smell; and exclusive of the qualities attributed to other bitters, was thought, when taken inter- nally, to be peculiarly efficacious in malignant fevers, and applied externally to heal cancers and chronic bones. It has now lost much of its reputation, and does not seem to be es- sentially different from other simple bitters. An infusion of it was formerly employed to afflict the operation of emetics, but the flowers of chamomile are now substitituted for it with equal advantage. In lots of appetite, where the stomach has been injured by irregularities, its good effects have been fre- quently experienced. Cold water poured on the dry leaves extracts in an hour or two a light grateful bitterness; by standing long upon the plant the liquor becomes disagree- able. Rectified spirit in a short time extracts the lighter bitter, but does not take up the nauseous to cafficly as water. See Woodville’s Medical Botany. 100. _C. eupha_, Lam. 61. Willd. 92. Desf. Anat. 2, 360. (Carduus illinatus luteus, capitulo minus pinoo. Tourn. 441.) "Ca-lyx doubly flominous, globular, small; spines very short; root leaves lyrate, obtuse; _fem_ winged." _Linn. Root annual. Whole plant pubescent. _Stem_ about a foot high, branched. _Root-leaves_ lyrate-pinnatifid; terminal lobe oval-obtuse; _fem-leaves_ de- current, oblanceolate, rather narrow, entire or toothed. _Flowers_ yellow, terminal; calyx-spines three; middle one longer, branched. A native of Italy and the coast of Barbary. 101. _C. eriophora_, Lam. 43. Mart. 46. Lam. 55. Willd. 91. (Carduus illinaciex canecaneus, Tour. 441. Calitrapa, Vaas. Akt. 1718. p. 212. Cyannus eriophora, Gart. 2, 345. tab. 161. fig. 4.) "Ca-lyx doubly flominous, woolly; leaves half-decurrent, entire and flattened; _fem_ proflerosus." _Linn. Root annual. Stem eight or nine inches high, with several branches on its upper part, which often rife higher than it- self. _Leaves_ light green, obtuse, with a spicle-like point. _Flowers_ yellow, terminal, somewhat globular; barren florets four-clft, shorter than the others; inner scales of the calyx- simply acuminate; outer ones ending in a yellow, spreading spine, half an inch long, armed with prickles on each side. A native of Portugal 102. _C. aegyptia_, Lam. Mutl. 116. Mart. 47. Lam. 56. Willd. 92. "Ca-lyx doubly flominous, somewhat woolly; leaves felate, lanceolate, entire and toothed; _fem_ proflerosus." _Root annual. Stem a foot high, di diá.
diffuse, profusely branched, spreading; branches alternate, from the axis of the upper leaves. Leaves alternate, sessile, or enclosing the stem, somewhat pubescent, lowly pinnatifid; middle ones lyrated, blunted lanceolate. Flowers white, of the ray four to six, smaller than the others; calyx-pinnate; filaments white, with a terminal, little-shaped small filament on each side. A native of Asia. 102. C. sheffeldica, Linn. 41. Mart. 48. Lam. 57. Willd. 67. Eng. Bot. 1. 179. (Carduus Jellettus, f. his papaveris cerasiti, Buckl. p. 587. Tourn. 440. Calctrepa, Hall. beyl. n. 191. Hippophagum, Col. phy. tab. 24. Calactrepa hippophagnum. Gart. tab. 165. fig. 2. ) Common thistle. "Calyxes doubly pinnatis, sessile; leaves pinnatifid, toothed; stem divaricated, spreading, hairy." Smith. Root annual. Stem low, much branched, furrowed. Leaves pale green, sometimes alternate, sometimes from luxuriance clustered under the branches; teeth somewhat prickly. Flowers purple or white, lateral; sessile; flowers of the ray scarcely longer than those of the disc, nearly regular; calyx-pinnate yellowish, divaricating, pinnate, three times the length of the scale, pinnate at their base with smaller pinnate. Seeds with shaggy any down. A native of England and other temperate parts of Europe. The plant and root are both bitter, and are said to be sometimes used by brewers instead of hops. The leaves are eaten by the Jews with their parsnip lath. They are given by the French physicians in the way of extract, decoction, or powder in agues and fevers. A decoction of the root in the proportion of half an ounce to an ounce in six ounces of water, is said to be useful in disorders of the bladder and kidneys. 104. C. calcitrapoides, Linn. 45. Mant. Flora Brit. 1. 188. Lam. 94. (Carduus Jellettus, folios integris, ferratis, Monp. 252. Tourn. 447. ) "Calyxes of what doubly pinnatis; leaves embracing the stem, lanceolate, undivided, serrated." Nearly allied to the preceding, if not merely a variety. A native of the south of France, and of Syria.

VIII. Calctrepa. Calyx-pinnate, terminated by a simple spine. (Calctrepa; June.)

105. C. diastata. Mart. 71. Hort. Kew. 3. 261. "Calyxes clavate; scales acuminate, somewhat thorny; leaves oblong, pinnatifid; flowers of the ray longer than those of the disc. A native of the south of Europe. 106. C. nivinjiri, Mart. 74. Willd. 69. Allon. ped. tab. 74. "Calyces clavata-pinnatis in the tip; leaves oblong, embracing the stem, feathery, undivided, quite entire; root leaves egg-shaped, toothed. "Root biennial. Stems a foot and a half high, globose, angular, alternate branched. Flowers yellow; calyx-pinnate at the tip; spine short, stiff. A native of the neighbourhood of Nice. 1-7. C. Jucunda, Willd. 56. Ded. Bon. Atl. 2. tab. 244. "Calyxes clavata-pinnatis at the tip; leaves of the stem hydrate-pinnatifid; of the branches pubescent, lanceolate, somewhat toothed." A native of the coast of Barbary. 120. C. hybrida, Mart. 73. Willd. 97. Allon. ped. m. 54. "Calyces clavata-pinnatis in the tip; leaves horse, pubescent, quite entire; upper ones lanceolate. "Root biennial. Whole plant horse-pubescent. Root leaves pinnatifid, somewhat toothed. Flowers of the disc yellow; of the ray violet; calyx-pinnate lobed, yellow. A native of hills about Tunis. 2. "Tunis have been supposed to be a mule between C. foliisilius and C. paniculatus. 119. C. figurata, Willd. 95. "Calyces clavata-pinnatis, cylindrical; scales reflexed at the tip; leaves of the stem pinnatifid; of the branches lanceolate. "Stems a foot high or more, erect, branched, panicked; branches spreading. Flowers violet, solitary, or two together at the top of the branches. A native of the Levant. 110. C. parvijphyllum, Willd. 93. Desf. Atl. 2. 181. (C. diffusa, Lam. 70. Carduus orientalis calcitrape folio, flore minimo, Tourn. 51. ) "Calyces clavata-pinnatis, egg-shaped; scales reflexed at the tip; leaves horse; root leaves lanceolate; leaves one leaf. "Nearly allied to the preceding. A native of the Levant and of the coast of Barbary. 111. C. carvulifoto, Willd. 120. (G. cardui, Can. tab. 352. Calactrepa clavata-pinnatis, leaves of the stem pinnatifid, heart of the branches lanceolate. Stem a foot high, erect, smooth, pubescent near the top, furrowed, branched; branches few, erect. Leaves smooth. Flowers violet; calyx-pinnate; scales egg-shaped, obtuse, with a long spine; inner ones scarious at the tip. A native of Spain. 112. C. Jacobebus, Lam. 68. Willd. 101. "Calyces clavata-pinnatis; inner leaves scarious; root leaves deeply pinnatifid, laciniated, tormentous; stem nearly naked, one-flowered. "Stem fixed or seven inches long, simplex, angular, cottony. Leaves from the root, or the lower part of the stem, pedicled, short, whitish. Flower yellow. Described by L. March from a specimen in the herbarium of Justull. 113. C. refia, Lam. 67. Willd. 101. (Carduus orientalis, calcitrape folio, flore flavescence odoratifolino ) "Calyces clavata-pinnatis at the tip; spines of the lower scales reflexed; leaves pinnatis; spine linear; obtuse; root leaves bimarginated. "Stem about three feet high, erect, angular, deeply furrowed, branched. Leaves large. Flowers yellow, large; calyx-pinnate, ending in a long, ruff, straight spine; spines of the lower ones shorter, weaker, reflexed. A native of Armenia. 114. C. ornata, Willd. 1-7. "Calyces clavata-pinnatis; spines of the lower scales reflexed; leaves very feathery, pinnatifid, linear; spine linear, mucronate; root leaves bimarginated. Nearly allied to the preceding. Leaves smaller, hoary; calyx-pinnate, ciliated; inner ones with a feathery ciliate little scale at the tip. A native of Spain. 115. C. eyrudioides, Lam. 69. Willd. 124. (Carduus eyrudioides, caprino spinulosa, Alp. Exot. 1-78. ) "Calyces clavata-pinnatis; leaves pinnatis; spine oblong, lanceolate, toothed, or entire, mucronate at the tip. "Root perennal. Stem a foot and a half high, upright, simple, furrowed. Flowers purple, large, terminal; calyx-pinnate egg-shaped, with a strong spine half an inch long; inner ones with a small ciliate appendage at the tip. A native of the Levant. 116. C. centauroides, Linn. 49. Mart. 53. Lam. 64. Willd. 105. (Jacea lutea spinosa centauroides, Oudin. Pm. 27. Carduus centauri majoris, fasicule, capitulon longis & brevis aculis unnoto, Tourn. Cor. 51. ) "Calyces clavata-pinnatis; leaves lanceolate, pubescent, generally entire; terminal lobe large, toothed. "Stems two or three feet high, angular, branched, clothed with short hairs. Leaves large, rough, deeply pubescent. Flowers yellow, large, terminal; outer calyx-pinnate, toothed; inner ones oblong, scarious, without a spine. A native of Spain, Italy, and the coast of France. 117. C. carvulifera, Linn. 57. Mart. 54. Lam. 65. Willd. 1-70. (Jacea lutea, capitata spinulosa, Oudin. Pm. 272. Carduus luteus centauroides f. spinulosa, Tourn. 447. ) "Calyces clavata-pinnatis; stem-leaves pinnatifid; root ones bimarginated; segments lanceolate. "Root perennal. Stem two or three feet high, angular, nearly smooth, branched. Leaves large, greenish. Flowers yellow, rather large, terminal, solitary. La March thinks it scarcely more than a variety of the preceding, but its leaves are more deeply cut, and their terminal lobe is smaller. A native of Italy, Spain, and the coast of France. 118. C. cyp俵licus, Linn. 70. Mart. 55. Lam. 69. Willd. 1-7. (Jacea lacinata folia, Oudin. Pm. 272. Col. Exphr. 1. tab. 35. fig. 62. Mor. tab. 8. fig. 25. ) "Calyces clavata-pinnatis; stem leaves pinnatis; rachis-leaves bimarginated; spine linear-silhoulet. "Root perennal. Stem scarcely angular, but little branched. Calyx-pinnate weaker, shorter than the scale; inner leaves scarious. Nearly allied to the preceding. 119. C. pubescent, Willd. 1-70. (C. incana,
The natural history of the plant is described, including its leaf shapes, flower structures, and growth habits. The text also mentions a variety of related species, some of which are cultivated for their decorative or medicinal properties. The plant's distribution is noted, and its habitat preferences are discussed. The text concludes with a summary of the plant's characteristics and its significance in the natural world.
The first root has a strong perennial root, and a great number of long pinnate leaves, of a lucid green colour. spreading wide on every side proceeding from it; the peduncles are fl-anid, but very stiff, and divide at top into many smaller peduncles. These together with the flanks, rife five or six feet high, having at each joint one small pinnate leaf of the same form with the others: each of the peduncles is terminated by a single head of purple flowers, considerabiy longer than the calyx, whioe come out in July, and in warm situations, produce ripe seeds in this climate.

The second root has a perennial root, running deep into the ground; the stem is commonly single, upright, one-flowered: sometimes, especially in a cultivated state, it puts forth a branch or two; the leaves are quite entire, tenuiform; and the flower large and spacious. And these are varieties, with broad leaves, with narrow leaves, and the dwarf perennial blue-bottle.

In the third the stem is from one to two feet high, angular, slightly tenuiform, branched at top; the leaves are numerous, white underneath, with three parallel ribs; the branches are one-flowered, flowering from June to August. It varies with blue flowers, with blue and white flowers, with purple flowers, with purple and white flowers, with flesh-coloured flowers, with flesh-coloured and white flowers; with violet-coloured flowers, with violet and white flowers, with red flowers, with double blue flowers, with double purple flowers, and with double purple and white flowers.

The last root is annual, and sends up a round channelled stalk near three feet high, which divides into many branches with jagged leaves, of a pale green colour, smooth, and close to the branches; from the side of the branches comes out long naked peduncles, each terminating a single head of flowers, which have a very strong colour, so as to be offensive to many people, but to others very grateful; they are purple, white, or flesh-coloured. It varies with purple flowers, with white flowers, with flesh-coloured flowers, with purple fleshy flowers, with white fleshy flowers, with fringed flowers and fawed leaves, and with bright yellow fleshy flowers.

**Method of Culture.**—These are plants which are raised with little trouble or difficulty. The first root is capable of being increased by parting the roots, and planting them out in the early spring months or in the autumn, in beds or borders where they are to remain. And it, as well as the annual roots, may likewise be raised from seed, which in it and the second kind should be sown in the borders or chumps in March or the following month. The young plants being kept clean from weeds, and removed into other situations, when necessary, in the following autumn.

The two last roots and varieties are also propagated by sowing the seeds in the open ground, where the plants are to flower, in the above leafoil. They should be put in patches of six or seven seeds in a place, covering them lightly in to the depth of half an inch. The latter of which may also be sown in the autumn as soon as the seeds are fully ripened, by which means they will flower at a much more early period in the following year. And the last or sweet sultan kind, especially the yellow, which is rather tender, may also be rendered more forward by sowing the seeds under frames or glasses on gentle hot-beds in the early spring, removing the plants to the open ground when of sufficient growth, with hills of earth about their roots or in pots. They are all proper for ornamenting the chimps and borders of pleasure-grounds; the two first being placed more backward in them, as growing to the largest size.

**CENTAURIUM minores**, among Chelmis, a name given by some to the Panacea of antiquity, called also by Giau-

bar, purgas: universole; the preparation of which is given by Juncker.

**CENTAURIDES, in Medicine and Pharmacy,** the fame with Giauitha. Others give the denomination to the greater century.

**CENTAURPOLIS, in Ancient Geography,** a fortress of Greece in Thessaly; situated on Mount Ossa, near Tempe. The emperor Julian is said to have repaired its ruined walls.

**CENTAURS, in Mythology,** a kind of fabulous monsters, half men, half horses. The poets feign that the centaurs were the fonts of lyric and a cloud. The reason of which fancy was, that the cattle to which they retired was called N. 129, which signifies cloud. Pind. Pyth. Od. 2. This fable is differently interpreted.

The centaurs, in reality, were a tribe of Lapithes, who inhabited the city Peletrum, adjoining to Mount Pelion, and first invented the art of breaking horses; as is intimated by Virgil, Georg. lib. iv. ver. 115. Homer and Hesiod speak of centaurs. The fable of these poets in his liad (L. i. v. 367, and 1. ii. v. 420) and in his Odyssey (L. xx. v. 267) calls them savage, or monsters covered with hair. Hesiod describes the combat of the centaurs and Lapithes, and the latter of whom had helmets and cuirasses, whereas the former fought without any defensive armour. Pindar seems to have been the first of the poets who represented the centaurs as half men and half horses. These monsters (fayt. bi) were the ftrict of the amours of Centaurus, the son of Ion, with the marces of Thessaly; they resembled their father in the upper part of their body, and their mother in the lower. But upon the death of Cypresses, mentioned by Phaonius, and upon which characters were written in the year 578 B.C. in the bull-roden form, the centaur Chiron appears half man and half horse, but represented as a man indulging upon two human legs, and, with the group-flanks and two hinder legs of a horse attached to his loins; so that two feet of this centaur were those of a horse; so that it resembled a man leading a horse by the bridle rather than a cavalry mounted on horseback. M. Tieret (Mem. Litt. t. 23) suggests, that the centaurs were herdsmen, who for a long time occupied with their herds the valleys of Thessaly. Their name seems evidently to be derived from κτεινος, filinulo, with, or a. bull-frikeris, or ctenars. It is of this kind of persons that Homer speaks (v. 250) as inhabiting at first the environs of mount Pelion, and who, having been driven away by Perithous, fought a retreat in the country of the Cethici. Didymus, upon this and the following verses, observes, that, according to all the ancients, the centaurs of mount Pelion were of the same nation with the Perithous. Accordingly, the centaurs were the herdsmen of Thessaly. The more ancient sculptures represent them as persons who flood near horses to hold them; and in process of time, and by means of a poetic or picturesque licence, they came to be represented as half men and half horset.

**CENTAURUS, CENTAUR, from κτεινος, formed of κτος, partes, and κταινος, bull: q. d. bull-frikeris, in Achorus, a part or moiety of a southern constellation, being one of the 48 old constellations, in form, half man, half horse; usually joined with the Wolf, See Lycoris. According to the tale of the Greeks, this was Chiron the centaur, who was the tutor of Achilles and Asculapius, represented as half man and half horse, because he had applied the art of medicine to the benefit both of men and of horses. Others pretend that it is the symbol of pleasure, which reduces men to the similitude of beasts; but the origin of the allegory, which has placed
placed Centaurus among the constellations is unknown. His hands hold a bottle full of wine, as a symbol of the vintage, which occurs when the sun is near this constellation; and tending towards Hercules is represented by his triumph on a famous animal, because the sun in the sign of Aquarius causes the minotaur or monster of this constellation to disappear.

The stars of this constellation, in Ptolemy's Catalogue are 37; in Tycho's 3; and in the Britannic Catalogue, with Sharp's Appendix, 35. Among a great number of stars in the catalogue of La Caille, there is one, besides others of the first magnitude, which in 1750 had 21° 43' 26" of right ascension, and 59° 47' 8" of south declination. For an account of the comparative altitudes of some of the stars in this constellation by Dr. Herchel, see the Phil. Trans. for 1797, p. 314.

Centaur. See Chlora, Gentiana, and Centauraea.

Centaur, in Agriculture, is the name of a weed or plant, abundant in arable or other lands, and generally called blue-bottle. It is often very troublesome to extirpate from the lands on which it has established itself.

CENTELLA, in Botany, Linn. See Hydrocotyle glabrata, and vilifia.

CENTENARIENSIS, in Ancient Geography, an episcopal see of Acre in Numidia.

CENTENARIUS, or Centenier, in the Middle Ages, was an officer who had the government or command, with the administration of justice, in a village, or division, containing an hundred freemen. The centenari were under the jurisdiction and command of a superior officer, called the count or comte. We find them among the Franks, Germans, Goths, Lombards, &c. On account of the disorders that prevailed in the ninth century, and the acts of violence that were so commonly committed, as to be hardly confedered as criminal, the centenari were required to take an oath, that they would neither commit any robbery themselves, nor protect such as were guilty of that crime. Before the time of Charles the Bald, the titles of count, duke, vicar, centenier, or thungin, were not hereditary in families. They had the management of the revenue and administered justice in the provinces. They were at the same time magistrates and military men. They convoked the ban and arrière-ban, assembered and conducted the troops to the places of general rendezvous.

Centenarius is also used for an officer who had the command of a hundred men, more frequently called centurion.

Centenarius, in Monasteries, was an officer who had the superintendence of a hundred monks.

Centenarius was also used for a person worth a hundred thousand furtures; otherwise called census.

CENTENIER. See Centenarius.

CENTENINUM. See Egg.

CENTER, or Centre, in a general sense, denotes a point equally remote from the extremities of a line, figure, or body; or the middle of a line, or plane, by which a figure or body is divided into two equal parts; or the middle point so dividing a line, plane, or solid, that some certain effects are equal on all sides of it. The word is κέντρον, which primarily signifies a point; being formed from the verb κεντρίζω, pungeres, to prick.

Center, in Architecture. This term is used to denote a frame of timber constructed for the purpose of supporting the flumes or bricks forming an arch or vault during the erection. Thus the center serves as a foundation for the arch to be built upon, which, at the completion of the work, is struck or taken down, and then the arch will stand of itself from its curved figure.

The center of a large vault, such as that of a bridge, consists of turned ribs, formed like those of a roof, let in parallel vertical planes, at the distance of 5, 6, 7, or 8 feet, bridged over with horizontal parries. In great works, a bridging is laid for every course of arch flumes, with blockings between to keep them at proper distances. The flume-tones do not always immediately rest upon these blockings: planks are sometimes put between that they may afterwards be cut away, in order to separate the center from the vaults, which must now support itself by the reciprocal pressure of its parts.

If a center is truly constructed, every point of the vault to be built ought to be supported, without giving any transferable strain to the incumbent part of the center: but this is impracticable, for, as it would require such a multiplicity of joints, and, from the shrinking of the timber, it would be less sufficient than if composed of few pieces, supporting only a certain number of points disposed at judicious distances, leaving the intervals to be supported by timbers in which the superincumbent part of the arch will act transfervely, but will still present a sufficient resistance so as not to be materially bent or put out of form by the load of the arch above.

If the river over which a bridge is to be built is not navigable, the manner of constructing the center is so easy, that it would be unnecessary to give any examples here; but where the river is navigable, the center requires an opening in the middle for vessels to pass: this renders the construction more intricate by interrupting the horizontal tie, instead of which a number of tongs are therefore disposed around the polygon, forming the interior part of the center; but as in many practical cases the most judicious and well-fitted theorist might be deceived as to the equilibrium of the arch to be supported, or the points on which it has the most tendency to fall in, it would, therefore, be difficult to lay what are tics and what are fluttas; and even if the true pressure of the arch could be ascertained, the knowledge of this alone would not be sufficient; for the same parts of the vaults, in the process of execution, vary their pressure in every succeeding additional part, and what was a tie at one time, becomes sometimes a flutta, and a flutta, on the contrary, a tie at another, either in building, or at the completion of the vault. This ought to be well considered; and, where the pressure is doubtful, or any of the lengths of timber forming the center be ascertained to be in the two different flutes above mentioned, such timbers should be made to act in either cafe.

Though the timbers upon which the vault immediately rests cannot be supported transfervely throughout, the other pieces, which support the arch from the several pressing points, may all be made to act by a judicious arrangement, in a direction of their lengths. The abutting joints, which are prefixed, will be sufficiently refilled, when their shoulders are made perpendicular to the direction of their force, and with a very small tenant; but if the timbers are drawn in a direction of their length, the joints ought to be strapped.

The beauty of every truf is to have as few quadrilaterals as possible. All the openings should be triangles: the intersection of the timber should be as direct as possible. Oblique preffures exert prodigious strains, which require timbers of very large sections to withstand them, and which press upon the abutments so much as to make the whole trus fag by the compression of the intermediate joggles.

If proper attention be paid to these circumstances, and
the bearings of the timbers well ascertained, a center, con-
structed upon such principles, must answer its intended pur-
pose, provided that a proper climate be taken of the com-
municating forces during the execution of the vault, and
that the center be well secured at its abutment.
There are several principles of constructing the ribs of
centering; one of these may be that of a large truss, spanning
the whole opening, having its vertex supporting the summit
of the arch, and its rafters, or principal braces, supporting
other subordinate trusses which reful the profile of the arch
at other intermediate points.

Of this kind is that of the bridge of Orleans, by Mr.
Hupceau, one of the boldest centers ever executed in Eu-
rope. Another principle is that of two independent trusses,
one supporting the fids or haunches of the arch and the
other the crown. Of this construction was the centering
of the nave and transepts of St. Peter's church at Rome,
by Michael Angelo, and two centers by Pitot.
Another principle of centering is that of inscribed equilateral poly-
gons, that is, the exterior beams, supporting the curve, are
of equal lengths, and joined together in the form of a poly-
gon: another polygon is formed within this, having its ar-
gles in the middle of the fids of the former, and so on, al-
nernately until there are as many polygons inscribed as will
make the centering sufficiently strong or stiff: this mode of
centering may be of two kinds. One, when the angles are
fixed at their junction to the fids of the fall, with bolts:
double king-polls are put over the angles to prevent tran-
verse strain at that section of the beams where the two
pieces meet, and to support the curve above. The other
kind is, when the polygons act independently of each other:
these polygons are brought into action by king-
polls, which support the curve, and act upon the angular
points of each other's polygon. Of this kind were the cen-
tering of the bridges of Cravant, Nogent, Mayence, and
Neuilly, constructed by Perronet. Though these cen-
terings have been executed to very large spans, the fall
mentioned being 120 feet, their equilibrium is by no means
so secure as when the angles of the inner polygon are
fastened to that immediately preceding, as is evident from
the information given of the erection of these bridges by
the ingenious architect who has favoured the world with a
treatise on this subject.
Another principle of centering is that of Westminster and Blackfriars bridges, London.
The conflict of a series of trusses, each supporting a point in
the arch, the principal braces having their lower extre-
mities abutting below at each end of the centering, on the
fronking-plates, and at the upper end, upon apron pieces,
which are bolted to the curve that support bridgings for
binding the pieces which compose them together at their
junction. There is one disadvantage under which this
mode labours; that is the frequent interfeion of the prin-
cipal braces with one another: they must either be
halved, upon each other, otherwise they must be disconti-
ued, and made in various lengths. Both of these diminish
their lateral strength, and consequently make them much
more liable to buckle than when whole; but of the two
that of halving is to be preferred; as, by the braces being
in one length, there can be no faking occasioned by inter-
mediate joggles, and the braces may be rendered sufficiently
secure laterally, by running straps longitudinally across the
notched part on each fide, bolting these straps to the
braces.

Lately another mode of centering may be that of a num-
ber of quadrilateral frames abutting on each other, having
their joints radiating to a center, in the manner of the wedge-
frames of an arch in masonry. These frames should all be re-
folved into triangles by one or two diagonals, according to
the kind of frame, keeping in view that a piece, which is a tie
in one diagonal, is, in the other diagonal, of the same quad-
rilateral, a strut; but if the kind of frame on any frame is
not well ascertained, it would be better to place two diag-
ons halved upon each other. The frames are to be secured
to one another with keys or bolts; by this precaution each
frame will be rendered quite impmoveable.

Having now shown the principles upon which a good
center may be constructed, we shall proceed to give
some of the most approved examples.

Fig. 1. Plate LXVI of Architecture, is the manner of
forming the ribs for a center by two independent trusses;
in this form of centering there is no occasion for bridles, or
double king-polls, as in those of Pitot, of the same con-
struction.

Fig. 2. The manner of forming a center by two poly-
gons, of which the interior one is secured to the exterior:
in this there is no occasion for double king-polls, as the
parts of the inscribed polygon either act as struts, or ties to
that of the circumferencing one.

Fig. 3. is the manner of constructing a center with three
polygons, which are all secured to each other. In this,
king-polls become necessary, otherwise the angles of the
inner polygon would bend the fids of that part to it.

Fig. 1, Plate LXVII. is the manner of constructing a
center according to Perronet, with four polygons, indepen-
dent of each other, but with this improvement, that the
lower extremities of each ring of polygons are framed into
the two abutments; this gives a much firmer base than if
they were all to meet at the same place, and renders the
center much stronger, by making the angles more acute.
In this it becomes also necessary to have double king-polls,
otherwise the exterior polygon would only be effective.

Fig. 2, is the manner of forming a center, as used at
Westminster and Blackfriars bridges, by independent trusses,
confiding of two rafters. Whoever considers the principle
of this center, must evidently fee that there is no occasion
for the double king polls, as the pressure is directed to the
abutments, or to two opposite of the arch in the same
level. In this example, the interfeions are all suppoed
to be halved together, and firmly strapped across the notch-
ing-plates.

Fig. 3, is the manner of constructing a center with se-
parate frames, the fids of which radiate to a center, as has
already been intimated.

Fig. 1, Plate LXVIII. is the design of a center; its
principle is that of two roofs intersecting each other. In
this example, the forces which are communicated to the
various parts of the frame are refolved longitudinally, either
by compression or extension; and no force is exerted tran-
versely on any part, excepting the curved pieces in contact
with the boarding supporting the arch fones.

Fig. 2, is the design of a center: it is first framed in on
large trusses, like a common roof, with two principal rafters,
and a collar beam: each of the rafters becomes a tie for the
two small trusses above which are framed in the manner of
a roof with queen-polls and braces. The lower angles of
the principal rafters are braced from the lower queen polls
to the polls. This truss is free from transverse strains in all
its parts, except the curve, which supports the arch fones:
and, if well secured at the abutments, an arch of an immense
weight may be erected upon it.

Fig. 3, is the celebrated center used at Blackfriars bridge.
The names of the timbers are as follows:

A. Timbers which support the centering.
B, C, Upper and lower friking-plates caled with copper.
D, Wedge
D. Wedge between striking-plates for lowering the center.
E. Double king-polls to confine braces.
F. Apron pieces to strengthen rib of center.
G. Bridles laid on the back of the ribs.
H. Blocks between bridgings to keep them at equal distances.

I. Small braces to confine the ribs tight.

K. Iron straps bolted to king-polls and apron-pieces.

L. Ends of the beam at the feet of king-polls.

M. Principal braces.

In striking the center of a large arch, the belt method is to let it down a little all in one piece, by easing some of the wedges; it is there let to red for a few hours or days, to try if the arch makes any efforts to fall, or any joints open orrones crack, or crack, that the damage may be repaired before the center is entirely removed, which is not to be done till the arch ceases to make any visible efforts.

Center of Attack. In French centre d'attaque, or attaque du centre, in Military Language, is an attack on an extensive front, from the second parallel upon the works of a strong place that is besieged, according to the rules or principles of a regular attack.

Center of Attraction. See Center of Gravitation. Center of attraction. In Fortification, is the middle point of its gorge, or angular point of the interior polygon, or the point where the two adjacent curtains would meet when produced.

Center, or Center of a battalion on parade, in Military Language, is the middle of it, where an interval is left for the colours; and so on.

Center of cavity, in a ship, is the center of that part of the ship's body which is immersed in the water; and which is also the center of the vertical force exerted by the water to support the vessel. See Ballast.

Center of a circle is a point in the middle of a circle, or circular figure, from which all lines drawn to the circumference are equal.

Euclid demonstrates, that the angle at the center is double to that at the circumference; i.e., the angle made by two lines drawn from the extremes of an arch to the center, is double that made by two lines drawn from those extremes to a point in the circumference.

Center of a conic section is the middle point bisecting any diameter, or the point in which all the diameters intersect and bisect one another.

This point, in the ellipse, is within the figure; and, in the hyperbola, without, or between the conjugate hyperbolas; and in the parabola, it is at an infinite distance.

Center of conversion, in Mechanics, a term first used by M. Parent. Its signification is thus conceived: if a body be placed on flagrant water, and drawn by a thread fastened to it, so that the thread always makes the same angle with the body, the thread will be found to turn on one of its points which will be immovable; which point is termed the center of conversion. For the greater ease the thread may be conceived fastened to one end of the body.

This effect arises from the resistance of the fluid, and the manner wherein it divides: for, imagine the first moment of traction, it is certain, hence, the resistance of the parts of the fluid to be displaced tends to turn the thread around the point to which the thread is fastened, as on a center; so that in the present instance, the fluid would describe precisely the quadrant of a circle: after which the fluid would no longer bear the thread lengthwise; but in a particular motion, in such manner, that the free end of the fluid, and the parts nearest it, would describe larger arcs of circles than the rest, and have a greater velocity. The resistance, therefore, of the fluid, which tends to impress a circular motion on the body, around the point to which the thread is fastened, tends to impress a greater velocity on the parts next to the other extremity, or, which is the same thing, those parts acquire a greater velocity to surmount the resistance of the fluid, so that the fluid will not have that circular motion around the point to which the thread is fastened; or the resistance of the fluid is greater towards the free extreme of the fluid, and still lessens towards the other extreme.

Now all the columns, or threads of water, which resist the fluid, must be supposed of the same length or the same masts. One may therefore find on the fluid such a point, as that taking a great number of those threads on that side which resists the least, and a little number on that side where they resist the most, there will be an exact compensation, and the forces be equal on each side: this point is the center of conversion. And as the reasoning has place in all motions of traction made in the same manner, this center is always the same point. The grand question here arising is, to know precisely in what point the center of conversion is found: this M. Parent has determined by much laborious calculation. If the fluid drawn by one extremity be a straight line divided into twenty parts, reckoning from the thread, the center of conversion he finds will be nearly on the 13th. If it be not a line, but a surface or a field, there will be some change in the situation of the center of conversion, according to the force, or the field. See Mem. of the Acad. of Sciences, abridged, vol. 1. p. 131.

If in lieu of a body swimming in a fluid, we suppose it laid on a rough uneven plane: the resistance of this plane to the motion of the body will always be divided in the same manner, and determine the same center of conversion. This resistance is, precisely, what we call friction, so prejudicial to the effects of machines. See Center of rotation.

Center of a curve, of the higher kind, is the point where two diameters concur.

When all the diameters concur in the same point, Sir Isaac Newton calls it the general center. M. l'Abbe de Gua, in his "Ufges de l'Analyse de Descartes," has given a method for finding the general centers of curves, and suggested some important remarks on the definition of general centers given by Newton. The ingenious abbe calls the general center of a curve a point of his plane, such that all the right lines which pass through one side or other of this point equal portions terminated by the curve; and he observes: 1. That this definition corresponds with sufficient exactness to the ordinary acception of the word center: 2. That the definition of Newton is comprised in his own: and 3. That by adhering to his definition he has arrived at those conditions which Newton affirms to curves, which, according to him, have a general center; and hence it seems to follow that Newton had in view the definition of M. l'Abbe de Gua rather than his own, when he determined thee centers. M. Cramer, in his "Introduction a l'Analyse des Lignes courbes," gives a very exact method for determining their general centers.

Center of a dial, is that point where its gnomon or style, which is placed parallel to the axis of the earth, intersects the plane of the dial; and from thence, in those dials which have centers, all the hour lines are drawn. If the plane of the dial be parallel to the axis of the earth, it can have no center at all; but all the hour lines will be parallel to the style, and to one another; the center being, as it were, at an infinite distance.

Center of an ellipse, is that point where the two diameters, the transverse and the conjugate, and all other diameters, intersect each other.

Center of the equant, in the Old Astronomy, a point in the line of the apsides being as far distant from the center of
of the eccentric towards the aphelion, as the sun is from the center of the eccentric towards the perihelion.

Center of equilibrium, is the name with respect to body s suspended in a F. 1, as the center of gravity of two bodies in free space: or it is a certain point on which, if the body or bodies be suspended, they will rest in any position. More generally, in a system of bodies, it is the point about which they will be in equilibrium; or it is a point such that if the system of bodies be suspended or placed by, the instantaneous products of the weight of the body or bodies about that point, would remain in equilibrium. Thus, the barycentre is the centre of equilibrium. For a method of determining the center of equilibrium, see Emerson’s Mechanics, pp. 20, 121.

Center of friction is the point in the base of a body, on which it revolves into which, if the whole surface of the base and the mass of the body were collected, and made to revolve about the center of the given body, the angular velocity destroyed by its friction would be equal to the angular velocity destroyed in the given body by its friction in the same time.

To find the center of friction. Let FGH (Plate IV. Mechanics, fig. 21) be the base of a body revolving about its center C, and suppose about a, b, c, &c. to be indefinitely small parts of the base, and let A, B, C, &c. be the corresponding parts of the solid, or the prismatic parts, having a, b, c, &c. for their bases; and P the center of friction. It is manifest, that the decrement of the angular velocity must vary as the whole diminution of the momentum of rotation caused by the friction directly, and as the whole momentum of rotation or effect of the inertia of all the particles of the solid inversely; the former being employed in diminishing the angular velocity, and the latter in opposing that diminution by the endeavours of the particles to perpetuate in their motion. Hence, if the effect of the friction varies as the effect of the inertia, the decrements of the angular velocity in a given time will be equal. Now as the quantity of friction does not depend on the velocity, the effect of the friction of the elementary parts of the base a, b, c, &c. will be as a x aC, b x bC, c x cC, &c. and also the effect of the inertia of the corresponding parts of the body will be as A x aC, B x bC, C x cC, &c. Now when the whole surface of the base and mass of the body are concentrated in P, the effect of the friction will be as a + b + c + &c. x CP, and of the inertia as A + B + C + &c. x CP²; consequently a x aC + b x bC + c x cC + &c. = a + b + c + &c. x CP : A x aC + B x bC + C x cC + &c. = A + B + C + &c. x CP + and hence

\[ \frac{A + B + C + &c.}{A x aC + B x bC + C x cC + &c.} = \left( \frac{a + b + c + &c.}{a x aC + b x bC + c x cC + &c.} \right) \]

center of gravity. In Mechanics, is a point within a body, through which if a plane pass, the segments on each side will be equal in weight, i.e., neither of them can move the other. Hence, if the defcent of the center of gravity be prevented, or if the body be suspended by its center of gravity, it will continue at rest in equilibrium, in any position. The whole gravity, or whole matter, of a body may be conceived united in its center of gravity; and therefore, in demonstrations, it is usual for the body to figure out the center.

Through the center of gravity passes a right line, called the diameter of gravity: the intersection, therefore, of two such diameters determines the center. The plane wherein the center of gravity is placed is called the plane of gravity: so that the common intersection of two such planes determines the diameter of gravity.

In homopodal bodies, which may be divided lengthwise into similar and equal parts, the center of gravity is the same with the center of magnitude. If, therefore, a line be bisected, the point of bisection will be the center of gravity.

The center of gravity of a parallelogram, or cylinder, or any prism whatever, is in the middle point of the axis: and the center of gravity of a circle, or any regular figure, is the same as the center of magnitude. Also, if a line be so drawn as to divide a plane into equal and similar parts, that line will be a diameter of gravity, or will pass through the center of gravity; and it is the same as the axis of the plane. Thus, the line, drawn from the vertex perpendicular to the base of an isosceles triangle, is a diameter of gravity; and thus also the axis of an ellipse, or a parabola, &c., is a diameter of gravity. The centre of gravity of a segment or arc of a circle is in the radius or line perpendicular to bisecting its chord or base. Likewise, if a plane divide a solid in the same manner, making the parts on both sides of it perfectly equal, and in all respects similar, it will be a plane of gravity, or will pass through the center of gravity. Therefore, as the intersection of two such planes determines the diameter of gravity, the center of gravity of a right cone, or a spherical segment, or cone, &c. will be in the axis of the same. See the sequel of this article.

To find the center of gravity of a body. Let A, B, C, D, &c. (Plate IV. Mechanics, fig. 22) be particles of the body, and finding the centers of equilibrium, P, and G, of A and B, C and D respectively (see Balance and Levers); let A + B be placed in P, and C + D in G, and their center of equilibrium, G, will be the center of gravity of the particles A, B, C, D, &c. Because the force of gravity acts upon the particles in parallel directions, the efficacy of A to communicate motion to G is A x A G, and that of B is B x B G, or A x A P + B x B G, and B x B P + B G, which are equivalent to them, or A + B + P x G, since A x A P and B x B P are equal and opposite, and consequently destroy each other. The sum of the moments of C and D is found, by a similar process, to be the same as if they were placed in G: and consequently G, which is the center of gravity of A + B + C + D, placed in P and Q respectively, is the center of gravity of A, B, C, D, placed at the points A, B, C, D, &c. Hence it follows, that the particles of the body cannot be in equilibrium about any other point except G; for, if possible, let X be such a point, and it is plain that the efforts of A and B to move X = A + B x P X, and of C and D = C + D x G X; consequently the point X is kept in equilibrium by two forces, A + B x P X, and C + D x G X, not acting in opposite directions, which is impossible. Moreover, in every situation of the body composed of the particles A, B, C, D, &c. if the point G be supported, the body will be at rest; for the force of gravity acting always in parallel directions upon the particles, their momenta, or efforts to move G.
G, will always be as \( \Delta \times \Delta G \), \( B \times B C \), &c. which, by the forces used in this proposition, will always be reduced to two forces that are equal and opposite. Further, if \( A + B + C + D \), &c. be equal to \( Q \), and the pressure of each in parallel directions be equal to \( g \), a force, as \( Q \times g \), acting at the point \( G \) in a direction opposite to that in which the particles press, will remove their pressure. Or, if \( A, B, C \), &c. be definite of gravity, and only refill the action of a force by their inertia, a force at \( P \) acting at \( G \) will communicate equal velocities to every particle; because their refinaleness, being exerted in directions opposite to that of \( P \), and therefore parallel to each other, vary as their distance from \( G \), and consequently the sums of the refinaleness on each side of \( G \) are equal. And, vice versa, if \( Q \) be moving and without gravity, a force applied at \( G \) (the center of inertia) equal to the momentum of \( Q \), will destroy all motion.

The center of gravity of a ship is always before the point, which is the middle of her absolute length; for the fore part, having greater capacity than the after part, must of course have also greater weight: and, therefore, it is the center of gravity forward in proportion to its greater weight (which in large ships is from 30 to 50 tons), and also to the interval between every center of gravity of each particular part, both forward and aft. When a ship is at sea, and loaded, the center of gravity may well be supposed not to change, unless the cargo be moved. But experience shows, that the fore or after part of the bottom of a ship plagues and labours more and more, in proportion as the wind acts with more or less force on the sails: because ships are generally not milled according to the point velum; so that a ship which has the center of the effort of the sail ill placed, draws always more water forward or aft, when the impulsion of the wind upon her sails is very powerful, than when she is at ease under her burden. Obs. From the center of gravity of the floating line of a ship let a perpendicular be raised, and continued till it be intersected by the direction of the impulsion of the water on the bows, in failing directly before the wind; and, where these two lines cut each other, that point is the "point velum," and where the center of effort of all the forces shall be placed.

**Center, common, of gravity of two bodies, is a point so situated, in the right line joining the centers of the two bodies, as that, if the point be suspended, the two bodies will equiponderate, and rest in any situation. Thus, the point of suspension in a common balance, or in a Roman freely, where the two weights equiponderate, is the common center of gravity of the two weights.

When any number of bodies move in right lines with uniform motions, their common center of gravity moves likewise in a right line with an uniform motion; and the sum of their motions estimated in any given direction, is precisely the same as if all the bodies, in one mass, were carried on with the direction and motion of their common center of gravity. Nor is the center of gravity of any number of bodies affected by their collisions or actions on each other.

1. If one or more of the bodies, \( A, B, C, \) &c. (Plate IV, Mechanics, fig. 23.) move uniformly in the same right line, with velocities equal to \( a, b, c, \) &c. their common center of gravity will move uniformly. For, let \( A \) and \( B \) move uniformly in the same or an opposite direction, \( P \) be their center of gravity, and \( D \) their distance; then, because the motions of \( A \) and \( B \) are uniform, \( D \) either continues the same, or increases and decreases uniformly; but \( A \times B = \frac{D \times B}{A + B} \), and consequently varies as \( D \), and \( P \) moves uniformly. If another body, \( C \), move uniformly in the same right line, and \( R \) be the center of gravity of \( A, B, C \), the distance, \( C P \), either continues the same, or increases and decreases uniformly, because \( C \) and \( P \) move uniformly; but \( P R = \frac{A + B + C}{A + B + C} \); and consequently varies as \( C P \), or \( R \) moves uniformly. Hence it follows, that the velocity of the center of gravity is equal to \( \frac{A + B + C}{A + B + C} \); and for, let \( p, r, a, b, c, \) be contemporary positions of \( P, R, \) and the bodies, and (by what we shall demonstrate in the sequel of this article,) \( A \times \Delta p, \) or \( \Delta a + \Delta b - B \times Bp \) or \( \times \Delta b + \Delta b + \Delta b = A + B + Pp \), and \( Pp = \frac{A \times \Delta a + B \times \Delta b}{A + B} \), because \( A \times \Delta a - B \times \Delta b = 0 \). And, placing \( A + B + P \) in, and repeating the above process, it appears that \( \Delta R = \frac{A \times \Delta a + B \times \Delta b + C \times \Delta c}{A + B + C} \). Hence again it is inferred, that the velocity of \( R \) is uniform; because \( Aa, Bb, Cc \), are confinetal, and consequently their sum, or difference, multiplied into the same given quantities, or the velocity of \( R \), is always the same. Moreover, because \( A + B + C \times \Delta R = A \times \Delta a + B \times \Delta b + C \times \Delta c \), the velocity of the center of gravity is such as would be communicated to the sum of the bodies actuated upon by a force equal to \( A \times \Delta a + B \times \Delta b + C \times \Delta c \).

2. If one or more bodies, \( A, B, C, \) &c. (fig. 24.) move uniformly in right lines, either in the same or different places, their common center of gravity, \( S, \) will move uniformly in a right line. Let \( A \) describe \( Bb \) uniformly in the time \( T \), and \( P, Q, \) be, the centers of gravity of \( A \) and \( B \); and \( A + B : B : A \times B : A B : A B : A B : A B : QP \). By the above, \( PQ \) is parallel to \( Bb \) and equal to \( X \), and varies therefore as \( Bb \), or uniformly. Let \( A \) describe \( Aa \) uniformly in the time \( T \), either in the same plane with \( Bb \), or not, and \( R \) the center of gravity of \( A \) and \( B \) placed at \( b \); and \( QR \), the path of the center of gravity, will appear, by the same process with the above, to be parallel to \( Aa \), and equal to \( Aa \), and consequently it varies as \( Aa \), or increases uniformly. When both bodies move at the same time, the point \( P \) will have two motions, \( PQ \) and \( QR \): and will consequently describe the diagonal \( PR \) uniformly in the time \( T \). Let a third body be added, and the common center of gravity be \( S \), and \( CS \) produced will pass through the center of gravity of \( A \) and \( B \). Then, from the nature of the center of gravity, \( A + B + C : A + B + C : CQ : CQ : CP \). By the above, \( CQ : CT : CQ : ST \); and \( ST = \frac{A + B \times \Delta P}{A + B + C}, \) and varies as \( CQ \); or uniformly; and for the same reason \( TV \), the motion of \( T \) arising from \( A \) motions, is equal to \( \frac{Q R \times A \times B}{A + B + C} \), and therefore varies as \( QR \), or uniformly. When \( A \) and \( B \) move together, the motions \( ST, \) \( TV \), will be combined into one, \( SV \); and if \( C \) describe \( Cc \) uniformly in the time \( T \), the common center of gravity will describe \( YY \), and this new motion, combined with \( SV \), will make it describe \( SY \) uniformly in the time \( T \).

This proposition may be otherwise demonstrated in the following manner. Case 1. Let two bodies move, in the same plane, in the directions \( A, B \), (fig. 25.) and let \( D \) and \( E \) be, and \( B \), be contemporary positions, and \( K, \) the center of gravity in those positions, respectively; and taking two
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B P = A D, joining E P, and drawing D L parallel to H K; D E : A B in the given ratio of the motions of the bodies; and, because the angle E D P is given, all the angles of the triangle E D P are given, and D P is to E P in a given ratio. Hence, all the angles of the triangle D P L are given, the angle P D L is given, and L is always in D L. By the nature of the center of gravity, D A : D H :: E B : E K :: P B or D A : L K; therefore D H = L K, and D H K L is a parallelogram, H K is parallel to D L, and the angle B H K is given, and the center of gravity K is always in the right line H K given in position. And, because all the angles of the triangles D P L, and D E are given, the lines D P, D E, D L, that is, A B, D E, H K, are in a given ratio, and consequently the point K moves uniformly in H K. The demonstration is the same if one of the bodies moves from B towards A.

Case 2. Let the paths of the bodies, A B and D E, (fig. 26.) be in different planes; and through A B draw a plane B d e parallel to D E, and through D E draw the plane D d e; perpendicular to B d e; produce B A to d, and let D d, E e, be perpendicular to d e, and the planes D d / A, E e / B, will be perpendicular to the plane c d / e. Let A and D, B and E, be contemporary positions of the bodies. If the body at D were to move in d e, the center of gravity would move uniformly in some line H K (case 1.); though H K does not the plane H K k e perpendicular to H B K. From similar triangles, the center of gravity of A B : D E :: A H : H d :: B K : K e :: B c : C e; therefore b k is the path of the center of gravity of the bodies moving in A B, D E. And, because D d : H b :: A d : A H :: B c : C e, D d = k e, H b = k e, and b k is equal and parallel to H K; therefore the center of gravity of the bodies, moving uniformly in A B, D E, moves uniformly in b k.

Case 3. The common center of gravity of two bodies and a third body is either at rest, or moves uniformly in a right line; for two may be placed in their common center of gravity, which was proved to move uniformly, and the center of gravity of the three or more bodies is proved, by the same process as before, to move uniformly.

From what has been above demonstrated, it is evident, that the path of the center of gravity, arising from the motion of any one body, is always parallel to that of the moving body: P Q and S T (fig. 24.) are parallel to B d e; Q R and T V are parallel to A a, and V Y to C c. Moreover, the centers of gravity of two, three, &c. bodies will describe polygons or curves similar to that of the moving body to which their motion is owing; and if the velocity of the body be variable, the velocity of each center will be variable according to the same law. Also, the velocity of the center of gravity of two, three, &c. bodies is the same as if they were placed in it, and acted upon by forces equal to the momenta of the moving bodies, in their respective planes and directions: for B x B c = A B x P Q, and A x A a = A B x Q R; and if A + B were placed at P, and acted upon by forces equal to B x B c and A x A a in the planes and directions of B c and A a, they would describe the diagonal B P.

1. The common center of gravity of two or more bodies is not affected by any action of the bodies upon each other. For, let A and B (fig. 27.) be two bodies in a field, acting upon each other, G their common center of gravity, and A a, B b, the velocities lost by A and gained by B respectively in opposite directions; and A x A a = B x B b, or A : B = B b : A a :: B G : A G :: t g, or A : B : B b’s distance from the center of gravity: A a’s distance from it; and consequently the same point, G, is still the center of gravity of A and B, or it has been immovable. What is proved of these two is true of every two bodies, and therefore of all. Hence, if two parts of a system, A and B, attract or repel each other, or moving with unequal rectilinear motions, disturb each other’s motion by the force of their inertia, the center of gravity will not be affected by their mutual action.

Center of gravity, laws of the. 1. In two bodies, whose masses of matter are equal, the center of gravity is equally distant from their two respective centers. For there are like two equal weights suspended at equal distances from the point of suspension; and in this case they will equilibrate, and rest in any position.

2. If the centers of gravity of two bodies, A and B, (Plate IV. Mechanics, fig. 28.) be joined by the right line A B, the distances, B C and C A, of the common center of gravity, C, from the particular centers of gravity, B and A, are reciprocally as the weights B and A. See this demonstrated under Balance and Lever.

Hence, if the gravities of the bodies A and B be equal, the common center of gravity, C, will be in the middle of the right line, A B. Again, since A : B :: B C : A C; it follows that A x A C = B x B C; whence it appears, that the powers of equilibrating bodies are to be estimated by the produce of the ma, multiplied into the distance from the center of gravity; which product is usually called the momentum of the weights.

Further, since A : B :: B C : A C; it follows, A B = B C + AC (or A B) = B : C + A : C = A : C (A B) = A C. Therefore the common center of gravity, C, of two bodies, will be found, if the product of one weight, A, into the distance of the separate centers of gravity, A B, be divided by the sum of the weights, A and B. Suppose, e. g., A = 12, B = 4, A B = 24; therefore B C = 12 x 16 = 18; and A C = 6. If the weight, A, be given, and the distance of the particular centers of gravity, A B, together with the common center of gravity, C, the weight of B will be found = to A x A C ÷ B C; that is, dividing the momentum of the given weight, by the distance of the weight required from the common center of gravity. Suppose, A = 12, B C = 18, A C = 6; then B = 6 x 16 = 18 = 4.

3. To determine the common center of gravity of several given bodies or points, a, b, c, d, (fig. 29.) in the same right line, A B. Find the common center of gravity of the two bodies, a and d, which suppose in F; conceive a weight, a + b, applied in F; and in the line, F E, if d the common center of the weights, a + b and e; which suppose in G. Lastly, in B G, suppose a weight a + b + e applied, equal to the two a + b and e, and find the common center of gravity between this and the weight d, which suppose in H; this H will be the common center of gravity of the bodies, a, b, c, d. And in the same manner might the common center of gravity of any greater number of bodies be found. Otherwise: take the distances of the given bodies from some fixed point, as V (fig. 30.), calling the distance V A = a, V B = b, V C = c, V D = d, and the distance of the center of gravity V S = x; then S A = x - a, S B = x - b, S C = x - c, S D = x - d; and by the property of the lever, A x x - a + B x x - b = C x x - c + D x x - d; hence Ax + Bc + Cx + Dx = Ax + Bb + Cc + Cb + Dd, and x = = A + B + C + D) = V S, the distance sought; which is consequently equal to the sum of all the moments, divided by the sum of all the weights in the bodies.
Or thus: when the bodies are not in the same straight line, connect them with the lines, A B, C D; then find, as before, P, the common center of A and B, and Q, the common center of C and D; and conceiving A and B united in P, and C and D united in Q, and S, the common center of P and Q, which will be the common center of the whole. Or, the bodies may be all reduced to any line, V A B. &c. drawn in any direction whatever, by perpendiculars, B B, C C, &c. and then the common center in this line, found as before, will be at the same distance from V as the true center is; and consequently, the perpendicular from s will pass through S, the real center. From the preceding general expression, viz. \[ x = \frac{Aa + Ba + Cc + \text{&c.}}{A + B + C + \text{&c.}} \]

for the center of gravity of any system of bodies, we may deduce a general method for finding that center; for A, B, C, &c. may be considered, as above stated, to be the elementary parts of any body, whose sum or mass is M = A + B + C + \text{&c.}, and Aa, Ba, Cc, &c. are the several moments of all these parts, viz. the product of each part multiplied by its distance from the fixed point, V. Hence then, in any body, if you find a general expression for the sum of the moments, and divide it by the expression of the body, and the quotient will be the distance of the center of gravity from the vertex, or from any other fixed point, from which the moments are eliminated. The application of this principle will appear in the sequel of the article. M. Lhuiller has, in the fourth volume of the New Acts of the Academy of Petersburg, given the demonstration of a very general theorem concerning centers of gravity; the following expression is a particular example of the general proposition: Let A, B, C be the centers of gravity of three bodies; a, b, c, their respective masses; and Q their common center of gravity. Let right lines, Q A, Q B, Q C, be drawn from the common center to that of each body, and the latter be connected by right lines, A B, A C, and B C; then \( QA^2 + a + QC^2 + b + QC^2 + c = AB^2 + \frac{ab}{a + b + c} + AC^2 + \frac{ac}{a + b + c} + BC^2 + \frac{bc}{a + b + c} \)

4. Two weights, D and E, \((\text{fig. 37.})\) being suspended without their common center of gravity in C, to determine which of them preponderates, and how much. Multiply each into its distance from the center of suspension; that side on which the product is greatest will preponderate; and the difference between the two will be the quantity wherewith it preponderates. Hence, the momenta of the weights, D and E, suspended without the center of gravity, are in a ratio compounded of the weights, D and E, and the distances from the point of suspension. Hence, also, the moment of a weight suspended in the very point, C, will have no effect at all in respect of the rest, D, E.

5. To determine the preponderation whereof several bodies, a, b, c, \(d, (\text{fig. 35.})\) are suspended without their common center of gravity in C. Multiply the weights, c and d, into their distances from the point of suspension, C E and C B; the sum will be the momentum of their weights, or the ponderation towards the right: then multiply the weights, a and b, into their distances, A C and C D, the sum will be the ponderation towards the left: subtracting, therefore, the one from the other, the remainder will be the preponderation required.

6. Any number of weights, a, b, c, \(d, (\text{fig. 35.})\) are suspended without their common center of gravity in C, and preponderating towards the right, to determine the point, P, from whence the sum of all the weights being suspended, the ponderation still continues the same as in their former situation. Find the momentum wherewith the weights, c and d, preponderate towards the right; since the momentum of the sum of the weights to be suspended in P is to be equal to it, the momentum now found will be the product of C F into the sum of the weights: this, therefore, being divided by the sum of the weights, the quotient will be the distance, C F, at which the sum of the weights is to be suspended, that the preponderation may continue the same as before.

7. The sum, or difference, of the products, which results from multiplying each particle, A, B, C, D, into its perpendicular distance from any plane, L N, as they are on the same or different sides of the plane, is equal to the product of all the particles multiplied into the distance of their center of gravity, G, from that plane. See figs. 32, 33, and 34. Let P and Q be the centers of gravity of A and B, C and D, and drawing right lines through P, Q, G, parallel to the plane, which intersect the perpendiculars drawn from those points respectively; and \( A : B = BP : BB \cdot PB = AP : MP - AA \); and \( A \times BP - AA = B \times BB - PP, \) or \( A \times \frac{Aa + Ba + Cc + \text{&c.}}{A + B + C + \text{&c.}} \) minus \( A \times \frac{Aa + Ba + Cc + \text{&c.}}{A + B + C + \text{&c.}} \) minus \( GQ \cdot P \cdot PP - G \cdot C, \) and \( A + B : C + D : QG : PG : \frac{G^2 + G^2 - GQ^2}{GQ} + XQ \); or, by transposition and substitution of equals, \( Aa + BA + Bb + Cc + \text{&c.} = C + D + \text{&c.} \) or, \( A + B : C + D : A \cdot PG = A + B + C + D \cdot Bg \); in which expression the higher or lower signs are to be used, as the bodies are on the same, or a different side, of the plane.

Hence it appears, that, if the particles be placed upon the same right line, or, \( (\text{as in fig. 35.}) Aa, Bb, Cc, \) &c.\(, \) become \( A + B, Cc, Dd, Gg \) respectively, \( A \times \frac{Aa + Ba + Cc + \text{&c.}}{A + B + C + \text{&c.}} \) and \( Bg + Cc + \text{&c.} = A + B + C + D + G \); i.e. the sum, or difference, of the products resulting from the multiplication of each particle into its distance from any point, \( g, \) as they are on the same, or a different side of that point, is equal to the product of their sum multiplied into the distance of their center of gravity from that point. Moreover, the whole momentum of a body, acting upon a lever, being equal to that of every particle, or to the sum of the products which results from the multiplication of each particle into its distance from the center of motion, is equal therefore to the product of the whole body into the distance of the center of gravity from the center of motion, and is consequently the same as if it were collected in the center of gravity. The demonstration of this proposition obtains therefore when \( A, B, C, D \) are collections of particles or bodies, whose centers of gravity are the points \( A, B, C, D. \) And to find the center of gravity of a system of bodies, it is evident that in the proposition, introducing this article, bodies, whose centers of gravity are \( A, B, C, D, \) &c. may be substituted for particles. Further, if \( A, B, C, \) \( D, (\text{fig. 33} \) and 34) be bodies acting upon any plane, L N, in parallel directions, the sum of their efforts to move it is the same as if they were collected in their center of gravity; for, if \( A, B, C, D \) be the respective centers of gravity of each body, this sum is equal to \( A \times AA + B \times BB + C \times CC + D \times DD = A + B + C + D + Gg \); or, if they be placed upon a lever, the sum of their efforts to make it rotate is the same as if they were placed at \( G. \) When the center of gravity, therefore, is in the plane, or at the fulcrum of the lever, the plane and lever are quiescent. And if any point, \( Z, \) be taken in \( N L, A \times AZ + B \times BZ + C \times CZ + D \times DZ = A + B + C + D + Gz, \) for if a plane passes through \( Z, \) the proof is the same as that of this proposition. Also, the distance
distance of any plane from the common center of gravity of 

\[ A_1, P, C, B, \text{ &c. or } G \text{ is equal to} \]

\[ A_1 \times A_2 + B \times B_2 + C \times C_2 + D \times D_2 \]

and its distance from a plane passing through any point, \( Z, \) is equal to

\[ A_3 \times Z_3 + B \times Z_3 + C \times Z_3 + D \times Z_3 \]

in which express the lower figures as to be used for the bodies whose center are not on the same side of \( Z, \) with \( A_1 \) and \( B. \)

It follows, that a right line drawn from \( A_1 \) through the center of gravity, \( G, \) of any number or bodies, \( A, B, C, D, \&c., \) will pass through the center of gravity of the remainder; for \( B \times B_1 + D \times D_1 = C \times C_1 \), and consequently the center of gravity of \( B, C, D \) in the plane passing through \( A_1 G \); and if this plane separate, their center of gravity is always in the plane passing through \( A_1 G \), and consequently it must be in the line \( A_1 G \) produced, which is the common intersection of the planes.

If \( r \) be this center, \( B + C + D + G \times r = A \times A_1 G, \) and if the bodies be equal, and \( n \) their number, \( A_1 G = \pi \times I \times G \).

It appears farther, that if a circle or sphere be described about the center of gravity, \( G, \) of any number of bodies, \( A, B, C, \&c., \) and any point, \( P, \) be taken in the periphery of the circle or surface of the sphere, \( PA^2 \times A + PB^2 \times B + PC^2 \times C, \) &c. is a given quantity; for, drawing \( G, \) and the perpendiculai to it \( A_1 B, C, A \times G_1 = B \times G_1 + C \times G_1, \) or by substitution of equals, \( A \times G_1^2 - PA^2 - G_1^2 = B \times PB^2 - G_1^2 - G_1^2 = AC^2. \)

8. If \( A, B, C, D, \&c. \) (fig. 38) be particles of a body urged by forces in parallel directions, whose magnitudes are \( A, B, C, \&c., \) the sum of their weights is equal to the weight of \( A + B + C, \&c., \) acted upon by a force whose magnitude is \( G \).

For the weights of \( A, B, C, \&c., \) be \( A \times A, B \times B, C \times C, \&c., \) the sum of their weights will be equal to \( A + B + C, \&c., \) but this product is the weight of \( A + B + C, \&c., \) acted upon by the force \( G \).

Hence, if the forces \( A_t, B_t, C_t, \&c., \) be equal to each other, \( G \) is equal to one of them, or if the particles \( A, B, C, \&c., \) be acted upon by the same force, their weight is the same as if they were collected in their center of gravity, and acted upon by that force.

The tendency, therefore, of a body to descend is the same as if it were collected in its center of gravity, and, consequently, if a line drawn from that center perpendicular to the horizon falls within the base of that body, it cannot fall; and if without the base, it cannot float. See Gravity.

9. If any number of bodies, \( A, B, C, \&c. \) (fig. 39) move in parallel directions, with any velocities, the center of gravity will describe a right line parallel to them. Let \( A \) and \( B, a \) and \( b, \) be contemporary positions of the bodies \( A \) and \( B, \) and \( G, \) their centers of gravity, and through \( G \) draw a line, \( x y, \) parallel, and consequently equal, to \( A \). From the nature of the center of gravity, \( A \), \( B \), \( P \) : \( P \) : \( G \), \( A \) : \( G \) : \( b_1 : a_1 \), \( y g : x g \), (by similar triangles); and the point \( P \) divides the parallel and equal lines \( A P, x y, \) in the same ratio, and \( G \) is a right line parallel to \( A P \) or \( B \).

If \( H \) be the center of gravity of \( A, B, C, \) it is proved in the same manner that it cuts the parallel and equal lines, \( G, C, \) &c., in the same ratio, and \( H \) is consequently a right line parallel to \( G C. \) Hence, if any number of bodies, \( A, B, C, \&c. \) (fig. 38) acted or deflected in parallel right lines, the sum of the products resulting from the multiplication of each body into the space described by it is equal to the product of their sum, and the space described by their center of gravity \( G, \) for, let \( a, b, c, \&c. \) be contemporary positions of \( A, B, C, \) and, drawing any plane \( M, A \times Am + B \times Bm + C \times Cm = A + B + C \times Gm; \) and \( A \times am + B \times bm + C \times cm = A + B + C \times Gm; \) and consequently by addition \( A \times a + B \times b + C \times c = A + B + C \times Gm, \) and moreover, if any number of bodies move in parallel directions with any unequal velocities, or they be placed upon the lever \( X Y \) (fig. 39, 39, and 40), and receive unequal impulses from any force at the same time in parallel directions, the center of gravity will, in the beginning of its motion, move uniformly in a right line parallel to itself, and its velocity is equal to the product of each body into its velocity, divided by the sum of the bodies; for the spaces \( Aa, Bb, Cc, Gd \) are described in the same time, and vary as the velocities; and \( Gd, \) or if \( G \) be the center of gravity, \( = \frac{A + B + C}{A + B + C}. \)

See Parkinson's System of Mechanics, &c. ch. ix.

10. To find the center of gravity in a right line \( A B \) (Pl. VI. Mechan. fig. 41). All the particles that compose this line may be considered as for any very small weights, each equal to \( \frac{m}{x}, \) which is therefore the fluxion of the weights, or of the line denoted by \( x. \) Multiplying therefore the small weight \( \frac{m}{x} \) by its distance from \( A, \) viz. \( x, \) and \( xx \) will be the momentum of that weight \( \frac{m}{x}; \) or, in other words, \( \frac{m}{x} \) is the fluxion of all the momenta in the line \( A B \) or \( x, \) and, therefore, its fluent \( \frac{x}{m} \) is the sum of all those momenta; which, being divided by \( x \) the sum of all the weights, gives \( \frac{x}{m} \) or \( \frac{1}{m} \) for the distance of the center of gravity \( C \) from the point \( A; \) that is, the center of gravity of an homogeneous line is in the middle of that line. In any body, having found a general expression for the sum of the momenta of all the parts, this be divided by the content of the body, the quotient will be the distance of the center of gravity from the vertex, or from any other fixed point, from which the momenta are estimated.

11. To find the center of gravity in a parallelogram and parallelepiped. Draw the diagonals \( A D \) and \( E G, \) (fig. 42.) likewise \( C B \) and \( H F; \) since each diagonal, \( A D \) and \( C B, \) divides the parallelogram \( A C D B \) into two equal parts, each passes through the center of gravity; consequently, the point of intersection, \( I, \) must be the center of gravity of the parallelogram. In the same manner, since both the planes, \( CBEF, \) and \( ADEG, \) divide the parallelepiped into two equal parts, each passes through its center of gravity; so that the common intersection, \( I, \) is the diameter of gravity, the middle whereof is the center.

After the same manner may the center of gravity be found in prisms and cylinders; it being the middle point of the right line that joins the center of gravity of their opposite bases.

The center of gravity of a parallelogram, &c. may be very easily found by the method of fluxions. Let the axis or length \( A B \) of the parallelogram (fig. 43.) be \( x, \) and its breadth \( DE = b, \) and if \( dc \) be drawn parallel and indefinitely near to \( DE, \) the area \( d E = b, \) will be the fluxion of all the weights, which multiplied by its distance \( x \) from
from the point $A$ gives $b \times \dot{x}$ for the fluxion of all the moments, and consequently the fluxion $\frac{1}{2} b \times \dot{x}$ is the sum of all those moments themselves; which, being divided by $b \times \dot{x}$ the sum of all the weights, gives $\frac{1}{2} x = \frac{1}{2} A B$ for the distance of the center $C$ from the extremity $A$, and is therefore in the middle of the axis, as we have above shown. The process and conclusion will be precisely the same for a cylinder, or any prism whatever, making $b$ to denote the area of the end or of a transverse section of the body.

12. In regular polygons, the center of gravity is the same with the center of the circumscribed polygonal.

13. To find the center of gravity of a cone and a pyramid. The center of gravity of a cone is in its axis $AC$ (fig. 44). If then $\Delta P = x$, $\angle AC = \alpha$, $\angle DC = \beta$, the periphery of the base is $\rho$, and $P N = \gamma$, we shall have, by the well known property of circles, $r : \rho :: y : r'$. The periphery of the circle, whose diameter is $MN$, which being multiplied by $\frac{v}{2}$ will give $\frac{r'}{2\gamma}$ be the area of the same circle. But, by similar triangles, $y : x :: r : \alpha$, therefore $y = \frac{r}{\alpha} x$, and $y^2 = \frac{r^2}{\alpha^2} x^2$; consequently the area of the circle, whose radius is $P N$, becomes equal to $\frac{\rho r^2}{2\alpha^2} x^2$; and therefore $\frac{\rho r^2}{2\alpha^2} x^2$ will be the fluxion of the mafs, or the content of the cone at the term $M N$, and $\frac{\rho r^2}{2\alpha^2} x^2$ will be the fluxion of the moment, whose fluxion is $\frac{\rho r^2}{2\alpha^2} x^2$, which, being divided by $\frac{\rho r^2 x^2}{2\alpha^2}$, the fluxion of the mafs, will give $\frac{x}{\alpha} \frac{\Delta P}{\gamma}$, for the distance of the center of gravity of the portion $AMN$ from the vertex $A$; and when $\Delta P$ becomes equal to $\Delta AC$, $x$ will be equal to $\alpha$; and therefore the center of gravity of the whole cone is distant from the vertex $\frac{\Delta AC}{\alpha}$ of $AC$. And in the same manner is found the distance of the center of gravity from the vertex of the pyramid $\frac{1}{3} \Delta AC$; and therefore all pyramids of the same altitude have the same center of gravity.

14. To determine the center of gravity in an isosceles triangle $BAC$ (fig. 45). Draw the right line $AC$, bisecting the base $BC$ in $D$, which will be also perpendicular to it; since $\Delta BAD = \Delta DAC$, each may be divided into the same number of little weights, applied in the same manner on each side to the common axis $AD$; so that the center of gravity of the $\Delta BAC$, will be in $AD$. To determine the precise point in that, let $AD = a$, $BC = b$, $AP = x$, $MN = y$; then will $\Delta AP : MN :: AD : BC$; or $x : y :: a : b$.

Hence, $y = \frac{b x}{a}$. Consequently $y \times \dot{x}$, which represents the fluxion of the mafs at the term $MN$, divided by $y \times \dot{x}$ expressing the fluxion of the area $AMN$, will be equal to $\frac{b \times \dot{x}}{a} = \frac{b \times \dot{x}}{a} = \frac{x}{\alpha}$; the fluxion of which quantity will be $\frac{1}{\alpha} x$, and at the term $BC$, when $x = A D$, $\frac{1}{2} \Delta AC$, and therefore the distance of the center of gravity of the $\Delta$ from the vertex, will be found $\frac{1}{2} a$.

In the very same manner the center of gravity of any other plain triangle will appear to be at $\frac{1}{2}$ of a line drawn from one angle to bisect the opposite side, or the diameter of gravity, from the vertex.

The same center may be otherwise ascertained without this process. Since a line drawn from any angle to the middle of the opposite side will pass through the center of gravity, the point of intersection of any two such lines will be the center of gravity. For that the center of gravity is in the line $AD$ (fig. 46), and it is also in the line $CG$ bisecting $\angle AB$; and consequently in the point of their intersection, $S$. In order to determine the distance of $S$ from any angle, as $A$, produce $CG$ to meet $BH$ parallel to $AS$ in $H$; then the two triangles $AGS$, $BGH$ are mutually equal and similar, because the opposite angles at $G$ are equal, and also the alternate angles at $H$ and $S$, and at $A$ and $B$, and the line $AG$ is $BG$; therefore the other sides $BH$, $AS$ are equal. But the triangles $CDS$, $CBH$ are similar, and the side $CB = 2 \times CD$; therefore $BH$ or its equal $AS = 2 \times DS$; that is $A S = \frac{1}{2} A D$, the same as before. And in like manner $CS = \frac{1}{2} CG$.

15. To determine the center of gravity of a tetrahedron. Divide the figure (fig. 47) into two triangles by the diagonal $AC$, and find the centers of gravity $E$ and $F$ of these triangles; join $EF$, and find the common center $G$ of these two by this proportion, viz. $\Delta ABC : \Delta ADC :: FG : EG$, or $\Delta ABC : \Delta ABD :: EF : EG$. In a similar manner, the center of gravity may be found in any other figure, whatever be the number of sides, by dividing it into several triangles, and finding the center of gravity of each; then connecting these centers together, and finding their common center as above; then connecting this and the center of a third, and finding the common center of these; and so on, always connecting the last found common center to another center, till all are included in the process; and thus the last common center will be that which is required.

16. For the center of gravity in a parabola (fig. 48). Let $A E = a$, $SH = b$, $AP = x$, $PN = y$. Then will $\frac{2}{3} y$, be the fluxion of the whole weight; but from the nature of the parabola, and the parameter being a constant quantity, $\frac{2}{3} x = y$; whence $x = \frac{2}{3} y$; substituting $2x\frac{2}{3} y$ instead of $2 y$ in the above expression, we shall have $2x\frac{2}{3} y$ for the fluxion of the mafs, whose fluxion $\frac{4}{3} \Delta x$ will be the moment of all the mafs itself. Then, multiplying $2x\frac{2}{3} y \times x$, we shall have $2x^2 \times \frac{2}{3} y \times x$ for the fluxion of the moment, whose fluxion $\frac{4}{3} \frac{x^2}{3} y$ will be the momentum itself. Divide this by $5$ for the whole weight, and the quotient $\frac{2}{3} x \frac{2}{3} y \frac{2}{3} y = \frac{2}{3} x y$, will be the distance of the center of gravity of the space $N A Z P$ from the vertex $A$; and when $AP$ becomes equal to $AE$, or $x = a$, $\frac{2}{3} a$, or $\frac{1}{3} AE$, will be the distance of the center of gravity of the whole parabolic space from the vertex $A$. Now $\Delta MN = \frac{1}{2} x$, being a general equation for all kinds of parabolas, we shall have $y = x \times n$ and therefore $x \times \dot{x}$ will be the fluxion of the whole mafs, and $\frac{1}{m} x$ the fluxion of the moment: the fluxion of this last expression, viz. $\frac{1}{2 m + 1} \times n$, being divided by the fluxion of $x \times \dot{x}$ or $\frac{1}{2 m + 1} \times n$, will give $\frac{m + 1}{2 m + 1} x$, for the distance of the center of gravity of the space $Z A N$ from the vertex $A$, and $\frac{m + 1}{2 m + 1} a$ will be the distance of the center of gravity of the whole parabolic space from $A$. When $m = 2$, as in the common
The center of gravity of a semi-circle, or of a circle, is the center of the circle. 

17. The center of gravity of the arc of a circle, as $ABD$ (fg. 49) is considered a plane line, having gravity.

It is evident that the center of gravity, $G$, of the arc, will be somewhere in the axis, or middle radius $BC$, $C$ being the center of the circle, which is considered as the point of fulcrum. Suppose $F$ indefinitely near to $A$, and $FH$ parallel to $BC$. Put the radius $BC$ or $AC = r$, the semi-arc $AB = z$, and the semi-chord $AE = x$; then $AH = x$, and $AF = z$, the fluxion of the weights, and therefore $CE = z$ is the fluxion of the momenta. But by similar triangles, $AC : r :: AE : z :: AH : x$; therefore $x = CE = z$, and consequently $y = 0$ is also the fluxion of the momenta; the fluxion of which is, and this, divided by $z$, the weight, gives $y = \frac{AC \times AE}{AB} = \frac{AC \times AED}{ABD}$.

$G$, the distance of the center of gravity from the center $C$ of the circle; and it is manifestly a fourth proportional to the given arc, its chord, and the radius of the circle. When the arc becomes the semi-periphery $ABK$, the above expression becomes $\frac{1}{3} \frac{r^2}{1 + \sqrt{3} r} = \frac{r}{1.5708} = .6366r$.

18. Let $ABCD$ (fg. 49) be a circular sector; and the center of gravity will be somewhere in the axis or middle radius, $BC$, as in the former case. With any lesser radius describe the concentric arc $LMN$, and put the radius $AC$ or $BC = r$, the arc $ABD = a$, its chord $AED = c$, and the variable radius, $C$, or $CM = y$; then $r : y :: a : \frac{r}{a}$.

and also by the last article the distance of the center of gravity of the arc $LMN$ is $\frac{CM \times LON}{LMN} = \frac{CM \times AED}{ABD}$.

$\frac{c}{a}$: hence the arc $LMN$ or $\frac{a}{r}$ multiplied by $y$ gives $\frac{c}{r} y$, the fluxion of the weights, and this multiplied by $r$ gives $\frac{c}{a} r$, the distance of the common center of gravity, gives $\frac{c}{a} c$ divided by $\frac{r}{a}$, the fluxion of the momenta; the fluxion of which, viz.

The centers of gravity of other bodies may be found in a similar manner. Thus the attitude of the segment of a sphere, or spheroid, or conoid, being $x$, the whole of the axis itself being $a$, the distance of the center of gravity in each of these bodies from the vertex will be as follows:

$4 a = 3 x$ in the sphere or spheroid.
$6 a = 4 x$ in the semi-sphere or semi-spheroid (as above).
$\frac{3 x}{2} a$ in the parabolic conoid.
$\frac{1}{4} a + \frac{3 x}{2} a$ in the hyperbolic conoid.

Thus, and such cases, however, are more or less, and also more uncommon, and we shall therefore refer for a more ample account of the center of gravity to writers on this subject; among whom we may reckon Archimedes, Pappus, Guidinus, Wallis, Caflus, Carle, Hays, Wolthus, Hodgson, Simpson, &c. &c.

To find the value of any surface or solid by means of the center of gravity; see Céserbary's Method.

20. To determine the center of gravity in any body mechanically. Lay the given body $H I$ (fig. 51.) on an extended rope, or on the edge of a triangular prism $F G$. bringing it thus and that way, till the parts on either side are in equilibrium; the plane, whose sides are $K$, parallel through the center of gravity. Balance it again, on the same, only changing its situation; then will the chord, or the edge $MN$, pass through the center of gravity; so that the intersection of the two lines $MN$ and $KL$, determine the point $O$, in the surface of the body required.

The frame may be drawn thus; on the horizontal table is near the
in two positions, lengthwise and breadthwise: the common
intersection of the two lines contiguous to the edge will
be its center of gravity. Or it may be done by placing
the body on the point of a file, &c. till it rest in equilibrio.
It was by this method that Borda found the center of
gravity in a human body to be between the nates and pubes;
so that the whole gravity of the body is there collected, where
nature has placed the generative organs, (says Wolffius)
the wisdom of the Creator, in placing the membro virile.
In that place which of all others is the most convenient for
copulation; nevertheless, this law does not take place in the
greater number of animals.

Or thus. Suspend the body by any point: then a plumb-
line hung over the same point will pass through the center
of gravity; because that center will always descend to the
lowest point when the body comes to rest, which it cannot
do except when it falls in the plumb-line. Therefore,
marking that line upon it, and suspending the body by an-
other point, with the plumbet, to find another such line, the
intersection of the two will give the center of gravity.

Otherwise. Hang the body by two strings from the fame
tack or nail, but fixed to different points of the body; then
a plummet, hung by the same tack, will fall on the center
of gravity.

Center of gyration, is that point of a body revolving
about an axis, into which, if the whole quantity of materie
were collected, the fame moving force would generate the fame
angular velocity in the body. This point differs from the
center of oscillation, because, in this latter case, the motion
of the body is produced by the gravity of its own particles;
but in the cafe of the center of gyration, the body is put in
motion by some other force acting at one place only. Let
a body, $p$, revolve about $C$, (Plate VII. Mechnica, f. 52.)
and let $A B$ be placed at $D$ to oppose its motion. Then
the momentum of $p$ varies, as $p$ x its velocity, or as $p$ x $p$,
which may be considered as a power acting at $p$, in oppo-
sition to the force at $D$; but this power acting at the dis-
cance, $p$, from the center of motion, its effer to oppose a
force at $D$ must (by the property of the lever), be as $p$ x $p$
$C$, which this power acting at its point, or, which is the fame, to prevent any change in its
motion, is called its "inertia."

To find the center of gyration of a body. Let a body be
conceived to be made up of the particles A, B, C, &c.
whose distances from the axis are $a$, $b$, $c$, &c. and let $x$ be
the distance of the center of gyration from the axis; then,
by the preceding observation, the inertia of $A$, $B$, $C$, &c.
will be as $a$ x $a$, $b$ x $b$, $c$ x $c$, &c. and the inertia of all the
materie of the distance $x$, will be as $A + B + C + &c.
x x$: and as the moving force is the fame in both cafes, the
inertia must be the fame when the fame angular velocity
is generated; hence, $A + B + C + &c.$ x $x^2$
$= A + a^2 + B + b^2 + C + c^2 + &c.$; and, therefore,
$x = \sqrt[3]{\frac{A + a^2 + B + b^2 + C + c^2 + &c.}{A + B + C + &c.}}$: that is, if $i$
be the fluxion of the body at the distance $x$, from the axis,
in $= \sqrt[3]{\frac{\text{flux of}}{x}}$.

E. G. 1. Let the direct line, CA, (fig. 53.) revolve
about $C$; and find O the center of gyration. Put $x$ = $p$,
then $s = s_1$, and $i = i_1$; and therefore $s + \frac{1}{2} s = s_1$, whole fluxion
is $\frac{1}{2} s^2 = (x = C A) \frac{1}{2} C A^2$; hence, $C O = \sqrt[3]{\frac{1}{4} C A^2}$
$= C A \sqrt[3]{\frac{1}{3}}$. Let a circle, A B, (fig. 54.) revolve in its
own plane about its center C; to find O, its center of gyration.
Put $p = 6.28: 518$, &c. the circumference of a circle
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monstrate under Center of percussion it will appear, that in the center of gravity, or from a line passing through the center of gravity parallel to the axis of vibration, be divided by the product of the whole mass or body, multiplied by the distance of the center of gravity from the point of percussion, the quotient will be the distance of the center of oscillation, from the center of gravity; which being added to the distance of the center of gravity from the point of percussion, will be the distance of the center of oscillation from the point of percussion.

Let C A B (Plate V. Mechanics, fig. 56.) represent any form of body regular or irregular, suspended at C; G its center of oscillation; G O its axis of gravity; C O B its axis or right line, passing through the point of percussion, and centers of gravity and oscillation. This body may be conceived to consist of an indefinite number of extremely small parts or weights. Let W be one of those small weights, join W C and W G, and W F perpendicular to C O. Then the product of W, by the square of its distance from C, is $W \times C W^2$. But (Eucl. p. 47, B. i.) $C W^2 = W F^2 + G F^2$; and $G W^2 = G F^2 + W F^2$. (Eucl. p. 7, B. ii.) $C G^2 + G F^2 = 2 CG \times GF + C^2$; and by transposition $C G^2 = GF^2 + CG^2 - 2 CG \times GF$. Then by substitution (viz. by putting instead of $C F^2$ its equal $G F^2 + C G^2 - 2 CG \times GF$), the above stated equation becomes $C W^2 = W F^2 + G F^2 + C G^2 - 2 CG \times GF = (putting GF^2 for its equal $G F^2 + W F^2$) $W F^2 + C G^2 - 2 CG \times GF$. And multiplying both sides by W, we have the sum of all the products $W \times C W^2 = \text{the sum of all the } W \times GF^2 \text{ or } W \times CG^2 \text{ or } W \times 2 CG \times GF$. But by the nature of the center of gravity, the sum of all the $W \times GF^2$ is = C, for those which are on one side of the axis must balance those which are on the other side; and of course all the $W \times 2 CG \times GF$ also become = 0. Therefore there remains the sum of all the $W \times CG^2$ = the sum of all the $W \times W C W^2$ or of all the $W \times CG^2$ or of all the $W \times W G W^2$ or of all the $W \times CG^2$. Or, (taking away the sum of all the $W \times GF^2$ from both sides of the equation) the sum of all the $W \times CG^2$ = the sum of all the $W \times CG^2$.

Then $CO = \frac{\text{the whole body } \times CG^2}{\text{the whole body } \times CG}$ (by rule the $1\text{st}$) = $CG + \frac{\text{the sum of all the } W \times W G W^2}{\text{the whole body } \times CG}$; And lastly, $G O = CO - CG = \frac{\text{the sum of all the } W \times W G W^2}{\text{the whole body } \times CG}$; which is the rule of the $2\text{nd}$.

In the application of the above-mentioned rules, it is frequently very difficult to find the sum of the products of all the weights multiplied by the squares of their respective distances. The method of fluxions is undoubtedly the most extensive, as it may be applied to all such figures or bodies as have some regularity of shape, or such as may be expressed by an algebraical equation. But in some cases the irregularity of form is so very great, that the center of oscillation can only be found out by means of the mechanical method subjoined.

In order to find the sum of the weights, &c. you must consider an indefinitely small part, or increment, or fluxion, of the figure, as being a small weight, and multiply it by the square of its distance from the center of oscillation or axis of vibration, according to the rule the $1\text{st}$, or else multiply it by

| Rule 1. if all the bodies or parts of a body, that forms a pendulum, be multiplied each by the square of its distance from the point or axis of suspension, and the sum of the products be divided by the product of the whole weight of the pendulum, multiplied by the distance of the center of gravity from the point of suspension; the quotient will be the distance of the center of oscillation or percussion from the point of suspension.

| Rule 2. if the sum of the products of all the parts or weights, multiplied each by the square of its distance from the center of gravity, or from a line passing through the center of gravity parallel to the axis of vibration, be divided by the product of the whole mass or body, multiplied by the distance of the center of gravity from the point of percussion, the quotient will be the distance of the center of oscillation, from the center of gravity; which being added to the distance of the center of gravity from the point of percussion, will be the distance of the center of oscillation from the point of percussion. |
by the square of its distance from the center of gravity, or from a line passing through the center of gravity, and parallel to the axis of vibration, according to rule the 2d.; then the fluent of that expression will be the sum of the products of all the weights, multiplied by the squares of their respective distances, either from the axis of vibration, or from the center of gravity, &c. Lastly, this fluent must be divided by the product of the whole body (to be had by common mensuration) multiplied by the distance of the center of gravity, from the point of suspension; and the quotient will be the distance of the center of oscillation either from the point of suspension, or from the center of gravity, according as the operation was performed either by rule the first, or rule the second. Before we proceed to flate and apply another method for investigating the center of oscillation, it will be necessary to premise the following lemma.

Suppose two exceeding small weights, C and P, acting on each other by means of an inflexible line (or wire), PC, to vibrate in a vertical plane, ROC, POM, about the center O; and it be required to determine how much the motion of one is affected by the other. Let CH and PQ (Plate VII. Mechanics, fig. 57) be perpendicular to the horizontal line OR; and let PB and CS be perpendicular to OP and OC respectively. If the force of gravity be denoted by unity, the forces acting in the directions CS and PB, whereby the weights, in their descent, are accelerated, will, according to the resolution of forces, be represented by \( \frac{OC}{O P} \times \frac{OG}{O C} \) and \( \frac{OC}{O P} \times \frac{OP}{OC} \). Moreover, since the velocities are always in the ratio of the radii OC and OP, if the aforesaid forces were to be in that ratio, or that of P was to become \( \frac{OC}{O P} \times \frac{OG}{O C} \), instead of \( \frac{OC}{O P} \times \frac{OG}{O C} \), in that case it is plain, that the weights would continue their motion without affecting each other, or acting upon each other on the line of communication PC (or PB). Whence, the excess of \( \frac{OC}{O P} \times \frac{OG}{O C} \) above \( \frac{OC}{O P} \times \frac{OG}{O C} \) must be the accelerative force whereby the weight, P, acts upon the line (or wire), OC, in the direction OPB; which multiplied by the weight, P, gives \( P \times \frac{OC}{O P} \times \frac{OG}{O C} \), for the absolute force in that direction; which, therefore, in the perpendicular direction NB, is \( P \times \frac{OC}{O P} \times \frac{OG}{O C} \times \frac{OB}{OB} \); whereby the part acting upon C being to the whole as OB to OC, is truly defined by \( P \times \frac{OC}{O P} \times \frac{OG}{O C} \times \frac{OB}{OC} \). If the hypothesis is supposing P to act upon C by means of FC (instead of PB) the conclusion will be in no respect different. For, let F denote the force \( P \times \frac{OC}{O P} \times \frac{OG}{O C} \), in the direction PB, found above; then the action thereof upon PC (according to the principles of mechanics) will be expressed by \( P' \times \frac{PC}{PC} \times \frac{C}{C} \), which, therefore, in the direction SC, perpendicular to OC, is \( F \times \frac{SC}{SC} \times \frac{PC}{PC} \). Hence it follows, that if P D, P Y, &c. be perpendicular to OS, the numerator of the fraction, found above, will become \( P \times \frac{OC}{O P} \times \frac{OG}{O C} \times \frac{GD}{GD} \), in the direction PO, &c. Consequently, the forces of all the particles destroying each other (by hypothesis), the sum of all the quantities \( P \times \frac{OC}{O P} \times \frac{OG}{O C} \times \frac{GD}{GD} \), and \( P \times \frac{OC}{O P} \times \frac{OG}{O C} \), &c. &c. is equal to the content of the body, multiplied by the distance \( ON \), of the center of gravity \( G \), from the line LM (perpendicular to OC); whence \( O C \) is also \( = \frac{ON}{P \times \frac{OC}{O P} \times \frac{GD}{GD}} \), and \( \frac{G}{G} \times \frac{b}{b} \times \frac{ON}{ON} \times \frac{P \times \frac{OC}{O P} \times \frac{GD}{GD}} \). Hence the center of oscillation \( O C \) is, therefore, \( \frac{ radius }{radius} \times \frac{S}{S} \times \frac{PC}{PC} \).
it appears, that, if a body be turned about its center of gravity, in a direction perpendicular to the axis of the motion, the place of the center of oscillation will remain unaltered; because the quantities \( P \times G P^2 + \frac{P}{2} \times \frac{G P^4 + \text{sec. \&c.}}{G \times O G} \) are not way affected by such a motion of the body. It also appears, that the distance of the center of gravity from that of oscillation (if the plane of the motion of the body remains unaltered) will be reciprocally as the distance of the former from the point of suspension. Consequently, if that distance be found when the point of suspension is in the vertex, or so placed, that the operation may become the most simple, the value thereof in any other proposed position of that point will likewise be given by the single proportion.

In order to show these conclusions may be reduced to practice, let it be observed, that the product of any particle of the body by the square of its distance from the axis of motion is (here) called the force thereof, (to efficacy to turn the body about the said axis being in that ratio).

According to which, and the first general value of \( O C \), it appears that, if the sum of all the forces be divided by the product of the body into the distance of the center of gravity from the point of suspension, the quotient thence arising will give the distance of the center of percussion, or oscillation, from the said point of suspension.

In the following examples, let the distance of the center of gravity from the point of suspension be \( g \), and the distance of the center of percussion, or oscillation, from the same point, be \( C \).

1. To find the center of oscillation of a right line, \( O S \), (fig. 59.) perpendicular at one of its extremities. If the part, \( O P \), considered as variable, be denoted by \( x \), the force of all the particles at \( P \), will be expressed by \( x \times x^2 \); and \( 4 \times x \), the fluency of this quantity will express the force of all the particles in \( O P \), or the sum of all the products, under each particle, and the square of its distance from \( O \), the point of suspension. This quantity, when \( x \) becomes \( O S \), being divided by \( O S \times \frac{1}{2} O S \), according to the rule above stated, will give \( \frac{1}{2} O S^3 = \frac{1}{2} O S \) for the value of \( C \), the true distance of the center of oscillation (or percussion) from the point of suspension.

2. Let \( A B \), (fig. 60.) be a line, vibrating in a vertical plane, having its two extremities, \( A \) and \( B \), equally distant from the point of suspension, \( O \). If \( O G \), perpendicular to \( A B \), be put \( = a \), and \( A P \times \frac{1}{2} A \), the force of \( x \) particles at \( P \), will be denoted by \( x \times a \times x^2 = x \times O P \); and the fluency of this quantity, divided by \( a \times x \), or \( P G \times O G \), will give \( \frac{a^2 x + \frac{1}{3} x^3}{a^3} = \frac{O G + \frac{1}{2} G^2}{O G} = C \), when \( x \) becomes \( O C \).

3. Let \( A P S Q \) (Plate VIII. Mechanics, fig. 61.) be a circle, vibrating in a vertical plane; any diameter of which is \( P Q \). Thus \( O P^2 + O Q^2 = 2 \times O G^2 + 2 \times P G^2 \), the sum of the forces of two particles at \( P \) and \( Q \) (putting \( O G = a \), and \( A G = r \)) will be \( a^2 + r^2 \times 2 \); whence the sum of all the particles, in the whole periphery, will be expressed by their number, multiplied by \( a^2 + r^2 \), or by \( a^2 + r^2 \) periphery \( A P S Q \); which, if \( P \) be put \( = 3 \times a \), &c., will be \( a^2 + r^2 \times 2 \times 2 = 2 \times a^2 \times r + 2 \times r^2 \). Hence the force of the circle itself is also given, being equal to the fluency of \( 2 \times a^2 \times r + 2 \times r^2 \times x \times x = a^2 + \frac{1}{2} r^2 \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times 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a constant ratio, we have \( y = \frac{b x}{c} \) (supposing \( S F = b \), and \( AS = c \). Hence, \( C = \frac{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}}{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}} = \frac{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}}{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}} = \frac{\frac{\sqrt{a}}{a}}{\frac{\sqrt{a}}{a}} = 1 \). Then, \( \frac{\sqrt{a}}{a} \) is a constant, and \( a \) is known to be \( \frac{2}{x} \). We have \( C = \left( \frac{g + a \times y - a}{g} \right) = \frac{g + a}{g} = \frac{a + g}{g} \), where \( g = d + a \) = \( d + \frac{1}{a} \), and \( a \) being \( \frac{n + 2 \times x}{n + 2} \). If \( a \) is the constant \( \frac{n + 2 \times x}{n + 2} \), we also obtain \( C = \left( \frac{g}{a + 3} \right) = \frac{g + a}{a + 3} \), where \( g = d + \frac{n + 1 \times x}{n + 2} \). But with respect to the arc of the curve, \( \psi = \left( \frac{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}}{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}} \right) \) is \( \frac{Flu. y \times x}{Flu. y \times x} = \frac{\sqrt{a}}{\sqrt{a}} = 1 \); which, when the point of suspension is in the vertex \( A \), becomes \( \frac{Flu. y \times x}{Flu. y \times x} = \psi \), and consequently, \( C = \frac{a \times y - a}{g} \), as in the preceding case.

But with regard to the superficies of the solid, it is found (Art. 4, above) that the force of all the particles in the circular section \( b \), parallel to \( H \), will be expressed by \( O P + \frac{b}{d} \times PN \times \pi b \) or \( O P \times \frac{b}{d} \times PN \times \pi b \) (\( 1 \) being \( 3.14159 \)). In algebraic terms, \( \frac{d}{d} \times \frac{1}{2} \times \frac{a}{a} \times y \times y \), \( \pi b \) is \( \frac{d}{d} \times \frac{1}{2} \times \frac{a}{a} \times y \times y \). This will give the true value of \( C \) with respect to the curve surface \( Eb Ab F \), which, putting \( \psi = \frac{Flu. y \times x}{Flu. y \times x} \), is likewise expressed by \( g + \frac{a \times y - a}{g} \).

E. G. 1. Let \( E A F \) be considered as a cone, then, putting \( AS = f \), \( SF = b \), and \( AF = c \), we have \( y = \frac{b x}{c} \), and \( \psi = \frac{c}{f} \); and, therefore, \( C = \frac{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}}{Flu. \frac{d}{a} + \frac{1}{a} \times y \times \frac{\sqrt{a}}{a}} = \frac{20 d^3 + 30 d f + 3 d^2}{20 d + 15 f} \) when \( n = f \). But with respect to the convex superficies, \( C \) will be found \( \frac{12 d^3 + 16 d f + 6 d^2 + 3 b^2 + 20 d^3 + 30 d f + 3 d^2}{12 d + 8 f} \).
C. E. G. 2. Let the figure be a sphere, and the axis of vibration pass through $C$ perpendicular to its plane. Put $G = r_1$, $C = d$, $GO = r = \rho$, and $\omega = - \omega$, &c. Then

$$p = \rho_1$$

and the area of the circle $x = \frac{p}{2}$; and hence

$$C = d + \frac{p}{2}.$$ 

Hence it follows that the same must be true for a cylinder, whose axis is parallel to the axis of vibration. See Simpson's Fluxions, vol. i. p. 214, &c. Hodgson's Fluxions, p. 414, &c. Vincè's Principles of Fluxions, section 5. Cavallo's Elem. of Nat. and Exp. Phiol. vol. i.

Mr. Huygens, in his "Horologium Oscillatorium," was the first person who showed how to find the center of oscillation. Mercenarius, he says, first proposed the problem to him, and he was very young, requiring him to resolve it in the cases of circles or of two circles inscribed in the same circle. He further, inspired to try it by advancing the motion of the pendulums of my clock, I have overcome all difficulties, going far beyond Descartes, Fabri, and others, who had done the thing in a few of the most costly cages only, without any sufficient demonstration; and solving not only the problem proposed by Mercenarius, but many others that were much more difficult, and showing a general way of determining this center in lines, superficies, and solids. In the Leibnitz acta for 1691 and 1714, this doctrine is discussed by the two Bernoullis; and the same is also done by Hermann, in his treatise "De Motu Corporum Solidorum et Fluidorum." But it has been since more amply investigated in various treatises on the interc method of fluxions, in which it is introduced as one of the examples of that method by Hayes, Carré, Wollius, Simpson, &c. &c.

A specimen of the application of this method to several cases has been given above; from which it appears, that in a right line, or rectangle, or cylinder, or any other prism, whose constant section is $y$, or the constant quantity $x$; then $y = \frac{x(a)}{a}$, whose flux is $\frac{x}{a}$; also $y = x \frac{a}{a}$, whose fluent is $\frac{x}{a}$; and the quotient of the former $\frac{x}{a}$ divided by the latter $\frac{a}{a}$, is $\frac{x}{a}$ for the distance of the center of oscillation below the vertex in any such figure; namely, having every where the same breadth or section, that is, at two-thirds of its length. In like manner, the centers of oscillation are found for various figures, vibrating flatways, and are as they are expressed in the subjacent summary:

Nature of the figure, when subjected by the vertex.

Hofscles triangle $- \frac{2}{3}$ of its altitude
Common parabola $- \frac{9}{8}$ of its altitude
Any parabola $- \frac{m + 1}{n + 1}$ of its altitude

$m$ being 2 in the common parabola; 3 in the cubic parabola; 4 in the biquadratic.

The investigation of the center of oscillation in figures moved laterally or side-ways, or edge-ways, that is, about an axis perpendicular to the plane of the figure, is somewhat difficult; because all the parts of the weight in the same horizontal plane, on account of their unequal distances from the point of suspension, do not move with the same velocity.
In vibrating the pendulum, let the body be made to oscillate about its point of suspension, and hang up also a simple pendulum of such a length that it may vibrate or just keep time with the other body; then the length of the simple pendulum is equal to the distance of the center of oscillation of the body below the point of suspension. Or it may be still better found in the following manner: Suspend the body very freely by the given point, and make it vibrate in small arcs, counting the vibrations it makes in any portion of time, as a minute, by a good stop-watch; and let that number of oscillations made in a minute be called $n$; then shall the distance of the center of oscillation be $SO = \frac{140850}{n^2}$ inches. For, the length of the pendulum vibrating second, or 62 times in a minute, being $39\frac{1}{2}$ inches, or more accurately 39.1166 inches, and the lengths of pendulums being reciprocally as the squares of the number of vibrations made in the same time; therefore $n^2: 62^2:: 39\frac{1}{2}: \frac{140850}{n}$, the length of the pendulum which vibrates $n$ times in a minute, or the distance of the center of oscillation below the axis of motion. Or again: divide 60 seconds by the number of vibrations performed by the pendulous body in quinelle one minute; and the quotient is the time of one vibration. Square this time, and multiply its square by the length of the pendulum that vibrates second, viz. by 39.1166 inches, and the last product shews the distance in inches of the center of oscillation or percussion from the point of suspension in the proposed pendulum.

E. G. 1. Let a cylindrical flick about a yard long be suspended by one extremity, and caunted to vibrate. Let the number of its vibrations be 75 in a minute; divide 60 seconds by 76, and the quotient, or $0.79$ (79 hundredths of a second), is the time in which the proposed pendulum performs one vibration. Then, the lengths of pendulums being as the squares of the times of vibration, lay, as the square of one second, i.e. unity, is to the square of $0.79$, viz. 0.6241, so is the length of the pendulum which vibrates seconds, viz. 39.1166, the length sought; therefore multiply 39.1166 by 0.6241, and the product, 24.64, is the distance sought: so that the center of oscillation in the flick is 24 inches and 4 tenths distant from its extremity by which it is suspended; that is, about $\frac{1}{3}$ of its length.

E. G. 2. Let an irregular body, suspended by one end, perform 20 vibrations in a minute; and the time of one vibration is $\frac{60}{20} = 3$ seconds; the square of this is 9, and 39.1166 $\times$ 9 = 352.0704 inches, or nearly 29 feet, the distance of the center of oscillation from the point of suspension.

Center of percussion, in a moving body, is that point where the percussion is the greatest, in which the whole percutent force of the body is supposed to be collected: or about which the impetus of the parts is balanced on every side: so that it may be stopped by an immovable obstacle at this point, and rest on it, without acting on the center of percussion: or, the center of percussion is that point in the axis of a vibrating or revolving body, which, striking against an immovable obstacle, causes the whole motion, estimated in the plane of the body's motion, to be destroyed. It is obvious, that if the obstacle be opposed to the moving body at different distances from the point of percussion, the stroke or percussion will not be equally powerful: and it is evident, that this center of percussion does not coincide with the center of gravity. Let the body, AB. (Plate VIII. Mechanics, fig. 67.) consisting of two equal balls fastened to a stiff rod, move in a direction parallel to itself, and it is evident that the two balls must have equal momentums, since their quantities of matter are equal, and they move with equal velocities. Now if in its way, as at N. II. an obstacle C be opposed exactly against its middle E, the body will thereby be effecitively stopped, nor can either end of it move forwards, for they exactly balance each other, the middle of this body being its center of gravity. Now should an obstacle be opposed to this body, not against its middle, but nearer to one end, as at N. III. then the stroke being not in the direction of the center of gravity, is in fact an oblique stroke, in which case, agreeably to the laws of congres, a part only of the momentum will be spent upon the obstacle, and the body advancing the end A, which is fartherl from the obstacle, as shewn by the dotted representation, will proceed with that part of the momentum which has not been spent upon the obstacle; consequently in this case the percussion is not so powerful as in the foregoing. Therefore there is a certain point in a moving body which makes a stronger impression on an obstacle than any other part of it. In the present case, indeed, this point coincides with the center of gravity; because the two ends of the body before the stroke moved with equal velocities. But in a pendulum the case is different; for let the same body of fig. 67. be suspended by the addition of a line AB, fig. 68, which line we shall suppose to be void of weight and flexibility, and let it vibrate round the point of suspension S. It is evident that now the two balls will not move with equal velocities; for the ball B, by describing a longer arc than the ball A in the same time, will have a greater momentum; and of course the point where the forces of the two balls balance each other, which is the center of percussion, lies nearer to the lower ball B; consequently this point does not coincide with the center of gravity of the body AB; but it is that point wherein the forces of all the parts of the body may be conceived to be concentrated. Hence the center of oscillation and the center of percussion coincide; or rather they are exactly the same point, whose two names only allude, the former to the time of vibration, and the latter to its striking force.

If in fig. 67, the balls A and B be not equal, their common center of gravity will not be in the middle at E, but it will lie nearer to the heavier body, as at D, supposing B to be the heavier body; so that the distances, BD, AD, may be inversely as the weights of those bodies. Now when the above-mentioned body is formed into a pendulum, as in fig. 68, though the weights A and B be equal, yet by their moving in different arcs, viz. with different velocities, their forces or momentums become actually unequal; therefore in order to find the point where the forces balance each other, so that when an obstacle is opposed to that point, the moving pendulum may be effectually stopped, and
and no part of it may preponderate, in which case the obstacle will receive the greatest impulse; we must find first the momentum of the two bodies A and B, then the distances of those bodies from the center of percussion, or, of equal forces, must be inversely as those moments. Thus the velocities of A and B are represented by the similar arcs which they describe, and those arcs are as the radii \( \overrightarrow{SA}, \overrightarrow{SB} \). Therefore the momentum of A is the product of its quantity of matter multiplied by \( \overrightarrow{SA} \), and the momentum of B is the product of its quantity of matter multiplied by \( \overrightarrow{SB} \); consequently \( \mathbf{A \cdot D} \) must be to \( \mathbf{B \cdot D} \), as the weight of B multiplied by \( \overrightarrow{SB} \) is to the weight of A multiplied by \( \overrightarrow{SA} \). Then \( \mathbf{D} \) is the center of percussion. And when four quantities are proportional, the product of the two extremes is equal to the product of the two means; therefore if the weight of A multiplied by \( \overrightarrow{AS} \), be again multiplied by \( \mathbf{AD} \), the product must be equal to the product of the weight of B multiplied by \( \overrightarrow{BS} \), and again multiplied by \( \mathbf{BD} \).

Center of percussion, locus of the. — The center of percussion is the same with the center of oscillation, where the percipient body revolves round a fixed point, and is determined in the same manner, viz. by considering the impetus of the parts, so many weights applied to an insensible right line, void of gravity; i.e. by dividing the sum of the products of the forces of the parts, multiplied by their distances from the point of suspension, by the sum of the forces. What, therefore, has been above shewn of the center of oscillation, will hold of the center of percussion, where the percipient body moves round a fixed point; e.g. that the center of percussion in a cylinder is at \( \frac{1}{2} \) of its length from the point of suspension; or that a duck of a cylindrical figure, supposing the center of motion at the head, will strike the greatest blow at a point about two-thirds of its length from the head. See Center of oscillation.

2. The center of percussion is the same with the center of gravity, if all the parts of the percipient body be carried with a parallel motion, or with the same celerity: for the moments are the products of the weights into the celerities. Wherefore, to multiply equiponderating bodies by the same velocity, is the same thing as to take equiparallels; but the equiparallels of equiponderating bodies themselves equiponderate; therefore, equivalent momenta are disposed about the center of gravity: consequently the center of percussion in this case coincides with that of gravity; and what is shown of the one, will hold of the other.

To find the center of percussion of a body. Let \( \mathbf{A \cdot B \cdot D} \) (fig. 69.) be a plane passing through the center of gravity \( \mathbf{G} \) of the body, and perpendicular to the axis of suspension which passes through \( \mathbf{C} \); and conceive the whole body to be projected upon this plane in lines perpendicular to it, or parallel to the axis: then, as each particle is thus kept at the same distance from the axis, the effect, from the rotary motion about the axis, will not be altered, nor will the center of gravity be changed. Let \( \mathbf{O} \) be the center of percussion, and draw \( \overrightarrow{p} \) perpendicular to \( \mathbf{p} \), and \( \overrightarrow{w} \) perpendicular to \( \mathbf{p} \); also \( \overrightarrow{v} \) perpendicular to \( \mathbf{G} \). As the velocity of any particle \( \mathbf{p} \) is as \( \mathbf{p} \), the momentum of \( \mathbf{p} \) in the direction \( \mathbf{p} \) is as \( \mathbf{p} \times \mathbf{p} \), being as the velocity of the lever, the efficacy of this force to turn the body about \( \mathbf{O} \) is as \( \mathbf{p} \times \mathbf{p} \times \mathbf{C} \times \mathbf{O} \times \mathbf{w} \) (because \( \overrightarrow{O \cdot w} = \mathbf{C} \times \mathbf{O} \times \mathbf{w} = \mathbf{O} \times \mathbf{C} \times \mathbf{O} \times \mathbf{w} = \mathbf{C} \times \mathbf{O} \times \mathbf{w} = \mathbf{G} \). Now the efficacy of all the particles to turn the body about \( \mathbf{O} \) may be \( \mathbf{r} \), we must make the sum of all the quantities \( \mathbf{p} \times \mathbf{w} \times \mathbf{C} \times \mathbf{O} = \) sum of all the quantities \( \mathbf{p} \times \mathbf{C} \times \mathbf{O} = \) sum of all the \( \mathbf{p} \times \mathbf{C} \times \mathbf{O} \); hence \( \mathbf{G} = \mathbf{r} \times \mathbf{G} \). Therefore the sum of the moments of all the particles is equal to the product of the center of gravity and the axis of vibration in that plane, is also \( \mathbf{r} \). But this is a problem of more difficult solution. As the force acting at \( \mathbf{O} \) destroys the motion, let its suppoasive force to act at \( \mathbf{O} \) and to generate the motion back again; then it is manifest, that the body would return to the point of suspension, and the same circumstances in which its motion ceased; that is, it would begin its motion by revolving about \( \mathbf{C} \). In this case \( \mathbf{C} \) is called the center of spontaneous rotation: making the plane the point at which a force acts upon a body that can move freely the center of percussion, the center of spontaneous rotation coincides with the center of rotation corresponding to that center of percussion. Vinci's Principles of Dynamics, p. 125. Parkinson's System of Mechanics, &c., p. 194.

Center of a parallelogram, the point wherein its diagonals intersect.

Center of position, denotes a point of any body, or system of bodies, so selected, that we may properly estimate the situation and motion of the body or system by those of this point. It is evident that, in mechanical discussions, the point, by the position of which we estimate the position and distance of the whole, must be so determined, that its position and distance, estimated in any direction whatever, shall be the average of the positions and distances of every particle of the mass, estimated in the same direction. Accordingly this will be the case, if the point be so selected that, when a plane is made to pass through it in any direction whatever, and perpendiculars are drawn to this plane from every particle in the body or system, the sum of all the perpendiculars on one side of this plane is equal to the sum of all the perpendiculars on the other side. If there be such a point in the body, the position and motion of this point are the average of the positions and motions of all the particles. For if \( \mathbf{P} \) (Plate 1X. Mechanism, fig. 70.) be a point of transit, and if \( \mathbf{Q} \) be a plane (perpendicular to the paper) at any distance from it, the distance \( \mathbf{P} \) of the point from this plane is the average of all the distances of all the particles from it. Let for the plane \( \mathbf{A \cdot P \cdot B} \) be passed through \( \mathbf{P} \), parallel to \( \mathbf{Q} \). The distance \( \mathbf{D} \) of any particle \( \mathbf{C} \) from the plane \( \mathbf{Q} \) is equal to \( \mathbf{D} = \mathbf{D} \), or to \( \mathbf{D} = \mathbf{D} \). And the distance \( \mathbf{G} \) of any particle \( \mathbf{G} \), lying on the other side of \( \mathbf{A \cdot P \cdot B} \), is equal to \( \mathbf{G} = \mathbf{G} \). Let \( \mathbf{n} \) be the number of particles on that side of \( \mathbf{A \cdot B} \), half of which are nearest to \( \mathbf{Q} \), and let \( \mathbf{m} \) be the number of those on the remote side of \( \mathbf{A} \), and let \( \mathbf{m} \) be the number of particles in the whole body, and therefore equal to \( \mathbf{n} + \mathbf{m} \). It is evident that the sum of the distances of all the particles, such as \( \mathbf{C} \), is \( \mathbf{n} \times \mathbf{P} \), after deducting all the distances, such as \( \mathbf{D} \). Also the sum of all the distances of the particles, such as \( \mathbf{G} \), is \( \mathbf{n} \times \mathbf{P} \), together with the sum of all the distances, such as \( \mathbf{G} \). Therefore the sum of both facts is \( \mathbf{n} + \mathbf{m} \times \mathbf{P} + \mathbf{G} \). But the sum of all the \( \mathbf{D} \), or \( \mathbf{m} \times \mathbf{P} \), the sum of \( \mathbf{G} \), or \( \mathbf{G} \); but the sum of \( \mathbf{D} \), or \( \mathbf{m} \times \mathbf{P} \), the sum of \( \mathbf{G} \), or \( \mathbf{G} \).
by the supposed property of the point P. Therefore $m \times P_0$ is the sum of all the distances, and $P_0$ is the nth part of this sum, or the average distance.

Now suppose that the body has changed both its place and its position with respect to the plane $QR$, and that $P$ (fig. 71) is still the same point of the body, and $A \beta$ a plane parallel to $QR$. Make $p = \alpha P \beta$ equal to $P_0$ of fig. 70. It is plain that $P_0$ is still the average distance, and that $m \times P_0$ is the sum of all the distances of the particles from $QR$, and that $m \times P_0$ is the sum of all the distances.

Therefore $m \times P = \pi$ is the sum of all the changes of distance, or the whole quantity of motion elastically determined in the direction $n$. $P_0$ is the nth part of this sum, and is therefore the average motion in this direction. The point $P$ has therefore been properly selected: and its position, and distance, and motion, in respect of any plane, is a proper representation of the situation and motion of the whole.

It follows from the preceding discussion, that if any particle $C$ (fig. 70.) moves from $C$ to $N$, in the line $C S$, the centre of the whole will be transferred from $P$ to $Q$, so that $P Q$ is the nth part of $CN$; for the sum of all the distances has been diminished by the quantity $CN$, and therefore the average distance must be diminished by the nth part of $CN$, or $P Q = \frac{CN}{m}$.

But it may be doubted whether there is in every body a point, and but one point, such that if a plane passes through it, in any direction whatever, the sum of all the distances of the particles on one side of this plane is equal to the sum of all the distances on the other side.

It is easy to show that such a point may be found, with respect to a plane parallel to $QR$. For if the sum of all the distances $DC$ exceed the sum of all the distances $GH$, we have only to pass the plane $AB$ a little nearer to $QR$, but still parallel to it. This will diminish the sum of the lines $DC$, and increase the sum of the lines $GH$. We may do this till the sums are equal.

In like manner we can do this with respect to a plane $LM$ (also perpendicular to the paper), perpendicular to the plane $AB$. The point wanted is somewhere in the plane $AB$, and somewhere in the plane $LM$. Therefore it is somewhere in the line in which these two planes intersect each other. This line passes through the point $P$ of the paper where the two lines $AB$ and $LM$ cut each other. These two lines represent planes, but are, in fact, only the intersection of those planes with the plane of the paper. Part of the body must be conceived as being above the paper, and part of it behind or below the paper. The plane of the paper therefore divides the body into two parts. It may be so situated, therefore, that the sum of all the distances from it to the particles lying above it shall be equal to the sum of all the distances of those which are below it. Therefore the situation of the point $P$ is now determined, namely, at the common intersection of three planes perpendicular to each other. It is evident that this point alone can have the condition required in respect of these three planes.

But it still remains to be determined whether the same condition will hold true for the point thus found, in respect to any other plane passing through it; that is, whether the sum of all the perpendiculars on one side of this fourth plane is equal to the sum of all the perpendiculars on the other side. Theore.

Let $AGHB$ (fig. 72.) $A X Y B$, and $CDFE$, be three planes intersecting each other perpendicular in the point $C$, and let $C I K L$ be any other plane, intersecting the first in the line $C I$, and the second in the line $CL$. Let $P$ be any particle of matter in the body or system.

Draw $PM$, $PO$, $PR$ perpendicular to the first three planes respectively, and let $PR$, when produced, meet the oblique plane in $V$; draw $MN$, $ON$, perpendicular to $CB$. They will meet in one point $N$. Then $PMNO$ is a rectangular parallelogram. Also draw $MQ$ perpendicular to $CE$, and therefore parallel to $AB$, and meeting $CI$ in $S$. Draw $SV$; also draw $ST$ perpendicular to $VP$. It is evident that $SV$ is parallel to $CL$, and that $STRQ$ and $STPM$ are rectangles.

All the perpendiculars, such as $PR$, on one side of the plane $CDFE$, being equal to all those on the other side, they may be considered as coexisting each other; the one being considered as positive or additive quantities, the other as negative or subtractive. There is no difference between their sums, and the sum of both sets may be called $0$, or nothing. The same must be allowed of all the perpendiculars $PM$, and of all the perpendiculars $PO$.

Every line, such as $RT$, or its equal $QS$, is in a certain invariable ratio to its corresponding $QC$, or its equal $PO$. Therefore the positive lines $RT$ are compensated by the negative, and the sum total is nothing.

Every line, such as $TV$, is in a certain invariable ratio to its corresponding $ST$, or its equal $PM$, and therefore their sum total is nothing.

Therefore the sum of all the lines $PV$ is nothing; but each is in an invariable ratio to a corresponding perpendicular from $P$ on the oblique plane $C I K L$. Therefore the sum of all the positive perpendiculars on this plane is equal to the sum of all the negative perpendiculars, and the proposition is demonstrated, viz. that in every body, or system of bodies, there is a point such, that if a plane be passed through it in any direction whatever, the sum of all the perpendiculars on one side of the plane is equal to the sum of all the perpendiculars on the other side.

The point $P$, thus selected, may, with great propriety, be called the center of position of the body or system.

If $A$ and $B$ (fig. 73.) are the centers of position of two bodies, whose quantities of matter (or numbers of equal particles) are $a$ and $b$, the center of the straight line joining $A$ and $B$, and $AC : BC = b : a$, or its distance from the centers of each are invariable as their quantities of matter. For let $AC \beta$ be any plane passing through $C$. Draw $A \alpha$, $B \beta$, perpendicular to this plane. Then we have $A \alpha = B \beta$, and $B \beta = a : b$; and, by the similitude of triangles, $CA \cdot CB = a : b$.

If a third body $D$, whose quantity of matter is $d$, be added, the common center of position $E$ of the three bodies is in the straight line $DC$, joining the center of the third body with the center $C$ of the other two, and $DE : EC = a + b : d$. For passing the plane $DE$ through $E$, and drawing the perpendiculars $D \delta$, $C \chi$, the sum of the perpendiculars from $D$ is $d \times D \delta$; and the sum of the perpendiculars from $A$ and $B$ is $a + b + C \chi$, and we have $d \times D \delta = a + b + C \chi$, and therefore $DE : EC = a + b : d$.

In like manner, if a fourth body be added, the common center is in the line joining the fourth with the center of the other three, and its distance from this center and from the fourth is invariable as the quantities of matter; and so on for any number of bodies.

If all the particles of any system be moving uniformly, in straight lines, in any directions, and with any velocities whatever, the center of the system is either moving uniformly in a straight line, or is at rest.

For, let $m$ be the number of particles in the system. Suppose any particle to move uniformly in any direction. It is evident from the reasoning in a former paragraph, that the
the motion of the common center is the n-th part of this motion, and is in the same direction. The same must be said of every particle. Therefore the motion of the center is the motion which is compounded of the n-th part of the motion of each particle. And because each of these was supposed to be uniform and rectilinear, the motion compounded of them all is also uniform and rectilinear; or it may happen that they will be compensative each other that there will be no diagonal, and the common center will remain at rest.

Cor. 1. If the centers of any number of bodies move uniformly in straight lines, whatever may be the motions of each particle of each body, by rotation or otherwise, the motion of the common center will be uniform and rectilinear.

Cor. 2. The quantity of motion of such a system is the sum of the quantities of motion of each body, reduced to the direction of the center's motion. And it is had by multiplying the quantity of matter in the system by the velocity of the center.

The velocity of the center is had by reducing the motion of each particle to the direction of the center's motion, and then dividing the sum of those reduced motions by the quantity of matter in the system.

By the selection of this point, we render the investigation of the motions and actions of bodies incomparably more simple and easy, freeing our calculations from numberless intricate complications of motion, which would frequently make our progress almost impossible. That there is in every body such a point has been demonstrated in the manner above stated by Dr. Robiton (after Bodinovich) in his Elements of Mechanical Philosophy, &c. Svo. 1803, p. 76 &c.

The center of pressure, in Hydrostatics, is that point of a surface, against which any fluid pressure, in which the whole pressure may be conceived to be united; or, as Mr. Cotes has defined it, is that point, in which, if the total pressure on any plane were applied, its effect upon the pane would be the same as when it was distributed unequally over the whole; or again, it is that point to which, if a force were applied, equal to the total pressure, but with a contrary direction, it would exactly balance or still itself in the effect of the pressure, and keep the surface at rest.

Thus if be de (Plate IX. Mechanic, Fig. 74) be a vessel or water, and the fluid be supported upon a force equivalent to 20 pounds of water, this force is unequally distributed over a; for the parts near a being at a lesser depth, are press'd up more than the parts near c, which are at a greater depth, and therefore the efforts of all the particular pressures are united in some point as e, which is nearer to e than to a, and that point e is what may be called the center of pressure. If to that point a force equivalent to 20 pounds weight be applied, it will affect the plane ac in the same manner as before by the pressure of the water distributed unequally over the whole; and if to this same point we apply the same force with a contrary direction to that of the pressure of the water, the force and pressure will balance each other, and by contrary endeavours destroy each other's effects. Suppose at e a cord p q were fixed, which passing over the pulley p has a weight, we, of 20 pounds annexed to it, and that the part of the cord p q were perpendicular to a c; the effect of the weight we is equal, and its direction contrary to that of the pressure of the water. Now if e be the center of pressure, these two powers will be in equilibrium, and mutually destroy each other's endeavours.

To find the center of pressure of a plane surface. Let A B C D (fig. 75) be the surface of the fluid, V W the plane, in which produced, let c d be its intersection with the surface, P the center of pressure, and G the center of gravity; and conceive the whole plane to be divided into an infinite number of indefinitely small parts, of which one is x y draw P Q, G x, perpendicular to the surface, and P a, G n, x m, perpendicular to c d; and join Q n, a m, w m; then it is manifest that the triangles P Q a, G x, w m, are similar. Now the pressure on x perpendicular to V W is as x x w (being as the particle or number of particles x the depth); and its effect to turn the plane about c d is as x x w x x m; but, by similar triangles, G x : G n :: x x m : x w = x m x G x : G n ; hence the effect of the pressure at x to turn the plane about c d is as x x m x x m x G x : G n ; therefore the whole effect is as the sum of all the pressure on all the x x m x x m x G x : G n ; for if A = the area of V W, the pressure on V W is as A x G x; therefore the effect of that pressure at P to turn the plane about c d is as A x G x x P a. Hence A x G x x P a = the sum of all the x x m x x m x G x : G n. Consequently P a = sum of all the x x m x x m x G x : G n. Hence it appears, that P is at the same distance from c d as the center of periphery is from the axis of fulcrum.

They do not, however, in general lie in the same line, that is, in the line n G; for the efficacy of the point at x, to turn the plane about G, is as x x w x x m, or (since x w varies as x m) as x x m x m, but the sum of all the x x m x m x m is not generally as a; therefore the whole pressure will not necessarily balance itself upon the line G. The situation of the line A P must therefore be determined, by making the sum of all the x x m x m x m = a. The centers of pressure and periphery are not therefore in general coincident, taking the center of periphery a in its usual acceptation. Ob. The center of periphery has always been defined to be that point in the line n G at which all the motion of the body would be destroyed, estimating the motion of the body at the line c d; but the body, after its action against that center, may still have a tendency to turn about the line n G. If, therefore, we were to define the center of periphery to be that point at which the whole motion of the body would be destroyed, the centers of pressure and periphery would not, in general, coincide; in which case, the position of the line A P is determined on the same principle. See p. 75. Principles of Hydrostatics, p. 47. &c. Venetian Principles of Hydrostatics, p. 100.

The center of a regular prism, or regular body, is the same as that of the included or circumscribed sphere or circle.

The center of rotation, is that point about which a body, otherwise at liberty, revolves or tends to revolve, when it is acted upon equally at different points, or by a force in the direction of which does not pass through its center of gravity. M. L. Bernouilli was the first who published anything on this subject; and he first found the point about which a body at rest would begin to revolve, when struck by another body, and he called this point the "monumental center of rotation," to distinguish it from the center of linear rotation. He observes, however, that D. Bernouilli had discovered the same; he has also mentioned the curve described by that point in the progressive motion of the body, and has directed a method of inquiry by which the velocities of the bodies may be found after the stroke. Two years afterwards D. Bernouilli published an paper on progressive and rotary motion, containing not the more than what J. Bernouilli had before given. Euler has also investigated the velocities of the
the bodies after impact in a manner somewhat different, but
he has rendered it much more intricate by a fluxional cal-
culus. Mr. Vince has treated this subject much at large and
with great perspicuity in the Philosophical Transactions, vol.
lxxv. (for 1750) p. 519, &c. He begins with the most sim-
ples cases, and then proceeds to those that are more complica-
ted: and he comprehends the whole in a variety of dis-
tinct propositions.

1. Let A and B (Pl. IX, Mechanics, fix. 76) be two in-
definitely small bodies connected by a lever void of gravity: and
suppose a force to act at any point D perpendicularly to the
lever; and it be required to find the point about which the
bodies will begin to revolve.

By the property of the lever, the effort of the force act-
ing at D on the body is to the effect on B :: BD : AD; and
therefore the ratio of the spaces Am, Dm, deflected by the
bodies A and B in the first instant of their motion will be as
BD : AD :: AB : B; join mn, and produce it if necessary, and also
AB to meet in C, and this will be the point about which
the bodies begin to revolve. Hence from similar figures
BC : AC :: AD : BD (Ba) :: A : AB (Am) :: A : AD : BD ; or DC - DB : AD + DC :: A : AD :: BD : AD + BD ; and consequently DC = BD - AD - AD ; and therefore DC is the center of percussion or occlusion to
the point of fulcrum C. Hence, whatever be the magni-
tude of the stroke at D, the point C will remain the same.
Moreover, if the force acts at the center of gravity, G, the
bodies will have no circular motion; for in this case BD =
AD : A : AD = 0: and therefore DC becomes infinite.
Further, if the force acts at one of the bodies, the
center of rotation, C, will coincide with the other body.
Also, if the lever had been in motion before the stroke, the
point C, at the instant of the stroke, would not have been
disturbed.

2. Let a given quantity of motion be communicated to the
lever at D, to determine the velocity of the center of gravity, G. The
space Am is as DB
A
; and CG = CD - DG = CD -
AG + AD = A + AD + BD - A = BD - AD - AD = BD = BD - AD - AD ; also CA = CD + DA = BD + BD - AD = BD + BD - AD ; hence we have
B + BD - AD = A + AD + BD + AD = B + BD - AD - AD = A + AD + BD - AD - AD = AD + BD - AD - AD = A
or G = v, the velocity of the center of gravity: hence if the
motion be communicated at G, the velocity becomes
A + B.

Let the motion, supposed to be actually communicated to the
rod at D, be equivalent to the motion of a body whose magnitude is G, and moving with a
velocity v; then, if that motion be communicated at G, the velocity of the center of gravity will be

\[
\frac{G \times v}{A + B} = \frac{B + B \times G + A \times A + G}{A + B}.
\]

3. Let a given elastic body P, moving with a given velocity, be supposed to strike the lever at the point D, in a direction per-
pendicular to it; and it be required to determine the velocity of the
center of gravity G after the stroke. Suppose, first, the
body to be non-elastic, and let v be the velocity of the
center of gravity after the stroke, and V the velocity of the
striking body: then CG = CD = v :: CD = v =
the velocity of the point D, after the stroke, or of the body P;
for the same reason, \(\frac{v \times CA}{C + G} \) and \(\frac{v \times CB}{C + G} \) equal the velocities
of A and B respectively. Now, because in revolving bodies, the momenta arising from the magnitude of the bodies,
their distance from the center of rotation and velocity con-
jointly, remain the same after the stroke as before it, we shall have

\[
\frac{v \times CD}{C + G} = \frac{P \times V + DC}{P + V} + \frac{v \times CA}{C + G}.
\]

or

\[
A + B \times G + P \times DC = A + B \times G + P \times DC.
\]
hence if P be supposed an elastic body, we shall have

\[
A + B \times G + P \times DC = \frac{2 \times P \times V \times CG}{C + G}.
\]

4. Let a motion be communicated to the lever obliquely, and
it be required to determine the point about which the bodies begin to
revolve. Let F D (fig. 77.) represent the force communicating
the motion at the point D, and resolve it into two others, FH, HD, the former F H parallel to the lever, and the latter H D perpendicular to it. Let G be the
point about which the bodies would have begun to revolve, if the
force HD alone had acted, which may be found by
Art. 1; and suppose in this case \(m \approx n \) to have been the next
position of the lever after the commencement of the motion,
or that the bodies A, B, and center of gravity G, had been
carried to m, g, and n, respectively. But as the force
FH acts at the point D at the same time in the direction of
the rod, if we take G as FH; HD, then whilst the
center of gravity would have moved from G to g in
consequence of the force H.D, it will be by means of the force
FH be carried in the direction of the lever from G to g,
and also every other point of the lever will be carried in
the same direction with the same velocity; take therefore
A and B each equal to G; and complete the paral-
lelograms A, G, and B, and the bodies A, B, and
center of gravity G will, at the end of that time, be
found at a, b, and \(a \approx b \), respectively, and \(a \approx b \) will be the
position of the lever. Now it is evident, that C is not
the point about which the bodies begin to revolve, for

\[
\frac{1}{A + B}.
\]
(considering the lever to be produced to C) that point must have moved over a space CE equal to CGy, when the lever is come into the position a w b; draw CO perpendicular to CE, and G O perpendicular to GC; and O will be the center of rotation at the commencement of the motion. For conceive CO to be a lever, then the lever A B C has a circular motion about C, whilst that point is moving from C to E, and consequently the point O is carried forward in a direction parallel to CO by this motion; but as the lever CO is carried by a circular motion about C in a contrary direction, it is evident that that point of the lever CO must be at rest where those two motions are equal, as they are in contrary directions. Now the velocity of C in the direction CO : velocity of G about C :: CG:y : G O :: (by fim. triangle) CO : CG, and the velocity of the point G about C: velocity of the point O about C :: CG : CO; hence ex aequo the velocity of C in the direction G O, or of O in the direction O P parallel to CO, is equal to the velocity of the base point O in a contrary direction arising from its rotation about C, and consequently O being a point at rest, must be the center of rotation in ipso motu initio. Also, because m is equal and parallel to a b, a b must be equal and parallel to m n, therefore the angular velocity is just the same as if the force FH had not acted. The center O of rotation at the beginning of the motion being thus determined, every thing relative to the motion of the bodies after they are at liberty to remove freely, may be determined as in the proceeding propositions.

Cor. 1. Hence it appears, that whatever be the magnitude or direction of the force communicating the motion, or the point at which it acts, the center of gravity will move in a line parallel to the direction of the force, for the triangles F H D, G g w being similar, G w must be parallel to F D.

Cor. 2. The same is manifestly true for any number of bodies; for let (fig. 78.) E be a third body, and conceive it to be connected with the other two bodies A and B in their center of gravity G; then if F D represents the force acting at the point D, it is evident from the last Corol. and the second Prop. that the center of gravity moves with the same velocity and in the same direction, as if the same motion had been communicated at G in a line R G parallel to F D, and that the center of gravity has the same velocity communicated to it, as if the two bodies had been placed at G; conceive therefore the bodies A and B to be placed at G, and let the force act at D, and then from the last Corol. the center of gravity g, of the three bodies, will move in a line parallel to the direction of the force communicated. In the same manner it may be proved for any number of bodies.

The method here used for determining the point of rotation in ipso motu initio, when a single force acts at any point D, may be applied, when any number of forces act at different points at the same time. For let (fig. 79.) a, b, g, &c. represent the forces acting on the lever at the points D, E, F, respectively, &c. then from the same principles the effect of all the forces on A: the effect on B::

\[
\begin{align*}
\frac{A}{B} & = \frac{a}{b} + \frac{\beta}{\gamma} + \text{ &c.} = \frac{A D + A E + A F}{B D + B E + B F} + \text{ &c.}
\end{align*}
\]

which quantities put equal to P and Q respectively, and then the ratio \(\frac{P}{Q}\) :: A:m: B:n :: A C: B C, from whence it appears, that (putting G C + G A = A C and G C + G B = B C) the distance G C = \(\frac{A \times P + B \times Q}{A \times Q - B \times P}\). The same conclusion might have been deduced from this consideration: that if any number of forces act on a lever, the effect on any point of that lever is just the same as if a force, equivalent to the sum of those forces, had acted at their common center of gravity; and therefore their common center of gravity, and conceive a force equivalent to them all to be communicated to that point, and the problem is reduced to the case of the first proposition. If any of the forces had acted on the opposite side of the lever, such forces must have been considered as negative.

If there be any number of bodies placed on the lever, and a single force acts at D, it will appear from the same principles that the point C, about which they begin to revolve, will be the point of fixation to the center of percussion D; and the same conclusion will be obtained, if the bodies be not situated in a straight line.

5. If a force acts upon a body in any given direction not passing through the center of gravity; to determine the plane of rotation, the direction in which the center of gravity begins to move, and its motion after. Conceive a plane A y B Z (fig. 79.) to be supported upon a line A B passing through its center of gravity G, and suppose a force to act at any point D in that line, and in a direction perpendicular to the plane; then it is manifest, that such a force can give the plane no rotatory motion about A B. Imagine now the support to be taken away whilst the force is acting at D, then it is evident, that as the plane had no tendency to move about A B as an axis, and the taking away of the support can give it no such motion, it will, by Cor. 2. Art. 4. begin its progressive motion in the direction in which the force acts; and as the force is supposed not to act at the center of gravity, it must at the same time have a rotatory motion about some axis, and as it has no motion about A B, must be somewhere in the plane, and perpendicular to A B; and consequently in ipso motu initio the plane of rotation must be perpendicular to the plane A y B Z. Let L C M, perpendicular to A B, be the axis about which the plane begins to revolve, and A y, B Z be two equal particles of the plane similarly situated in respect to A B, also A y, B Z are perpendicular to L C M. Now the centrifugal force of p, or its force in the direction a p = p x a p, and that of q in the direction b q = q x b q; to determine now how these forces will affect the motion of the plane, we may observe, in the first place, that the force p x a p, acting at a in the plane, must tend to give it a motion about an axis perpendicular to the plane; but as an equal force q x b q acts at q to give it a motion in a contrary direction, it is evident that the two forces will destroy each other, so far as they tend to generate any motion in the plane about an axis perpendicular to it; and hence it is manifest, that if the parts of the plane A y B, A Z B, be similar, and similarly situated in respect to A B, the plane, after the commencement of the motion, will have no tendency to revolve about an axis perpendicular to it. Also, as the centrifugal force of each particle acts in a direction parallel to A B, it can give the plane no tendency to revolve about that line as an axis, and consequently the plane of rotation will be preferred as in ipso motu initio. Conceiving therefore the plane on each side the line A B to be similar, and similarly situated, suppose another plane to be fixed upon this, whose parts on each side A B are similar, and similarly situated, and the force to act as before, then it is manifest, that as each plane endeavours to prefer the same plane of rotation, the
two planes connected will also continue to move in the same plane of rotation, for the action of one plane on another, on each side the plane of rotation, being equal, cannot tend to disturb the motion in that plane; and as this must be true for any number of planes that similar and familiar situated, it is evident, that if a force should act upon a body, and each section, perpendicular to the direction of the force, should be similar on each side the plane passing through the direction of the force, and the center of gravity of the body, that plane would be the plane of rotation in which the body would both begin and continue its motion. It appears also, from what has been proved, that if every section on each side that plane had not been similar, the plane of rotation would not necessarily have continued the same after the commencement of the motion. Hence all bodies, formed by the revolution of any plane figure, will have the axis about which they were generated, a fixed axis of rotation; to determine, however, every other axis of a body about which it would continue to revolve, would be foreign to the present subject. Supposing therefore the plane of rotation to continue the same, imagine all the particles of the body to be referred to that plane orthographically, which supposition not affecting the angular motion of the body, the centrifugal force of all the particles, to cause the body to revolve about an axis perpendicular to that plane, will remain unaltered. Let L M N O (fig. 83.) be that plane, and suppose a force to act at A in the direction P A living in the same plane, which produce until it meets L N, passing through the center of gravity G, perpendicularly in D; then by Cor. 2. Art. 4. the center of gravity G will begin its motion in a line parallel to P A, or perpendicular to L N; and consequently the center C, about which the body begins to revolve, must lie somewhere in the line L N. Now the centripetal force of any particle P is \( p \times \frac{r^2}{R^2} \); let fall a perpendicular to L N, then the effect of that force at C, in a direction perpendicular to L N, will be \( p \times \frac{r^2}{R^2} \); and in the direction C L it will be \( p \times \frac{r^2}{R^2} \); but as the sum of all the quantities \( p \times \frac{r^2}{R^2} \), it follows from the same reasoning as in Art. 3. that the point G will continue to move in a direction perpendicular to L N; and also, as the forces \( p \times \frac{r^2}{R^2} \) act in a direction perpendicular to that in which the center of gravity moves, its motion must be continued uniform. In the following proposition, therefore, we suppose the axis to be fixed, after the commencement of the motion, to continue perpendicular to the plane passing through the direction of the force and the center of gravity of the body, and that the body itself is orthographically projected upon that plane; also in the case of the action of two bodies on each other, the plane passing through the direction of the striking body and point of percussion is supposed to pass through the centers of gravity of each body; that the axis of each body after it is fixed continues perpendicular to that plane, and that each body is reduced to it in the manner above described.

6. To determine the point about which a body, when struck, begins to revolve. Let L M N O (fig. 83.) represent the body, G the center of gravity, and P A the direction of the force acting at A, which produce till it meets L N, passing through G, perpendicularly in the point D; draw \( p b \) perpendicular to \( p c \), on which (produced if necessary) let fall the perpendicular D w; C being supposed the point about which the body begins to revolve, and which, from the last proposition, is somewhere in the line L N. Because the body, in consequence of the force acting at D, begins to revolve about C, and consequently if immediately after the beginning of the motion a force were applied at D equal to it, and in a contrary direction, the motion of the body would be destroyed. It is evident, that the efficacy of the body revolving about C, to turn the body about D, should any obstacle be opposed to its motion at that point, must be equal to nothing; for were it not, the body, when stopped at D, would still have a rotatory motion about that point, and consequently two equal and contrary forces applied at D would not destroy each other's efficacy, which would be absurd. Now the force of a particle \( p \), in the direction \( p c \), being \( p \times p c \), its efficacy to turn the body about the point D is \( p \times p c \times D w \); but by sim. trian.,

\[ D w = D b \times p \frac{a c}{p c} \]

and consequently the efficacy to turn the body about \( D = p \times D b \times p \frac{a c}{p c} \). 

Hence \( p \times p c \times D w = \frac{p c}{p c} \times D b \times a c \); and consequently the efficacy to turn the body about \( D = \frac{p c}{p c} \times D b \times a c \). 

Hence \( D w = D b \times p \frac{a c}{p c} \), and consequently the efficacy to turn the body about \( D = \frac{p c}{p c} \times D b \times a c \).
part of a long object glass were exactly in the middle, yet it may be a very good one when it is an inch or two out of it.

Phil. Trans. No. 4, p. 57. Id. ibid. p. 64. seq. See Ob-
ject glass.

CENTESIMA, in Roman Antiquities, that wherein the inter-est in an hundred months became equal to the prin-
cipal; i.e. where the money is laid out at one per cent. per
month, answering to what in our line would be called 12 per cent. for the Romans reckoned their interest not by the
year, but by the month.

CENTESIMUM, in Ancient Geography, a piece of Italy,
in Umbria, S.W. of Nuceria. Its name indicates its dif-
tance from Rome.

CENTESIMATION, in Ancient Military History, a
punishment reorted to in cases of mutiny, defection or the
like, by which every one hundredth man only was executed
or punished with death.

CENTESMI, the 10th part of any thing.

CENTAVIUS, in Middle Age Writers, the same
with CENTAVRUS.

CENTIARE, in French Superficial Measure. 100 square
meters or 930.4 square feet. See Measure.

CENTIBAR, in French Measures of Capacity, the hun-
dredth part of a bar, called also decal, containing 10 cubic
decimeters of water, and weighing 20.444 French pounds.

See Measure.

CENTICAD, a bushel, 10 cubic decimeters, or 10.5
Paris pints, or .578 Paris bushel. See Measure.

CENTIGRAM, or dram, the hundredth part of a
Grave, weighing 2 gros, 44.41 grains. A piece of silver
coin weighing a centigrave, is denominated a Franc of silver,
and, according to the former standard, will be worth 40 sols
10\textdegree} deniers.

CENTIGRAV, contains 1,000 cubic decimeters, and
weighs 1.481 grain.

CENTILIOQUIUM, from centum, a hundred, and logor;
I speak, denotes a collection of an hundred Sentences, opin-
ions, or sayings.

CENTIME, in French Money, the hundredth part of
a livre. See Money.

CENTIMETRE, in French long Measure, is the hun-
dredth part of a metre or 4.444 lines. A cubic centimetre of
water is named a Gravit or Miller, and weighs 18.441
grams.

CENTINEL or Centry, in French Sentinelle, is a soldier
from a guard, placed at any poll for the security of the fald
guard, or any other body of troops, for watching the enemy,
preventing surprizes, and stopping those who might wish to
pass without orders, and without making themselves known.
All centinels ought to be very vigilant on their polls, should
avoid finging, smoking, making any noise themselves, or
suffering any to be made near them by others. They should
keep their arms in their hands during the whole time they
are on duty, should not sit down, or on any account go to
sleep, as on their attention and watchfulness depend the lives
of many; but should keep moving about, if the weather will
permit them. They ought never to move farther from their
polls in any directions, than to distances from which they
can have distinct views of them, as well as of the intervening
and intervening spaces. And should the weather be ever so bad,
they ought not to go under any other cover than that of their
centry boxes. Not one of them should be allowed to quit
his poll without leave from his commanding officer. And
in order to prevent defection, marauding, or other irregulari-
ties; they should be strictly charged to let no soldier pass
them.

CENTINEL perdu, in French Sentinelle perdu, is a soldier
placed at a very hazardous poll, or in a situation where he
is in constant danger of being attacked, taken, or killed
by the enemy without any prospect of aid, help (holp) or relief.
Hence the phrase fortun perdu, commonly pronounced forlorn
hope.

CENTINEL, Great and Little, in Geography, two islands
in the Indian Sea: the former five leagues from the Great
Andaman; and the latter seven leagues N.W. from the
Little Andaman.

CENTINODIUM, an official plant, popularly called
botanics polygium; reputed an allrin-
gent and vulnerary.

CENTIPES, CENTIPEDIL, in Entomology. See Scro-
lopendra.

CENTIUM, Putei, in Ancient Geography, a place of
Asia in Syria, situated on a large plain, and surrounded by
mountains.

CENLANCES, in Military Language, a name given to
a Scottish company of gendarmerie, established in 1422
by Charles VII. of France.

CENTILVRE, Susanna, in Biography, a dramatic
writer, was the daughter of Mr. Freeman, a gentleman of
Lincolnshire, who, being attached to the parliamentary
camp, took refuge in Ireland at the restoration. She
is supposed to have been born in Ireland about the year 1667.
Discovering an early propensity to poetry and a romantic
disposition, and being ill-treated by those who had the
care of her after the death of her mother, she resolved on a
visit to London; and in the course of her journey, which she
performed on foot, she was met by Anthony Hammond, eq.,
then a student at the University of Cambridge. This
gentleman caused her to assume a boy's garb, and took her
with him to college, where she spent some months in his
company, but fearing a discovery, he persuaded her to go
to London, where, being in her 15th year, she married a
nephew of Sir Stephen F. By having in about a year lost
her husband, she soon after married Mr. Carroll, an officer
in the army, whom she left in a duel about a year and a half
after their union. She then commenced her course as a
dramatic writer, and made her first attempt in tragedy.
Accordingly in 1700 her "Perjured Husband" was
performed at Drury-lane. She afterwards wrote several
comedies, which were chiefly translations from the French,
and which obtained temporary success. One of them,
etitiled "The Gameller," was honour'd with a prologue by
Rowe. She also made some trial, without rising to any
great reputation, as an actress. Under this character,
however, she performed before the court on the stage at
Windlor, and captivated the heart of Mr. Joseph Centlivre,
young man of the mouth to Queen Anne, whom she married
in 1756. Of the number of her comedies, which she
produced with great fertility, we may reckon "The Bufty Body,"
performed in 1708; "The Wonder, a Woman keeps a
Secret," in 1714; and "A bold Stroke for a Wife," in
1715. The licentiousness which at that time characterized
the English stage is too apparent in her productions. She
lived, however, on terms of friendship and familiarity with
most of the wits of that period, as Steele, Rowe, Farquhar,
and Bulstrode; but upon incuring the displeasure of Pope,
she was introduced into the Dunciad. Her person was
handsome, her conversation sprightly, and her disposition
friendly and benevolent. She died in 1753. Her dramatic
works were printed in 1761, in 3 vol. 12mo. Her verses
and letters were collected and published by Mr. Boyer.

CENTNER, or Dzensnog Hundred, in Metallurgy
and Assaying, is a weight divisible, first into an hundred, and
thence into a greater number of other smaller parts; but
though the word is the same, both with the assayers and
metallurgists,
metallurgists, yet it is to be understood as expressing a very
different quantity in their different acceptance of it. The
weights of the metallurgists are catly understood, as being of
the common proportion, but those of the affayers are a
thousand times smaller than these, as the portions of metals
or ores examined by the affayers are usually very small.
The metallurgists, who extract metals out of their ores,
sue a weight divided into an hundred equal parts, each part
a pound; the whole they call a centun or hundred weight;
the pound is divided into thirty-two parts, or half ounces;
and the half ounce into two quarters of ounces, and these
each into two drams.

These divisions and denominations of the metallurgists are
catly understood; but the same words, though they are
equally used by affayers, with them express very different
quantities: for as the centun of the metallurgists contains
a hundred pounds, the centun of the affayers is really no
more than one drachm, to which the other parts are propor-
tioned.

As the affayers' weights are divided into such an extreme
degree of minuteness, and are so very different from all the
common weight, the affayers usually make them themselves
in the following manner, out of small flaker, or fine folder
plates, of such a size, that the mark or their weight, ac-
cording to the division of the dram, which is the docimatic,
or affaying centun, may be put upon them. They first
make a half an ounce weight, being about two thirds of a
common dram; this they mark (63:8.) Then having at
hand some granulated lead, washed clean, well dried, and
fitted very fine, they put as much of it in one of the small
dishes of a fine balance, as will equipotence the 63:8. (as it
is called) just mentioned; then dividing this granulated lead
into very nice halves. In the two scales, after taking out the
first flaker weight, they obtain a perfect equilibrium between
the two scales; they then pour the granulated lead out of
one dish of the scales, and instead of it put in another flaker
weight, which they make exactly equiperpondent with the
lead in the other scale, and mark it (6:x.) If this second
weight, when first put into the scale, exceed by much the
weight of the lead, they take a little from it by a very fine
flake; but when it comes very near, they use only a whiteline
to wear off an extremely small portion at a time. When it
is brought to be perfectly even and equal to the lead, they
change the scales to see that no error has been committed,
and then go on in the same manner till they have made all
the divisions, and all the small weights. Then to have an
entire centun, or hundred weight, they add to the 63:8.
(as they call it) a 32:6. and a 4:8. and weighing against
then one small weight, they make it equal to them, and
mark it (10:6.) This is the docimatic, or affaying centun,
and is really one dram. Cramer, Art. All, p. 108.

CENTO, in Poetry, a work wholly composed of verses,
or paraphrases, promiscuously taken from other authors;
or disposed in a new form, or order: so as to compose a new
work, and make a new meaning.
The word is Latin, cento, which primarily signifies a
dress made of patches, and that from xenia.

Autonomus has laid down the rules to be observed in com-
posing cantors. The pieces, he says, may be taken either
from the same poet, or from several; and the verses may be
either entire, or divided into two; one half to be connected
with another half taken elsewhere; but two verses are never
to be taken running, nor is much less than half a verse to be
taken. Agreeable to these rules, he has made a pleasant
nuptial cento from Virgil.

Hvba Falconi has written the life of Jesus Christ in cantos
taken from Virgil: the like is done by Alex. Rolli, in his
Chriftidos; and by Stephen de Pleure, canon regular of

CENTOBRYCA, in Ancient Geography, a town of
Spain, in Celtiberia.

CENTON, a fortress of Thrace, in Lower Myria, the
walls of which were repaired by Justinian. Procopius.

CENTONARE. In Italy, a plagiarist in musical com-
position, where melody and harmony are mere patch-work;
it is said to centonar. Sometimes an opera consisting of airs
selected from the Mafoni, or by the fingers themselves from
the works of various composers, is called a cento. See
Pasticcio.

CENTONARI, in Antiquity, a sort of officers or
operators, whose business was to make centones, or coats
patched of leather and cloth, wherewith to cover the vince,
under which the bullies made their approaches, as well as
the towers and machines used to batter the place, and pre-
vent their being set on fire by the enemy.

In the Theodorian code we have a title De centonaribus
et denrobatibus. And in ancient inscriptions, the centonarii are
joined with the signarii, or carpenters, ferrarii, or smiths, &c.
who made but one company, under the denomination of collegium
fabrorum et centonariorum.

CENTONIER, French. See Centonare, Ital.

CENTO-POZZI, in Geography, a town of Naples, in
the province of Batn; three miles N. of Matera.

CENTORBI, the ancient Centoripa, a city of Sicily,
mentioned by Cicero in his oration against Verres. It is
situated on five points of rocks, and resembles a far-fish;
being very difficult of access, and incommodious for habitation.
Yet, in the time of the Romans, it was very populous;
but it retains no vestige of its ancient splendour, except a
few ruins. Its long fabums, terminated in a point, are
miserable and depopulated; and it is delirious of money and
commerce. The convent of the reformed Augustines is a
large building, but in as depopulated a state as the town.
To the wellward of the town there are considerable runs of
baths, built with beautiful marble, lined with marble in
the Roman style, like that of the baths of Baal. To the
east of the town is the ruin of a castle, called the castle of
Canradin. Frederic, the grandfather of this Conradin,
destroyed Centorbi about the beginning of the 13th century,
and razed its foundations. It was, however, again rebuilt,
with the castle; for in 1268, after the J. fest of Conradin,
Conrad Capetius, aspiring to become king of Sicily, and
finding himself abandoned by the Sicilians, who declared for
Charles of Anjou, that himself up in this fortress.
Montfort, having forced him to surrender, put out his eyes,
and afterwards hanged him; and then destroyed the city.
A greater number of gold and silver coins, precious stones of
every kind, vases, statues, cinerary urns, &c. have been
found at Centorbi than in any other place in Sicily.
A considerable part of the riches of the museum of the
 prince of Bicaris has been furnished by this town. The
number of inhabitants in this ancient and once large city is now
reduced to 3000, who are very poor and wretched. The
neighbouring country, planted chiefly with vineyards, pro-
duces an indifferent wine; and there are soft rocks of an
imperfect free-stone, mixed with a marine tufa, even to the
summit of the mountain. The soil in one part of the town
is formed of marine concretions, mixed with shells; and
under the vegetable earth lies tufa, with the fore-mentioned
concretions, and gritty stone; and at a greater depth,
found lavas, beneath which is a bed of grit. The
lava probably forms the basis of the mountain, and indicates,
by being covered with marine concretions to the depth of
600 feet below the present level of the sea, the antiquity of
the
the volcano that produced it. De Nola's Journey in Sicily and Malta, p. 85.

CENTRES, in Ancient Geography, a people of Scythia, mentioned by Valerius Flaccus.

CENTORIO, Accarnia, in Biography, an Italian writer of the 16th century, originally of Rome, and after his expulsion from this city, a resident at Milan. His profusion was military; but in the interval of peace he compiled "Military and Historical Memoirs," collected from his own knowledge and from the information of others. They were published at Venice in 1565 and 1579, in 2 vol. 4to. The first part contains an account of the wars of Transylvania; the second, of those of his own time. They are held in high estimation. Nov. Dict. Hist.

CENTRAL, something relating to a centre, or centre. Thus, we say, central eclipse, central forces, central rule, &c.

Central eclipse, is that in which the center of the luminaries exactly coincides, and are directly in a line with the eye of the observer. See Eclipse.

Central forces, are the forces which tend to or from some point or center; or they are forces which cause a moving body to tend towards the center of motion, or to recede from it. According they are divided into two kinds, with regard to their different relations to the center, viz., the centrifugal and the centripetal.

The doctrine of central forces, a very considerable branch of the Newtonian philosophy, has been much cultivated by mathematicians, on account of its extensive use in the theory of gravity, and other physico-mathematical sciences.

In this doctrine it is supposed, that a body at rest never moves itself; and that a body in motion never of itself changes the velocity or the direction of its motion; but that every motion would continue uniform, and its direction rectilinear, unless some external force or resistance affected it. Hence, when a body at rest always tends to move, or when the velocity of any rectilinear motion is accelerated or retarded continually, or when the direction of a motion is continually varied, and a curve line is described; these changes are supposed to proceed from the influence of some power that acts incessantly; which power may be measured either by the pressure of the quiescent body against the obelisk that hinders it to move, in the first case; or by the degree of acceleration or retardation of the motion, in the second; or by the flexure of the curve described, in the third; due regard being had to the time in which these effects are produced, and other circumstances, according to the principles of mechanics. Effects of the power or force of gravity of each kind fall under our cognizance observation near the surface of the earth; for the same power which renders bodies heavy while they are at rest, accelerates them when they descend perpendicularly, or retards them when they ascend, and bends the course of their motion into a curve line when they are projected in any other direction than that of their gravity.

But we can judge of the forces or powers that act on the celestial bodies by effects of the last kind only. And hence it is that the doctrine of central forces is of so much use in the theory of the planetary motions.

SIR ISAAC NEWTON has treated of central forces in book i. § 2, of his Principia; and has demonstrated this fundamental theorem respecting them, viz., that the arcs which revolving bodies describe by radii drawn to an immovable center, lie in the same inmoveable planes, and are proportional to the times in which they are described. Principi. lib. i. prop. 1.

A late eminent mathematician observes, that this law, which is originally Kepler's, is the only general principle in the doctrine of centripetal forces; but since this law, as Sir ISAAC NEWTON himself has proved, cannot hold whenever a body has a tendency by its gravity or force to any other than one and the same point, there seems to be wanting some law that may serve to explain the motions of the moon and satellites which have a gravity towards two different centers. The law he lays down for this purpose is as follows: namely, that where a body is urged by two forces tending constantly to two fixed points, it will describe, by lines drawn from the two fixed points, equal solids in equal times, about the lines joining those fixed points. See MACHIN, on the laws of the moon's motion, in the Phil. Trans. This short treatise is published at the end of the English translation of Sir ISAAC NEWTON's Principia. See a demonstration of this law by Mr. W. Jones in the Phil. Trans. vol. li. art. 12. p. 74. &c. The same subject has been elaborately discussed, when the motion respects, not two centers only, but several centers, by many ingenious authors; and practical rules have been laid down for computing the places, &c. of planets and satellites; as by La Grange, La Place, Waring, &c. See Berlin Memoirs, those of the Academy of Sciences at Paris; and the Philosophical Transactions of the Royal Society of London, and various treatises of astronomers.

M. de MONTUORE has given elegant general theorems relating to central forces in the Phil. Trans. and in his Mémo. Analyst. p. 321.

Let M P O (Plate X. Mechanics, fig. 81.) be any given curve in the perimeter of which a body moves; let P be the place of the body in the curve at any time; S the center of force, or the point to which the central force acting on the body is always directed; P G the radius of concurrency of curvature at the point P; and S T the perpendicular drawn from the center of force to the tangent PT of the curve in P, then will the centripetal force be everywhere proportional to the quantity S P.

Monseigneur Varignon has also given two general theorems on this subject in the Memoirs of the Academy. an. 1700, 1701, and has shown their application to the motions of the planets. See also the same Memoirs, an. 1706-1710. Mr. MACLAURIN has also treated the subject of central forces very fully in his Fluxions, from art. 426 to 429, where he gives a great variety of expressions for these forces, and several elegant methods of investigating them.

Central forces. Laws of 1. The following rule, for which we are obliged to the marquis de l'Hôpital, is very clear and comprehensive. Suppose a body of any determinate weight to move uniformly round a center, with any given velocity: find from what height it must have fallen to acquire that velocity; then, as the radius of the circle it describes is double to that height, so is its weight to its centripetal force.

Let v represent the body, or its weight or quantity of matter, o its velocity, and r the radius of the circle described, and g be = 10^2.45152 f屏障, the space fallen through in the first sec. of time, and z g will express the velocity acquired; then, since the squares of the velocities are as the spaces (see Acceleration) 4 g^2: g^2: o^2: or the height pertaining to the velocity v; and r: o^2: b: a: s: = f the centripetal force. Hence, if the centripetal force be equal to the gravity, the velocity acquired is equal to that acquired by falling through half the radius.

2. The central force of a body moving in the periphery of a circle, is as the verified sine of the indeterminate small arc, A E, or as the square of the said arc divided by the diameter, A B; or, as the square of the arc, A E, directly, and the diameter
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Let this be the distance which the body describes in a given particle of time; then, from the nature of the circle (of little being very small, and consequently nearly equal to its chord) 

\[ AE^2 = AB \times AM, \text{and therefore} AM = \frac{AE^2}{AB}. \]

Now AM is the space through which the body is drawn from the tangent in the given time; and though 2 AM is the proper measure of the central force, yet when the forces compared are all computed in the same manner, from the same, or indefinitely small subtenes of contemperaneous arcs, it is of no consequence whether we consider these subtenes, or their doubles, as the measures of the forces, since the ratio is in both cases the same. Since then a body, by an equable motion, in equal times describes equal areas \( AE \); the central force by which the body is impelled in the periphery of the circle is constantly the same.

3. If two bodies describe different peripheries by an equable motion, their central forces are in a ratio, compounded of the duplicate ratio of their velocities directly, and the reciprocal ratio of their diameters: because the ratio of the velocities is in this case the same with that of the arcs or spaces described in the same time; and the velocities are evidently in the subduplicate of the products of the diameters multiplied by the forces. Thus, \( F_1 : F_2 = \frac{v_1^2}{D_1} : \frac{v_2^2}{D_2} \) \( A \), \( E^2 \) \( A \) \( B \), and the velocity \( v \) is as the space \( AE \) uniformly described. Hence, if the velocities be equal, the central forces will be reciprocally as their diameters; and if the diameters \( A B \) and \( H L \) be equal, i.e. if each moveable proceed in the same periphery, but with unequal velocities, the central forces will be in aduplicate ratio of the velocities. Hence, if the radii or diameters be reciprocally in the duplicate ratio of the velocities, the central forces will be reciprocally in the duplicate ratio of the radii, or directly as the 4th powers of the velocities: that is, if \( V^2 : v^2 : r : R \), then \( F_1 : F_2 : R^2 : V^2 \) \( v^2 \), for \( V^2 = v^2 \) \( r \), and \( F = \frac{V^2}{R} : \frac{v^2}{r} \). \( V^2 : v^2 : r : R \).

If the central forces of the two bodies moving in different peripheries be equal, the diameters of the circles \( A B \) and \( H L \) will be in a duplicate ratio of the velocities. For in this case, \( \frac{V^2}{R} = \frac{v^2}{r} \) and \( V^2 = v^2 \) \( r \); therefore \( r : R :: \frac{V^2}{R} : \frac{v^2}{r} \).

4. The central forces are in a ratio compounded of the direct ratio of the diameters, and the reciprocal one of the squares of the periodic times. For the diameters are as the peripheries which are the spaces run in the periodic times; and these are in the compound ratio of their times and velocities directly: therefore, representing the times by \( t_1 \), \( t_2 \), the velocities by \( V \), \( v \), and the diameters by \( D_1 \), \( D_2 \) \( D :: \frac{V^2}{D} \times T \cdot v \times t \; \text{consequently,} \frac{V^2}{D} \times T :: \frac{v^2}{d} \times t \). \( t^2 \) \( d^2 \) \( D^2 \); and therefore by Art. 3. the central forces are in the proportion required; i.e. \( F_1 : F_2 = \frac{V^2}{D} : \frac{v^2}{d} \). \( t^2 \) \( d^2 \) \( D^2 \). And when the circles are equal, the central forces are reciprocally as the squares of the times, \( D \) being \( d \).

5. If two bodies, equal in weight, describe peripheries of unequal circles in equal times, their central forces are as their diameters \( A B \) and \( H L \). For \( F' :: t^2 \times D = T^2 \times d \); but \( T' :: t' \); \( F :: F' : D : d' ; R : r \). And hence, if the central forces of two bodies, describing peripheries of two unequal circles, be as their diameters, they pass over the same in equal times. For \( Fd = F' T^2 \times d \); and \( F' T^2 \times d = f' \times d' \times D ; \) therefore, \( T' = t' \) \( T :: t \).

6. If two bodies, moving in unequal peripheries, be acted on by the same central force, the time the larger is to that in the smaller, in a subduplicate ratio of the greater diameter \( A B \), to the less \( H L \); for \( F \) being \( F = \frac{V^2}{D} \times t = t' \times D, \) and \( T' :: t \). \( T :: T' \); wherefore, \( T' :: F' :: D : d \) the time of the diameters of the circles in whose peripheries those bodies are acted on by the same central force, are in a duplicate ratio of the times. Hence also the times wherein similar peripheries or arcs are run over by bodies impelled by the same central forces, are in proportion to their velocities.

7. If the times wherein the bodies are carried through the same entire peripheries, or similar arcs, be as the diameters of the circles, the central forces are reciprocally as the same diameters. For \( T :: T' :: D \times d \); and \( T' :: d' \times D' \); therefore, \( F' : F = \frac{r}{D} = \frac{R}{D} \).

8. If a body move uniformly in the periphery of a circle, with the velocity it acquires by falling from the height \( A F \); the central force will be to the gravity, as double the altitude of the circle \( A F \) to the radius \( CA \). If, therefore, the gravity of the body be called \( G \), the centrifugal force will be \( 2AF \times G \div CA \). See Art. 1.

9. If a heavy body move equally in the periphery of a circle, and with the velocity which it acquires by falling through a height equal to half the radius; the central force will be equal to the gravity. And again, if the central force be equal to the gravity, it moves in the periphery of a circle, with the same velocity which it acquires in falling a height equal to half the radius.

10. If the central force be equal to the gravity, the time it takes up in the entire periphery, is to the time of its fall through half the radius, as the periphery to the radius.

11. If two bodies move in unequal peripheries, and with an unequal velocity, which is reciprocally in a subduplicate ratio of the diameters; the central forces are in a duplicate ratio of the distances from the center of the forces, taken reciprocally. For \( F :: d^2 \div D^2 \); and \( F = \frac{V^2}{R} \div \frac{v^2}{r} \). \( d' \div D' \), or \( r \div R \).

12. If two bodies move in unequal peripheries, with velocities which are reciprocally as the diameters or distances from the center; their central forces will be reciprocally as the cubes of their distances from the center, or directly as the cubes of the velocities. Thus, if \( V :: r :: R \); \( F = \frac{V^2}{R} \div \frac{v^2}{r} \). \( \frac{R^3}{r^3} \); \( r^3 \div R \), or \( V^3 :: r^3 \).

13. If the velocities of two bodies, moving in unequal peripheries, be reciprocally in a subduplicate ratio of the diameters, or central distances; the squares of the times wherein they pass the whole peripheries, or similar arcs, are in a triplicate ratio of the distances from the center of the forces; wherefore, if the central forces be reciprocally in a duplicate ratio of the distances from the center, the squares of the times wherein the entire peripheries, or similar arcs, are passed over, are also in a triplicate ratio of the distances.

If \( V :: r :: d^3 \div D^3 \); or \( V^3 :: d :: D \); then \( T' :: t' \).

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14. However, the central forces differ from one another, they may be compared together; for they are always in a ratio compounded of the ratio of the quantities of matter in the revolving bodies, and the ratio of the distances from the center; and also in an inverse ratio of the squares of the periodical times. If then you multiply the quantity of matter in each body by its distance from the center, and divide the product by the square of the periodical time, the quotients of the division will be to one another in the said compound ratio, that is, as the central forces.

15. When the quantities of matter are equal, the distances themselves must be divided by the squares of the periodical times, to determine the proportion of the central forces: in that case, if the squares of the periodical times be to one another as the cubes of the distances, the quotients of the divisions, as well as the central forces, will be an inverse ratio of the squares of the distances.

From the foregoing theorems we may deduce the velocity and periodical time of a body revolving in a circle, by means of its own gravity, at any given distance from the earth's center. Let $g$ be the space through which a heavy body descends at the surface of the earth, in the first second of time, or $164$ feet, $= A M$, in the preceding figure; then $2g$ will be the measure of the force of gravity at the surface: and $r$ being allowed for the earth's radius, $A C$, the velocity in a circle at its surface, in one second, will be $v = \sqrt{2rg}$, or $\sqrt{2rA}$, &c., as Art. 2. Hence, if we put $c = 3.14159$, &c., the circumference of the earth is $2\pi r = 25,000$ miles nearly, or $132,000,000$ feet (in round numbers), we shall have $v = \sqrt{2gr} = \sqrt{2}\pi r = \pi r$.

The velocity of a body at the equator, or any other part of the earth, is $\pi r$, where $r$ is the radius of the earth, and $\pi$ is the number of the squares of a circle.

In order to apply this to the case of the moon, revolving about the earth at the distance of 60 semidiameters, let $R = 60r$, or the distance of the moon from the earth, and the above expressions will become $v = 26000 \sqrt{\frac{r}{R}}$, or $26000 \sqrt{\frac{r}{60r}} = 3557$ feet per second, or 3574 miles per minute, for the velocity of the moon in her orbit; and $T = 5078 \sqrt{\frac{R}{r}} = 236051$ seconds, or 27.3 days nearly for the periodical time of the moon in her orbit at that distance. This is nearly equal to what the astronomers reckon it, viz. 27\(\frac{1}{2}\) days; and it would have come out exactly like it, if the distances had been precisely stated, and other circumstances, omitted for the sake of brevity, had been taken into the account, which interfere with that period. Similar calculations may be instituted with respect to all the planets of our solar system, and the result of the calculations will be found to coincide, with surprising exactness, with the appearances; and this affords a strong confirmation of the Newtonian theory of universal gravitation.

Thus also the ratio of the forces of gravitation of the moon towards the sun and earth may be estimated. For, 1 year, or 365 days, being the periodical time of the earth and moon about the sun, and 27.3 the periodical time of the moon about the earth; and also 60 being the distance of the moon from the earth, and $23.2$ the distance from the sun, in semidiameters of the earth, we shall have (by Art. 4.)

$$\frac{F}{f} = \frac{R^2}{r^2} \times \frac{c^2}{t^2}$$

that is, the proportion of the moon's gravitation towards the sun is to that towards the earth, as 23 to 1 nearly.

Further, the mean distance of the moon from the center of the earth is $1,073,000,000$ feet, or about 60 semidiameters of the earth. Also, the force of gravity at different distances is inversely as the squares of the distances, and the radius of the earth is $210,000,000$ feet; therefore, as the square of $1,073,000,000$ is to the square of $210,000,000$, so is the force of gravity at the earth to the force of gravity at the distance of the moon; viz.

$$\frac{F}{f} = \frac{1,073^2}{210^2} \times \frac{c^2}{t^2}$$

or $1:5560$; so that the force of gravity at the surface of the earth is to the force of gravity at the moon as 1 to 0.6667; or as 10,000,000 to 274. And since the earth falling bodies pass over $16\frac{1}{2}$, or $16.57$ feet, in the first second of time; therefore we may say, 10,000,000: 274: 16.57: 0.0044 of a foot; which shows that the moon, if its velocity should cease at once, would fall towards the earth, and in the first second of time would descend through not more than $16\frac{1}{2}$ feet of a foot.

Again, we may hence compute the centrifugal force of a body at the equator, arising from the earth's rotation. The time of revolution, when the centrifugal force would become equal to that of gravity, as has been shewn above, is $5078$ seconds; and, by Art. 4. $86160$, which is the square of the number of seconds in 24 hours, 56 minutes, the time of the earth's entire rotation on its axis, is to $5078$, as the force of gravity, which may be denoted by unit, to $5560$, the centrifugal force required, which is the 28th part of gravity at the earth's surface. Simpson's Fluxions, vol. i. p. 240, &c.

Otherwise, it appears (by Art. 4.) that, when the distances from the center are equal, or in the same circle, the central forces are inversely as the squares of the periodical times; and we have above shewn, that the velocity, which near the surface of the earth is equivalent to gravity, is $26000$ feet per second nearly. Then if, as the square of the earth's diurnal rotation round its axis is to the square of the periodical time in the case above shewn, viz. $1:24\frac{1}{2}$, or nearly 85, is the force of gravity (e. g. i.) to the centrifugal force of bodies near the equator of the earth; i. e. $2073000$ (the square of 24 hours): $7225$ is the centrifugal force near the equator; i. e. the force by which bodies that are near the equator are attracted towards the center is to the force with which they endeavour to fly off, in consequence of the earth's diurnal rotation round its axis, as 1 is to 0.004385; or as 10,000,000 to 3495; or the former is almost 300 times more powerful than the latter.

By similar means we may determine the centrifugal force of bodies in different latitudes; for as the earth turns round its axis, it is evident that those bodies on the surface of it, which lie nearer to the axis, or, which is the same thing, are nearer
nearer to the poles, perform circles smaller than those which are nearer to the equator; though they are all performed in the same interval of 24 hours. Hence, the periodical times being equal, or the same, the central forces are as the radii of the circles, and as in different latitudes the radii are equal to the cosines of the latitudes, we may use the following proportion; viz. as the radius is to the cosine of a given latitude, so is the centrifugal force of bodies situated at the equator to the centrifugal force of bodies at that given latitude. Now as the cosines decrease in length the nearer they approach the poles, so the tendency of bodies to fly off from the surface of the earth is greatest at the equator, but diminishes in approaching towards the poles; and hence we perceive why the earth has been found, by means of unquestionable measurements and other observations, to be an oblate spheroid, whose polar diameter is the shortest. This circumstance furnishes a convincing evidence of the earth's daily rotation about its axis.

For another example of the application of the theory of central forces above stated, we may suppose A to be a ball of one ounce, whirled about the center C, so as to describe the circle ABE (fig. 82.) each revolution being made in half a second; and the length of the cord AC = 2 feet. Here \( r = \frac{1}{2}, \) r = 2; and as it has been already found that

\[
e = \sqrt[\frac{2}{3}] \frac{2R}{\varepsilon} = T \text{ is the periodic time at which the circumference of the earth, when the centrifugal force is equal to gravity; hence then, (by Art. 4.) } \frac{R}{T^2} = \frac{\varepsilon}{g}; \text{ and this proportion becomes } \frac{g}{2} = \frac{r}{t}; \text{ viz. as } \frac{2g}{r} = \frac{16\pi^3}{9} = \frac{16 \times 3 (1+16)^\frac{1}{3}}{16\pi^3} = 9.819 = \text{ the centrifugal force, or that by which the string is stretched, viz. nearly } 10 \text{ ounces, or } 10 \text{ times the weight of the ball. This central force may be called centripetal or centrifugal, according as it is applied to the tendency of the parts of the string, or to the force of the body; so that the body is said to be retained by a centripetal force } 9.8 \text{ times as great as the force of terrestrial gravity, or may be said, that the centrifugal force of the revolving body stretches the string as much as if a weight of } 9.8 \text{ pounds were simply suspend to it.}

Again, suppose the string and ball to be suspended from a point D (fig. 83.) and to describe in its motion a conical surface, AXB; then, putting DC = a, AC = r, and AD = b; and F = t, the force of gravity as before; the body will now be affected by three forces, viz. gravity acting parallel to DC, a centrifugal force in the direction CA, and the tension of the string, or force by which it is stretched, in the direction DA; hence these three powers will be as the three sides of the triangle ADC respectively; and, therefore, as CD or a : AD or b :: \( \frac{2g}{r} : \frac{1}{a} \); the tension of the string as compared with the weight of the body.

Also, CD or a : AC or r :: \( \frac{2g}{r} : \frac{1}{a} \); the general expression for the centrifugal force above found; hence \( g^d = 2a^2 \), and consequently \( t = e \sqrt[\frac{2}{3}] \frac{2a}{g} = 1.108 \sqrt{e} a \) is the periodical time.

When the force by which a body solicitated towards a point is not everywhere the same, but is either increased or diminished, in proportion to some power of the distance from the center; several curves will thence arise in a certain proportion according to that power. If the force decreases in an inverse ratio of the squares of the distances from that point, the body will describe an ellipse, which is an oval curve, in which there are two points called foci, and the point towards which the force is directed, falls upon one of them; so that in every revolution, the body once approaches to, and once recedes from it: and the eccentricity of the ellipse is greater or less, according to the projective force: and when the eccentricity is nothing, the curve becomes a circle, which may also be described, in certain circumstances, by a moving body. The body may also (by supposing a greater degree of velocity in certain proportions, describe the two remaining conic sections, viz. the parabolic and hyperbolic curves, which do not return into themselves; on the contrary, if the force increses with the distance, and that in a ratio of the distance itself, the body will again describe an ellipse: but the point to which the force is directed is the centre of the ellipse; and the body, in each revolution, will twice approach to, and again twice recede from, that point. In this case also a body may move in a circle, for the reason above mentioned.

In order to explain these particulars more at large, let ABC (fig. 84.) represent a circular orbit, A = S an elliptical, ADE a parabolic, and AKF an hyperbolic orbit: and let the bodies be supposed to move with certain velocities under the influence of a force at N, which is the center of the circle, and the focus of the conic sections. Let A B, perpendicular to A D, represent the velocity which is necessary to retain the body in the circular orbit, and let it be denoted by \( v \); as the standard with which the other degrees of velocity may be compared. Also, let a body be projected from A in the direction \( A \) with any other degree of velocity \( u \). It is now proposed to determine the nature of the curve, which will be described with this other velocity \( u \), or rather to ascertian what the value of \( u \) must be in order to produce each particular conic section. Draw \( m K \) parallel to \( A \) L, interseeting the circle as well as the other curvres. Let \( A N \) be denoted by \( z \); the semi-transverse axis of any of the conic sections by \( a \); the semi-conjugate by \( b \); and Am = B C = GZ = HZ = I K = \( x \) by \( x \). Then the ordinate m C in the circle will be \( z \), but the other ordinates \( m z \) of the ellipse, and \( m K \) of the hyperbola may both be represented by \( \frac{b \times z}{x} + \frac{x}{x} \). The fluxions of these ordinates are

\[
\frac{d}{dx} \left( \frac{1}{x^2} \right) = \frac{1}{x^3} \quad \text{and} \quad \frac{d}{dx} \left( \frac{1}{x} \right) = \frac{1}{x^2} \]

respectively; which fluxions are to each other as the velocities in every point of their respective curves in the direction A L; and in the like proportion are the quantities \( \frac{d}{dx} = \frac{1}{x^3} \quad \text{and} \quad \frac{b \times z}{x} + \frac{x}{x} \)

these quantities being the abovementioned fluxions divided by the same quantity. Now, when the point in the curve approaches the point A so near as to coincide with it, then Am vanishes, or \( x = ox \); and the above expressions become \( \frac{d}{dx} = \frac{1}{x^3} \quad \text{and} \quad \frac{b \times z}{x} + \frac{x}{x} \); so that at the point A the velocity which retains the body in the circular orbit is to the velocity which retains the body in the ellipse or hyperbola, as \( \frac{d}{dx} : \frac{b \times z}{x} + \frac{x}{x} :: \frac{1}{x^3} \quad \text{and} \quad \frac{b \times z}{x} + \frac{x}{x} \). Therefore

\[
n \times \left( \frac{1}{x^3} \right) = \frac{b}{a} \quad \text{and} \quad n \times \frac{b}{a} = \frac{b}{a} \quad \text{or} \quad an \times \frac{b}{a} = \frac{b}{a}. \quad \text{When}
\]

M = 2

\( x = \)
The central rule is chiefly founded on this property of the parabola; that if a line be inscribed in that curve perpendicular to any diameter, a rectangle formed of the segments of this line is equal to a rectangle made of the intercepted part of the diameter and the parameter of the axis.

The central rule has the advantage over Cartes's and De Latteres's methods of conducting equations, as both these are subject to the trouble of preparing the equation by taking away the second term. This we are freed from in Baker's method, which shews us how to construct all equations not exceeding the fourth power, by the intersection of a circle and parabola, without the omission or change of any terms. See Phil. Trans. No. 157.

CENTRALS Retina, in Anatomy, an artery, which is sent from the ophthalmic, and is chiefly distributed to the retina. See Arteries and Eye.

CENTREVILLE, in Geography, the chief town of Queen Anne's county, and on the east side of Chesapeake bay in the state of Maryland, in America. It lies between the forks of the river which runs into Chester river, 18 miles S. of Chester, 34 S. E. by E. of Baltimore; and 95 S. W. by S. of Philadelphia, N. lat. 39° 6'.

CENTRIFUGAL FORCE is that whereby a body revolving round a centre or another body endeavours to recede from it.

It is one of the established laws of nature, that all motion is of itself rectilinear; and that the moving body never recedes from its first right line, till some new impulse be superadded in a different direction: after that new impulse, the motion becomes compounded, but it continues still rectilinear, though the direction of the line be altered. To move in a curve, it must receive a new impulse, and that in a different direction every moment; a curve not being reducible to any number of finite right lines. If then a body continually drawn towards a center be projected in a line that does not go through that center, it will describe a curve; in each point whereof, the velocity is a quantity less than the square root of 2 (viz. less than the square root of twice that velocity which is requisite to retain the body in a circular orbit); then the values \( \frac{n}{2 - n} \) and \( \frac{n}{2 - n \frac{1}{2}} \), viz. of \( a \) and \( b \), will be positive; whereas, by the same substitution, the value \( \frac{n}{2 n - 2} \) becomes impossible; which shews, that when \( n < 2 \) the square root of 2, the curve can only be the ellipse.

But if we make \( n = 2 \) equal to any thing greater than the square root of 2; then the values of \( a \) and \( b \) for the hyperbola become positive, whereas those for the ellipse become impossible; and, therefore, in this case, the curve must be the hyperbola.


Central Rule, is a rule or method discovered by our countryman Thomas Baker, rector of Nympont in Devon, for finding the center of a circle designed to cut the parabola in as many points as an equation to be constructed had real roots. See the article Baker.

Its principal use is in the construction of equations; and he has applied it with good success as far as biquadratics.
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he has given a few easy cases in bodies revolving in the circumstances of circles. But the doctrine was full fully difficult, especially in its reference to the comic sections, by Sir Isaac Newton. He was succeeded by several other writers upon the same subject; as Leibnitz, Varignon in the Mem. de l'Acad. Keil in the Phil. Trans. and in his "Physices," Bernoulli, Hennel, Cotes in his "Harmonia Mensurabilum," Malusian in his "Geometria Organica," and in his "Fluxions," and Euler in his book "De Motu," where he considers the figures described by a body acted on by centripetal forces tending to several points. The subject has also been illustrated by various writers on mechanics and astronomy. See Centrifugal Force, and Central Forces.

Centrifugal Machine, a curious machine invented by Mr. Erkine, for raising water by means of a centrifugal force, combined with the pressure of the atmosphere. This machine consists of a large tube of copper, &c. in the form of a crofs, placed perpendicularly in the water, and resting at the bottom on a pivot. At the upper part of the tube is an horizontal cog-wheel, which touches the cofs of another in a vertical position; so that by the aid of a double winch, the whole machine is moved round with very great velocity. Near the bottom of the perpendicular part of the tube is a valve opening upwards; and near the two extremities, but on the contrary sides of the arms, or crofs part of the tube, are two other valves opening outward. These two valves are kept shut, by means of springs, till the machine is put in motion; when the centrifugal velocity of the water forces them open, and discharges itself into a cylinder or reservoir placed there for that purpose. On the upper part of the arm are two holes, which are closed by pieces of screw that pierce into the metal of the tube. Before the machine can work, these holes must be opened, and water poured in through them, till the whole tube be full; by which means all the air will be forced out of the machine, and the water supported in the tube by means of the valve at the bottom. The tube being thus filled with water, and the holes closed by their screw-caps, it is turned round by the winch; when the water in the arms of the tube acquires a centrifugal force, opens the valves near the extremities of the arms, and flies out with a velocity nearly equal to that of the extremities of the said arms.

A perspective view of the centrifugal machine erected on board a ship, is exhibited in Pl. XI. Mechanics, fig. 93. ABC is the copper tube; D an horizontal cog-wheel, furnished with 12 cofs; E a vertical cog-wheel, having 36 cofs; FF the double winch; a the valve near the bottom of the tube: b, b, the two pivots on which the tube turns; c one of the valves in the crofs piece; the other at d, but invisible, as it is on the other side of the tube; e e the two holes through which the water is poured into the machine; G H the cylinder or reservoir; I I part of the ship's deck. The distance between the two valves, e e, is 10 feet; the diameter of these valves is about 3 inches; and that of the perpendicular tube is about 7 inches.

If the men who work the machine be supposed to turn the winch round in 3 seconds, the machine will move round its axis in one second; and con-fquently each extremity of the arms will move with a velocity of 18.8 feet in a second. A column of water, therefore, of three inches diameter will issue through each of the valves with a velocity of 18.8 feet in a second; but the area of the aperture of each of the valves is 7.14 inches; which, being multiplied by the velocity in inches = 135.6, gives 1610.784 cubic inches, the quantity of water discharged through one of the apertures in one second; so that the whole quantity discharged in that space of time through both the apertures is = 3221.568 inches; or 19720.68 cubic inches in one minute. But 60812 cubic inches make a tun, or measure; consequently, if we suppose the centrifugal machine to revolve round its axis in one second, it will raise nearly 3 tons 44 gallons in one minute; but this velocity is too great, at least to be maintained for any considerable time; so that, when this and other deficiencies in the machine are allowed for, two tuns are nearly the quantity that can be raised by it in one minute. As the water is forced up the perpendicular tube by the pressure of the atmosphere, it is evident that this machine cannot raise water above 32 feet high.

An attempt has been made to diminish this machine in the place of the pumps commonly used on board board; but the labour of working was found to be too great to render the machine inferior to the chain-pump; which fee. The machine might be improved by loading with a weight of lead the ends of the tubes through which the water issue; and thus the machine would be made to turn with much greater ease, as the centrifugal force of the lead would in some measure supply the place of a fly.

Centrifugal Wheel. See Wheel.

Centrina, in Ethnology, the specific name of a shark. See Squalus Centrina. The fish described by Ray, Aldrovandus, and various old writers, under the name of Centrina and Centrine is of this species. This shark has been also called Porcus Pfeptis, from its somewhat triangular figure, and elevated back, which rising into a ridge, bears a remote resemblance to that of a hog.

Centrina, a binominal name of Chimaera Mon- flia. Centrina prima, Centrina vera, Simia marina Danica. Aldrovandus.

Centrinæ, in Physiology, a species of insects hatched in the wild fig-tree, and used in caprification.

Centripetal Force is that by which a moving body is perpetually urged towards a center, and made to revolve in a circle, instead of a right line. Thus, the body impelled in the right line AG, (Plate X. Mechanics fig. 82.) is perpetually drawn out of its rectilinear motion, and forced to proceed in a curve. The centripetal force, therefore, is as the right line DE; supposing the arc, AE, indefinitely small. Hence, when a body revolves in a circle, the two forces, viz. the centrifugal and centripetal, are equal and contrary to each other, since neither of them gains upon the other; the body being, as it were, equally balanced by them. But when, in revolving, the body recedes farther from the center, then the centrifugal force exceeds the centripetal; as is the case in a body revolving from the lower to the higher apsis in an ellipse, and reflecting the focus as the center. And when the revolving body approaches nearer to the center, the centripetal force is less than the centrifital; as while the body moves from the farther to the nearer extremity of the transverse axis of the ellipse. For the proportion of the one to the other, fee the sequel of this article.

In the firft or nascent state of circular motion, the projective force infinitely exceeds the centripetal force. For, let the circle AEB, (fig. 82.) represent the orbit of the body A, moving uniformly along its circumference; this body, A, is impelled by a projective force in the direction AG, perpendicular to AC, and is at the same time constantly acted upon by an attractive or impelling force, in a direction towards the center, C: these two forces being fo adjusted, or bearing such proportion to each other, as to keep the body in the circular orbit, AEB. In the very small arc AE, the line AD is to the line AM (= DE) as the force of projection is to the centripetal force at the distance AC; for whilst AD represents the uniform or equitable
equable movement which arises from the projectile force in a certain time, $DF$ represents the deviation from that course, or the force by which the body is driven towards the center of force in the same time. $N:W:DF$ ($= AM$); $AE :: AE :: AB$; and when the arc $AE$ becomes indefinitely small, or is in its vincent state, then the diameter $AB$ becomes indefinitely greater than $AE$ and of course $AE$ or $AD$ (which in the state here supposed is nearly equal to it) becomes indefinitely greater than $DE$ or $AN$; i.e. the projectile force infinitely greater than the central or centripetal force.

If a body move in a curve line, and in such a manner that the radius $CB$ ($f_{g, 56}$) drawn from it to the fixed point $C$, placed in the same plane, describes areas $ABC, BCE, \&c.$ proportional to the times, or equal to any given time, it is solicited towards the point $C$ by a centripetal force. And also, if a body proceed according to the direction of the right line $AD$, and be solicited by a centripetal force towards a fixed point $C$, placed in the same plane; it describes a curve, whole cavity is towards $C$, and whose several areas, comprehended between the two radii $AC$ and $CB$, are proportional to the times. Moreover, the velocity of a revolving body, at any point, $Q$ or $R$, ($f_{g, 56}$) is inversely as the perpendicular $SP$ or $ST$, falling from the center of force, upon the tangent at that point. For, let two other bodies, $m$ and $n$, be supposed to move uniformly from $Q$ and $R$, along the tangents $QP$ and $RT$, with velocities respectively equal to those of the revolving body at $Q$ and $R$; then the distances $m$ and $n$, gone over in the same times, will be in each other as those velocities, and the area $QS$m and $RS$n, will be equal, being equal to those described by the revolving body in the same time (see Quadrature): whence $Qm$ and $SP$ being $= Rn$ and $ST$, it follows that $Qm = Rn = ST$.

1. To determine the law of the centripetal force tending to a given point $C$, ($f_{g, 77}$) by which a body may describe a given curve $AQB$. Let $QP$ be a tangent to the curve at any point $Q$: upon which, from the center $C$, let fall the perpendicular $CP$: put $CQ = t$, $CP = u$; and let the velocity of the projectile at $Q$ be denoted by $v$. Since $v^2$ is always as $\frac{v^2}{u}$ (by the preceding article), it is evident that if we take the fluxions of both quantities, $v^2$ will also be as $\frac{v^2}{u^2}$. But the centripetal force, whether the body moves in a right line or a curve, is always as $\frac{v^2}{u^2}$ (see Central force): consequently the centripetal force is likewise as $\frac{v^2}{u^2}$.

Otherwise, let the ray of curvature $QO$ be denoted by $R$; then, because the centripetal forces in circles are as the squares of the velocities directly and the radii inversely (see Central force); it follows that the force, tending to the point $O$, by which the body might be retained in its orbit at $Q$, or in the circle whose radius is $QO$, will be defined by $\frac{1}{u^2} \times \frac{1}{R}$; whence (by the resolution of forces) it will be $CP (u) = CQ (t) = \frac{1}{u^2} \times \frac{R}{R}$ (the force in the direction $QO$), the force in the direction $QC$, which, because $R = \frac{1}{u^2}$ (see Radius of Evolute), will be expressed by $\frac{1}{u^2} \times \frac{v^2}{u^2}$.

Hence it appears, that as the force, tending to the point $C$, is universally as $\frac{CQ}{CP} \times \frac{QO}{QO}$ (or $\frac{s}{u^2}R$), the force to any other point $c$ will, by the same argument, be as $\frac{CQ}{CQ} \times \frac{QO}{QO}$. Consequently, the forces to different centers $C$ and $c$ (about which equal areas are described in the same time) are to each other in the ratio of $\frac{CQ}{CQ}$ to $\frac{QO}{QO}$ inversely. Moreover, the ratio of the velocity at $Q$ to the velocity by which the body might revolve in a circle about the center $C$, at the distance $CQ$, is easily deduced from hence: for, since the velocity at $Q$ is that by which the body might revolve in a circle about the center $O$, and the forces tending to the centers, $O$ and $C$, are to each other as $u$ (CP) and $s$ (CQ); at therefore follows, if the ratio sought be assumed as $v$ to $w$, that $\frac{v^2}{w^2} = \frac{u^2}{s^2}$ (see Central force): whence also $\frac{v^2}{w^2} = u \times QO \times QO$.

For, let the centripetal force be given, the nature of the trajectory may be found; for since the force $(F)$ is universally defined by $\frac{1}{u^2}$, it is evident that $\frac{1}{u^2}$ will be the fluent of $F$; which, when $F$ is given in terms of $u$, will become known; and then the relation between $u$ and $x$ being given, the curve itself is known.

E. G. Let it be required to find the law of the centripetal force, by which a body, tending to the focus $C$, is made to revolve in the periphery of an ellipse $AQDB$ ($f_{g, 86}$).

From the other focus, $F$, draw $FK$ parallel to $CP$, meeting the tangent $PQ$ (at right angles in $K$, join $F$, $Q$; putting the transverse axis $A$ $B = a$, the semi-conjugate $O$ $D = \frac{1}{2} b$, and the parameter $\frac{b^2}{a} = b$: then, $CQ$ and $CP$ being denoted as before, we have $FQ = (A B - C Q)$, and property of the ellipse) $= a - x$; whence, by reason of the similar triangles $CQP$ and $FKQ$, it will be $x = u: a - x: FK = \frac{a - x + u}{i}$. But $FK \times CP$ is $= OD^3$ (by the nature of the curve). Hence we get $\frac{u - x \times u^2}{i} = \frac{1}{a^2}$; and consequently $\frac{1}{u^2} = \frac{4 a^2}{b^2} - \frac{1}{b^2}$; the fluxion of which being $\frac{-2 u}{u^2} = -\frac{4 a}{b^2} i$, we obtain $\frac{u^2}{u^2} (as before) = \frac{2 a}{b^2} \times \frac{i}{i} = \frac{2}{b^2}$, and $\sqrt{\frac{u^2}{i^2}} = \sqrt{\frac{2 \times a - i}{a} = v \times \Gamma_2}$. 


\[ \sqrt{\frac{FQ}{AQ}} \]  
Hence it appears, that the centripetal force is, in this case, as the square of the distance inversely; and the velocity at \( Q \) is to that by which the body might describe a circle at the distance \( CQ \), every where in the ratio of \( \frac{FQ^2}{AQ^2} \) to \( AO^2 \). If the curve had been a hyperbola, then 
\[ \frac{a + o}{s} \times u^2 \]  
instead of \( \frac{a - o}{s} \times u^2 \) would have been 
\[ \frac{1}{4} b^2 ; \]  
and for \( \frac{o}{s} = \frac{2 a}{b^2} \times \frac{1}{s} = \frac{2}{b^2} \), as before. If the 
curve had been a parabola, the equation would have been 
\[ \frac{a + o}{s} \times u^2 = 4 b^2, \]  
or \[ u = \frac{b^2}{4 a} \]; and the force, 
\[ \text{still, as } \frac{a}{s} \times u^2 \]. But the measure of the velocity 
\[ \sqrt{\frac{a^2 - 2 b^2}{a}} \]  
in this case becoming barely \( \sqrt{2} \), it 
follows that the velocity in a parabola is to that by which 
the body might describe a circle at the same distance 
from the centre, in the conflux ratio of \( \sqrt{2} \) to unity.

2. To determine the ratio of the velocities of bodies revolving 
in different orbits, about the same, or different centers; the orbits 
themselves, and the forces by which they are described, being 
given. Let \( A \) be any orbit, described about 
the center of force \( C \), and let the force itself at the 
principal vertex be denoted by \( F \); also let \( r \) stand for the 
semiparameter, or the ray of curvature at the vertex, and let \( C \) 
be perpendicular to the tangent \( Q \). Then, the celerity at 
\( A \) being, always, as \( \sqrt{rF} \) (by central forces), we have 
\[ \frac{C \times C}{A} : C : \sqrt{rF}, \]  
the velocity at \( Q \) (by a preceding article). This answers 
in all cases, let the values of \( \frac{C}{A} \) and \( F \) be what they 
may.

Hence, if the centripetal force be as the square of the 
distance inversely, or \( F \) be expressed by \( \frac{1}{AC^2} \), the velocity at 
\( Q \) will become 
\[ \frac{AC}{CP} \times \sqrt{\frac{r}{AC}}, \]  
or \[ \sqrt{\frac{r}{CP}} \]; whence 
the velocities, in different orbits, about the same center, are 
in the subduplicate ratio of the parameters, and the inverse 
ratio of the perpendiculars from the center of force to the 
tagents, conjunctly. Farther; if the celerity at \( Q \) be 
denoted by \( Q_1 \), and \( C \) be drawn; then, \( Q_2 \) being as 
\[ \sqrt{\frac{r}{CP}} \]; it follows that \( \sqrt{r} \) is as \( CP \times Q_1 \), or as the 
triangle \( Q \times C \). Consequently, the areas described about 
a common center of force in a given time, are in the subduplicate 
ratio of the parameters.

Moreover, since the area of the curve \( A \times H \), &c. 
when an ellipse, is known to be as \( (AO \times OD) \frac{A \times \sqrt{r}}{AO} \) (supposing 
\( O \) to be the center), if the same 
be applied to \( \sqrt{r} \), expressing the area described in a given 
part of time (by the last article), we shall hence have 
\[ A \times O \times \sqrt{AO}, \]  
or \( AO^2 \), for the measure of the time of 
one whole revolution. Whence it appears that the periodic 
times, let the foci of ellipse be what it may, are in the 
uequivalence ratio of their principal axes.

3. The centripetal force, tending to a point \( C \), being as 
the square of the distances reciprocally, and the direction and velocity 
of a body at any point \( Q \) being given; to determine the path in 
oblique the body moves, and the periodic time, in case it returns, 
(\( fig. 90 \)) The trajectory \( \Lambda Q B \) is a conic section, having 
the point \( C \) for one of its foci. Let \( F \) be the other focus, 
and upon the tangent \( PQ \) the let fall the perpendiculars \( CP \) 
and \( FK \), and let \( CQ \) and \( FK \) be drawn; also, put, the 
feminal focus axis \( AO = \alpha \), the given focal distance 
\( CQ = d \), and the sine of the angle of direction \( \angle FCQ \) (to 
the radius \( 1 \)) = \( m \) and let the given velocity at \( Q \) be to 
that by which the body might revolve in a circle about 
the center \( C \), at that distance, in any given ratio of \( a \) to unity: 
then it will be \( n : 1 : FQ : \Lambda O \) \( \frac{a}{2} \) (i.e. a preceding 
article); therefore \( n^2 = \frac{1}{2} \times (2 a - d) : \Lambda O \), etc.

whence \( \Lambda O = \) \( \frac{d}{2 - n^2} \). Moreover, since \( CP \times m \times 
CQ \), and \( FK = m \times FQ \), we have \( O D^2 \) \( = C \times 
FK^2 = m^2 \times CQ \times FQ \) \( = m^2 - n^2 \), whence 
the semi-conjugate axis (\( OD \)) is given likewise. Lastly, it 
will be (by a preceding article) as \( CT : \Lambda O \) \( \frac{a}{2} \) : \( P \) 
the periodical time in any given circle, whole radius is \( CT \), to 
\( \frac{(\Lambda O \frac{a}{2} \times P)}{\times \times} \) the required time of one revolution, when 
the orbit is an ellipse; that is, when \( n^2 \) is less than \( 2 \); for 
if \( n^2 = 2 \), the curve (as its axis \( \frac{a}{2 - n^2} \) becomes infinite) 
will degenerate to a parabola; and if \( n^2 \) be greater than \( 2 \), 
the axis being negative, it is then an hyperbola; whose 
principal diameters are equal to \( \frac{2 d}{m} \) and \( \frac{2 m n d}{n^2 - 2} \). Hence 
it follows, that, since neither the value of \( \Lambda O \), nor that of 
the periodic time, is affected with \( m \), the principal axis, and 
the periodic time, will remain invariable, if the velocity \( Q \) be 
the same, let the direction at that point be what it may.

The same solution might be obtained by first finding the 
principal parameter; for it is evident, that the area described 
by the body about the center \( C \), in any given time, is to 
the area described, in the same time, by another body revolving 
in a circle at the distance \( CQ \), as \( mn \) to unity; hence it will 
be, \( 1^2 : m^2 n^2 :: d : m^2 n^2 d \), the semiparameter: from which 
(proceeding as above) we get \( a \times m^2 n^2 d = (O D^2) = m^2 
\times \frac{2 a - d}{d} \); and consequently \( a = \frac{d}{2 - n^2} \), as before.

4. To find expressions for the centrifugal and centripetal 
forces, and to determine their proportion to each other. Let \( S \) 
(\( fig. 91 \)) be the center of force, \( PK \) the curve described, 
\( PT \) a tangent to it, \( SY \) perpendicular to \( PT \), and \( P \) an 
indefinably small arc; draw \( QW \) perpendicular to \( SP \), and 
with the center \( S \) describe the circular arc \( QX \); and let 
\( R \) be parallel to \( SP \), and \( PV \) be the chord of the 
circle of curvature. Let \( PQ \) represent the motion of the 
body in the curve in a given time; then \( P \) will represent 
that part of the motion which is directed towards the 
center, and by which alone the body would be found, at 
the end of the given time, at the distance \( S \); but on account 
of the motion \( Q \), it is found at the end of the same 
time at the distance \( S \) or \( S \); so that the perpendicular 
motion \( Q \) has made the body to recede from \( S \) through a 
space equal to \( Q \), which therefore represents the 
centrifugal force; and the centripetal force is represented by \( Q \) \( R \).

Now \( Q \times \frac{Q^2}{x} \) ultimately; but \( Q^2 \) varies as \( \frac{\text{area } S \times Q^1}{\times x} \), 
therefore \( Q \times \frac{x}{S} \) varies as \( \frac{\text{area } S \times Q^1}{\times x} \), which varies as 
\( \frac{x}{S} \).
...
hundred feet from it, who seemed determined to oppose their paffage. These were Armenians, Mygdolians, Chaldeans, and other auxiliaries, hired by Orontes, governor of that province. The only road which the Greeks could discover led upwards, and seemed to have been made by art; and the breadth of the river inducing them to believe it fordable, they attempted to pass it there; but they had not proceeded far before they found themselves obliged to return, and encamp on the banks of the river.

CENTRO. BARYC Method, from κέντρον and βάρος, heavy, in Mechanicis, is a method of measuring or determining the quantity of a surface or a solid, by considering it as formed by motion, and multiplying it into the way of its center of gravity.

The doctrine is comprised in the following theorem, with its corollaries.

Every figure, either superficial or solid, generated by the motion of a line or figure, is equal to the product of the generating magnitude into the way of its center of gravity, or the line which its center of gravity describes.

Demonstr. For suppose the weight of the whole generating magnitude collected in the center of gravity; the whole weight produced by its motion will be equal to the product of the weight moved into the way of the center of gravity. But when lines and figures are considered like homogenous, heavy bodies, their weights are as their bulk; and therefore the weight moved is the generating magnitude; and the weight produced that generated. The figure generated, therefore, is equal to the product of the magnitude into the way of its center of gravity. Q. E. D.

This kind of proof, furnished by Wallis, is very vague and unsatisfactory. But it is not difficult to supply one that is much better. Accordingly, let us suppose a lever loaded with two weights, and a fixed point in this lever. It is well known that the sum of the products of each weight by its distance from this point is equal to the product of the sum of the weights by the distance of their center of gravity from this point: then, if we imagine the lever to revolve round this fixed point, the circumstances will be proportion of the radii, and the sum of the products of each weight by the path or circumference which it describes will be equal to the product of the sum of the weights by the circumference described by the center of gravity. This demonstration, comprehending two weights, may be easily applied to any number of weights at pleasure.

Corol. 1. Since a parallelogram A B C D (Plate XI. Mechanicis, fig. 94.) is described, if the right line A B proceed according to the direction of another A C, with a motion still parallel to itself; and the way of the center of gravity E is equal to the line E F, perpendicular to C D, that is, to the altitude of the parallelogram: its area is equal to the product of the base C D, or the describing line here to the altitude E F. On this corollary we may observe, that A C is not, strictly speaking, the directrix of A B, although A B moves along A C; but this directrix is properly the line E F, which measures the distance of A B from C D; and the way of the center of gravity, by which we multiply the describing line, A B (or C D) is not the absolute way of this, but its way estimated with respect to the directrix or the way it describes in a line perpendicular to the describing line. This remark is necessary in order to prevent those paradoxes which might occur, in applying without precaution the foregoing rule to the measure of surfaces and solids.

Corol. 2. In the same manner it appears, that the solidity of all bodies, described by a plane defending according to the direction of any right line A C, is had by multiplying the describing plane by the altitude.

Corol. 3. Since a circle is described, if the radius C L, (fig. 95.) revolves round a center C, and the center of gravity of the radius C L be in the middle F, the way of the center of gravity is the periphery of a circle X, described by a subduple radius: consequently the area of the circle is equal to the product of the radius C L into the periphery described by the subduple radius C F.

Corol. 4. If a rectangle A B C D (fig. 96.) revolves about its axis A D; the rectangle will describe a cylinder, and the side B C the superficies of a cylinder. But the center of gravity of the right line B C is in the middle, F; and the center of gravity of the generating plane in the middle, G, of the right line E F. The way of this latter, therefore, is the periphery of a circle described by the radius E G, and that of the first the circumference of a circle described by the radius E F. Wherefore, the superficies of the cylinder is the product of the altitude B C into the periphery of a circle described by the radius E F, or the base. And the solidity of the cylinder is the product of the generating rectangle A B C D into the periphery of a circle described by the radius E G, which is subduple of E F, or of the semidiameter of the cylinder.

Suppose v. gr. the altitude of the describing plane, and therefore of the cylinder B C = a; the semidiameter of the base D C = r; then will E G = 2 r a and supposing the ratio of the semidiameter to the periphery = 1 : m, the periphery described by the radius 2 r = 2 m r. Therefore multiplying 2 m r by the area of the rectangle A C = a r; the solidity of the cylinder will be = 2 m r 2. But 2 m r 2 = 2 r x m r x a; and m r 2 is the area of the circle described by the radius E G. It is evident, therefore, the cylinder is equal to the product of the base into the altitude.

Corol. 5. In like manner since the center of gravity of the right line A B (fig. 97.) is in the middle M, and the surface of a cone is described, if the triangle A B C revolves about its axis; if PM = 1 2 BC; the superficies of the cone will be equal to the product of its side A B, into the periphery described by the radius PM, or the subduple of the semidiameter of the base BC.

Suppose v. gr. B C = r, A B = a, the ratio of the radius to the periphery = m; then will PM = 1 4 r, and the periphery described by this radius = 1 4 m r. Therefore multiplying 1 4 m r into the side A B, the product is the superficies or 1 4 a r. But 1 4 a r is also the product of 1 4 a and m r; therefore the surface of the cone is the product of the periphery into half the side.

Corol. 6. If the triangle A B C (fig. 98.) revolves about its axis, it describes a cone; but if C B be bisected in D, and the right line A D be drawn, and A O = 1 2 A D; the center of gravity will be in O. The solidity of the cone, therefore, is equal to the product of the triangle C A B into the periphery described by the radius PO; but A D = A O : BD : OP; and A O = 1 2 A D, and DB = 1 2 C B. Therefore, OP = 1 2 BD = 1 2 C B.

Suppose v. gr. B C = r, A B = a, the ratio of the radius to the periphery = m. Then will OP = 1 4 r, the periphery described by this radius 1 4 m r; the triangle A C B = 1 4 a r; and, therefore, the solidity of the cone 1 4 m r 1 4 a r = 1 4 a r 2. But 1 4 a r 2 = 1 4 r x m r x 1 4 a; or, the product of the base of the cone into the third part of the altitude. See Triangle.

Corol. 7. Let the semicircle D C A (fig. 99.) revolves about the diameter A D, and describe the surface of a sphere,
sphere. If there be taken DC : FC : FC : FH = \( \frac{4r^3}{c} \), putting \( r \) for the radius, and \( c \) for the whole circumference; \( H \) will be the center of gravity of the arc DCA; and consequently \( r \cdot c = FH \cdot 4r = \text{the line or circumference described by } H \text{ the center of gravity: and by the general rule } DCA \times \frac{4}{3} r = 4 \times 4 \times 3 \text{ r} = 2rc = \text{the surface of the sphere = the circumference into the diameter: as it ought to be by other principles. For the focality of the sphere, we shall have } \frac{1}{3} c = 2 \cdot r = \frac{3}{2} \cdot r = \frac{8}{9} r^3 = \text{the distance } FH \text{ of the center of gravity of the sphere } \text{from the diameter } AD \text{, which is two-thirds of the distance of the center of gravity of the arc } DCA \text{ from the same diameter } DA, \text{ in the former case: consequently, the line described by the center of gravity in this case will be two thirds of that in the former: but the describing line in the former case is to the describing space in this as } \frac{3}{2} \text{ r} \text{ to } \frac{5}{2} \text{ r}; \text{ therefore } i \cdot \frac{3}{2} \text{ r} = \text{surface of the sphere = solidity} = \frac{3}{2} \cdot \text{the content}, \text{ which is } \frac{3}{2} r^3 \text{ of the circumfered cylinder.}

Coroll. 8. For the focality of a parabolic spindle, put \( b = \text{the base, and } a = \text{the altitude or axis of the generating parabola, and } a = 5.855.8 \text{. It is known that } \frac{3}{2} \text{ r} \text{ is the distance of the center of gravity from the base, and consequently } \frac{3}{2} \text{ a} = \text{the line described by the center of gravity; but } \frac{3}{2} ab \text{ is the revolving area: therefore } \frac{3}{2} a \times \frac{3}{2} ab = \frac{3}{2} \text{ a} \cdot \text{ab} = \text{the content, which is } \frac{3}{2} r^3 \text{ of the circumfered cylinder.}

This elegant theorem, which may be ranked among the chief inventions in geometry of the 16th age, was taken notice of long ago by Pappus; but the justit Guldinus was the first who set it in its full light, and exhibited its use in a variety of examples. Several other geometers, after Pappus and Guldinus, have also used it in measuring solids, and surfaces generated by a rotation round a fixed axis: especially before the late invention of the integral calculus: and it may still take place in some cases where the integral calculus would be more difficult. M. Leibnitz has observed, that the method will hold, though the axis or center be continually changed during the generative motion.

CENTRON, in Geography, a village of Savoy in the Tarantaise, formerly a capital town of a people, called Centronii; 3 miles E. N. E. of Monther.

CENTRONES, in Ancient Geography, a people of Belgic Gaul, placed by Cassar in dependence on the Nervii. Some authors place them in the territory of Gand, others in that of Courtry, &c. D'Antville has not mentioned them. — Also, an ancient people of the Gauls, placed by Ptolemy in the Grecian Alps; and mentioned both by Cassar and Pliny. Many authors have supposed, and not improbably, that the Actavones, on the Alps, were the Centrones.

CENTRONIA, in Zoology, the name by which Dr. Hill distinguishes the crustaceous worms called Sea-cadets, and by Naturalists. Echinus. See Echinus.

CENTRUM, in Geometry, Mechanics, &c. See CenteR.
CEN

CEN


Gen. Ch. Cal. Periа-th four-cleft, spreading; segments lanceolate, acute. Cor. monopetalons; wheel-shaped; tube short, somewhat globular; border four-cleft; segments egg-shaped, spreading. Stam. Filaments four, naked, the length of the corolla; anthers simple. Pyi. Germ. superior, roundish, within the tube of the corolla; style filiform, permanent; stigma simple. Peric. Capsule globular, one celled, splitting horizontally; receptacle free. Seeds many, very small.

Eff. Char. Calyx four-cleft. Corolla wheel-shaped, four-cleft, filaments naked, capsule splitting horizontally, one-celled, many seeds. According to Jussieu it is sometimes petandrous with a five-cleft corolla, and then in its essential characters does not differ from Anagallis; but Dr. Smith is of opinion that the tubular form of the corolla, and the naked filaments, independent of the number, justify Dillenius in making it different.

Sp. C. minimus, Linn. Mart. Lam. Willd. Gart. tab. 50. fig. 2. Lam. Illud. tab. 83. Flor. dan. tab. 177. Curt. Flor. Land. tab. 11. Engl. bot. 531. (Anagallis, Waill. par. tab. 4. fig. 2. Meuntz. Pogil. tab. 7. Anagallidflorum, Mch. gen. tab. 18. fig. 2.) Baillart Pimpler, small Chaffweed. Root annual, fibrous. Stem one or two inches high, a little branched at the base, ascending, leafy, somewhat angular, smooth. Leaves alternate, sessile, spreading, egg-shaped, quite entire, smooth. Flowers solitary, axillary, sessile, little, white, expanded only in the most brilliant sunshine, foot withering, but permanent till forced off by the swelling capsule. Capsule globular, mucronate with the permanent style. A native of moist heaths in England, France, Italy, Germany, and Sweden, but often overlooked on account of its minuteness; it is most readily discovered by its capsules.

CENTUNCULUS, Scop. See Cerasium.

CENTURI, in Geography, a sea-port town of the island of Corfu.

CENTURIA, in Ancient Geography, or Pinturia, the name as it variously occurs in Ptolemy's geography, of one of the fortunate islands, in the Atlantic Ocean, near the coast of Africa.

CENTURIE, an episcopal city of Africa, in Numidia; probably the same with Centuriasens, or Centuriamens.

CENTURIAL INSCRIPTIONS, a denomination given by some to those inscriptions inscribed in the face of Severus's wall, which make mention of the centuries and cohorts by whom such parts of the wall are supposed to have been erected. In which sense, centurial inscriptions stand contradistinguished from legionary.

CENTURITÀ Comitia, in Antiquity, those assemblies of the Romans, wherein the people gave their votes by centuries. See Centuriis and Centurians.

CENTURIATORS, an appellation given to certain learned Germans of the city of Magdeburg, who in the early days of the Reformation composed a body of church history, divided into centuries of years.

Baronius is said to have written his Annals by way of opposition to the centurials of Magdeburg.

CENTURINUM, in Ancient Geography, a town or burgh, seated at the point of the most northerly promontory of the island of Corfu.

CENTURION, a military officer among the Romans, who with another officer of the same denomination, commanded a company or maniple, or one of the ten separate parts, into which the hattati, as well as the principles and triarii in each legion, were divided. From each of these descriptions of soldiers, ten men of the most approved and distinguished merit were first selected, and after them ten more. These were all called Commanders of companies or maniples. The first of these that was chosen or appointed was called primipilus, or centurio primipilus, and had a seat in the military council. Two of these centuries or captains of companies or maniples were appointed to each company. And when both were present, he that was first chosen led the right, and the other the left of the company; but when either of them was absent, he who remained, conducted the whole of it. In the choice of these captains or commanders of companies, those who were the boldest and most enterprising were not esteemed the best, but rather those who were nearest and fleeter, prudent and skilful in command. And it was not so much required of them that they should on all occasions be eager to begin an engagement, to force those themselves into action, as that when hard pressed or even overpowered by superior force and numbers, they should still maintain their posts, and rather die than desert their stations.

The twenty centuries or commanders of companies chose twenty two other men of distinguished conduct, prudence, and merit; two of whom were affiliated to each company to take care of its rear. Besides these, two of the bravest and stoutest among the soldiers were appointed by the centuries to carry the standards in each company. And it was not without very good reason indeed, that two captains or centuries were affiliated to each maniple or company, as well as two sub-captains or sub-centurions. For as it was impossible to know or ascertain beforehand what the conduct of an officer would be, or to what accidents he might be exposed; and as those of the affairs of war is inadmissible, that precaution and arrangement were necessary to prevent the company from being on any occasion without a leader.

A centurion is generally defined to have been a military officer, who commanded a hundred men. But this is a very erroneous definition. For when the Roman state was in its greatest vigour and perfection, which it was about the time of Hannibal's invasion of Italy, the two centuries in a maniple or company of the hastati or principles commanded twice as many men as the two centuries in a maniple of the triarii; as a maniple of each of the former then contained 120 men, whereas a maniple of the latter consisted only of sixty. The legion then consisted commonly of 4200 foot, and 300 horse. Of these 4200 infantry, 600 were triarii, 1200 were hastati, 1200 were principles, and the remainder were velites or light troops.

Anciently and before the war of Hannibal, it was the constant custom of the Romans to raise four legions annually, and to allow to each legion 4000 foot and two hundred horse, unless they were pressed by any great or unusual danger, in which case they increased the number of men composing it to 5000 foot and 300 horse. And prior to the battle of Cannae, they ordered eight legions of 5000 men each to be raised, independent of an equal number of the allies, an expedient, to which they had recourse before they had recourse in any of their wars. Whilst the number of foot in a legion thus varied between 4000 and 5000, the number of men commanded by a centurion in the hastati and principles also varied, though the number of those commanded by a centurion in the triarii continued invariably the same. For whatever number of men the legion consisted of, that of the triarii continued at 600, or the same, till it was augmented as equal that of the hastati or principles; towards the time of Julius Cæsar and the close of the mixed government of the Romans, during the continuance of which in its vigour and purity the numbers of men commanded respectively by a centurion in the hastati, or principles, and by a centurion in the triarii, were
were in a ratio that frequently varied. During the same period, there were, in every legion, sixty centurions or commanders of companies or maniples, sixty officers chosen by them to take charge of the rear of the companies, who might be denominated sub-centurions or sub-capitans, and sixty standard-bearers or enligns, who were appointed by the captains or centurions.

CENTURIONES, An, in Ancient Geography, a place of Gaul in the French.

CENTURIPS, Centuripri, now Canterbury; a town of Sicily on the south coast, at a small distance from Catania. This city was declared a capital, and, like Syracuse, received its liberty from Timoleon. Its inhabitants cultivated the fine arts, particularly sculpture and engraving. In digging for the remains of antiquities, coarse are no where found in such abundance as at Centuripii and its environs. The situation of the place is romantic; it is built on the summit of a salt group of rocks, which was probably chosen as the most difficult of access, and consequently the most proper in times of civil commotion. The remains of its ancient bridge afford evidence of its having been formerly a considerable city. Cicero speaks of it as such. It was taken by the Romans, plundered and oppressed by Verres, destroyed by Pompey, and restored by Octavius, who made it the residence of a Roman colony. Houel's Voyage Pittoresque des Isles de Sicile, de Malte, et de Lipari, &c. See CANTORI.

CENTURY, in French centuria, from the Latin word centuria, a derivative of centum, a hundred. Strictly speaking, it signifies one hundred of any thing, as a hundred years, a hundred men, &c.

The term centuria, century, was given to the Roman horsemen or equites that belonged to each tribe, and at first amounted only to a hundred. The term, however, centuria equitum was continued after that number was greatly increased. It was also, however, the custom of the Romans, in forming their legions, to choose their cavalry, and to add two hundred horsemen to every four thousand of their infantry. But in the time of Polybius, the citizens, of whom the cavalry was composed, were appointed by the censors according to the rate of their revenue, and were enrolled before the infancy; and three hundred of them were assigned to every legion.

When the Roman people were assembled in the Campus Martius for the purpose of choosing magistrates, establishing laws, or deliberating on public affairs, they were divided into centuries, and voted by centuries to facilitate the taking of their suffrages. These assemblies were called comitia centuriata.

The Latin writers sometimes made use of the word centuria, to denote a company or the number of men commanded by a centurion, whether it consisted of a hundred, or of more, or of less. Thus the phrase, pedes centuriant, means infantry divided into companies or maniples.

In chronology, century signifies a period of one hundred years. Church-history is generally computed by centuries commencing from the incarnation of Jesus Christ. In this sense of the word, we say, the first century, the fathers of the second century, the counsels of the third century, &c.

CENTUS, in Ancient Geography, a town of Arabia Felix. Ptolemy.

CENTUSIS, a Roman coin, containing a hundred asses. See AS.


CEPOL, or CEPOL, in Ancient Geography, now Zira, one of the Cyclades, an island of the Aegorean sea, lies opposite to the promontory of Aegina, called Sinumium, and is 50 miles in compass. This island is commanded by the ancients for its fertility and the richness of its pastures. If we may credit Pliny and Solinus, the first silk fluffs were brought in this island; and they were hence called the Cepolian manufacture. Cepos was also famous for its excellent figs. It is said to have been first peopled by Arioius, the son of Apollo and Cyrene, who, being grieved for the death of his son Acheron, retired from Thebes, at the perfusion of his mother, and went over with some Thebans to Cepos, at that time unoccupied. Diiodorus Siculus says, that he retired to the island of Cepos; but the ancients, as Servius (in Virg. Georg. lib. i.) observes, called both these islands by the name of Cepos. However this be, the island of Cepos became fo populous, that a law prevailed there, commanding all persons upwards of 60 years of age to be poisoned, that others might be able to labour; so that none above 60 years of age were to be seen in the island, being obliged, after they had attained that age, either to submit to the law or abandon the country, together with their effects. (See Strabo, lib x. Ælian Var. Hist. lib. i. c. 77.) In former times Cepos had four famous cities, viz. Julis, Corthea, Corephiis, and Praethylis. The two latter were, according to Pliny (l. xvi. c. 25), swallowed up by an earthquake. The other two flourished in the time of Strabo. Julis was seated on a rising ground, at the end of a valley, about 3 miles from the sea; and its situation agrees with that of the present town of Zira, whence the island derives its name. The ruins both of Corthea and Julis are still remaining; those of the latter occupy a whole mountain, and are called by the modern inhabitants "Polis," that is, the city. Near this place are the ruins of a small temple, with many pieces of broken pillars, and statues of most exquisite workmanship. The walls of the city were of marble, and some pieces are still remaining. About 12 feet in length. Julis, was, according to Strabo, the birth-place of Simonides, Bacchylides, Eratosthenes, and Ariton. We learn from the Oxford marbles, that Simonides, the son of Leep gepis, invented a sort of artificial memory, the principles of which he explained at Athens; and that he was defended from another Simonides, who was a poet no less renowned than himself. One of these two poets invented those melancholy versicles which were sung at funerals, and are called by the Latins "Nemesis." (Hor. I. ii. 1.) Strabo says, that the Athenians having besieged the city of Julis, raised the siege upon advice that the inhabitants had resolved to murder all the children under a certain age, that useful persons might not be employed in taking charge of them. Cepos, with the other Greek islands, subdued by the Romans, and belowered upon the Athenians by Marc Antony the triumvir, together with Æginæ, Timos, and some other adjoining islands, which were all reduced to one Roman province by Vespasian.

CEPA, in Botany. C. Bauh. Tourn. See ALLIUM.

CEPA, Rumph. See Pancreatium anchoifae.

CEPA, in Gardening. See ALLIUM.

CEPÆA, in Botany. C. Bauh. See Sedum Cepæa.

CEPARUM PRIMONTORIUM, in Ancient Geography, a promontory of the island of Cyprus, extended into the sea directly towards the north, near the town of Sol, according to Strabo and Ptolemy.

CEPASILE, in Geography, a town of Italy, in Venetia, N. of Plavis and W. of Æpitergyium.

CEPEDE, De La, Count, in Biography, a French writer on music, who published, in 1785, a treatise entitled "La Poétique..."
P.S.C. P.

Poezie de la Musique," which contains many excellent reflections and precepts for a young composer of lyric dramas, particularly French, from which the author draws all the illustrations of his principles. The work is extended to 2 vols. 12mo.; is well written and well printed, but contains few precepts to which the present musical critics at the Institute, or ferous opera, will subscribe. The tale of music at Paris, from all we can gather in conversing with good judges of the lyric drama, is so much improved since the time of Rossini, and the orchestra so well disciplined by the performance of German symphonies, that, with a better language for the emission of sound, and better fingers, would be very high in the scale of the melodrama.

CEPHALOÆDIS, Cefalu, a town on the northern part of Sicily.

CEPHALALGIA, in Medic. from κεφαλή, head, and αἰθή, pain, is the technical term for the disorder, which is, in common language, called head-ache. By some authors this term is applied only to a recent or flight head-ache, or to one which is partial or confined to a particular part of the head; and they employ the word CEPHALÆA, κεφαλαία, to denote the complaint, when it is of longer standing, or more obstinate, or when the whole of the head is affected. These definitions, however, are generally overlooked at present, and from two terms are used synonymously. Other denominations are also given to head-aches, which are accompanied by other peculiarities of symptoms; thus when they return at regular periods, with certain intervals of cafe, they are termed intermittent head-aches, and by the vulgar, aches in the head; and as in these infures it usually happens that one half of the head only suffers, they are technically described under the term Hemianalia (from ἡμι-, half; and ἀνάλη, the skull); see HEMICRANIA. When the pain is confined to a particular point in the face, namely, to the situation of a small hole, through which a nerve passes to the integuments, it has been denominated by the French Tie Douleurs. A local and violent pain also occurs occasionally in some part of the head, in hyphema, an animal, which is laid to resemble the senation of a nail driven into the head, and has hence been denominated Clavus hystericus. See HYSTERIA.

Head-ache is a symptom of almost every febrile complaint, as well as of many others of a chronic nature; inform much that Dr. Cullen has not included it among the genera of idiopathic disease, in his nosology. Although it be, however, in a great majority of infures, symptomatic of a disease in some other part of the body, or of a general febrile state, yet it is frequently the concomitant of some morbid state of the contents, or of the integuments, of the skull.—An acute pain of the head is one of the most obvious marks of inflammation of the brain or its membranes, which is termed phrenitis, or phreny; as well in its common acceptance, as in that form of the disease, which terminates by an effusion of serum into the ventricle of the brain, and is then denominated hydrocephalus. It also accompanies the various organic diseases, which take place in the different parts of the brain, as may be found among the accounts of febicides, detailed by Morgagni, Haller, Lieutaud, &c. Thus after death, which had been preceded by severe and obilinate head-ache, tumours and abscesses have been found in, or adhering to, certain portions of the cerebrum or cerebellum; the different membranes of the brain have been found thickened; the arteries or membranes partially converted into bone; bony projections from the cranium have been discovered piercing or pitting on the brain; and effusions of blood or serum producing pressure on the external surface, or in the internal cavities, of that organ. Pain in the head is also the consequence of that influx of the vessels of the head, which gives rise to lethargic, apoplectic, and paralytic affections, by prehure on the brain, or by the subsequent rupture of the vessels, and effusion of blood. In persons of full habit of body, therefore, with short neck, large head, and fluid complexion, the head-ache is usually one of the forerunners of an apoplectic attack.

Further, there are infures of idiopathic head-ache, in which the brain itself does not appear to be affected, but in which the morbid condition is confined to the skull, or its integuments. The integuments of the cranium appear to be not unfrequently the seat of rheumatic inflammation, which gives rise to a head-ache, tedious and distressing as rheumatic fevered in the membranes surrounding the joints, or in other parts of the body. The poison of the venereal disease, when the syphilis becomes thoroughly imbued with it, is liable to excite a peculiar inflammation in the periosteum, or membrane investing the skull, and even in the skull itself, which excites a severe head-ache, accompanied by a great forense and tenderness of the integuments.

The most frequent infures of head-ache, however, are those in which it is symptomatic of disease in some other part of the body, or arises in consequence of the sympathy which exists between the brain and some other organ. These sympathies are numerous, and one of the strangest is that which takes place between the head and the alimentary canal, but especially between the head and the stomach. Hence with almost every derangement of the stomach, the head is liable to suffer. Such is the origin of that common complaint, especially among the high-feeding ranks of society, which is usually termed a sick head-ache, and which has been well described and commented on by Dr. Pothergill. (See Medical Obs. and Inquir. vol. vi. p. 103.) This learned physician has remarked, that the patients, affected with this species of head-ache, awake early in the morning with a pain, which seldom affects the whole head, but one particular part of it only; most commonly the forehead, frequently over one, and sometimes over both eyes. Sometimes it fixes itself about the upper part of the parietal bone of one side only; sometimes, and not unfrequently, the back part of the head, or occiput, is affected: sometimes it darts from one to another of these places. With this is joined more or less of sickness, which is dull barely, in many people, not sufficient, without ailanscence, to excite vomiting. If this pain comes on, as is usually the cafe, early in the morning, and before any meal is taken, seldom any thing is thrown up but this phlegm, unless the inflammation is severe, when some bitter or acid bile is brought up. In this case, the disease begins soon to abate, leaving a forense about the head, a squamativeness at the stomach, and a general measiness, which induces the sick to wish to repose. Perhaps, after a short sleep, they recover perfectly well, being only a little debilitated by their sufferings.

The duration of this paroxysm is different in different persons: in some it goes off in two or three hours; in others it will last twenty-four, or longer, and with a violence scarcely to be endured, the leaf light or noise seeming to throw them on the rack. Its returns are very irregular, as must be the case, since the disease for the most part proceeds from accidental causes. It occurs in persons of almost every habit and complexion; chiefly in the early and middle stages of life, and among the middle and upper ranks in society. Those who use but little exercise, and are inattentive to their diet, both as to the kind and the quantity, are the greatest sufferers.

This,
CEPHALALGIA.

This, or a similar species of head-ache, is frequently an attendant on a constricted state of the bowels; so that those who are habitually colicky, are frequently subject to habitual head-aches, which are really removed by laxative medicines, or cease on the suppression of a laxity of the intestines from any other cause. Even in the febrile state, when the head-ache may be considered as originating from other circumstances, dilatation of the bowels tends to aggravate it greatly. Hence the necessity for the practitioner to attend to the state of the bowels in all cases of head-ache.

A pain in the head frequently occurs, in consequence of its sympathy with the utile organs, more especially as a symptom of retention or suppression of the catamenia. In the latter case, indeed, it may perhaps be considered as the effect of an increased quantity of blood distributed to the head, rather than a sympathetic pain, since a general pleurisy is induced by the suppression of an accutened evacuation. In the same way head-ache is the consequence of the suppression of other habitual discharges, such as old ulcers, and ulcers, the bleeding piles, or the omission of periodical blood-letting.

Head-ache is a symptom of almost all acute febrile complaints, as well of intermittent as of continued and convulsive fevers. It likewise occurs in certain atheritic or debilitated conditions of the body, when it has been called a nervous head-ache. This species of head-ache takes place, as Dr. Willan has remarked, "unconnected with any particular febrile disease, from sorrow, fatigue, watching, and from sudden changes of temperature in summer as well as in winter. It is attended with a whiteness of the tongue, and a sensation of weakness or languor. A sharp and quick pulse, in this complaint, produces a throbbing at the temples, and an acute pain through the whole head. When the pulse is slow and feeble, the pain is described as dull and heavy, sometimes girding round the head, sometimes fixed at the nape of the neck. In persons who have constitutionally a very languid circulation of the blood, the latter species of head-ache recurs on every light occasion, and often becomes periodical, returning every day, or every other day, without any manifest exciting cause." Reports on the Diseases in London, p. 239.

It is obvious, then, that the causes of head-ache may be considered under three heads; namely, whatever comprizes or in any manner irritates the contents or the integuments of the cranium itself; whatever irritates or injures those parts with which the head is connected by sympathy, especially the organs of digestion; and, lastly, whatever tends to induce a state of fever or of morbid irritability in the constitution at large. It is frequently extremely difficult, particularly at the commencement of the disease, to ascertain the nature of the cause from which the pain originates. If it arise from inflammation in the brain or its membranes, indeed, it will be easily distinguished by the acute fever, with a quick and hard pulse, the intolerance of light, delirium, and other symptoms of phrensy; and if these occur in children, a termination in hydrocephalus, or dropsy in the head, may generally be anticipated. When the pain attacks those persons who exhibit the marks of phthisis before described, and who are affected with great drowsiness, or slight loss of memory, there can be no doubt that the fullness of the vefels of the brain is the immediate cause of the head-ache. And when symptoms of Hercynia, or of rheumatism, in other parts of the body, have preceded or accompanied the head-ache, it may be pronounced phthisical or rheumatic according. But it is not only extremely difficult, if not impossible, to determine what the internal organic cause of the head-ache is, or in what part of the brain it is situated, but also to ascertain whether the cause be really organic, or whether it may arise from sympathy with some other organ, or from the state of the constitution in general. The duration and perniciousness of the pain are often the only source of conjecture as to its organic origin.

With respect to the sympathetic head-aches, the absence of the diagnostic symptoms just enumerated; the obvious condition of the functions of the stomach, bowels, &c.; the known circumstances as to irritability of diet, &c. which may have preceded the attack; and the fact, the mode, and time of its occurrence, as has been already stated, will contribute to inform us of the nature and origin of the head-ache. And if there be any obvious general debility, languor, or low spirits, with occasional giddiness, tremors, and sensations of faintness about the precordia; and, more especially, if grief, watching, fatigue, or such debilitating causes have been acting, the asthenic head-ache, before described from Dr. Willan, may be presumed to exist.

After all these circumstances have been duly investigated and considered, the method of treatment to be adopted will readily suggest itself, if the conclusion as to the origin of the complaint be satisfactory. Where the symptoms of phrenetic inflammation are present, general and local blood-letting, blunting, purging, the application of cold, and the whole of the anthroplogistic regimen, must be referred to. See Phrenitis. Where there is apparently some internal organic cause, the nature and seat of which cannot be ascertained, the attempt to cure can only be pursued upon general principles; and therefore, upon the supposition that some morbid or preternatural enlargement of some part is taking place, the impetus and quantity of the blood carried to the brain, and the increased action of its vessels, must be diminished by the local extraction of blood, and the application of blisters; which view will also be further accomplished by the administration of some febrile medicine, such as digitalis, or ciauta; or with the intention of exciting the activity of the absorptive vessels, by which any morbid growth may be diminished, the use of mercury may be also referred to. The bowels, in such a case, must be kept regularly open; and every thing which can accelerate the circulation, whether stimulating food or drink, or corporeal exertion, should be carefully avoided. Where the head-ache is apparently phthisical or rheumatic, it is scarcely necessary to mention that the remedies, which are useful in other forms of phthisis and rheumatism, may be administered with success.

The "feck head-ache," which depends on a disordered condition of the stomach and bowels, occasioned by irregularities of diet, may be readily removed or relieved by emptying the stomach of its ed-digested and noxious content, by means of an emetic or mild cathartic: but the same paroxysm will be again repeated, unless the cause be avoided. Some persons prefer to little f.d.-command, and are so much habituated to indulge in the gratification of the palate, that they pass a great portion of their lives in the constant succedaneum of such attacks. The stomach, however, may be strengthened, and its digestive powers aided, by the use of bitter stomachic medicines, joined with alkalies or preparations of fucul; and the remora of the food may be in some degree avoided by the use of rhubarb and magnesia, or the astrigent pills, in moderate quantities. But, as Dr. Fothergill has very judiciously remarked, "whatever proceeds the physician's judgment leads him to pursue, there is one object that will defer his attention, and will require that of the patient. This disease is not the effect of any sudden accidental cause; it is the effect of reiterated errors in diet, or in conduct, which, by weakening the powers of digestion,
Where the head-ache is a concomitant of general fever, the treatment peculiar to that modification of fever which may be present must be necessarily employed. See Fever.


Gen. Ch. Col. common perianth none: capsules receptacle globular, villose, collecting numerous florets into a head; superior perianth superior, small, one keeled, funnel-shaped, angular; border quadrifid. Proper monopetalous, funnel-shaped; tube flender, longer than the calyx; bowl quadrifid. Stem. filaments four, inserted into the corolla, shorter than the border; anthers globular. Pet. germ inferior; stile longer than the corolla; stigma globular. [Peric. none. Seeds solitary, long, attenanted at the base, pyramidal, wooly. Linn.] Peric. capsule inferior, crowned with the permanent calyx, inverely pyramidal, four-celled; cells one-seeded, separating from each other as the seed ripens, but without valves, and not opening spontaneously; two of them generally abortive. Seeds oblong. Garr. Lam.

Gen. Ch. Flowers aggregate, fixed to a globular receptacle. Calyx proper superior, quadrifid. Corolla tubular. Capsule four to two-celled, dividing into four or two parts. Sp. 1. C. occidentalis, Linn. Sp. Pl. Mart. 1. Lam. 1. Willd. Gart. tab. 86. fig. 7. Lam. ii. tab. 59. (Sect. mila, Pluk. tab. 72. fig. 4.) "Leaves opposite alternate: heads terminal, forming a kind of raceme." Lam. A shrub, from five to seven feet high. Stem a little branched, weak, cylindric, greyish, leathy, almost its whole length. Leaves petiolate, egg-shaped, acute, entire, soft, smooth above; the nerves of the lower surface, as well as the petioles, sometimes bifet with short hairs. Flowers white, in small peduncled heads which terminate the stem, three, five or seven together, and form what La Marek calls a kind of raceme, but which, from the terms of his own description, as well as from his figure, is rather an umbel. A native of swamps, in Carolina. A decoction of the wood or root is used as a cure for the bite of venomous animals, and is said to be efficacious in venereal complaints. 2. C. angustifolius, Mart. 2. Linn. Cochin. "Leaves lanceolate, linear, opposite." A middle-sized tree, with ascending branches. Leaves quite entire. Flowers pale, in small terminal heads; common receptacle oblong, villose; segments of the proper calyx awl-shaped, hairy, beket with shining, coloured, peduncled glands. Fruit a small compound berry; the acini or component parts roundish, crummed, flacid, two-celled, inferior; cells one-seeded. A native of Cochin-China. 3. C. procumbent, Mart. 3. Linn. "Stem procumbent; leaves ovate-lanceolate, alternate." A thick shrub, with many long filiform branches. Leaves large, quite entire, tomentose, petiolate. Flowers violet-coloured, dioecious; in long, interrupted, terminal racemes; the females in a naked globular receptacle, without any perianth, either proper or common; corollas five-cleft, inferior, very many, on long pedicules, forming a ball or head; stile capillary, equal to the corolla; stigma simple. Seed fagine, egg-shaped, compressed, naked. A native of Cochin-China. 4. C. montanus. "Leaves egg-shaped, crenate, alternate." A large tree, with a hempen bark and spreading branches. Leaves acuminate, petiolate, rough above, tomentose underneath. Flowers dioecious, green, on solitary axillary peduncles, forming roundish...
in heads, on a naked globular receptacle; the female
without a corolla; proper perianth almost closed, four-cleft,
superior. Sex fiddle, compacted, with a subpappose ring,
periphere from the lacinated tube of the calyx. A native
of China. 5. C. Reticula, Mart. 5. Four. Leaves
laciniate, laciniate-linear." A middle-sized tree, with ascending
branches. Leaves by threes, quite entire, smooth. Flores
white, collected into a ball, with a small egg-shaped receptacle;
no common perianth; proper perianth inferior, with
four awl-shaped segments; corolla superior, with a four-cleft
reflexed border, four nearly sessile anthers, a long style, and
one naked style. A native of Cochin-China.

We have followed professor Martyn in taking up the last
four species from Loureiro, that they might not be entirely
omitted; although Loureiro himself confesses that they differ
very much from each other, as well as from Linnaeus's
generic character. The description given by Linnaeus
of the fruit of his sole cephalanthus is certainly founded on a
misconception, and, according to Gartner, appears to have
been made when he was only half awake: fructus negligenter & quasi ex infimo descript. It is, therefore,
titled to no authority in fixing the generic character. But
Loureiro's descriptions of his new species are also in several respects so confused, that it is not easy to determine what
he means. If, by the fruit of the second species, which he
calls a compound berry, we are to understand, as is probably
the case, the aggregate fruit of all the proper flowers, it
may belong to this genus. What he calls the single naked
seed of the fifth, may possibly be a pericarp with three abortive
cells, and may not contradict any essential part of the
generic character. But the third and fourth seem too refractory to obtain admission. In Morm, in the Encyclo-
pedic, has added to the C. occidentalis of Linnaeus, two other
species, which he calls euripus and philodera, both
communicated by Sonnerat: the former he supposed might
be found not to differ from nauclea orientalis of Linnaeus,
but he had then no doubt of its being a real cephalanthus.
As, however, he has not infected them in his subsequent illu-
lusions, he appears to have changed his opinion. See
Nauclea.

Propagation and Culture. The first species only has been
cultivated in England. It has been raised by cuttings and
layers, but is chiefly propagated by seeds. These should be
sown before Christmas, and will then come up in the next
spring; but if they be sown in spring, they generally remain a
year in the ground; in which case, the pots should be
placed in the shade during the summer, and sheltered under
a common frame to protect them from frost in the ensuing
winter. The third year, after they come up, they should be
shaded from the sun in hot weather; and as they naturally
grow in moist ground, should be regularly watered. In
the autumn they may be transplanted into sheltered nur-
series beds, where they may remain a year or two, according to
the progress which they have made; and should be finally
transplanted in October.

CEPHALAS, in Ancient Geography, a promontory of
Africa, mentioned by Strabo, situate at the commencement
of the great Syrin. He adds, that it was elevated, and
covered with wood. Ptolemy also mentions it. It is thought
to be the present cape Mejana.

CEPHALE, a burgh of Greece in Attica, between
Prophyta and Aphydne, at some distance from the coast of
the Saronic gulf. The Dioecuri, viz. Caistor and Pollux,
were highly respected in this place, that they were ranked in
the number of the great gods, according to Pausanias.
This burgh belonged to the Acrampite tribe.

CEPHALENIA, or Cephalenia, an island of the
Ionian seas, now called Cephalonia, which see. It was
known in the time of Homer (Odyssey) by the names of Olym-
peus and Black Epirus, or Epirus Melana; and had an-
ciently four cities, one of which bore the name of the island,
although Ptolemy mentions only two. Strabo tells us, that
in his time there were only two cities remaining; but Pliny
(L. iv. c. 12.) speaks of three; adding, that the ruins of Same,
which had been destroyed by the Romans, were still in being.
Same was the metropolis of the island, and is supposed to
have flood in the place which the Italians call "Porto Gir-
cardo." The names of the four cities were, according to
Thucydides (lib. ii.) Same, Prone, Craioni, and Pale.

This island was subdued by the Thebans, under the con-
duct of Amphytrion, who is said to have killed Pterelas,
who then reigned there. While Amphytrion was carrying on the
war in Cephalonia, then called Samos, one Cephalus, a man
of great distinffion at Athens, having accidentally killed his
wife Procris in shooting at a deer, fled to Amphytrion, who,
pitying his fate, not only received him kindly, but made him
governor of the island, which from that time was called Cep-
halonia. After it had been long in subjection to the The-
bans, it fell under the power of the Macedonians, and was
then taken from them by the Athenians, who held it till it was reduced by
M. Fulvius Nobilior, who having gained the metropolis
after a four months' siege in the year 169 B. C., fold all the
citizens for slaves, adding the whole island to the dominions of
his republic. Liv. i. xxxviii. c. 29. 29.

CEPHALICUS, in Medicine, from κεφαλή, the head,
a term given by the older writers on the materia medica,
to the organs which receive the disorders of the head. Under
this term were chiefly included certain fragrant, aromatic,
and stimulant substances, which, whether applied as odours
to the organs of smell, or used as inebriating, or taken into the
flomach, afforded a speedy relief to nervous or ascen-
taneous headaches, giddiness, and faintness. In such a condi-
tion of the body all cordials would operate as cephalics.
The symptoms arise from a languor of the circulation in the
veils of the head, which is accelerated by the general flui-
mus of cordials taken into the flomach, or the local flui-
mus of odours or inebriating applied to the organ of
smell, and the headache or giddiness necessarily ecede. The
term is now seldom used.

CEPHALIC vein, in Anatomy, one of the large superficial
veins of the upper extremity. See Veins.

CEPHALOIDES, a denomination given by some writers,
who discover virtues in plants from their signatures, to
those which bear any resemblance to a human head; such
are the poppy, poppy, and like.

CEPHALOMANTIA, from κεφαλή, and μάντις, divi-
nation, an ancient species of divination, or method of foretell-
ning futurity by a dead man's skull.

CEPHALONIA, in Ancient Geography, one of the ancient
names of the city of Rome.

CEPHALONIA, or Cephalonia, in Geography, a con-
 siderable island of the Levant, in the Mediterranean, near
the coast of Livadia to the north-east, and near the coast
of Morocco to the south-east, opposite to the gulf of Lepanto;
about 150 miles in length, and from 80 to 90 its greatest
breadth; anciently called Cephalonia, which see. Venice
acquired the sovereignty of this island, as a gift from Gaido
to lord, in 1224; though it was taken by the Turks in 1479,
and held by them for about 20 years. On the fall of Venice,
it was seized by the French; and by the fourth article of the trea-
ty of Campo Formio in 1797, renewed and confirmed by the
third article of the treaty of Lunville in 1801, so that the
French republic hold posses, in full sovereignty, the ci-

devant Venetian islands of the Levant, viz. Confl. Zante, Cephalonia, St. Maure, Cerigo, and other islands dependent theron; together with Butrinto, Larta, Voaizia, and in all the cis-vant establishments in Albania, which are situate lower down than the gulf of Lodrino.

The chief articles of commerce in Cephalonia are oil, molasses, and a species of grapes called currants. The air of this island is very warm; the trees are covered with flowers through the winter, and bear ripe fruit twice a year, in April and November; but those which grow in the latter month are smaller than the others. Corn is sown in the winter, and reaped in June. N. lat. 38° 10' to 38° 54'. E. long. 20° 15' to 21° 52'.

Cephalonia, the capital of the island of the same name; the seat of a bishopric united to Zante. N. lat. 38° 30'. E. long. 28° 40'.

Cephalonnesos, in Ancient Geography, an island of the Exune sea, in the Cariamite gulf, according to Pliny. It belonged to European Sammtica, according to Ptolemy. CEPHALONANTICIA, composed of κεραῖον, head, κοιλιον, and μυχαίνα, division, a method of division, or revealing secrets, by means of an αία's head broiled on the coals. After muttering a few prayers, the name of several persons suspected of a theft, or the like, were repeated over; he at whose name the αία's jaws made any motion, or the teeth began to chatter, was held for convicted.

CEPHALOPHANYGEUS, in Anatomy, a term applied by some writers to the middle constriction of the pharynx. See CONSTRUCTIORES PHARYNGIS.


Eff. Ch. Receptacle naked, hemispherical; down chaft-like, many-leaved; calyx many-leaved, reflexed.


CEPHALOPODY, from κεφαλή and ποτίς, pain, a denomination given by home to the cephalophora, or head-ache.

CEPHALOTOEM, in Ancient Geography, a people of Asia, placed by Pliny towards mount Caucas, and on the borders of the Exune sea.

CEPHALUS, a town of the island of Cyprus, watered by the river Areus.

CEPHALE, in Mythology, the name given by Aristotle, Aelian, Appian, and others to the mullet, muced cephalus, which fee.

CEPHALE, in Ancient Geography, a country of Armenia, more generally called Sophort.

CEPHENES, a name anciently given by the Greeks to the Persians.

CEPHENIA, a name which, according to Agathæneus, was given to Euphratea, and which seems to have been derived from the fabulous Cepheus.

CEPHESIAS, a lake, so called by Strabo, situated on the coast of Africa.

CEPHESUS, in Astronomy, a constellation of the northern hemisphere, being one of the 45 old altitutins; whose stars in Ptolemy's Catalogue, are 15; in Tycho's, 12; in Hevelius's, 51; in the British Catalogue, 55.

Dr. Herchel has given an account of the latitude of the 35 stars in this constellation, in his third catalogue of the comparative brightnesses of the stars; (Phil. Trans. for 1797; pt. ii. p. 314.) and he observes that the 15th, in the neck of Cepheus, marked by Bayer, consists of two stars. Mr. Goodricke infers from a series of observations on the star α Cephei, that it has a periodic variation of 5' 8° 37', during which it undergoes the following changes; viz. it is at its greatest brightness about one day and thirteen hours; its diminution is performed in about one day and eighteen hours; it is at its greatest obscurity on about one day and twelve hours; and it increases about thirteen hours. In the fift point, it appears as a star of the 2d and 4th magnitude, though its relative brightness does not seem always to be quite the same. In the third point it appears as a star of between the 4th and 5th magnitude, if not nearer the 5th; and its relative brightness is as follows: nearly equal to; and ɛ Cephei, and considerably less than 7 Lacertae. The relative brightnees and magnitude of these stars with which the variable one was compared are as follow: ɛ Cephei, the brightest, is between the 3d and 4th magnitude; ɛ Cephei, the next brightest, is between the 4th and 3d; 7 Lacertae, is less than ɛ Cephei, and of about the 4th magnitude; ɛ Cephei is between the 4th and 5th magnitude; and ɛ Cephei, which is a little less than ɛ, is between the 5th and 4th. The variation of the star ɛ was corroborated by the observations of Mr. Pigott. Phil. Trans. vol. lxxvi. p. 43. &c.

Cepheus, in Fabulous History, a king of Ethiopia, father of Andromeda by Calliope. See ANDROMEDA. Cepheus was one of the Argonauts, and after his death, became a constellation. There was another Cepheus, prince of Arcadia, and favoured by Minerva, who transferred to his head a lock from the head of Medusa, by which he was rendered invincible. He is mentioned by Apollodorus as the son of Leucorus, and hunter of the Caledonian boar. A third Cepheus is said, by the same author, to have been the son of Aeius, an Argonaut, king of Tegen, father of Sterope, and an oracle of Hercules, in opposition to Hippocoon.

CEPHISSIA, in Ancient Geography, a village of Greece, in Attica, near Athens.

CEPHISSUS, a fountain of Attica, according to Pliny.

CEPHISSUS, or COPIS HIBIUS, a lake of Brontia, which took its name from the river Cephissus, which discharged itself into this lake. Its name, Copis, was formed from the town of Copes, seated upon its banks. Pausanias says (l. ix. Boetiae, c. 74.) that there were two towns on this lake, viz. Athens and Eleutis, which had been swallowed up by its inundations.

CEPHISSUS, or CEPHISUS, a river of Greece, which had its source in the mountains that separated Phocis from Thessaly, which range of mountains was called Octa. Its course was from north-west to south-east. In its progress it received several rivers, such as the Lilea, the Fundus, and the Chalceus; and before it entered Brontia, it ran at the foot of a mountain, where was the district called Patopotamus. In Brontia it received the Hermon and the Melas; and at the south of Orchomene it discharged itself into the lake Copis, or Cephissus. This river was celebrated in fabulous history; as the graces delighted to bathe in it, and were thence flyed the goddesses of the Cephissus. This river, or rather river god, is said to have been enmoured of several nymphs, all of whom flew his passion. 

In Attica there were two rivers of this name, one, which
was the most easterly and the most considerable, commenced north of Decelia, ran towards the south as far as Cephalis, and to the south-west on the north of Athens, near the northern wall of the Pireaus, and discharged itself in the port of Phalerum. See Athens. The other river commenced N. of Phyla, and flowed into the Saronic gulf, near Sceius. Near its mouth were found several statues, and one in particular of a young man, who cut his hair in order to consecrate them to the river, according to the custom of the ancient Greeks. Paulmus, in Attic. c. 37. — Cepheus was also the name of a river of the Pecoponousus in the Argolid, according to Pausanius. — Ortelius mentions a river of this name in the island of Samos; a river of Grecia in S. Crema, and another of the same name in the island of Iesus.

CEPHIRO, or Kephiro, a village and desert of Egypt, at the entrance of the desert of Libya; to which were banished Democritus of Alexandria, St. Marcellus, &c.

CEPIUS, or Cephus, in Orbacon, the name by which the black-headed gull has been described by some writers. See Lib. ed. Holboed. See Cepus.

CEPHYRA, or Typhon, daughter of Oceanus, who is fabulously reputed to have deceived Neptune.

CEPI, in Ancient Geography, a maritime place of Asia Minor, placed by Strabo near the island of the Medeans. Also, a town in the island of Cocoscondia, upon the Euxine sea, at the entrance of the Cimmerian Bosphorus, according to Pliny; who says, it was a colony of the inhabitants of Miletus. Strabo calls it Cepus; and it is denominated Cepus by Mala and Diodorus Siculus.

CEPE, in Lavo, a nation made by the sheriff, upon a capias, or other process to the like purpose; signifying, that he hath taken the body of the party.

CEPLANA, in Ancient Geography, a town of Spain belonging to the Celts of Lusitania.

CEP, in Geography, a town of Ithria; 4 miles S. of Pelena.

CEPION, in Antiquity, the name of a particular air, invented by a disciple of Terpander, and designed to be played on the cithara.

CEPIONIS TURRI, in Ancient Geography, a place of Spain, in Bética.

CEPIONITES Turr, in Ancient Geography, a place of Spain, in Bética.

CEPITAS, in Natural History, a name given by Pliny, and other ancient writers, to a species of fish, seeming to approach to the nature of the Jasper. Pliny tells us that there were many kinds of it, some more peculiar than others, and some colourless; others variegated with green and the other colours of the jaspers and agates: they were all used in the ornamentation of houses; and the best beautiful furred, when well polished, to make speculums of.

CEPITES, in Natural History, a name used by the ancients to express a gem which gave the representation of the several chalets of plants and flowers in the beds of a garden, with naked veins, expressing the walks between. The common text of Pliny is unintelligible, where he gives the description of this stone; but Schaffius has restored it from some old copies, so as to make it finite, and expressive of this meaning. The stone was probably not of another peculiar kind of that agate which the ancients called dimwrits, and we the molca flaves.

CEPOLA, in Ichthyology, a genus of theracae fishes, which have the head roundish, and compressed; teeth curved, and placed in a single row; gill membranes fixed; body elongated, naked; belly rather shorter than the head.

CEPULATIS, with cadulian tapering, wCdc; and head very obtuse. It is a native of the Mediterranean sea, and is sometimes found of the length of three, four, or five feet, but more commonly does not exceed two feet in length. The head is short and rounded; mouth large, and the lower jaw rather exceeding the upper one in length. Both jaws are armed with sharp curved teeth, placed in a single row in the upper, and in a double row in the lower jaw. The tongue is broad and long; the eyes very large, with silvery sides, and black pupil, and placed vertically in the head. The abdomen scarcely longer than the head; body remarkably long, gradually tapering to the tail, and of extreme thickness in proportion to the length, whence it obtained the name of a fish or band-fish among ancient ichthyologists. The general colour is very, huory on the back, and the sides, and after a month, marked with rather large reddish spots; a lateral line is wanting, and the fins reddish. This fish is confined to the neighbourhood of the shores, in other more rarely to obtain its food, which consists principally of crabs, and other crustaceous animals. The flesh is extremely edible.

CEROLA, or Cepola, a Cadulian tapering; jaws sharp, pinnate, Limn. Ophiomus macropsia, Ruff., Sync. nat. Tama fipps in the river of Cephisus.

Support, as Gemm and others be to be, perhaps, a variety of the preceding; it is smaller, and of a pale red and hour yellow, hout. It inhabits the Mediterranean, and has been lately discovered on the coast of Devonshire. Vide Limn. Trans. and Donov. Brit. Tiges.

CERAL, or Cepola, a head tapering; both jaws arched; fins pinnate, forked, and rough.

Found in the Adriatic. The lateral line in this species is straight, with a single row of scales.

The hermanian band-fish, cedula hermaniana of Dr. Shaw's zoology, appears to differ from such particulars from the true cedula, that we are of opinion with Cepede, that it ought to form a genus altogether distinct from them.

CEPOLAPITES, in Natural History, a name given by aee to the fish properly called cypites, a kind of moccia agate.

CEPES. See CEPUS.

CEPHULA, in Ichthyology, a name by which Gefeir and some other authors have called the common ribb. fish. It is derived from the Italian word cepole, the familiar name of the same fish in the markets of Rome. This is the cepola tania of modern naturalists.

CEPUS, or CEPUS, in Zoology, a name affixed indiscriminately by old writers to several monstes of the smaller kind that have more or less green among them other colours. The only monstes so named by modern naturalists is the monstes. flamme, fitua cepus of Schreiber.

CERA prima et extrina, in Roman Antiquity, were terms applied to wands and tawettes, from the circumstance of their being usually written on tables covered with wax, because in them a person could easily erase what he wished to alter. Hence cera is put for tabula cerata or tabula tawettea, (Juvenal, i. 63.) and primus cera is used for prima tabs tabulate, the first part of the wall, (Hor. Sat. ii. p. 53;) and cera extrina or ima for the last part, (Cic. Ver. r. 56. Suet. Juvenal, 8. 4.)

CERACE, in Ancient Geography, a town of Macedonia, so called by Pylus, seated near the lake Lichonides.

CERACHATES, in the Natural History of the Ancients, the name of a species of agate of a plain yellow colour, and very much resembling yellow wax. We have it from the East Indies, as also from New Spain, and some other parts of America; and our jewellers sometimes work it into toys of small value.

CERAM,
CERAM, in Geography, one of the spic islands in the East Indian Sea, about 100 miles in length, and 40 in breadth; low towards the shore, and in the interior parts, which are little known, very mountainous. Several chains of mountains run parallel to one another, in the direction of east and west, and are separated by fertile valleys that support a luxuriant vegetation. Its high mountains, some of which are at least 1,200 toises in perpendicular elevation, and yet frequented by the natives, afford effectual protection to their inhabitants; so that the Dutch have only been able to attach to its government of Ambon a comparatively small number, settled on the lower parts of the island, near the sea.

This island is said to contain 30,000 fighting men. It produces clove trees, which the policy of the Dutch has induced them to destroy along the coasts, to which their influence extends; and it has also large forests of the fago-tree, which furnishes a valuable article of exportation. S. lat. about 3°. E. long. about 128° to 131°.

CERAM-LAOUT, an island of the East Indian Sea, near the island of Ceram, above five miles long, and nearly three broad; mountainous, and uninhabited. It has a bay on the north coast.

CERAMBYX, in Entomology, a genus of insects in the order Coleoptera.

The generic character of the Cerambyces is variously defined by different writers. Linneus describes it as having the antennæ composed of articulations, which gradually diminish in size as they approach towards the extremity: thorax either gibbous laterally, or armed with spines; wing-cases linear, or of equal breadth throughout; and the feet confiding of four joints.

This Linnean definition of the genus applies to such a vast number of insects, which, in other particulars, possess an evident generical dissimilarity, that later authors have found it absolutely requisite to divide the Linnean Cerambyces into several distinct genera. Linneus was himself aware of the inconvenience of retaining many of his Cerambyces in this genus; but in order to comprise them, divided the genus into five distinct sections. Thoese families, or sections, as far as they relate to the few species known to the Linnean philosopher, may, perhaps, be found sufficiently comprehensible by the Linnean entomologist; but when we reflect on the vast number of new species, described by the indefatigable Fabricius, by Olivier, and other skilful writers, not to mention the many species that are to be yet found in our cabinets, that have not been described by any author, thoese subdivisions will at once appear incompetent for their arrangement. We must constitute new genera for their reception, or if we are to follow in servile imitation, we cannot dispense with the inattention, at last, of several new subdivisions, to comprise them. The Linnean subdivisions of the Cerambyx genus stand in the following order:

1. Thoese which have the thorax armed on each side with moveable spines—This is exemplified in Cerambyx Longimanus. Linn.
2. Thoese in which the thorax is margined, and armed at the fides with spines—As in Cerambyx pinosus. Linn.
3. Thoese having the thorax round, and armed with fixed spines—As in Cerambyx futor. Linn.
4. Thoese with the thorax unarmed and somewhat cylindrical—As in Cerambyx punclatus. Linn.
5. Thoese with the thorax unarmed, roundish, somewhat globose, and flattened on the upper side—As in Cerambyx violaceus. Linn.

Two writers of respectable quality, Geoffroy and Schaffier, form several new genera of the different kinds of Linnean Cerambyces. Their genus Prionus consists of those which have serrated antennæ placed in the eyes, or surrounded and embraced at their base by the eyes. The true Cerambyces, according to these authors, are such as have the antennæ gradually tapering from the base towards their extremity, and are placed in the eye, and have the thorax armed with spines. Thoese Linnean Cerambyces, which have feticose antennæ placed in the eyes, and the thorax cylindrical and unarmed with spines, are referred to their genus Lepultura; and their genus Speritus comprehends thoese which have the antennæ tapering towards the extremity, but have their base originating before the eyes; and the wing-cases diminishing in breadth towards their point. This last genus Speritus is divided into two families, each of which only belongs to the Linnean Cerambyces, being such as have the thorax armed with spines; the other to the Linnean Lepultura, having the thorax delimitated of spines. Sco-poli likewise has made some alterations in the Cerambyx and Lepultura genera; his character of the first is, however, vague and indefinite; he assigns it the power of emitting a sound or noise by the friction of the thorax, where it lies close to the body, as a character of the genus, and has, by this means, placed several of the true Cerambyces, which have not this property, among his Lepultura. The remainder of the Linnean Cerambyces he separates into two divisions, the first containing those which have the thorax armed with spines, and the other those which have the thorax delimitate of spines.

Olivier found it requisite to divide the Linnean Cerambyces into several genera; La Marck and Latreille have done the same; but the most important innovations that have been made on the Linnean genera are to be found in the different entomological publications of Fabricius. Contrary to the Linnean method, his characters of genera are taken from parts of the mouth, which cannot readily be so examined as thoese which Linneus has taken, or it would be impossible to deny the manifested superiority of the Fabrician genera over thoese of Linneus. Notwithstanding that Fabricius confines so many genera of the Linnean Cerambyces, and that his characters are so dissimilar, thoese genera appear so natural and well selected, that other characters, seen after the Linnean method, may be applied with propriety to nearly the whole of them. This is in particular obvious in the genus Prionus, as well as Lamia and Speritus, each of which poises Linnean characters, if they may be so expressed, different from those which characterize the true Cerambyces, although in the system left us by Linneus, they could not be referred to any other genus. In a work recently published, on the entomology of New Holland, and the contiguous islands, we have endeavoured, under this persuasion, to reconcile the Fabrician genera, Prionus, Lamia, Stenocorus, and Speritus, to the Linnean arrangement, by allying each to a new general definition after the manner of Linneus; and conceiving there can be neither difficulty, nor impropriety, in reconciling many other of the Fabrician genera to the Linnean method in a similar manner. As subdivisions of the Linnean genera, the Fabrician genera might be eminently useful. Should increasing the number of new genera be thought objectionable. It must be regarded as no inconsiderable improvement, in the last edition of the Systema Naturae, that Cimelie has availed himself, in a great measure, of the Fabrician genera as subdivisions of his genus Cerambyx.

The genus Cerambyx comprehends an amazing number of the larger and most beautiful of all the coleopterous insects. In the larger races they resemble the oblong, slender worms, with a heavy head, furnished with strong jaws, and
and fix feet on the anterior part. They live, principally in trees, the inner part of which they bore through, reducing the wood to powder, and undergo their change from the larva to the pupa, and thence to the perfect state, in the cavities which they bore. In the larva state, they are sometimes eaten; in the West Indies these larvae are collected by the negroes as an article of luxury for the tables of their owners, and are in great esteem. Many of these insects possess a powerful odoriferous smell similar to that of the European species Molochatus. The antennae, in many of the species, are longer than the body.

In describing the species of the genus Cerambyx, we shall mention those first which stand as true Cerambyces in the Fabrician, as well as Linnean, systems; the other genera Prionus, Lamia, &c. will be introduced under the present article for the sake of brevity.

Genus Cerambyx.

Antenna fetcaceous: feelers four: thorax spinous or gibbous: wing-cases linear: jaw obtuse and armed with a single tooth. Feelers four, bifid: wing obtuse, with one tooth: antenna fetcaceous. Fabr.

Cerambyx virgatus, black: thorax unarmed, elongated, with transverse rugose fibras: wing-cases feathery at the base, and smooth towards the apex. Donov. Inf. N. Holland.

Cerambyx nigritus, black: antennae fetcaceous, long, flattened in the eyes; feelers four, equal: eyes crescent-shaped: jaws bidentate. La Mare.

Cerambyx circatus, black: thorax unarmed, elongated, with transverse rugose fibras: wing-cases feathery at the base, and smooth towards the apex. Donov. Inf. N. Holland.

This species is found on the willows in European countries, and is generally known in England by the name of Goat-chaffer, or milk-beetle, which last it merits particularly, the insect emitting a powerful smell of musk when alive.

Length, including the antenna, about three inches.


This is a native of Jamaica; the larva is found in the trunk of the amys balumafa. Dr. Schwartz. It is observed of this species, by Fabricius, that it varies in having the antenna longer or shorter than the body, and the thighs toothed or unarmed. These suppos'd varieties are most probably distinct species.

Nitens. Thorax rounded and somewhat spinous: spinning green: thighs elevated, the club of the four anterior ones rufous. Cerambyx nitens of Olivier. Habits Africa.

Muft. Donov. Described by Fabricius from the Bankian cabinet. The antennae are twice the length of the body, and of a black colour: the body fuscous green and shining: legs black: posterior femurs compressed. Fabr.

Afr. Thorax rounded and spinous: body green: antenna and legs rufous. Fabr. This is Cerambyx of the Linnean manta 5:2: the front is obtuse: antenna scarcely longer than the body, and rufous: thorax rugose: wing-cases attenuated: four anterior teeth elevated.

Vittatus. Thorax spinous, fuscous green: thorax and wing cases linedate with black. Fabr. This is Cerambyx of the Linnean manta 5:2: the front is obtuse: antenna scarcely longer than the body, and rufous: thorax rufous: wing-cases attenuated: four anterior teeth elevated.

Festivus. Thorax spinous and green: wing-cases violaceous, greenish at the base: thighs ferruginous, and armed with a foot's tooth. Fabr. Discovered by Mr. Mears in the banks of the river Gambia. The antennae are of moderate length, black, with the first joint rufous: two obtuse spines on each side the thorax: thighs ferruginous: hairs brown.

Voluta. Thorax spinous and black: with a deep black stripe. Fabr. The antennae of this insect are of a moderate length: the body black: wing-cases obtuse, with the dorsal stripe velvety: posterior femurs compressed, and spinous at the apex. This kind inhabits America. Dr. Schinz.

Sericeus. Thorax spinous, body black and filiform: future and stripe on the wing-cases greenish: thighs rufous. Fabr. This insect inhabits South America. The antennae are black: head and thorax deep black, velvety, and spotted with shining green.


Described by Fabricius from the Hunterian cabinet. It inhabits South America. The abdomen is black, beneath bluish and glosy: legs black: thighs clavated: posterior femurs yellowish, and covered with a blackish sable.

Elegans. Thorax spinous, and, with the head, brassy green and glosy: wing-cases dusky: antenna long and rufous: legs rufous. Fabr. Habits America. The antennae in this species are twice the length of the body.


Interruus. Thorax spinous, deep black: wing-cases with three linear white spots: antenna short. Fabr. Described by Fabricius from the museum of Olivier. The antennae are shorter than the body, which last is black: posterior femurs longer than the red, and with the hairs compressed. Native place unknown.


This species is described by Olivier, under the name of Cerambyx torridus. It inhabits Africa. The antennae are long and black, with the third, fourth, fifth, and sixth joint spinous at the tip: thorax black, with three tubercles on each side the face, the lateral ones obtuse: legs black: thighs clavated.

Atrix. Thorax somewhat spinous, black: antenna moderate, and anulated with rufous and black. Fabr. Olivier, &c. Inhabits the Cape of Good Hope. This is much less than the last mentioned species. The body is black: head crimson and glosy: legs black: thighs at the base reddish: posterior femurs long.


Ferrugineus. Thorax armed with sharp spines, rufous.
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gold and black; wing-cases ferrugineous; antennae long. Cerambyx ferrugineus. Linn. Inhabits the East Indies. Cerambyx gigas of the Fabrician Monarch.

AELFINUS. Thorax spinous; head, and four spots on the wing-cases; black; antennae long. Linn. Found in some parts of Europe, not hitherto discovered in England. Its size is rather less than that of Cerambyx Mecophus, or Mofh Beetle.

SCALARIS. Thorax spinous and fuscous, with a white longitudinal line; antennae long. Fabr. A native of South America, described by Fabricius from the Bokian cabinet. The antennae are three times the length of the body; head fuscous; orbits of the eyes, and dorsal line white; thorax armed with acute spines, fuscous, with a dorsal line of white; wing-cases fuscous with a white dot in the middle and indented future.

EBULINUS. Thorax spinous, green and brassy; wing-cases telfaceous; antennae short. Fabr. This kind inhabits Africa, and was first described by Fabricius, from a specimen in the collection of Dr. Hunter. The antennae are ferrated; thorax uneven, and without spots.

MARGO. Thorax furnished with two spines, rugose and black; antennae long and ferrugineous. Fabr. From the same cabinet, as the preceding. This species inhabits Cayenne. The antennae are twice the length of the body, cylindrical, and ferrugineous, with the first and second joint cutiled black, and the three next black at the base; thorax rugose; with two spines on each side, the posterior one of which is larger; wing-cases smooth, impressed at the base, and at the tip truncated.

KAHLERI. Thorax spinous, black; wing-cases ferrugineous, with a black spot. Linn. Found in the south of Europe, and varies in being sometimes without the black spot on the wing-cases, and sometimes marked with a rufous lateral spot. Wing-cases notched at the extremity.

LUNDII. Thorax spinous, fuscous, antennae, tips of the wing-cases, abdomen, and legs black. Fabr.

Described by Fabricius from the cabinet of Lund, who received it from Tranquebar. Size of C. Kahlern. Antennae short and black; thorax gibbous, spinous, fuscous, and without spots; scutell black; breast ferrugineous; abdomen black, with acute rugous tubercle between the second pair of legs; thighs slightly elevated.

SUCINCENTUS. Thorax rugose, with two spines; wing-cases banded with yellow; antennae very long and compressed. Linn. Inhabits America and Brazil, and is mentioned by de Geer under the title of Cerambyx fuscles-oalitaec. [i. 113. &c.

DESFONTAINI. Thorax spinous, fuscous, spotted with black; wing-cases ferrugineous and black at the tip and base; antennae very long. Fabr.

In the collection of Desfontaines. This kind inhabits Barbary. The head is black; wing-cases smooth, with a small black spot at the base, and an larger one at the apex; thorax black and without spots.

STRIATUS. Thorax somewhat spinous, rugose, ferrugineous; wing-cases impunctate with yellow; antennae long. Oliver. Fabr. &c. Inhabits Cayenne. Described from the Hunterian collection. The antennae are cylindrical, twice the length of the body, ferrugineous, and black at the tips. Head ferrugineous with three vertical black spots; thorax rugose, with two spines on each side, and dotted with black; scutell black at the tip; wing-cases ferrugineous with four yellow bands; thighs black at the tips.

RUTIPES. Thorax robust, and armed with two spines; wing-cases smooth and black; antennae long. Fabr. A native of South America. The antennae are longer than the body, and yellowish, with the tips of the joints ferrugineous; posterior thoracic spine large; wing-cases glabrous, with a large impressed dot at the base; legs yellowish with the tips of the thighs black; abdomen black.

DIMICATUS. Thorax armed with two spines, and rugose, yellow with black spots; wing-cases black, yellow at the base; antennae moderate. Fabr.

The head of this insect is yellow, with three vertical black spots; posterior spine on the thorax large, and yellow with black dots; wing-cases glabrous, black, with the future and base yellow; body yellow with half the abdomen black; legs yellow.

BICOLOR. Thorax armed with two spines, tuberculated and ferrugineous; lower half of the wing-cases, and the body black. Olivier. &c. Inhabits Cayenne; first described from the cabinet of Von Rohr. The antennae are moderate, ferrugineous at the base, in the middle yellow, and at the extremity ferrugineous; head ferrugineous; throat prominent and acute; a large impressed dot at the base of the wing-cases; legs ferrugineous.

DEPRESSUS. Thorax armed with many spines, depressed, black, variegated with cinerous; wing-cases pointed; antennae long. Olivier. Vest. &c.

The head is black with cinerous villous impressed spots; thorax befeet on each side, with about four or five short spines; wing-cases striated; legs black.

FASCICATUS. Thorax spinous, azure; wing-cases banded with yellow; antennae moderate; yellow, blue at the base and tip. Found in Tranquebar by Dr. Koenig. The antennae are compressed, and blue; the last four joints but one yellow; the last blue; legs blue, the posterior ones compressed. Olivier, Dallas, &c.

BARBICORNIS. Thorax spinous; four first joints of the antennae bearded with black; body telfaceous, variegated with black. Fabr. This species inhabits the East Indies.

NEBULOSUS. Thorax spinous; wing-cases dotted and striped with black; antennae long. Linn. Inhabits the trunks of pine trees in Europe, and is found in England. Donov. Brit. Inf. Length half an inch.

OBSCURUS. Thorax spinous, villous and fulvous; wing-cases black, with a villous fulvous spot behind; antennae moderate. Fabr.

Size of the preceding; antennae length of the body; wing-cases somewhat feabrous; legs black with yellowish flanks. Inhabits the Cape of Good Hope. Lund.

KLASSICUS. Thorax spinous and fulvous; wing-cases smooth with grey bands dotted with black; antennae very long. Fabr.

This species inhabits Germany (Loewenfkiold.) It bears a great resemblance to Cerambyx Nebulous but is larger, and has the antennae three times the length of the body. The head and thorax are fuscous, very slightly spotted; wing-cases with a dirty band at the base, and another in the middle, and also the tip cinceroes dotted with black; body cinceroes; thighs dotted with black; flanks black at the tip.

COSTATUS. Thorax spinous, grey; wing-cases with elevated lines dotted with black at the tips fulvous; antennae very long. Fabr.

Size of the last. The antennae twice the length of the body, black, with the joints whitish at the base, head and thorax grey, the latter armed with a single spine; wing-cases grey at the base with four elevated lines; legs grey.

HISPIDUS. Thorax spinous; wing-cases whitish at the base, and indented at the tip; antennae of moderate size and hairy. Linn. Le capricorne à écus denté. Geoffr. Cerambyx falsiculatus. De Geer. Inhabits Europe, and is found...
CERAMBYX.

fond in England. Donor, Brit. Isf. This insect is small, of a general colour diverse; forehead black with white, and an ovoid oval into the middle of the wing-cases with white.

**BALTUS.** Thorax spinous; wing-cases entire, with three forked legs; antennae moderate and hairy. Pauser., Hymen. &c. Inhabits Germany. The head and thorax of this species are fuscose; wing-cases pale at the base; legs grey.

**Pilosus.** Thorax armed with two spines; wing-cases grey with a single tooth at the tip; antennae moderate and hairy. Olivier.

This kind is found in Saxony. Hymen. It is smaller than Cerambyx hirsutus; wing-cases grey, pale at the base.

**RUGICOLLIS.** Thorax unarmed, very rough and black; antennae moderate, and with the legs pithy. Fabr. Inhabits Tranquebar, (Hymen.) The antennae are compript: wing-cases black, obtuse at the tip, and nearly truncated; legs pithy.

**BIMACULATUS.** Thorax unarmed and rufous; wing-cases tealtaceous with a black spine; antennae short. Fabr. Found in the East Indies. This is of the middle size; the antennae are villous, rufous, and shorter than the body; head and thorax villous, rufous and immaculate; thorax tuberculated, and very finely spined; wing-cases dotted; legs tealtaceous. Muf. Lund.

**SPLENDIDUS.** Thorax somewhat spinous and rufous; wing-cases tealtaceous, black-blue at the base; antennae short. Fabr. Described from the cabinet of Lund. The species inhabits Tranquebar. It resembles C. bimaculatus; the antennae are rufous at the base, tealtaceous in the middle, and brown at the tip; head punctured, rufous, and without spines; thorax rounded, dotted and armed with a small spine, obtuse spine on each side: wing-cases with three smooth elevated frises; body villous; abdomen rufous, with a prominent tooth beneath, and correspondent lateral groove in the thorax; legs rufous.

**LONGICORNIS.** Thorax unarmed; back flat; body varied with grey and fuscose; antennae very long. Fabr. Inhabits the coast of Coromandel. Antennae thrice the length of the body; black, the joints cinereous at the base; head cinereous, bafe and lateral line black; thorax flat above, and much impressed, brown and cinereous varied; wing-cases with punctured frises; body cinereous. From the Bankian cabinet.

**MARGINALIS.** Thorax unarmed; wing-cases somewhat tealtaceous, and surrounded with a black margin. Fabr. A native of the Cape of Good Hope. Antennae moderate, and pithy; head brown; thorax ovate, fuscose, bordered behind and in front with black; wing-cases smooth; legs blackish.

**BREVICORNIS.** Thorax unarmed, green; wing-cases dusky; antennae short and black. Olivier &c. From the Bankian cabinet.

Obf. The head is green; antennae compript; thorax dotted, green and shining; wing-cases smooth, and greenish; legs black, thighs elevated; the four anterior ones rufous, posterior greenish.

**JEUNUS.** Thorax unarmed, and rufous; wing-cases pointed, black, with brown down; antennae very long. Linn. inhabits America.

**HOLOCERUS.** Thorax unarmed, rufous, gricous; wing-cases armed with a single tooth, fink, with a brown and cinereous hue; antennae moderate. Fabr.

Inhabits the East Indies. Head grey; body beneath shining. Olivier &c.

**CINEREUS.** Thorax unarmed, and somewhat rugose, cinereous and without spots. Fabr. From the cabinet of Lund. This is a native of Tranquebar.

**GNOTUS PRIORUS.**

Antennae ficateous; eyes reniform, embracing the base of the antennae; thorax flat, and marginate, the margin often very imbricated; body oblong, and depressed. Donov. Inf. N. Holland.

**GNOTUS PRIORUS.** Feels four; filiform; jaw cylindrical and acute; lip short and membranaceous; antennae ficateous. Fabr.

**P. LONGICORNIS.** Thorax armed with moveable spines; wing-cases with a single tooth at the base, and bidentated at the tip; antennae and fore legs very long. Fabr. *Cerambyx Longicornis* Linn. This is an insect of large size, the body exceeding three inches in length, and having the antennae, and tarsal part of legs remarkably long in proportion; the colour is pale whitish grey varied with yellow and orange, and a number of black interrupted lines. It is a beautiful species, and inhabits South America.

**LEPIDOPTERUS.** Pitchy, rufous; wing-cases with grey villous spots and three elevated longitudinal lines; base gibbous, tip truncated. Donov. Inf. N. Holland. *P. lepidus* Hybner. Tranquebar. This insect is of a large size; the species is named Lepidopterus from the villous spots on the wing-cases, which, when attentively examined, appear clothed with a fort of feathy down, or feathering, most exactly resembling that which we observe on the wings of lepidopterus insects.

**FASCATUS.** Thorax somewhat marginated, and unarmed; black, downy; wing-cases chefsuot clouded with yellow, and rounded at the tip, with four elevated lines. Donov. Inf. N. Holland. A new species lately discovered in New South Wales.

**FULIGINOSUS.** Thorax with crenated margin, armed with one tooth, and marked with an impressed dorsal line; wing-cases with crenated teeth at the tip. Fabr. Described from a specimen in the British Museum, received from America.

**ROSTRATUS.** Thorax marginated, armed with one tooth and rufous; jaws inflected and acute; sternal spinous. Fabr.

This species, which is very large, inhabits Siam. The head is black, and grooved; antennae shorter than the body, the last joint much serrated; thorax glabrous; wing-cases black and obtuse; breast and legs rufous.

**BIDENTATUS.** Thorax somewhat marginated, unarmed, black and downy; wing-cases chefsuot clouded with yellow, and bidentated at the apex, with four elevated lines. Donov. Inf. N. Holland.

**LINEATUS.** Thorax with crenated margin, and a single lateral tooth on each side; black, striped with white; wing-cases crenated with teeth at the apex. Fabr. *Cerambyx lineatus* Linn. This species inhabits America.

**NITENS.** Thorax with crenated margin and single lateral tooth each side; braly azure; wing-cases coppery. Fabr. Described from the Hunterian Museum. Inhabits Brazil. The antennae are long and blue; head grooved, and braly greem; wing-cases punctured, and obtuse; abdomen braly green.

**FABR.** Thorax marginated with a single spine on each side; wing-cases pitchy; antennae moderate. Fabr. *Cerambyx Faber* Linn. Schaeffer &c. This is a rare species and inhabits Europe; the thorax of the male has the crenated edges, but is destitute of the tooth.

**MUCRONATUS.** Thorax marginated, and bidentated; wing-
CERAMBYX.

wing-cafes mucronated and rufulous. Fabr. Inhabits America. The front is retuse; antennae short and compressed; thorax with two tubercles on the back; wing-cafes velvety and pointed.

Desparius. Thorax somewhat margined, arried with a single tooth, and downy; body blackish; antennae short and red. Fabr.

Described from a Swedish insect in the cabinet of Ziechuck. It is the Cerambyx desperius of Linn.

Scabriicoris. This thorax somewhat margined, and armed with a single tooth; somewhat villous, blackish with fusous wing-cafes, and two elevated lines; antennae moderate. Fabr. Cerambyx fabricioris, Olivier, and Pfeu! Prionus fabricioris of Scopoli. Leptura Geoffroy. A native of the southern parts of Europe; the body is very narrow; thorax very slightly margined, and in one sex nearly unarmed.

Arcaarius. This thorax bidentate; teeth arched and black; wing-cafes obtuse and tettaceous. Fabr. Inhabits Van Diemen’s land. Described from the Bankian Museum.

Maculatus. Thorax margined and three-toothed; black; wing-cafes with cerinseous spots. Fabr.

Described from Senegal, derived from a specimen in the museum of the late king of France. This is a large species; the jaws are exerted and dentated; antennae length of the body and black; thorax armed with three sharp spines; wing-cafes much variegated with grey. Muf. Donov.

Cevicornis. This thorax margined, with three teeth each side; jaws advanced and armed outwardly with a single spine; antennae short. Fabr. Cerambyx cevicornis. Linn.

This insect is an inhabitant of America; the larva is eaten by the Indians, and is esteemed a delicacy.

Spinicornis. Thorax armed on each side with three teeth; black, glossy; antennae short; exterior joint fpinosus at the tip. Fabr. Native country unknown. Muf. Brit. Obf. This does not appear distinct from Prionus buphthalmus of the fame author, and Hypsarius Ceylonensis of Voet. Fabricius describes both specifically in the same words “Thorax utrinque tridentato ater nitidus, antennae brevissimae, articulis ultimis apecte spinosis.”


This is an European insect, and is scarcely found in England. Donov. Brit. Inf. Lives in the trunks of decayed trees. Fabricius fooposes the Cerambyx imbricarius of Linneus (Syl. Nat. 2. 634. 5.) to be only a variety of this insect, and entertains a similar opinion with regard to the Laccanus trigint unus of Linnæus. 5yl. Nat. 2. 560. 5.

Giganteus. Thorax armed with two teeth on each side; body black; wing-cafes ferrugineous; antennae short. Fabr.

The Fabrician Prouus giganteus is Cerambyx giganteus of the Linnean maitilla; this kind is of a large size, as its name implies, and inhabits Cayenne.

Cylindricus. Thorax margined, three-toothed, and dusky; breast and abdomen ferrugineous; antennae short. Fabr.

This is the Cerambyx niticolor of Drury; inhabits North America. Blackburn. The antennae are comprefsed; head and thorax black; wing-cafes pitchy.

Armillatus. Thorax margined, with four spines on each side; wing-cafes ferrugineous with black margin. Fabr.

This is of a very large size, and inhabits India. It is the Cerambyx armillatus of Linnæus. The front is retuse; jaws emarginate; thorax ruifulus at the sides; wing-cafes pointed at the tip.

Luciouris. Thorax margined with many spines; jaws advanced, armed with a single tooth, and blifu apex; anterior legs elongated. Fabr. A native of South America, described by Petiver. The antennae are of moderate length, and black, with the second, third, fourth, and fifth joint margined beneath; thorax black, ciliated at the edge with twelve spines; wing-cafes mucronate, pale ferrugineous, and slightly punctuated at the base; anterior legs rough and prickly beneath.

Serrifis. Thorax margined, with many spines; jaws advanced, and tridentated at the tip; legs spinous and ferruginate. Fabr. A native of Africa.

Danicornis. This thorax margined, and denticulated; jaws advanced, bidentate; antennae short. Fabr.

This is Cerambyx danicoriis of Linnæus (Mant. 532.) It inhabits America; and the larva is eaten.

Bifasciatus. Thorax margined and denticulated; body black; wing-cafes red, with two black bands; antennae short. Linn. Inhabits America, and is the Cerambyx bifo- ciatis of Linnæus.

Thone. Thorax with crenulated margin; body black; wing-cafes glutinous and ferrugineous; margin pale yellow. Fabr. Cerambyx Thone. Acta Soci. Berol. This is native of the isle of St. Thomas in America; wing-cafes rounded at the tip.


Spinibarbis. Thorax with crenated margin; head spinous below the jaws, which are armed with three teeth. Cerambyx spinibarbis. Linn.

This is a native of South America; the jaws are large, thick, three-toothed within, with the tip emarginate.

Palmatus. Sides of the thorax ferruginous, with many teeth; posterior tooth palmedate; antennae short. Fabr. Inhabitans Guinea. The head is grooved and black; antennae comprefsed and dusky at the tip; thorax flat and glossy; wing-cafes smooth, piceous, and mucronated on the future at the tip; legs ferrated within.

Maxillosus. Thorax with crenated margin; jaws advanced, hairy within, and armed with four teeth. Fabr.

This is the Cerambyx maxillosus of Drury, and Prionus maxillosus of Olivier. It inhabits South America. The colour is glossy black.

Canaliculatus. Thorax with crenated margin and a villous white groove down the back; antennae short. Fabr. Muf. Hunter, and Donov. A native of the American islands. The antennae are short, comprefsed, and black; head without spots; cutel white and villous; wing-cafes rather rough; legs black.


Melanopus. Thorax with denticulated margin; jaws advanced and armed with many teeth; wing-cafes mucronated. Fabr. Cerambyx melanopus. Linn. Cerambyx cama- nOPSIS. Drury. From the same country as the last.

Spinosus. Thorax armed with many teeth, and black; wing-cafes tettaceous and one-toothed. Fabr. Inhabitans Tranquebar. Muf. Hybr. The head of this insect is grooved; the antennae short, comprefsed, and black; thorax very slightly margined, cincuous-downy beneath; back grooved.

Barbatus.
CERAMBYX.

Barbatum. Thorax with entire mac in; jaws ferrugineous; antennae very long; legs moderate. Fabr.

Descended from the Bankian cabinet. This is a native of South America. The antennae are rough, the lab joint conical and with the wing-cases picaceous, abdomen villous and white; legs black.

Pectinicornis. Thorax unarmed, tectaceous; antennae short and pett"hard. Olivier.

This inhabits Central America. The antennae are shorter than the body, and greatly pettinulated; jaws exerted, with a single tooth in the middle.

G P H Lamia.

Antennae frugicos and elongated; head large, obtuse, declivous; eyes reform, and produce the base of the antennae; thorax cylindrical and uncinus; wing-cases as long as the abdomen, body cylindrical. Donov. Lat. N. Holland.

Genus Lamia. Feders four, filiform; jaw bravy, and bind; tip chit and horn; antennae feticus. Fbr.

Vermicularis. Thorax somewhat tuberculatus, black; wing-cases ptericro with numerous minute white vermicular characters. Donov. Lat. N. Holland.

Lamia vermiculata is a new species lately discovered in New South Wales, and described amongst the insects of New Holland. It is of the middle size, and entirely black, except the vermicular marks.

Obliga. Thorax dentated, cinereous; wing-cases fuscous, emarginate at the tip, and marked obliquely behind with a whitish band. Donov. Lat. N. Holland.

This is a small but elegant species, general e four pale tectaceous and whitish varie with brown, and begett with numerous small denticulations.

Gigas. Thorax armed with sharp spines, and rugous; wing-cases cinereous, with a black marginal sp., rough with two tubercles at the base; antennae long. Fbr. Oliv.


This insect, which is of a large size, inhabits the coast of China, and of the middle size, and entirely black, except the vermicular marks.

Tribulus. Thorax four-spined; felted and wing-cases fuscous; antennae longer than the body. Fabr.

Found on the banks of the river Gabun in Africa. Muf. Donov. &c. The antennae are longer than the body, brown, with the base of the joints cinereous; head and thorax brown and cinereous variegated; tips on the fevital two, and short; wing-cases fuscous as the thorax, and pointed at the tip with a short desticule; a small tubercle at the end of the middle shanks of the legs.

Petcornis. Thorax and wing-cases fuscous; anterior thighs coimated. Fabr.

Distinguished from the Bankian cabinet. This is a native of New Holland. The colour of the head grey; antennae vil-

lus and moderate; thorax grey, rounded, with rick dorso erect fuscous; wing-cases grey, with unate, marginal, cinereous spot red variegated in the middle, and at the base many erect black spots; horns on the anterior thorax long, sharp and curved.

Pimenta. Thorax fuscous; a projecting recurved notch behind on front; antennae long. Fabr. Cerambyx zonatus. Dryx. I f. Inhabits the Cape. The antennae are long, and brown, and have the joints black at the tips; head brown, with black mandibles; thorax fuscous, rather rugous, brown with a broad white line on each side beneath; wing-cases brown, with a few elevated dots at the base, two ocellated black spots in the middle, and a larger whitish one behind; abdomen and legs fulvous.

Hystrix. Thorax armed with five spines; wing-cases with tufts of hairs; antennae moderate and ferrugineous. Olivier, Fabr. &c.

This insect is a native of the Cape of Good Hope. The antennae are hairy, deeply ferrugineous towards the extremity, with the joints Tufts at the tips; two raised tubercles below the middle spine on the thorax; wing-cases with fuscous and brown; body small and cinereous.

Crypta. Thorax armed with sharp spines, grey; wing-cases with a compressed tridenticulate tubercle at the base. Fabr.

Discovered in New Zealand by Sir Joseph Banks. The antennae are very little longer than the body, cinereous, the joints tinged with black; on each side below the lateral spine a fuscous dot. a small oblique black line on the posterior part of the wing-cases. thorax; thighs emarginated and black, the club grey; thanks grey with black tips.

Ambulacrum. Anterior part of the thorax furnished with two spines on each side; body elongated. Fabr.

Descended by Petiver as a native of America. The antennae are of a moderate length; thorax and wing-cases clouded with cinereous and cirrus.


Clepsidra. Thorax fuscous, black; wing-cases with a cinereous lunular fillet, and marginal dot; antennae long. Fabr.

Native country unknown. The body is long, and of a ducky black colour; antennae twice the length of the body; on each side of the thorax an oblique fuscous transverse line in the middle of the exterior margin of the wing-cases a small dot; legs blackish.

Vaginata. Thorax fuscous, rugous, and black; wing-cases ferrugineous and emarginated; antennae moderate. Fabr. Inhabits the Balkan lands. The antennae are compressed and ferrugineous, fuscous cinereous, and fuscous, smooth, fuscous, cinereous, at the base, with emarginated tips; beneath cinereous and fuscous.


This insect is rather larger than the body, and black; heat black with a green stripe, black on the side crossing the eyes; wing-cases armed with two elevated tridenticulate tubercles; body variegated with black and green; two black dots; almost in each.

Regalis. Thorax fuscous, mixed with green; wing-cases speckled with green, and three oblong spots on each. Fabr. &c.

This is a species of considerable beauty, and in size and general appearance bears a living resemblance to the last; and it also inhabits the same country. The antennae are longer than the body, and black; head black, variegated with green, and marked by each joint with a fuscous spot; thorax black, with three in profile green bands; wing-cases somewhat flattened, and black; body grey beneath; on each side of the abdomen a row of fuscous dots.


Native country unknown. Size of the 1. regalis. Antennae longer than the thorax, and black.

Irregulara. Thorax fuscous, and ferrugineous variegated; wing-cases black, speckled with ferrugineous; antennae moderate. Fabr. Obst. &c. Cerambyx irregulara. Gmel. Inhabits the East Indies. Antennae moderate, grey-
in; head fuscos, and ferruginous; mandibles black and glossy; feeted ferruginous; wing-cafes pointed at the tip.

ÆDILIS. 


Found in the trunks of trees in the northern parts of Europe, and is found, though rarely, in England. Donov. Brit. Inf. p. 72. The antennæ are rather more than three times the length of the body, measuring about three inches, the body better than three fourths of an inch. This species is most frequent in Germany.

ANNULARIA. 

Thorax spinous, tuberculated, and cinereous; wing-cafes fuscos variegated, with black elevated dots; antennæ long. Fabr. Cerambyx annularius. Gmel.

According to Smidt this insect inhabits Germany. It resembles ædilis, but is rather smaller. The antennæ are as long as the body, cinereous and black variegated; thorax spinous, with four tubercles on the back; wing-cafes with four raised lines meeting behind, and sprinkled with black dots; body cinereous, fleckled with black.

VARIATA. 

Thorax spinous, and tuberculated; body variegated with black and cinereous; thighs elevated; antennæ moderate. Fabr. Inhabits the south of Europe. Zschuck. Cerambyx variatus. Gmel.

The antennæ are cinereous annulated with black; head brown; wing-cafes rounded; body dark brown beneath; tians black annulated with cinereous.

ARANEIFORMIS. 

Thorax spinous and tuberculated; wing-cafes porous; antennæ long, with a single tooth on the fifth joint. Linn. Sloane, &c. Inhabits South America.

PUNCTATA. 

Thorax spinous, fuscos, with white dots. Olivier. Cerambyx punctatus. Gmel. A native of Cayenne. Antennæ of moderate length, and black; head black, with two white dots above the tip, and two others placed vertically; thorax tuberculated, with two larger marginal white dots, and two smaller dorsal ones; wing-cafes black speckled with white. Resembles lamia ædilis.

CANCERIFORMIS. 

Thorax befig with many denticulations; back flat; wing-cafes and anterior tians with a single tooth. Fabr. Cerambyx canceriformis. Drury. Inhabits Jamaica. The antennæ are long; the first joint one-toothed behind the tip; thorax cinereous, with five or six small teeth on the margin disposed in two series; wing-cafes cinereous, sprinkled with brown elevated dots; thighs elevated.

NODOSA. 

Thorax spinous; wing-cafes cinereous, with black spots; antennæ very long, with the third joint gibbous at the tip. Fabr. Cerambyx nodosus. Gmel.

Described from a specimen in the British Museum, received from Maryland. The antennæ are four times the length of the thorax; wing-cafes flat, rounded, and dotted at the base.

TUBERCULATA. 


Fabricius refers for this species to the Hunterian Museum. It inhabits Jamaica. The body is grey, with an angulated white band on the wing-cafes; antennæ fuscos, the joints cinereous at the tips; jaws black; thorax rough, with numerous elevated obtuse dots; wing-cafes befig with many spines, which are sharp and black; legs black, the tians with a white annulation.

HISPANA. 

Thorax armed with a sharp tooth, and bica- rimated on the back; wing-cafes cinereous, frilled, and spotted with fuscos. Fabr. Cerambyx hispana. Gmel. Found in South America. Antennæ short and black. Thorax cinereous, with a thick and sharp spine on each side; two elevated lines on the back, black and glabrous; wing-cafes rounded, cinereous, with the future and three fine brown, and between them numerous spots; legs cinereous. Cabinet of Dr. Hunter.

HORRIDA. 

Thorax acutely spinous, cinereous; wing-cafes spinous; antennæ long. Fabr. Cerambyx horridus. Olivier. Inhabits Cayenne, and is rare. Muf. Donov. The antennæ are long, greyish, with the joints black at the tip; thorax greyish, with a thick, somewhat bent, and sharp-pointed spine; wing-cafes spinous and grey.

PRAEMORSA. 

Thorax ferruginous; wing-cafes granulated tubercles; antennæ length. Fabr. Cerambyx præmorso. Fabr. Man., &c. Inhabits South America. antennæ short, cinereous, with the joints black at the tip; thorax cinereous, the four spines on the thorax black at the tip; wing-cafes cinereous, veined, with black granulated tubercles; legs short.

GLAUCA. 

Thorax armed with five spines, and glaucescent; wing-cafes muralated, the sides and band black; antennæ long. Fabr. Cerambyx glaucus. Linn. Degeer, &c. This species inhabits America.

Obs. The extremities of the wing-cafes are furnished each with a single tooth.

BIDENTATUS. 

Thorax somewhat spinous; wing-cafes bidentated, rough, cinereous, variegated with fuscos. Fabr. Cerambyx bidentatus. Mant. Gmel. &c. Inhabits America. The antennæ are long; thorax unequal, and armed on each side with an obtuse spine; wing-cafes rough, with acute elevated dots; thighs clubbed.

SCABRA. 

Thorax spinous, and armed with three tubercles; wing-cafes eubrous, with bidentated tip; antennæ very long. Fabr. Olivier, &c. Cerambyx scabrer. Gmel. &c.

Described by Fabricius from a specimen in the British Museum. The antennæ tesselacous, at the base of the tip cinereous; wing-cafes tesselacous at the base, with elevated glabrous dots; body cinereous; thighs elevated.

PREMORSA. 

Thorax tuberculated; wing-cafes dotted, cinereous, tip fuscos and bidentated; antennæ long. Fabr. Cerambyx premorsa. Gmel. &c. Inhabits Guadaloupe. Cabinet of de Radier. One of the smallest insects in the lamia family. Antennæ twice the length of the body; thorax cinereous, with three dorsal tubercles, and two black spots on each side at the base; a few elevated dots on the wing-cafes; thighs elevated.

SPINIFERA. 


This is about the middle size. Antennæ longer than the body, and dusky grey; scutellum yellowish; wing-cafes smooth; body villous and grey. Inhabits South America. Muf. D. PIg.

GRISATOR. 

Thorax unarmed, and greyish; two tubercles at the base of the wing-cafes; apex spinous; antennæ short and villous. Fabr. Inhabits Tranquebar. Schian-buchel.

ÆDIFICATOR. 

Thorax spinous and tuberculated; cinereous; wing-cafes with two tubercles at the base; antennæ moderate. Fabr. Inhabits the East Indies. Muf. Lund.

AMPUTATOR. 

Thorax spinous; wing-cafes cinereous, sprinkled with black, and numerous tesselacous spots. Fabr. Inhabits the American islands, and is reported to gnaw round and cut off the larger branches of trees.

STERNUTATOR. 

Thorax spinous; wing-cafes porus at the
CERAMBYX.

the bafe; antennae moderate. Fabr. A native of Barbadoes.

Obl. The antennae are blackish, the extreme joint acute; thorax unequal; wing-cases obtuse and black; beneath covered with yellow hair.

Spinator. Thorax spinous, and, with the base of the wing-cases, finely wrought; apex grey; antennae moderate. Fabr. Inhabits the Cape of Good Hope. Muf. Lund.


An African insect, described from the British Museum. The head is telateous, marked with a black longitudinal line; thorax telateous, with a transverse ridge in the middle; wing-cases obtuse, speckled with yellow, and a few elevated red dots at the base.


Nebulosa. Thorax unarmed, ferruginous, lined with black; wing-cases varied with fuscous and ferruginous, and a marginal cinereous spot; antennae moderate. Fabr. &c. Inhabits Europe, and is found in England. Cerambyx nebulosa.

Variator. Thorax spinous and linedate; wing-cases fuscous, with a ferrugineous white line. Fabr. Inhabits the Indies. Antennae longer than the body; thorax fuscous, with white declivous and lateral line.

Sutor. Thorax spinous; wing-cases black, with fuscous spots; apex pale yellow; antennae very long. Fabr. Cerambyx sutor. Linn. Cerambyx atomarius. De Geer. Inhabits the woods of Europe. The species has been found in England, according to Harris; (Vide Donov. Brit. Inf. &c.) but is very rare.

Sartor. Thorax spinous, black, with yellow feate; wing-cases immaculate; antennae very long. Fabr. This resembles the last, but is larger, and has the front between the antennae, deeply grooved. Found by Ziehuck on the horse-chestnut, &c. in the vicinity of Dresden.

Dentator. Thorax spinous, varied with fuscous, and cinereous. Fabr. This resembles lamia sutor, and inhabits Carolina. The antennae are thrice the length of the body, and of a fuscous colour, but black at the base.

Reticulator. Thorax spinous, black; thorax fulvous, and linedate with black; wing-cases fulvous and reetated with black. Olivier. Donov. Inf. China, &c. This very rare species inhabits China, and the bordering parts of India. The body is black, and without spots; antennae of moderate length, and ferruginous. The extant joint at the base black, the second gibbous at the base and tint, yellow and black. Length of the body about an inch and a half.

Scalator. Thorax armed with acute spines, and black; wing-cases with numerous interrupted white lines; antennae moderate. Fabr. A native of Louisiana. Size of the leaf. The head is black; hand above the hill and orbits white; sides of the thorax and two broad lines white; shells black and glossy, the edge and future ramifying into numerous interrupted dents; body cinereous and downy.

Molitor. Thorax somewhat spinous, dusky, cinereous, with fuscous spots; wing-cases rufous at the tip. Fabr. Inhabits Cayenne. The antennae are of moderate size and fuscous; head cinereous, rufous in front; thorax rufous on the anterior and posterior margins; wing-cases obtuse; abdomen pale, rufous.

Titillator. Thorax spinous; wing-cases cinereous, clouded with glaucous, and brown; antennae very long and rufous. Fabr. This is a native of Carolina. The antennae are red, with the third joint fuscous; on the anterior part of the thorax two very small tubercles; wing-cases punctured, cinereous, with irregular brown and glaucous spots; tips of the legs rufous, the second pair with a flight gibuosity.

Vittator. Thorax spinous; wing-cases cinereous, and finely speckled or powdered, with two yellow stripes, and black margin. Fabr.

This is the Cerambyx incanus of Forster. Nov. Sp. It is described by Olivier and Petiver, and has been found on the shores of Campaspe. The antennae are of moderate size, varied with cinereous and fulvous; head cinereous, powdery, with two glibrous black lines; thorax cinereous, with three glibrous, black, longitudinal lines; wing-cases with a few black spots at the base.

Oculator. Thorax spinous, black; wing-cases with four subocculated spots; antennae long. Fabr. Cerambyx oculatus. De Geer. Inhabits the Cape of Good Hope. Thorax marked before and behind with two thin, yellow, impressed lines; wing-cases somewhat disrated, with four yellow spots encircled by a white ring, that nearly the base large and rounded, the second placed near the anterior margin, the third in the middle, and the fourth near the tip. This is an insect of large size, and very beautiful.

Cerastes. Thorax armed with two spines; black; wing-cases with four rufous bands; antennae moderate. Fabr. Cerambyx capensis. Linn. This, as its name implies, is a native of the Cape of Good Hope.

Hottentotta. Thorax spinous and rufous; wing-cases black, with a band and two marginal spots, fangouineous. Fabr. Cerambyx hottentotta. Gmel. Cerambyx huttentotta. Brown's Illust. The antennae are moderate; thorax ferruginous, dusky, rufous; wing-cases with a brassy tinge; legs black.

Ferrugator. Thorax spinous, dusky, ferruginous; wing-cases dusky, greenish, with an interrupted fangouineous stripe; antennae long. Fabr.

Deferred from the cabinet of Spengler as an inhabitant of the Cape of Good Hope. The antennae are black; thorax somewhat rugged, with a small denticate on each side; wing-cases punctured, dusky, greenish, and glibrous; exterior margin fangouineous, head, body, and legs ferruginous, the latter with black tails, and the flanks of the middle legs slightly toothed outwardly.

Humeralis. Thorax spinous; wing-cases yellow, fuscous, with black, and morscinated anteriorly. Fabr.

This elegant species is described by Fabrancus from a specimen in the cabinet of the late Mr. Drury, now in Mus. Donov. The native country is unknown, but supposed to be South America. The antennae are larger than the body, and black; head yellow, with four black lines; thorax yellow, with three black bands; the base emargiante at each side; wing-cases yellow, with confluent bands; femora advanced, and bidentate at the tip.

Disfasciata. Thorax spinous, and fuscous behind; wing-cases yellow, with two bands and rhombic spot of black. Fabr. Inhabits Jamaica. Muf. Brit. The antennae are rather longer than the body, and black; head yellow, with the orbits of the eye blue; thorax yellow, with blue posterior band; scutell at the bafe and tip blue; legs pale yellow, with blue thighs.

Trifasciata. Thorax somewhat spinous, black; three yellow bands on the wing-cases; antennae moderate. Fabr. Cerambyx trifasciatus. Gmel. The thorax slightly tuberculated on each side; yellow bands on the wing-cases broad; legs black, the flanks of the middle ones tuberculated at the tip.
Cerambyx.

Tip. This is a native of Sierra Leone. Herbst, Olivier, &c.

5. Fasciculata. Thorax armed with two spines, and black; wing-cases with five red bands; antennae moderate. Fabr. Inhabits the coast of Guinea. Mus. Dr. Hert. The antennae of this species are black; thorax fuscous, black, with short spines on each side; wing-cases fuscous at the base; body black.

Nobilis. Thorax spinous and black; margin yellow; wing-cases black, with three yellow bands, and two white dots. Fabr. A native of Cayenne. The antennae are of moderate length, and black; head black, with yellow frontal spots, and two dots between the eyes; thorax velvety, black with yellow margin, and white at the base; spine near the base black; wing-cases velvety, black, with an interrupted yellow band at the base, the middle band innate, that at the tip abbreviated; the two white dots situated between the second and third band.


Athiops. Thorax spinosus, black; wing-cases with two yellow bands and a dot at the tip; antennae moderate. Fabr.

The antennae are black; head grooved; thorax rather rough; wing-cases velvety, black, with two yellow bands; the dot at the tip very small, and sometimes wanting; legs compresed and black. Mus. Brit. Inhabits the Cape of Good Hope.

Vasiator. Thorax spinosus and cinereous; thorax and wing-cases varied with brown; antennae long. Fabr.

From the Bankian cabinet. Found in Africa. The antennae are fuscous; head, thorax, and wing-cases with an intermixture of brown and cinereous; mouth black.

Lisca. Thorax spinosus, rough, black sprinkled with ferruginous; at the base of the wing-cases a large black ocular spot; antennae very long. Fabr. Cerambyx fuscus. Gmel.

This inhabits Siam. The antennae are black; head blackish, with a few ferruginous dots; thorax somewhat rough, black, with a few ferruginous dots on each side; wing-cases obtuse, and nearly truncated; legs black; thanks of the middle pair armed with a single tooth on the back.


Lucuris. Thorax acutely spined and black; wing-cases rough, with obsolete ferruginous; antennae very long. Fabr. Cerambyx lucuris. Gmel. Inhabitats Italy, Schlabenth. The antennae are twice the length of the body, and black; body black; legs black, with a small elevated obtuse tooth at the extremity of each of the four anterior tarsus.

Tristis. Thorax spinosus, fuscous, with rough wing-cases; with two black spots; antennae moderate. Fabr.

It is found on the cypresses in the south of France. Olivier. The antennae in one cross is twice the length of the body, in the other the same length as the body.

Fenesta. Thorax spinosus, fuscous; wing-cases smooth with two black spots; antennae short. Fabr.

Lives in the north of France, chiefly on the Elder. Dr. Broussonet. This is only half the size of the preceding species.


This kind inhabits China, and has been described under several names by different writers: it is the Cerambyx farinosus of Drury. Cerambyx punctator. Olivier. Cerambyx chinensis. Forster. nov. Sp.—Obs. The antennae are black, with the joint at the base pale; wing-cases rough at the base; legs black.

Fasciculata. Thorax spinosus and hairy; wing-cases tufted with hair. Fabr. Lamia fasciculata. Olivier. Cerambyx fascicularis. Gmel. A native of Cayenne. This species is of the middle size. The antennae are of moderate length, black, with the first articulation yellow and villous; thorax armed with short spines, and thickly covered with pubescent hairs; wing-cases fuscous, with one or more whitish dots; black elevated furcular line, three tufts of hair near the base, and two contiguous pairs near the apex; legs variegated.

Rotator. Thorax spinosus and cinereous; wing-cases somewhat fasciated; antennae moderate. Fabr.

The joints of the antennae are cinereous with fuscous tips; head furrowed, cinnereous, with black feelers; wing-cases cinereous, and somewhat banded with brown. This species inhabits India.

Glucyrrhize. Thorax spinosus, black; wing-cases bicinctured and incised with white; legs ferruginous; antennae short. Fabr. &c.

Discovered by Pallas in Siberia. Described by Subzzer under the name of Cerambyx ovatus. Head black, with a whitish daub at the base; antennae short, black, the first joint ferruginous and black at the tip; three white lines on the thorax; future white; legs ferruginous and white at the tip.

Cruciata. Thorax spinosus, black, a white cross in the middle of the wing-cases. Fabr.

The antennae of this insect are short and black; head black; thorax black, with a dusky white line; legs black. Inhabits the southern part of Russia. Becker. Cerambyx cruciatus. Pallas, Lem. &c.

Fuliginator. Thorax somewhat spined, and black; wing-cases grayish; antennae short. Fabr. Cerambyx fuliginator. Linn. Geoffr. &c. Inhabits the south of Europe. This insect is said to become gradually darker as it advances in age.


This is a native of Russia, and is about half the size of the preceding species.


This is a Siberian species, described from a specimen in the Bankian cabinet. The antennae are short, thick, and black; head and thorax punctured with impressed middle line; wing-cases obtuse; body beneath whitish.

Coquus. Thorax slightly spined, and hisitary; wing-cases obtuse, furrowed, black, with the anterior part ferruginous; antennae moderate. Linn. A native of North America. The thoracic spines are very minute.

Ruscator. Thorax spinosus, brown, with two fuscous dots; wing-cases brown, variegated with cinereous. Fabr. Inhabitats Africa. The antennae are moderate, and fuscous; head fuscous; facel ferruginous; wing-cases obtuse and dotted; body brown.

America. The antennae are black; head rufous with an elevated black dot at the base of the antennae; thorax obtutely spined at the sides, rufous with four black dorsal dots; body beneath black changeable to cinereous.

Bankii. Thorax spinous grey; wing-cases sprinkled with ferruginous, with two cinereous bands. Fabr. This kind inhabits the Cape of Good Hope. It is of a small size. Antennae moderate, varied with fuscous and cinereous; thorax with two short spines at the anterior part on each side, and sprinkled with ferruginous.

Saltator. Thorax unarmed, greyish; with two abbreviated white bands, composed of three or four white spots, and a white punctured streak behind; antenna short. Fabr.

Native country of this species unknown. This is of a small size; thorax with a white dorsal line; wing-cases dotted, obtuse, faceted, and spotted with fuscous white.

Illicitro. Thorax unarmed and yellowish, sprinkled with numerous fuscous-white dots; antenna short. Fabr. Inhabits Tranquebar. Muf. Lund. The antennae are short and greyish; head punctured, yellowish with obsolete whitish spots; thorax rounded, unarmed, dull, yellowish, with many distinct fuscous dots; wing-cases punctured, yellowish, with numerous fuscous dots; body yellowish.

Testator. Thorax spinous, with a short recumbent horn; body tesselate; antenna short with black tip. Fabr.

The body of this insect is short, villous and tesselate; head large, and flat in front; thorax with a short broad recumbent horn in the middle having the tip retuse; wing-cases villous, fimbriated, and without spots.

Pedestri. Thorax spinous and black, with an entire white stripe; antenna moderate. Fabr. Cerambyx pedifris. Linn. Inhabits the south of Europe.

Ruppes. Thorax spinous, black, future of the wing-cases white; base of the antenna and legs rufous. Fabr. Inhabits Hungary. Refembles L. pedifris in size and appearance. The antennae are compresse and black, except the first joint at the base which is rufous; head and thorax rufous and without spots; wing-cases smooth and black, with white future; legs rufous.

Morio. Thorax spinous, black; wing-cases of one colour; antenna short. Fabr. Inhabits the south of Germany, Zilchuck. Rather larger than Lamia pedeliris; the elytra of one colour, sometimes black, sometimes tesselate; antennae black, with the first joint usually tesselate.

Lineata. Thorax spinous black; margins of the wing-cases, and two longitudinal lines, that unite at each end, white. Fabr. Cerambyx Scolapi. Herbst. Inhabits Germany. Head and thorax black with a white line on the back; legs black.

Molitor. Thorax spinous, and fuscous, with three entire white stripes; antenna moderate. Fabr. Inhabits India. Described from a specimen in the British Museum. The body is brown above, with three white lines, extending from the head to the extremity of the wing-cases, a small line between the broader one at the base of the latter; thorax with a lateral tubercle.

Tuberculata. Thorax unarmed, grey; wing-cases with two tubercles at the base, and two common white spots; antenna short. Fabr.

The antennae are cinereous; tubercles on the wing-cases comprised near the future; anterior spot large.

Mutator. Thorax unarmed, cinereous, with a pale line on each side; body villous; antenna and legs tesselate. Fabr.

Inhabits Otaheite. From the Bankian cabinet. The antennae are of a moderate length; wing-cases punctured and obtuse.


S. maculatus. Thorax spinous and bimaculated; wing-cases spotted with white; at the base rough and maculated; tip bidentated. Fabr.

Nearly allied to L. Rufus, of which it is supposed by some to be a variety. The antennae are longer than the body, rough and black; thorax unequal, acutely spined, with two large impressed yellowish dorsal lines; scutellum whitish; wing-cases cinereous, and rough, with black raised dots at the base; in the middle four whitish spots, the second of which is largest, the fourth small and rounded; side white.

Spinicornis. Thorax spinous and rough; wing-cases truncated and grey; antenna compressed, joint at the tip spined. Fabr.

A native of Africa. The antennae are moderate, and compressed, joint at the tip acutely spined outwardly; head black; thorax rough and grey; wing-cases smooth, truncated, and somewhat spined.

Scapductor. Thorax spinous, somewhat tesselate; wing-cases with rough black dots at the base. Olivier, &c.

Antenne moderate, with the joint at the tip black; wing-cases somewhat emarginate at the tip, and pointed at the future. Inhabits the East Indies. Bankian cabinet.

Spengleri. Thorax spinous, and tesselate; cinereous; wing-cases rough, with two lateral black spots. Fabr.

From the cabinet of Spengleri. A native of South America. The antennae are long, cinereous, with the joints fuscous at the tip; thorax obtusely spined on each side, with three dorsal tubercles.

Fuscator. Thorax armed with two spines, and tuberculated; wing-cases three-toothed at the tip, and griseous, with a cinereous band. Fabr.

Inhabits Tranquebar. This is of the middle size. The antennae are rather shorter than the body, and greyish; thorax unequal, with two spines, the anterior one largest, recurved, and above them a large obtuse tubercle; wing-cases cinereous, or griveous, sprinkled with numerous ferruginous dots; legs grey.

Bidens. Thorax acutely spinous, grey; wing-cases bidentated at the tip. Fabr. This species inhabits New Holland. The antennae are long and fuscos, and the legs unarmed.

Crantor. Thorax unarmed, cinereous with black dots; wing-cases pale tesselate; tips bidentated, cinereous, with black spots. Fabr.

Inhabits China. Cabinet of Schlumbergh. The antennae moderate and black; head cinereous with two dots, and small black line at the base; scutellum black, with cinereous margin; wing-cases pale tesselate, dotted at the base, and bidentated at the tip, cinereous, with a black spot; body and legs black, with cinereous down.

Leprosa. Thorax spinous; wing-cases variolous at the base, with a large lateral spot of black; antennae long. Fabr. Cerambyx leprous. Gmel.

A native of America. The antennae are dusky and rufous; thorax uneven on the back; wing-cases with large impressed dots at the base; behind smooth and cinereous, with a small spot in the middle; on each side, at the base of the abdomen, a snowy spot; legs cinereous.

5. Solander.
CERAMBYX.

SOLANDRI. Thorax somewhat spinous and black; wing-cases bidentated, sprinkled with fulvous and cinereous. Fabr. Inhabitst New Holland. The antennae are moderate and black; thorax somewhat rough, and black with a small acute anterior spine each side; scutell black; wing-cases dotted, black sprinkled with cinereous; gibbous at the shoulder, and bidentated at the tip; legs black, with thefoles of the feet fulvous.

CORNUTOR. Thorax obtusely spinied; jaws cornuted at the base; antennae very long. Fabr. Inhabits America. It is figured by Olivier from a specimen in the British Museum. The antennae are black; head grooved and black; jaws advanced, sharp pointed, with a thick horn-shaped elevated tubercle at the base; thorax black and without spots; wing-cases dotted, black, with yellow spots, small inflected spine at the base; tip rounded and unarmed.

UNGARICA. Black; head and thorax spinous; longitudinal line, future, and three lines on the wing-cases white. Herb. Cerambyx Ungaricus. Gmel.

TRIFASCIATA. Thorax spinous; wing-cases convex, black, with three interrupted scarlet lines; narrow towards the apex; antennae long. Gmel.

DAVIESI. Black, thorax spinous, with numerous fulvous dots and spots; wing-cases somewhat triangular. Swederus. Nov. Act. Stockh. This inhabits the bay of Honduras.

Genus Stenocorus.

Antenna long and filiform; eyes reniform, embracing the base of the antennae; thorax round; wing-cases length of the abdomen, frequently with two teeth at the apex; body somewhat cylindrical. Donov. Inf. N. Holland.

Genus Stenocorus. Antennae four, anterior ones filiform, posterior elevated; antennae facetous. Fabr.


SEMIPUNCTATUS. Thorax spinous, and fuscous; anterior part of the wing-cases rough, with dots, and banded with yellow; posterior part smooth; apex bidentate with three yellow spots. Donov. Inf. N. Holland. From the same country as the preceding.

LAMED. Thorax pubescent; wing-cases fuscous, livid, with a dusty finate stripe down the middle. Fabr. Cerambyx lamed. Linn. This inhabits Europe.

CYANEUS. Thorax somewhat spinous, azure, with the wing-cases yellow at the base. Fabr.

This is an Indian species, first described by Forster under the title of Cerambyx pallorius. The antennae are short and blue, with elevated joints; thorax narrow in front, behind somewhat spinous.

BIGOTTATUS. Thorax without spines, and ferrugineous; anterior part of the wing-cases rugose with dots, and spotted with fuscous; posterior part smooth, bidentate, and marked with a yellow spot. Donov. Inf. N. Holland.

GARGANICUS. Thorax spinous; wing-cases bidentated, and greyish, with a yellow spot; antennae very long. Fabr. Defended by Fabricius from a specimen in the British Museum. It is a native of Maryland.

FESTIVUS. Thorax armed with two teeth each side; wing-cases bidentated and greenish, with a yellow lateral line. Fabr. Cerambyx fusticus. Linn. Common in America.

OBSCURUS. Thorax rugose, spinous, fulvous; anterior part of the wing-cases rough, with dots; posterior part smooth, fuscous, and bidentated at the tip. Donov. Inf. New Holland. A new species.

MARYLANDICUS. Thorax depressed, tuberculated, unarmed; wing-cases bidentated, clouded with fulvous and cinereous; antennae moderate. Fabr.

This insect inhabits Maryland. The antennae are somewhat spinous; body entirely varied with cinereous and fulvous.

SPINICORNIS. Thorax unarmed, tuberculated; wing-cases bidentated; joints of the antennae with two spines; body variegated. Fabr.

Inhabitst America. The body is cinereous with raised fulvous dots.


IRRORATUS. Thorax unarmed and unequal; wing-cases bidentated and sprinkled with white; antennae long and aculated. Fabr. Cerambyx irroratus. Linn. A native of America.

GLABRATUS. Thorax unarmed and cinereous, with a glabrous brown line; wing-cases bidentated. Fabr.

The antennae of this species are moderate, brown with three joints spinous; wing-cases varied with grey, and brown. Inhabitst South America. Rohr.

FARINOSUS. Thorax spinous, pitchy; wing-cases sprinkled with powdery dots; antennae long. Fabr. Cerambyx farinosus. Linn.

6-MACULATUS. Thorax spinous, and ferruginous; wing-cases pointed, with three yellow spots. Fabr. &c. Cerambyx fex-maculatus. Olivier. This insect inhabits Cayenne. The antennae are moderate, villous, and ferruginous; thorax ferruginous, with a small black spine on each side; wing-cases with three large, oblong, yellow spots, and black spine at the apex.

5-MACULATUS. Thorax somewhat spinous, and rufous; with four yellow spots; wing-cases bidentated and rufous; two spots and line at the apex white; antennae very long. Fabr.

This insect inhabits the island of Guadaloupe. Dr. Fert. The antennae are ferruginous; head ferruginous with the orbits of the eyes cinereous; thorax rough with lateral line and four dorsal spots pale; scutell whitish; wing-cases ferruginous with whitish spot, and double yellow pupila: body beneath whitish.

4-MACULATUS. Thorax spinous, and rufous; wing-cases bidentated, with two pair of glabrous spots. Fabr. Cerambyx quadriscutellatus. Linn.

A native of South America. Obs. The four posterior thighs are spinous.

MACULATUS. Thorax spinous, and fuscous; wing-cases bidentated with two pair of glossy spots; antennae moderate and black. Fabr. Cerambyx maculatus. Olivier.

The head is fuscous with ferruginous lip; thorax spinous, fuscous, and without spots; wing-cases pale; legs black with rufous thighs.

GENINATUS. Thorax unarmed, black, with rufous spot on each side; wing-cases black; with two pair of glabrous spots; antennae very long. Fabr.

A native of Sierra Leona. Pfugl. The antennae are black; head rufous with a black dot in front; wing-cases truncate at the tip, and gibbous with cinereous; legs black; thighs rufous; the four posterior ones spinous at the tip.

PELLENS. Thorax unarmed and pale; wing-cases with a single spine and three black dots; antennae long. Fabr.

This kind inhabits South America. It is of the middle size. The antennae are long, and pale, and cinereous; eyes palish.

STREPENS.
CERAMBYX.


The antennae are compossed, moderate, and ferruginous; head grooved; wing-cases finou, pale yellowish, and immaculate; body ferruginous. Olivier describes this insect as a native of Provence, and observes that it flies by night with a buzzing noise.


This kind inhabits Africa. The antennae are moderate, red black; head yellow, with three black lines; thorax black above, beneath yellowish; wing-cases dotted at the base; abdomen tesselated with a yellow spot on each side of the base, and black tip.

It is particularly described, Thorax rounded, unarmed, griscous, with tesselated legs. Fabr.

The country of this species is unknown. The fize is small; antennae moderate; villous, and cinereous; head and thorax grey, without spots; wing-cases grey, with two longitudinal abbreviated black lines; legs tesselated with very thick plumes.


The antennae are ferruginous, with the third, fourth, and fifth joint annulated with white; head fuscose with two white lines; thorax grey with four white lines; wing-cases grey, with fuscose tip and white margin, truncated and fingle toothed; legs fuscose, with cinereous rings.

Lineola. Thorax spinous, ferruginous; wing-cases pointed and tesselated, with three small glossy yellow lines. Fabr. Cerambyx brasiliensis. Gmel. A native of Brazil.

The head is ferruginous; antennae longer than the body, black, with the first joint ferruginous; wing-cases armed with a fingle spine at the tip; legs black; thorax yellow, the four posterior ones armed with a thick black spine at the tip.

Varius. Thorax somewhat spinous; wing-cases bidentated, cinereous, fuscose, and yellow variegated; the base at the angle compressed. Fabr. Cerambyx taylorinae. Gmel.

This is an insect of small fize. The general colour is cinereous; antennae longer than the body, cinereous, with the joints fuscose at the tip; thorax black, with yellowish lines and dots; wing-cases emarginated, and bidentated at the tip.

Purpurascens. Thorax spinous, and black; wing-cases with a fingle spine at the tip, base tesselated; antennae long. Fabr. Cerambyx purpurascens. Olivier. A native of Cayenne. This species is small; the antennae are longer than the body, black and spinous at the joints; thorax spinous and tesselated.


Durius. Thorax somewhat spinous; wing-cases truncated, bidentated, ferruginous, with cinereous bands; antennae short. Fabr.

Described from a specimen in the cabinet of Drury. The antennae are shorter than the body, and pecoous; thorax armed with a small spine on each side, and marked with a few raised transverse lines; wing-cases truncated at the tip, bidentated, the outer spine large, ferruginous, with three cinereous bands, which unite at the fracture; base ferruginous, with two large white spots on each side; abdomen with three white dots on each side. Muf. Donov.

Undatus. Thorax spinous, cinereous; wing-cases bidentated, with two waved black lines. Fabr. Habits America. The head is cinereous; eyes black; antennae, moderate, villous, black, with the joints cinereous at the tip; thorax cinereous, with a few dorsal black glutinous spots; wing-cases dotted, cinereous, with two large waved black bands, the posterior one of which is largest.

Rusticus. Thorax spinous, ferruginous brown; wing-cases bidentated and pale; antennae very short. Fabr.

An insect of middle size, that inhabits India. The antennae are longer than the body and fuscose; head and thorax dusky, ferruginous and downy; wing-cases smooth, paler and bidentated at the apex. Cerambyx ferrugineus. Gmel.

Quadriguttatus. Pale tesselated; thorax somewhat spinous; wing-cases two-spined, with two yellow spots on each side; thorax cinereous and unarmed. Sweeds Nov. Act. Stidh. Habits Honduras.


A native of Europe.

Ferruginosus. Blackish; wing-cases ferruginous; antennae spinous inwardly. Rauzer Jour. de Phy. A native of America.

Hirudinaceus. Beneath brown; head and thorax woolly, with a bare space on the back; wing-cases black, glabrous, with five bluish white dots, and tesselated future on each side. Pals. This species inhabits woods in the northern parts of Siberia.

Perforatus. Above covered with a whitish powder, beneath with yellowish down; five black dots on the middle of each wing-case. Pals. Habits the same country as the preceding, which it readily resembles.

Genus Callidium.

Antennae fuscous; head ovate-obtuse and inferted; eyes lateral, reniform, and bearing the base of the antennae; thorax flat, with rounded and rather prominent margin; wing-cases rigid; length of the abdomen; body flat; somewhat depressed, and often pubescent; legs elongated and formed for running; tigulis con elavated.

Genus Callidium. Feelers four, elevated; jaw membranaceous and bifid; lip two-leafed; antennae fuscous. Fabr.

Oscenurum. Thorax somewhat villous, fuscose; wing-cases tesselated, varied with cinereous; antennae moderate. Fabr.

The antennae are pubescent and fuscous; wing-cases dusky at the base; legs tesselated.


CERAMBYX.

Found on plants in Africa. Vahl. The antennae are moderate, ferruginous, with the first joint thick, and black; body black; wing-cases smooth, violaceous and glisting; thighs clavated.

Aeneum. Fuscous, thorax and wing-cases brassy green; thighs ferruginous. Fabr. From the Hunterian museum.

The antennae are black; thorax without tubercles, pubescent and brassy; wing-cases pubescent, and glisting; body black; legs black, thighs somewhat compressed and rufous, with the knees black. Inhabitts India.

Fulcratum. Thorax naked and glisting; body black; wing-cases rufous; antennae moderate. Fabr. Inhabitts Saxony. Hybner. Obs. All the thighs are compressed.

VioLACEUM. Thorax somewhat pubescent; body violaceous; antennae short. Fabr.

Linnaeus describes this insect under the name of Cerambyx violaceus. It inhabits woods in Europe, and is rarely found in England. Donov. Brit. Inf. This kind is highly detrimental to timber, especially fir, that has been felled some time, and has not been directed of the bark, beneath which it bores terpine cavities in the wood in various directions. Tranf. Lin. Soc.

Femoratum. Thorax naked; body black and opake; thighs red; antennae moderate. Fabr. This is Cerambyx femoratus. Linn. Inhabits Germany.

Spinosum. Thorax spinous, naked, black, antennae short. Fabr. Inhabitts Hungary. Hybner. The antennae are black; head grooved; thorax flat, naked, smooth, black and without spots, with a sharp spine each side; wing-cases smooth, glisting and black; legs black, thighs thick. 


Amethystinus. Pubescent, azure, with rufous legs; thighs clibbed and black. Fabr.

This insect is small, pubescent, azure, and glisting; antennae short, black, and rufous at the base; legs ferruginous, with all the thighs clavated; club large and black.

Biplicatum. Thorax pubescent, black; wing-cases with two rufous bands.

Described from a South American insect in the Bankian cabinet. Fabr. The antennae are moderate, with the joints two-fined at the tip; thorax with two tubercles; legs black; thighs somewhat clavated.

Acuminatum. Thorax warded and blackish; wing-cases pointed and greenish. Fabr. A native of the Cape of Good Hope. The antennae are moderate, fuscous, with the tips of the joints spinous; thorax rounded, black, with many elevated tubercles; wing-cases greenish, with blue future, tip sharp-pointed; legs black; thighs clavated, the club red.

Rusciicum. Thorax warded, black, wing-cases tellacous, with a black spot in the middle, and black tip. Fabr. Inhabitts Russia. Head black, antennae moderate; legs unarmed and black.


Tenebrosum. Thorax tuberculated, dullky, rufous, with black dorfl lines; wing-cases cinereous, deprefled, with two elevated black lines. Fabr. Inhabitts Cayenne. Olivier.

VITTATUM. Thorax rounded, naked; wing-cases ferruginous, with a black stripe in the middle; antennae long as the body. Fabr.

The antennae are ferruginous, second joint long, incurved, and somewhat spinous at the tip; body dusky; thighs clavated.


STIGMA. Thorax dotted; body black; wing-cases smooth, with a white fignitate spot. Cerambyx stigma. Linn. A native of America.

Fugax. Thorax hairy, fuscous; joints of the antennae rufous at the base. Fabr.

Found in Provence. Olivier. The head is small, entirely black and fuscous; thighs clavated, thanks tellacous.


This kind inhabits Italy, and has been found in England; antennae longer than the body, and yellow; thighs clavated.


Fulvicolle. Thorax unarmed, fuscous, black, with very long antennae. Fabr. Inhabitts Surinam.

Hirtum. Thorax rounded and hairy, wing-cases pointed, and pale tellacous. Fabr.

Described from the Bankian cabinet. The antennae are compressed, and black; legs black.

Pubescens. Thorax rounded, pubescent, and tellacous; wing-cases greenish, and at the base tellacous. Olivier, &c. A native of the Cape of Good Hope.

Barnatum. Thorax rounded, beneath each side a downy ferruginous spot, antennae very long and bearded. Olivier. This insect inhabits Tranquebar. Dr. Koegig.


Inhabitts Siam. Described from the Bankian Cabinet. The head, thorax, wing-cases, and body are smooth; abdomen tellacous; thighs much compressed.

Variegatum. Back of the thorax glabrous, black, with four white lines, and the wing-cases sprinkled with yellow. Fabr. Olivier, &c.

The antennae are of moderate size, black, with the two extreme joints ferruginous; head black, with two whitish lines, and transverse streaks; sides of the thorax sprinkled with yellow; three lines on the wing-cases rather raised, black, and thickly sprinkled with yellow dots; abdomen black, and speckled with yellow on both sides; legs blackish, with elongated thighs, the posterior ones ringed with white. Bankian Cabinet. Inhabitts New Holland.

Linetum. Thorax with two white lines, and four on the wing-cases, the middle ones uniting, and abbreviated. Fabr. Olivier, &c.

Antennae short, with the first joint ferruginous; lip whitish, with three black lines; feutel whitish; wing-cases obtuse; abdomen whitish in the middle black; legs ferruginous, with black joints. A native of New South Wales. Cerambyx angulis. Gmel. &c.

Sulcatum. Thorax downy cinereous; wing-cases white, firiated with black. Olivier.

This is a native of New Zealand. The antennae are short and...
and fuscous; head clavate, with a black, frontal, elevated line; lines on the wing-cases elevated and glossy; legs grey.


Sanguineum. Thorax somewhat tuberculated, and, with the wing cases, fuscous; antennae moderate. Fabr. "Le touches velocee couleurs de feu." Geoffr.

A Linnæan species, Cerambyx sanguineus of that author. Inhabits European woods; once met with in Wales. Muf. Donov.

Pileum. Thorax somewhat tuberculated and ferruginous; wing-cases tesselate; antennae moderate and villose; thighs elevated. Fabr.

Inhabits South American islands. This is of the middle size; head ferruginous; wing-cases smooth; legs tesselate, with the thighs much compressed.


Perhaps a variety of the Linnæan Cerambyx testaceus. The antennae are moderate, fuscous at the tip; thighs elevated.

Ligustum. Thorax tuberculated, villose, and black; wing-cases red, with spot and tip violaceous. Fabr.

The body is black; thorax flat, villose, black, with glosby elevated tubercles; legs black, with compressed thighs. Schulz.


Flaviss. Thorax rounded, pubescent, ferruginous; legs tesselate. Fabr.

A native of the Cape of Good Hope. This is small; antennae rather longer than the body, and ferruginous; head ferruginous, with the eyes black; thorax rounded, downy, somewhat tuberculated, and ferruginous; wing-cases rather paler.


The antennae are fuscous; legs black, with short, thick, and compressed thighs.

4. Maculatum. Thorax villous, fuscous; wing-cases with two ferruginous spots each; antennae long. Fabr.

A native of the island Candeloup, and described by Fabricius from the cabinet of Dr. Caudri. This is of a small size, and dusky; antennae longer than the body, somewhat ferruginous, and dusky at the base; head and thorax villous and fuscous; legs dusky, ferruginous, with elevated thighs.

Hainnense. Thorax somewhat villous and black, with four white lines, the inner ones abbreviated. Olivier, Fabr. &c. Cerambyx hainnense. Linn. Inhabits Europe.


Inhabits Germany. Muf. Hattorff. Antennae fuscous, and, at the base ferruginous; head and thorax smooth, violaceous, and glossy; body braily: legs violaceous, with fuscous flanks; posterior thighs elevated, and fuscous at the base.

Striatum. Thorax glabrous; body black; wing-cases frayed; antennae short. Fabr.

This is the Linnæan Cerambyx striatus. A native of Europe; is said to have been found in England.

Bicolor. Thorax glabrous and yellowish; head and wing-cases greenish; antennae moderate and black. Fabr.

Inhabits South America. Smaller than the last; thorax flat, smooth, and yellow; wing-cases smooth, green; legs black.

Lyncium. Thorax rounded, somewhat fuscous, villose, and black; wing-cases with a somewhat double fuscous spot. Fabr. Cerambyx lyncium. Olivier.

A native of the Cape of Good Hope. Thorax armed on each side with a small spine.


Inhabits Europe, and is found on willows. Antennae short and rufous; wing-cases slightly frayed; abdomen and legs rufous.

Cyanum. Thorax flat, tuberculated, villose, and violaceous; half segment but one ferruginous; antennae moderate. Fabr. Inhabits Italy. Cerambyx cyanus. Gmel.


Flavum. Thorax fuscous at the base; body yellow; thighs elevated; antennae moderate. Fabr. Inhabits America, Off. The antennae are yellow; eyes black; all the thighs thickly elevated.


Varius. Thorax rounded and fuscous; wing-cases fuscous at the base, with two white bands. Fabr. Inhabits North America.

Flexuosum. Thorax rounded, with yellow bands; wing-cases with seven yellow bands, the anterior ones curved upwards, the posterior downwards. Fabr. Leptura rubrolinea of Forster. Leptura pilosula. Drury. A native of America. Olivier, &c.


Florale. Thorax globose, and banded with white; the white bands on the wing-cases, the second and third of which are removed.


Aestival. Thorax globose, with cinereous spots; wing-cases black, with whitish dots, and posterior, fuscous, whitish line. Fabr. Inhabits Saxony.

Gazella. Thorax rounded, black; wing-cases black, with yellow bands, the second bent; legs ferruginous; thighs black. Fabr. A native of Europe.

Mucronatum. Thorax rounded and spotted; wing-cases mucronate and black, with three bent yellow lines and ferruginous base. Fabr. Found in America.

Angulatum. Thorax rounded, and mucronate; wing-cases mucronate, with three dorsal spots, and two yellow spots in the middle. Fabr. Country unknown.

Erythrocephalum. Thorax rounded, somewhat fuscous; wing-cases bidentate and fuscous, with four yellow bands; thighs compressed and elevated. Olivier. A native of America.
GLAUCUM. Thorax rounded, black; wing-cafes glaucous, spotted at the base with black. Olivier. Inhabits India.

SEX-FASCIATUM. Black; thorax with two, wing-cafes with four yellow bands. Fabr. Described from a specimen in the British Museum.

TRIFASCIAI. Thorax globose, ferruginous; wing-cafes black, with three white bands, the first annular. Fabr. A native of Europe.

ORNATUM. Thorax rounded, fasciated with black; wing-cafes greenish, with three entire black bands, the first annular. Fabr. Callidium ornatum. Herb. Stenocerae du-

plex. Scopoli. Inhabits Germany.


ANNULARE. Thorax rounded, and spotted with black; wing-cafes bidentated, and somewhat greenish, with three black bands, the first of which is annular. Fabr. Callidium annulare. Olivier. A Siame species.

EGYP'TIACUM. Thorax rounded and ferruginous; wing-cafes greyish, with three fuscous bands, the first annular. Found in the East Indies. Forthahl.

VIRENS. Thorax rounded, greenish, with black antennae, and telfaccean legs. Fabr. Inhabits Barbary.

GIBROSUM. Thorax rounded, black; wing-cafes fasciated with cincereous; at the base tuberculated, and pointed at the tip. Fabr. Inhabits Italy. Daldorf.

UNIFASCIAI. Thorax rounded, brown; wing-cafes black, with a snowy band in the middle; base chefun. Olivier, &c. Inhabits Provence.

PICIPES. Thorax globose, black, with an oblique streak on the wing-cafes.

GÉNUS CALOPUS.

Antennae filiform; feelers four, anterior ones elevated; posterior filiform; jaw bifid; thorax gibbous; wing-cafes linear. Gmel. &c.

GÉNUS CALOPUS. Feelers four, anterior elevated, posterior filiform; jaw bifid; lip membranaceous and bifid; antenafiliform. Fabr.


HISPICORNIS. Somewhat fuscous; joints of the antena with a small spine behind. Gmel. Doubtful if of this genus.


GÉNUS RHAGIUM.

Antennae setaceous, elongated, approximate, and infert between the eyes; feelers four, capitata; jaw armed with a single tooth; eyes rounded; thorax narrow, cylindrical, and spinous each side; wing-cafes rigid; legs formed for running; feet formed of four joints.

GÉNUS RHAGIUM. Feelers four, capitata; jaw single toothed; lip membranaceous, and bifid; antennae setaceous. Fabr.

MORDAX. Thorax spinosus, grey; wing-cafes clouded, and somewhat banded with telfacceous. Fabr. Inhabits Germany.

INQUISTOR. Thorax spinosus, and black; wing-cafes clouded, and subfasciated with telfacceous. Fabr. Cerambyx insqustor. Linn. Remembtes the last but is rather smaller. Inhabits Europe; not uncommon.

INDAGATOR. Thorax spinosus, cinereous; three elevated lines on the wing-cafes; specklings and two bands black. Fabr. DeGeer, &c. An European species.


CINCTUM. Thorax spinosus, and black; wing-cafes somewhat ferruginous, with a yellow band; posterior thighs with a single tooth. Fabr. Inhabits Germany.

NOCTIS. Thorax spinosus, and black; base of the antena ferruginous. Fabr. Linn. &c. Bears some affinity to Rhegium Curfor, but differs in being entirely black. Inhabits northern Europe.

BIFASCIAI. Thorax spinosus; wing-cafes with two oblique yellow spots. Fabr. &c. An European species.

CLATHRATUM. Thorax somewhat spinous; black; wing-cafes somewhat reticulated with yellow; legs rufous. Fabr. A native of Austria. Schneider.

ORNATUM. Thorax spinosus, and black, wing-cafes with a broad yellow band. Fabr. Inhabits Pennsylvania.

MINUTUM. Thorax spinosus; wing-cafes with elevated frise, cinereous, waved with black. Olivier, &c. A native of Europe.

MENTICUM. Thorax unarmed, rufous, with two black spots; wing-cafes fuscous, with rufous flax, and bidentated at the tip. Fabr. Found in Sweden. Obs! This is small. The head is cinereous; antena brown annulated with white at the base; wing-cafes somewhat dotted; body cinereous; legs ferruginous.

GÉNUS SAPERDA.

Antennae setaceous; eyes lunate, and embracing the base of the antennae; thorax short, somewhat cylindrical, and unarmed; head retracted; wing-cafes rigid and as long as the abdomen; body elongated, cylindrical, and marginate. Donov. Inf. N. Holland, &c.

GÉNUS SAPERDA. Feelers four, filiform; jaw membranaceous and bidentate, with heart-shaped and truncated; antena setaceous.

NIGROVIRENS. Blackish-green; thorax with rufous characters; wing-cafes rough, with a telfaccean spot at the base; sides yellow; tip truncated and bearded. Donov. Inf. N. Holland. A species lately discovered in New South Wales.

COLLARIS. Black, thorax encircled with four white rings; sides of the wing-cafes, spot at the tip, and body beneath covered with white down. Donov. Inf. N. Holland. This also is a new species from the same country as the preceding.


CANDIDA, white; thorax and wing-cafes fuscous, with two white stripes. Fabr. From the Hunterian Museum. Country unknown.

DETRIVA. Black with cinereous hairs, and white dorsal line, and a white stripe on the wing-cafes; antennae short. Fabr. Inhabits Barbary.


MODESTA. Black; head, thorax, and vent ferruginous. Fabr. Inhabits Africa.

ATRICORNIS. Ferruginous; antennae and tip of the abdomen above black. Fabr. Inhabits China. Schefeldt. Obs! The head and thorax are smooth, glabrous, rufous, and immaculate;
immaele; wing-cases frillated with dots, dusky and emarginate at the tip; wings ferruginous; with black tip.


Tricolor. Ferruginous; wing-cases bidentated, frillated with dots, and greenish; antennae moderate and black. Fabr. A native of the East Indies. Muf. Schell. Off. The head is rufous with black eyes; thorax rufous with 3 small dots at the base; body rufous; the legs black at the apex.

Hirta. Ferruginous with green hairs; frillated and obtuse at the eyes fulvous. Fabr. Inhabits New Zealand. Head greyish with four yellow spots at the base; wing-cases covered with grey hairs; and obtuse at the tip.

Unicolor. Tectaceus; antennae and legs same colour; antennae long. Fabr. Described by Fabricius from a specimen found in Amsterdam Island.


Nigrispect. Cylindrical, black, with two lines on the thorax and scutellum cinereous; legs black. Fabr. Inhabits Hungary.

Cyindrica. Cylindrical, black, with the anterior legs pale yellow. Fabr. Cerambyx colombianus. Linn.

Triplunctata. Cylindrical, black; thorax ferruginous above, with three black dots. Fabr. Inhabits Virginia. Off. The antennae are moderate, villous, and black; wing-cases frillated with dots.

Melaenochlata. Thorsx rufous, body black; legs rufous. Fabr. Inhabits Africa. Vahl. The antennae are moderate and black; and head and body black.

Plicicornis. Violaceous, with the first and second joint of the antennae chubbed, and hairy. Fabr. Inhabits South America. Hybr. 

Barnicornis. Head and thorax rufous; wing-cases azure; antennae moderate, and bearded before the tip. Fabr. Native country unknown. This is of the middle size.


Ruficollis. Thorax villous, rufous; antennae and wing-cases fulvous. Fabr. A native of Virginia. Off. The head is rufous, antennae moderate and black; thorax villous, rufous, and immuculate; wing-cases villous and fulvous.

Fasciata. Thorax somewhat spinous, azure; with two yellow bands on the wing-cases. Fabr. Inhabits Siberia. Off. The antennae are moderate and black; body entirely violaceous, slightly glossed with cinereous.

Clavicornis. Green, with three yellow spots on the wing-cases. Fabr. Inhabits the Cape of Good Hope. From the Bankian cabinet.

Latipes. Black; thighs clavated and violaceous at the tip; posterior flanks compressed; antennae long. Fabr. From the same country as the preceding.

Off. The antennae are longer than the body, the first and second joint thick and black, the rest rufous with black tips, except the last joint which is entirely black; four anterior legs rufous with clavated thighs.


The body of this insect is small, black, glossed with blue; wing-cases rough; legs blue with all the thighs clavated.


Lyncia. Thorax black, with a ferruginous dot on each side; wing-cases grey and pointed. Fabr. A native of New Zealand. Off. The head is black; antennae ferruginous; wing-cases gray, frillated at the base; body black; abdomen with four ferruginous dots on each side; legs fulvous; thighs clavated.

Grisea. Greyish; margin of the scutel, and small lines on the wing-cases yellowish. Fabr. Inhabits New Zealand. Off. The antennae are fulvous; wing-cases somewhat villous; legs fulvous with clavated thighs.

Analis. Tectaceus; tip of the wing-cases and vent black. Fabr. A native of Africa.

Bidentata. Thorax rounded; with four dots of black; wing-cases bidentated at the tip. Fabr. Inhabits Guiana. Dr. Hert. This is small; antennae length of the body, with the third and fourth joint yellow; body and legs yellow.

Nigricornis. Fuscous; thorax linear; scutellum yellow; antennae long. Fabr. Cerambyx Cardii. Linn. Found on thistles in southern Europe. The body is fulvous sprinkled with yellow; lines on the thorax three in number.


Annulata. Thorax rounded, lined, greenish; wing-cases pointed, with white future. Fabr. Found on plants in Africa. Vahl. The antennae are moderate; joints white at the base and black at the tip, the first entirely black; head dusky.

Lineata. Thorax rounded and somewhat spinous; joints of the antennae white at the base. Fabr. Inhabits South America.

Teistis. Thorax rounded, black, with white lines; wing-cases clavated, tectaceous with whitish lines. Fabr. This kind inhabits Transcaucas. The antennae are short and fulvous; wing-cases smooth.

Populnea. Thorax lined with yellow; wing-cases with four yellow dots; antennae moderate. Fabr. Cerambyx populneus. Linn.

Tremula. Green, with two black dots on the thorax, and four on the wing-cases. Fabr. A native of Germany.

Punctata. Green, with numerous black spots; antennae moderate. Fabr. Cerambyx punctatus. Linn. Inhabits the south of Europe.

Vellecens. Thorax villous and cinereous; wing-cases somewhat attenuated and green. Fabr. Inhabits Italy, Dr. Allioni, and France. Broutefont.

Longicornis. Fuscous; legs tectaceous; antennae very long and black with a white ring. Fabr. Inhabits Austria. Bankian cabinet.

Femorata. Anterior part of the thorax fulvous, posterior tectaceous; three alternate bands of black, and tectaceous on the wing-cases; antennae very long. Fabr.

Volvulus. Above black; thorax and wing-cases margined with cinereous. Fabr. Inhabits Cayennne.


Brunnea. Thorax rather spinous, ferruginous; antennae
CER

CER

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ceramic and legs fuscous colour. Inhabits Germany. Helwig, &c.

Testacea. Black with tellteaceous wing-cases. Fabr.

A native of Germany.

Violacea. Body violaceous and immaculate. Fabr. Obs. The antennae are moderate and black; thorax somewhat pubescent; wing-cases rough; legs black.

Ephippium. Black; dorso line on the thorax and feint cinereus; thighs ferrugineus. Fabr. This inhabits Hungary, Hungary.

Picea. Fuscus; antennae and legs ferrugineus. Fabr. A South American species of final size.


Scutella. Thorax somewhat spinosus, black; antennae wing-cases and legs greyish; ventral white. Fabr.

A native of Germany. The antennae are shorter than the body, greyish, with the joints ferrugineus at the base; and black at the tip, the frst entirely black; head black; wing-cases smooth, and cinereus; thanks dusky ferrugineus.

Lincola. Black; dorso line on the thorax. and thighs fuscous at the tip. Herbst, &c. Inhabits Italy.

Genus Clinetus.

Antennae fuscous; eyes redinforn, and embracing the base of the antennae; thorax gloes, and broad as the wing-cases; elytra rigid; length of the abdomen; legs long and furmed for walking; thighs comprised; four joints in the feet. Donov. Inf. N. Holland.


Silmaculus. Black; thorax covered with fivory down; wing-cases with three yellow spots, and somewhat emarginate at the tip. Donov. Inf. N. Holland.


Ceramicus, the name of a burgh in Greece, in Attica, belonging to the Acmantole tribe; which was the place called by others the Oster Ceramicus.

Ceramicus, in Botany, a genus formed by Roth for some species of sea weed arranged by Linnaeus and other authors under either focus or conferva, with the following generic character: fronds membranous-corticifolious, somewhat geniculatis; epithelia with generally one seed scattered on the conferva of the branches. His generic character of focus, in contradistinction from the preceding, is, vehicles, aggregate, imbedded in the substance of the frond, furnished with micelluous pores; and of conferva, small tubes, or herbaceous elements, with granae of fructification scattered on the inndo coats of the tube. The same name was given by Stackhouse in the first Faciehin of his "Neres Britannica," to another falcation of plants from the genus Focus, which is afterwards called palmaria. See Neres Brit. Introil. p. 15. 24. 31. 32. See Palmaria.

Ceramium, share in measure, answering to what was otherwise called amphora and cadus.

Ceramorum, in Ancient Geography, a town of Asia Minor, which, according to Xenophon, was situated on the confines of Myia.

Ceramus. See Ceramicus.

Ceramus, or Ceramusa, or Ceramunus, an ephical fee of Africa, in Numidia, and near Mrica.

Cerane. A town of Phrygia, according to Pliny.

Ceranga, a town of Italy, placed by Ptolemy on this side of the Ganges.

Ceranthus, in Botany, Schrebr. Gen. 27. See Chionanthus hieracifolius.

Cerasus affinis, fruitu coccineo. Sloan. Jam. See Cera

Cerasus affinis, fruitu fuscus, Sloan. Jam. See Er

Cerasus affinis, Bauh. Pin. See Prunus maloab.

Ceraso, in Ancient Geography, a Greek town, situated in the territory of Calchis, on the coast. It was a colony of Sampe, according to Xe

Cerasus, or Cerason, an ephical fee of Asis, under the metropolis of Bostra.

Cerasus, one of the names of the isle of Cyprus, according to Pliny. Some say that it bore this appellation on account of the ferocious manners of its inhabitants. Others say that it was called Cerastes (from κερατον, horned), or horned, because it was surrounded with promontories, which projected into the sea, and exhibited the points of rocks at a distance, appearing like horns.

Cerasus was also the name of a people who inhabited this island, who had an altar dedicated to Jupiter, the Hospitable, and which was always invested with the blood of strangers. Venus, offended at this inhumanity, changed them into bulls.

Cerasus, in Zoology, the horned shafe. See C clarify.

Cerasus was also the name given by the ancient Greeks to a flag when at its full growth, or at the end of its fourth year.


Gen. Ch. Cal. perianth five-leaved; leaves ovate-lanceolate, acute, spreading, permanent. Cor. petals five, fuid, obtuse, erect-spreading. Stam. filaments generally ten, filiform, shorter than the corolla; alternate ones shorter;

Q. 4

and
CERASTIUM.


...
CERASTIUM.


** Capsules roundish.

Raf. pl. 1051. Col. Phyta. tab. 71. Myrofoss. Hall. helv. n. 891.) "Leaves linear, tomentuous, hoary; peduncles branched, form what perianth." Lam. Root perennial, creeping. Stems five or six inches long, cottony, branched near the bottom; outer branches procumbent, more abundantly hairy or barren. Leaves white, from six to eight lines long. Flowers white, large, on branched peduncles; calyx cottony, half the length of the corolla. *Catnioniera, L. ob. aid and 21. native I she torn opal.

CERASUS, Cerasus, Cherries. - The word Cerasus is derived from *Cerastia, Cassine virginiana, Rait. denc. See Cercis canadensis.

CERASUS, or Cera, is the name of two mountains of Greece, which were the scenes of the operations of Megara and Athens, according to Strabo. Dictam Surcul, and Plutarch. See Ceratium.


Ceratia flagrata, L. B. See Ceratonia flagrata.

* Ceratia argafla, vitis, Rait, denc. See Ceris canadensis.


CERATIAE, quidam modo affinias, Plut. See Mimosa ligustica.

CERATIAS, among Ancient Naturalists, denotes a horned comet. The word is formed from κέρας, a horn. Such is that said to have appeared when Xerxes passed his army into Greece.

CERATINUS, Jamiw, in Biography, a learned Dutchman of the 16th century, whose family name was Tryggs, but who assumed the name Ceratinus, of Greek etymology, from κέρας, the appellation of his native place, Horn or Hoorn. He combined singular modesty with distinguished attainments in Greek and in the Latin literature, for which he is highly commended by Erasmus. Such was his extreme disinterestedness, that, upon being examined for priest's orders, a question was put to him from the Latin grammar, to which he ingeniously replied, that he did not recollect a single rule by heart. The consequence was his rejection; but when he acquainted a friend with the reason of it, the friend immediately repaired to the examiners, and told them, that they had discovered the most learned man in Louvain, who had given ample evidence of his erudition by an elegant Latin translation from Cytrofson's works. Upon receiving this information, they set him for a second time, and armed him with many apologies for their former rejection of him. Being obliged by the war to quit a professorship which he held at Tournoy, he became a private teacher of Greek at Louvain; and afterwards, on the recommendation of Erasmus to George elector of Saxony, he was chosen to succeed Moellanus in the university of Leipsic. But returning to Louvain, he died there in 1530, in the prime of life. His works were "A Translaction of Cytrofson's Treatise concerning the Priesthood," an improved edition of the "Greek-Latin Lexicon," printed in 1524, with a preface by Erasmus; and a treatise " De Soni Grecorum Literaturum," printed in 1529. Gen. Dict. See Ceratinus Sinus, in Ancient Geography, a gulf of the Thracian Bosphorus.

CERATION, Ceratio, in Cenocracy, the operation of waxing.

CERATITIS, a name given by many authors to the substance more usually called by authors wax. See Ceratia flagrata, and found in great plenty in the coverts of Hartz forest in Germany.

CERATIUM, or Ceration, a name given by the Ancient...
Ancient Physicians to a small weight. The curation is properly the name of a tree called the carob, or *ficus delici*, the sweet pipe-tree: this tree bears a long pod, in which are contained several seeds among the pulp: these seeds are also called *ceratod* and *fumut* by the Arabians; and being dried, they were used as a weight to proportion the dose of medicine. Thus the small weight which took its origin from them, was called curation; as that small weight, which took its origin from a grain of barley, was called granum.

**Ceratodium** was also a small silver coin, the third part of an obolus, and the fame with what the Romans called follis.


Gen Char. Male flowers. Cal. perianth one-leaved, tubular, wider at the top, thin, coloured, smooth (two leaved, Gartt., Cor. none. Stam. filamente, capsillary, scarcely longer than the calyx, inserted into the receptacle; anther two-celled, oval, upright. Female flowers. Cal. perianth one-leaved, inerfely egg-shaped, compressed, keeled on both sides, permanent, two-horned; hornis straight, awl-shaped, divaricat. Cor. none. Pyft. germ oblong, superior; filis two, capillary; ligules simple, standing out between the horns of the calyx. Peric none, except the permanent enlarged calyx, including and cluily adhering to it. Seed simple, oblong, keeled at the bottom, compressed.


**Ceratocephalus**, in Botany, bulbous folio, Vail. See Spilanthes acmela.

**Ceratocephalus folis ordalitis, Vail.** See Biddies there.

**Ceratocephalus folis lanceolatis, Vail.** See Cotula Spilanthes.

**Ceratocephalus delphini folis, Vail.** See Coreopsis coronata.

**Ceratoglossus**, in Anatomy, is that part of the hyoquollus muscle which arises from the cornu of the os hyoides, and which is described by some anatomists as a distinct muscle. See Tongue.

**Ceratoide, in Botany, orientalis fruticos, Tourn.** See Anxri, ceratoide.

**Ceratoide orientalis major & minor, Tourn.** See Ceratocarpos.

**Ceratomalaga**, a sere or cerylcloth.


Gen. Ch. Hesperaphrodite, male and female flowers each on a different plant. Male. Cal. perianth small, open, with five divisions. Cor. none. Stam. filaments five, rarely fix or fcent, awl-shaped, very long, expanding, oppoite to the division of the calyx, proceeding from the margin of the fibrous disk, which occupies the middle of the flower; anthers large, furred, two-celled.

Female. Cal. perianth one-leaved, divided by five tuberules. Cor. none. Pyft, germ superior, in the centre of the fibrous disk or receptacle which covers the inner part of the calyx; style long, terminal; stigma capitate. Peric. lemma long, obtuse, flattened, tetrangular when dry, smooth, coriaceous, not opening by valves, divided by transverse partitions into many cells. Seeds one in each cell, bedded in a succulent pulp, roundish, compressed, hard, shining.


Obsev. Fafano, in Act. Neap. 1787, calls the fibrous disk or receptacle of other authors a permanent corolla.

Sp. C. filipes, Linn. Sp. Pl. Matt. Lam. Illus. Pl. 859. Fafano Act. Neap. tab. 18. fig. 2. Gartt. tab. 146. fig. 1. Del. Pempt. 787, fig. 1. (Silisca eurium, Bauh. Pl. 149. Blackbl. tab. 190.) Carob-tree, St. John’s bread, Pr. Carobum. An evergreen tree of a considerable size. Trunk rugged. Branches crooked, spreading like those of the apple tree. Leaves winged, without an odd one; leaflets in six or eight pairs, three inches broad, roundish, entire, thick, rigid, nerved, dark green above, paler beneath. A native of the south of France, of Naples, Spain, Egypt, and the Levant. Its fruit, when ripe, has a tolerably pleasant sweetish taste, and is eaten in times of scarcity by the country people, but is apt to purge and give the hovels. It is commonly given to cattle. As a medicine, it has the same properties as calffia, but in a lesser degree. The pulp, which has the confidence of a blackish syrup, mixed with licorice-root, dry raffins, and several other kinds of fruit, forms the herbet of the Turks. It was long supphed to have been the food of John the Baptist in the wildernefs; but a better acquaintance with natural histry has now rendered it very unlikely that the *axenic*, or bocul of the evangelic history, is the wealf-known delusive insect of that name. It is much more probable that the shells of the carob tree were the hovels intended by our Saviour in the parable of the prodigal fig. Its leaves are of an alltrange nature, and may be used as a substitute for oak-hark in the tanning of hides. Its wood is esteemed in the south of Europe equal to that of the evergreen oak, and is used for the same purposes.

**Ceratonia**, in Gardening, contains a plant of the evergreen, exotic, thorny kind; of which the species cultivated is the carob-tree, or St. John’s bread, (C. filipes), which rifes with an upright, thick, woody stem, to the height of 15 or 20 feet in its native situation; the head being divided into many branches; the leaves are pinnate, of a dark green colour, three inches in breadth, and rather more in length; and the flowers small, and of a dark purple colour. It is a native of Syria, &c.

**Method of Culture.** These plants are increaset by laying the seeds produced from their native situations in pots of light earth in the spring, plunging them in moderate hotbeds; and after the plants have attained sufficient growth, removing them into separate pots, shade, water, and earth being occasionally given, and the pots continued in the hotbed. As soon as the weather becomes fine in the summer, they should be gradually hardened by exposure to the free air, and be placed out till the approach of autumn, when the protection of the green houle will be necessary to preserve them during the winter feason, free air being given in fine days as much as possible; and afterwards they require only to be managed as other green-house plants, in which situation
tion they have a good effect by the variety which they afford.


Gen. Ch. Male. Cal. perianth with many divisions: divisions awl-shaped, equal. Cor. none. Stam. filaments double the divisions of the calyx, from sixteen to twenty, very short; authors oblong, erect, longer than the calyx.

Female. Cal. and Cor. as in the male. Pet. germ egg-shaped, compressed; flyle none; stigmas obtuse, oblique. Peris. nut small, with a thin, somewhat conicinous rind, hard, one-celled. Seed attached to the bottom of the shell.


**CERATOFORUM**, in *Ancient Geography*, an episcopal see of Afia Minor, in the Pactian Phrygia, according to the acts of the council of Ephesus.

**CERATOSANTHES**, in *Botany*, (compound of κεράς and σανθης, denoting a horned flower). Jaffieu, p. 396. Vent. vol. iii. p. 518. A genus formed out of the Tricho- santhes of Linnæus, for such species as have a four-celled fruit and the inner segments of the calyx not ciliated, but divided at the summit into two revolute horns.

**CERATOSPERMUM**, (compound of κεράς, and σπερμον, denoting a horned seed), Lam. Encyc. Mich. nov. gen. 125. Tab. 56. fig. 1. Hal. helv. n. 2212. Clas and ord. Cryptogamia Alge. A plant acknowledged to be very rare, and to have been seen by few botanists.

It is said to grow on the bark of trees, and to consist of numerous cruraceous, orbicular, distinct warts, charged with a fugacious powder, and containing, in small cavities, oblong, curved capsul with embossing little horns. But Dillenius suspects that Micheli imagined more than he saw, and that his 'cerato' is no other than Lichenoides verrucosum and rugosum, curium album of the Hiliora Muscorum; Lichen pertusus of Linnaeus. Deprerata, quinquies poterit; fiores Michelii visos, tab. 56. lit. A, B, C, D. Quidam plus videt, quam ait, quoniam nempe imaginato perit. Hilt. Muic. p. 139.


Gen. Ch. Cal. Perianth top-shaped, five-cleft; segments large. Cor. concav, tubular-cylindrical; border five-cleft, erect. Stam. ten, situated on the calyx; filaments short; authors very long, attenuated at the tip, and ending in two horns. Pet. stigmas one. Pet. Capsule crowned with the segments of the calyx, somewhat downy, five-cleft, many-seed.


**CERATUM**, in the *Medicinae.* a kind of stuff unguent or liniment; made of oil and wax, with other ingredients; used externally in several diseases, especially those of the skin.

It takes its name from its capital ingredient, wax, called in Latin cera.

Its consistence is thicker than that of a liniment; the last having usually two ounces of wax to two oz. oil; but the cerate four of wax to two of oil; yet it is thinner than a phial.

There are cerates of various kinds, refrigerativa, glammatic, &c. cerates de sulfur, of sanufors, refirgentes cerate de brics, divine cerate, &c.

There is a particular one, called the refrigerativa cerate of Galen, made of white wax and oleum rostit. amphiun.

**CERATUM euphoricum**, a name given to a late London Dispelting to the composition commonly called Turner's cerate, called in the late London Pharmacopea "Ceratum lapides cauinariam," and ordered to be made in this manner: take olive oil a pint; yellow wax and prepared calamine, of each half a pound; melt the wax in the oil, expo it to the air, and when the mixture begins to congeal again, sprinkle in the powder of calamine, and continue stirring it till the whole is cold.

**CERATUM cantharidid is prepared by mixing fix drams by weight of cerate of spermaceti softened by the fire, and one dram by weight of finely powdered cantharis." This may supply the place of the "Epithelium vegetans of the former dispensatory; and in order to quicken its action, an addition of pulv. cantharid, may be made at discretion.

**CERATUM lithargyri aceti compositum**, or compound cerate of acetated litharge, is composed of 2 oz. ounces by measure of water of acetated litharge, four ounces by weight of yellow wax, nine ounces by measure of olive oil, and half a dram by weight of camphor. Rub the camphor with a little of the oil: melt the wax with the remaining oil, and when the mixture begins to thicken, pour on gradually the water of acetated litharge, stirring it till it is cold; and then mix in the camphor, which was before rubbed with the oil.

**CERATUM reina fluxa**, or cerate of yellow resin, is prepared by melting together half a pound of ointment of yellow resin with one ounce by weight of yellow wax.
CERATUM socotri, or soap-cerate, is composed of the following ingredients; viz. 8 ounces by weight of soap, 1 ounce by weight of yellow wax, one pound of powdered laurel, one pint of olive oil, and one gallon of vinegar. Boil the vinegar with the laurel, or, as means of a slow fire, constantly fuming, till the mixture unites and thickens; then mix in the other ingredients in order to form a cerate.

CERATUM Sperrmanni Ceti, or cerate of spermaceti, is prepared by mixing together half an ounce by weight of spermaceti, two ounces by weight of white wax, and four ounces by measure of olive oil, and allowing it till the mixture becomes cold.

CERATUM mercurialis, a form of medicine prepared in the late London Pharmacopoea, and ordered to be made in the following manner: take yellow wax and twice logo's lard, of each half a pound; quicksilver, three ounces; simple balsam of sulphur, a dram: melt the wax and lard, and then add to them gradually the quicksilver, first well divided by the bal- 

CERATUS, or CERATUS, in Ancient Geography, a small river of the island of Crete, which, according to Siraiob, ran near the town of Gaius.

CERERIA, in Antiquity, a kind of musician, who blows or plays on the horn.

In which sense, the word amounts to the same with the Latin cornicen.

CERANIA, in Ancient Geography, a town of the Peloponnesus, in Achaia, according to Polybius. It was one of the twelve cities which formed the Achaean league.

CERANIA, now Cerone, an ancient town on the north coast of the island of Cyprus; which, like Paphos, exhibits nothing but ruins, as a testimonio of its past grandeur.

CERANIAS, CERANIAS; of CERANIAS lupitae, in Natural History, a sort of flinty figured stone of no certain colour, but of a pyramidal or wedge-like figure; popularly supposed to fall from the clouds in thunder-storms, and to be possessed of divers notable virtues; as of promoting sleep, preferring from lightning, &c. The word is formed from κέρανιον, a thunder bolt. The ceramia is the name with what is otherwise called the thunder-flone, or thunder-bolt; and sometimes also ≤γινιτα, or arrow's head, on account of its shape.

The ceramia are frequently confounded with the ombria and brontia, as being all supposed to have the fame origin.

The generality of naturalists take the ceramia for a native fomite, formed among pyrites, of a silane, concrete, mineral juice. Mercutus and Dr. Woodward assert it to be artificial, and to have been fashioned thus by tools. The ceramia, according to these authors, are tinsels, or heads of the ancient weapons of war, in use before the invention of iron; which, upon the introduction of that metal, growing into disuse, were dispersed in the fields through this and that neighbouring country.

Mr. Dohrke has found, among the worn fomes of the Mediterranean shore, javelin-heads of pyhophyr, Jasper, horn-flone, fchell, varoite, &c. probably fabricated by the ancient inhabitants, the Gauls. These javelin-heads, made of Jasper, &c. on account of their excelle hardnes, of which even the savages of Canada have availed themselves in the confection of such weapons, are commonly known by the name of thunder-flomes, and are distinguished by the Litho-

gulls by the name of Ceramites or Ceranias.

CERANIAS albus, a name given by Pliny to a gem or precious flone, of the nature of the alieria, but somewhat inferior to it in beauty. Pliny tells us that it was a very bright gem, of a crytalline appearance, but

with a cat of blinis; and that it was found in Caramania. Solinus gives us much the fame account, but makes Ger-

many the place of its origin. It is, indeed, written Ger-

mania in several of the old copies in Pliny, but the most correct have it as in printed, Caramania; and Caramania was a country from which the Romans had many gems.

CERANII, in Ancient Geography, a people of Illyria, who, according to Pliny, were divided into 124 decures. They are also mentioned by Ptolomy.

CERANIA, See ACERANIA. Pomponius Mela gives this name to a part of mount Taurus, which proceeded from the coast of the Euxine sea, the Palus Mountis and Tania.

CERANIAE, or CERANAE, a town of Italy, which Diodorus Siculus places in the country of the Semnites; and which, he says, was taken by the Romans.

CERANITIES, in Natural History, a name given by several writers to the seminates.

CERANUS, or Fulminator, in Mythology, an epitaph of Jupiter.

CERANUS, in Ancient Geography, a river of Asia, in Cappadocia, according to Pliny.

CERANUS, a mountain of Peloponnesus, in Arcadia; which, according to Pausanias, formed a part of mount Lyceum.

CERBALITANUS, an episcopal see of the proconfular Africa.

CERBALUS, now Ceravo, a river of Italy.

CERBANI, a name given by Pliny to an ancient people of Arabia Felix; called Cerdanite by Steph. Byz.

CERBANUM, a town of Italy, mentioned by Procopi.


Gen. Ch. Cal. Perianth five-leaved, or five-cleft. Cor. monopetalous, funnel-shaped; tube elevated, longer than the calyx; orifice pentangular, nearly closed by five converging teeth; limb large, five-cleft; segments oblique, obtuse, more gibbous on one side. Stam. filaments five, awl-shaped, in the middle of the tube; anthers erect, converging. Pijf. germ roundish; style filiform, short; stigma capitulate, two-lobed. Peric. drupe large, roundish, felthy, hollowed on one side by a longitudinal furrow. Seed, a nut, containing one, two, or four kernels.


Sp. 1. C. Aboun, Linn. Sp. Pl. 1. mart. 1. Willd. 1. Lam. 1. Illuf. Pl. 170. Bat. Mag. Pl. 737. (Ahousi, Thev. Antarct. 65. Tourn. Infl. 658. tab. 434.) Thevetia, Linn. Hort. Chlf. Arbor Americana, folis pinnatis, fructis triangularibus, Daud. pin. 454.) "Leaves egg-shaped, acute." A tree, ten feet high, yielding in all its parts a poisonous milky juice. Stem and branches irregular and crooked. Leaves three inches long, one and a half broad, thick, succulent, bright green, smooth. Flowers in clusters at or near the extremity of the branches, cream-coloured; calyx divided half way down into five acute reflexed segments; tube of the corolla dilated in the upper part; stamens five, twisted, marked with five deep furrows; segments of the limb, oval, oblique, with undulated margins; anthers on short filaments, enclosed in the inflated part of the tube; stigma bident, top-shaped, surrounded at the base by a circle of greenish glands, which secrete a colourless, very sweet honey, perfectly free from any acrid or nauseous taint. A native of Brazil and the West Indies. Cultivated by

Mr.
Mr. Miller, in 1759. It flowers in July and August, but never produces fruit in England. Its wood has a very offensive smell; and its kernels of the nuts are a deadly poison. 2. C. obtusa, Willd. 2. Cavan. 1c. in. p. 35. tab. 470. "Leaves elliptical, obtuse." Leaves feathery, nearly sessile. Flowers terminal, about five together. A native of New Spain. 3. C. theovis, Loudon. Sp. Pl. 2. Mart. 3. Lam. 2. Willd. 6. Jacq. Amer. 38. tab. 34. Herb. 20. tab. 47. Lam. Ill. Pl. 170. "Leaves linear, very long, crowded." An elegant shrub, from twelve to fifteen feet high. Stem round, subangular in a poisonous milky juice, diluting at the top into numerous weak branches; branches imparipinnate, leaves so small, marked with the scars of fallen leaves. Leaves on short petioles, scattered, narrow, linear, acuminate. Four or five inches long, full of a milky juice. Flowers yellow, large, odoriferous, generally solitary, nodding, axillary, and terminal; pedicels shorter than the leaves; teeth of the tube dilated; filaments very short; germ free, brown, interspersed with a yellow, fleshy, mealy-ovate, yellowish seed. Fruit greenish, round, oblong, milky, containing an obscurely three or four-corrugated nut, which opens by a kind of furrow on one side. A native of Cayenne and the West Indies. Received by Mr. Miller in 1759, by the name of French physic-nut. 4. C. manghas, Loudon. Sp. Pl. 2. Mart. 2. Lam. 3. Willd. 4. Obs. l. 91. Petiv. tab. 16. fig. 4. (Manghas fruitu venenato, Bauh. P. 442. Burm. Zel. 150. tab. 70. fig. i. Arbor lactacea, Rumph. Ambr. ii. p. 243. tab. 51. Odolom. Rheed. Mal. i. p. 71. tab. 39.) "Leaves lanceolate; nerves transverse." A milky tree, from eighteen to twenty feet high. Wood white and tender; bark even; branches rather spreading, crooked, cylindrical, marked with scars of fallen leaves. Leaves alternate, but scattered near the ends of the branches, ten or twelve inches long, and three broad, on short petioles, quite entire, smooth even, above, furnished underneath with transverse parallel nerves, which proceed from the midrib, and terminate in a nerve-like cord at the border of the leaf. Flowers white, in terminal, branched, unequal, racemose; calyx five-lobed; leaflets lanceolate, spreading, coloured, deciduous; tube of the corolla longer than the calyx; anguly oval within; lobes of the border egg-shaped, large; filaments very short, inserted into the upper part of the tube; anthers egg-shaped, covered with the down of the tube; germ brown; style filiform, somewhat shorter than the tube; stigma egg-shaped, cloven. Fruit egg-shaped, the size of a goose's egg, green, marked with small white spots, compressed on one side, with an obsolete furrow; including two large seeds which resemble chestnuts, and have a poisonous, vomiting quality. A native of the East Indies, and of the Society islands. In the island of Ambuina its bark is used as a purgative.

Swartz has observed that this species would form a genus distinct from the two preceding, if it were not defirable not to multiply genera without absolute necessity. Gartner affirms that on account of the difference in the structure of the fruit it cannot be associated with them under the same genus. He maintains moreover, that the Arbor lactacea of Rumphius and the Odollam of Rhedoe, quoted by Linnaeus as synonyms, are distinct species strongly marked by the characters of the fruit. He gives the following description of the former from a specimen in the collection of Mr Joseph Banks, and of the latter from a specimen preserved in the museum at Amsterdam. C. manghas, Tab. 123 and 124. fig. 1. Paric. Drupe two, dry, large, ovate-oblong, gibbous and obliquely truncated behind, more even with a slightly deprected furrow before; outer cuticle membranous, thin, dark brown; flesh fleshy, resembling the dried pith of elder, intermingled with the filaments of the putamen or shell; putamen woody; confining of round fibres proceeding from the inner part in a radial manner towards the circumference, and there changing into new, rather even, longitudinal fibres which form a peculiar woody kind of bark; embalmed by means of a delusive fruit in the anterior part, and continued to the middle of the back; oneelled, but divided into two chambers by a movable membranous partition placed between the valves. Seed one, (the other constantly abortive) large, ovate-oblong, lenticularly compressed, attenuated at the tip, of a dull nutty colour.

5. C. obsidolem, tab. 124. fig. 3. Drupe generally single, elliptico-oblong, very convex on one side, greenish yellow; cortical layer of fibres as in the preceding, woody; fibres broader, more branched and frequently reticulated on the hinder part; putamen embalmed, one celled, but divided into two chambers; partition free, double, rising from a woody curved pedicle, each part clothed on its inner side (that towards the axis of the fruit) with an irregular sheath of crooked fibres, and on its outer side bearing the seed. Seed one in each chamber, ovate-accuminate, on one side remarkably convex, flat on the other, and so closely adnate to the partition as to leave only the tip free. Gartner describes also a seed communicated to him by a friend which appears to belong to another distinct but unknown species. He calls it 6. C. playf. frons, tab. 124. fig. 2. Putamen woody, egg-shaped, muriated on all sides by multiform upwardly incurved fibres, nearly two-valved by means of a future extended to the base, divided into two very compressed chambers by a movable partition; partition coriaceous, confining of two laminæ opposite to the future of the valves. Seeds two in each chamber, foliaceous-compressed, free on both sides, unequal; one larger, ovate-lanate superior; the other smaller, somewhat kidney-shaped, inferior. 7. C. parvispero. Willd. 3. Forth. prod. 121. (Ochofria borbonica; Genel. Syllab. nat. p. 459.) "Leaves filiform, irregularly egg-shaped." A native of the Friendly Islands and of Savage Island in the Pacific ocean. 8. C. maculata, Willd. 5. (Ochofria borbonica;焦耳. O. maculata; Jacq. croc. rar. 2. tab. 341. Dryand. in Linn. Trans. 2. p. 227.) "Leaves lanceolate, dark green, spotted; cymes axillary, branched, disarticulated." It differs from the preceding in the form of its leaves. A native of the Isle of Carbon, 9. C. falatis, tab. 35. Linn. Cochin. 156. (C. crassifolium, Lam. 9. Lat. falatis; Rumph. Amb. 3. tab. 255. tab. 54.) "Leaves and fruit oval." A middle-sized tree, with a milky juice, and spreading branches. Leaves oblong-oval, obtuse, quite entire, shining, crowded at the ends of the branches, on short petioles. Flowers white, inodorous, in small nearly terminal racemes; calyx five-cleft; segments awn-scaled, long, erect; corolla falcat-shaped, with a long incurved tube; segments of the border oblong, fleshy, spreading, not contorted; germ egg-shaped, very small; style longer than the filaments, thick, curved, always turbinated on the side of the corolla; stigma smooth, vertically compressed, truncate. Drupe oval, large, with a smooth skin, yellow on one side, red on the other, containing a fibrous-woody nut, with a single kernel, not poisonous. The want of a contorted corolla renders its genus dubious. A native of Cochin China near the coast, and of the Moluccas. 10. C. mumculformis, Lam. 5. (Fructus mumculiformes; Rumph. Amb. 2. Append. 165. tab. 63.) "Fruit mumculiform." Leaves alternate, pinnate, petiolated, ovate-oblong, obtuse, smooth furnished with lateral transverse nerves, from six to eight inches long and two broad.

Flowers


Flowers in a simple raceme, according to Rumphius resembling those of C. manghas, but smaller. Fruit oblong, acute, full of a milky juice like the leaves and all other parts of the plant, about three inches long and one broad, a little compressed laterally, with a longitudinal furrow, having firm flesh, and containing two or three irregular kernels. The empty dried shell is half split in two on the upper part and bears some resemblance to a muscle. A native of the Moluccas and the Sunda isles. La Maree judges this as well as the preceding to be a doubtful species.

Propagation and Culture. These plants may be propagated by seeds procured from their native countries, and require the same treatment as other tropical trees and shrubs, but as they abound in milky juice, they should be sparingly watered, especially in the winter season.

CERBERUS, in Astronomy, a small northern constellation near Hercules, confining, in Hevelius’s Catalogue, of four stars, which are enumerated under Hercules in the British Catalogue.

CERBERUS, among Chemists, denotes Mercury.

The name CERBERUS is also given by some to a famous purging powder, more usually called pulvis cornachines, and pulvis comitis Harracense. See Cornachina powder.

CERBERUS, in Mythology, a name which the ancient poets have given to a dog with three heads and mouths, born of Typhon and Echidna, and stationed at the gate of hell. Those who entered were cared for by him; but to such as would return he was more terrible than hell itself; except in the influences of Bacchus and Hercules, and Mercury and Orpheus. The “dog of darkness” of the Edda bears, in some respects, a resemblance of this monster.

Some have supposed that CERBERUS is the symbol of the earth, or of all-devouring time; and that its three mouths represent the present, past, and future. Accordingly they derive the name from *κερίς, καρνοφόρος, carnivorous; it being the property of the earth to devour dead bodies. The victory obtained by Hercules over this monster, denotes the conquest which this hero acquired over his passions. The Platonists consider him as the evil demon, who, as Porphyry expressed it, is found in the three elements, air, water, and earth; whence they derive his three heads. In a monument, preferred by Montauro, CERBERUS is represented on a box, with one head of a man, another of a dog, and the third of an ape; and two serpents twining round him bind together his legs. This figure was brought from Egypt. Heraclides gives to CERBERUS 50, and others 100 heads; but he more commonly appears with three. He is said by SOME to have had the tail of a dragon; and instead of hair a skin, flagged over with scales, whence probably is derived the epithet Medusaean.

Dr. Bryant supposes that CERBERUS was the name of a place, and that it signified the temple of the Sun; deriving it from Kûr-Abor, the place of light. This temple was also called Tor Caphel, of which it was changed to *τυρακόπους, and hence CERBERUS was suppos’d to have had three heads. It was likewise called Tor-Korin, Turris Regia; whence *τυρών, of a, from *τιμων, three, and ἄπων, head. Anal. of Mythology, vol. i. p. 439, ccc.

CERBIA, in Ancient Geography, a town of the island of Cyprus.

CERBICA, Sleekhal, a town of Africa, situate 18 leagues S.W. of Capsa, according to Ptolemy. In this place are found some vestiges of the Romans.

CERBOLE, in Geography, a small island, or rather rock, in the Mediterranean, near the coast of Tuscany, a little to the north of the island of Elba.

CERAPHUS, in Ancient Geography, a mountain of Afa Minor, in Ionia, near the town of Colophon.

CERCARIA, in Zoology, a genus of animals, defined by writers vermis nudus ocult insconsuerus, pellicidas, candidus. Gmel. Vermis insconsuerus, pellicidas, candidus, Müller, &c. A worm, invisible to the naked eye, pellicid, and furnished with a tail.

The animals of this tribe which, from their extreme minuteness, can only be discovered by the assistance of a microscope, are found in vegetable and animal infusions of water, in stagnant waters of every kind, in salt-water, even in pure water, and in spermatic fluids, according to some French writers. The most copious history of these anamnelves is to be found in Müller’s Hist. Vermin, Havniae, 1786. Om insurrectiones dysenterae forplantifer-ciliata, &c. The following are the principal species of this genus.

* Depressid.

PLEURONECTES. Orbicular, the tail consisting of a single bristle. Müll. Gmel. This is membraneous, rather round, and white; not the entire tail of the latter is blackish, but the middle orbicular interlines of various sizes, the larger of which appears remarkably bright. When swimming, it is observed that one edge of the lateral membrane is upwards, and the other folded down. It is found in water that has been kept several months. Müll. Adams, &c.

TENAX. Membraneous, anterior part rather thick and truncated; tail three times as short as the body. Müll. This appears an oval pellucid membrane, the anterior part thick, and truncated, the posterior acute, or terminating in a short tail; its motion in the water is circular, whirling about in various directions with great velocity.

CYCLIDUM. Oval, somewhat emarginate behind, with an exsertile tail. Müll. Found frequently in pure water. The body is oval, smooth, membraneous, pellucid, with a black margin; the posterior part is somewhat notched, and furnished with a tail which it thrusts out at pleasure. The interlines are remarkably pellucid vehicles.

** Subregional.

TRIPUS. With a pointed, reflected arm on each side. Müll. This kind was discovered in sea-water by Müller. The body is of a somewhat triangular form, with a straight tail.

LEMMIA. Changeable, somewhat flattened, with an annulated tail. Müll. Remembles, in some respects, the proteus of Baker, though altogether different. The body is capable of being contracted or extended, changing from oblong, or the shape of a pear, to kidney-shape. The tail is short, thick, and annulated. It vibrates, when stretched out, with so much velocity, that it appears double. The interlines are not very dilated. Near the apex is a small pellucid globule, which Müller supposes to be the mouth. Adams, &c. Inhabits stagnant water.

LUPUS. Cylindrical, thick, and elongated: tail terminating in two spines. Müll. Lives in stagnant waters. This is one of the largest species of its genus. It is full of muscles, which are capable of being contracted or extended. The head is larger than the body, with the apex bent down like a hook. The two spines at the extremity of the tail are very bright, and moveable.

PODURA. Cylindrical, posterior part pointed, and slightly

clit
of tail, level, river of air, though, e. months cake, pointed. It body. Also, arm, Gyrinus. Gibba. Inquieta. CERCEAU, terminating and swimming, gelatinous, with ventral turns and long is. This one form Adams. Rarely found. Inhabitants eat water. Hirta. Anterior part, what truncated; lower obtuse, and terminating in two small points. Adams. This also is found in salt water.

Crumena. Cylindrical and ventricose; anterior part obliquely truncate; tail linear, and ending in two diverging points. Adams, &c.

Verticillata. Cylindrical, annulated, with projecting front; tail two small points, Adams.


Luna. Orbicular; tail two short points; anterior part inflated, or crescent-shaped. Cercestis, Adams.

CERCAS, in Ancient Geography, a town of Greece, near Adas, mentioned by Suidas.

CERASAROPOLIS, a town of Egypt, seated on the left bank of the Nile, at the place where this river divides to form the Dikta. It is mentioned by Herodotus and Pompimus Mela. Its eastern branch is the Pelusian arm, and the western, the Canopian. Strabo calls this town Cerephora, and places it on the side of Libya.

CERCI, in the Eastern History, are a body of horse in the service of the grand vizier.

CERCEAL, John Anthony Duc, in Biography, was born at Paris in 1750, and entering at the age of 18 years among the Jeffins, distinguished himself in their society by the vicinity of his talents. Having indulged his taste for Latin poetry, he published a collection of pieces in 1755, which gained him a considerable degree of reputation. He afterwards applied to vernacular poetry, and became an imitator of Miró. But, retiring to a life of leisure and study, he resumed his former pursuits; and, after a long illness, he was enabled to pursue his studies in peace. He died in 1775, and was buried in the church of St. Stephen, where a monument was erected in his memory. His works were published posthumously, and were received with great applause.

CERCEI, in Hisbelion, one of the nymphs called Oceanides, the daughter of Oceanus and Theis. Hesiod. Theogon. v. 55.

CERCEI, in Ancient Geography, a town of Egypt, placed by Diodorus Siculus towards the western ocean; called the Atlantides. CERCEASCO, in Geography, a town of Piedmont, in the marquisate of Salsus; 21 miles S.S.W. of Turin.

CERCEI, in Ancient Geography, a people who dwelt to the south of Mount Caecina and the Esiae sea, according to Strabo.

CERCI, in Modern Geography, the mountains of Thessaly, according to Pausanias. They are named "Mons Cercestis," by Ptolemy, and "Mons Cerasti" by Lyc. CERCLITICUS Sins, a small place, said to be called by the ancient coast of the Esiae sea, to the east of the Ades.

CERCIUS, a mountain of the island of Samos; Strabo seems to make it a part of mount Amphias.

CERESARO, in Geography, a town of Naples, in the province of Calabria Citta; 6 miles N.E. of Capo di Farno.

CERCHIARO, a river of Naples, which runs into the sea of Tarentum; 9 miles N.E. of Capo di Farno.

CERCI, in Ancient Geography, an island of the Mediterranean, placed by Ptolemy in Asia Minor, on the coast of India.

CERCHI, a people of Italy, who were forced by the Romans into a colony under the consulate of Lucius Varus and A. Munatius. Diod. Sec.

CERCEI and CERCI, now Kraukol, two vast and contiguous islands of Africa, situate to the S.E. of Capo-podis, at the distance of five leagues. Strabo and Pliny say, that they were joined by a bridge. Poleni mentions also a town of the name of Cercina. A great stream, Strabo, and other ancient geographers, fix the beginning of the Iberian Syrtes at these islands; though, from circumstances
CERCIS, a mountain of Macedonia, between Peonia and Sotica, according to Thucydides.

CERCINE, a town of Macedonia, at the mouth of the river Pontus in the lake called "Cerciniths palus," which was a marsh extending from west to east, between the town of Cercine and the place called Myrcineus.

CERCINTIS. See CERCINE.


Gen. Ch. Col. Parnath one-leaved, very short, bilobed, gibbous below, meiferous, with five erect obverse teeth. Cor. Petals five, inserted into the calyx, phyllonoceous; wings bent upwards, affixed by long claws; standard roundish, shorter than the wings, and placed beneath them; keel two-petalled, converging into a heart-shaped form, and containing the stamens and pistil; neasty a style-shaped gland beneath the germ. Linn. (a cavity between the insertion of the stamens and of the pistil. Linn.) Stam. Filaments ten, not united, avul-shaped, curved, slightly downy on the inner side of their base, unequal, inserted into the calyx; anthers oblong, incumbent, rising upwards. Pyl. Germ linear-lanceolate, pedicilled, smooth; style the length of the stamens; stigma obtuse, rising upwards. Peric. Legume oblong, obliquely acuminate, one-celled. Seeds several, roundish, attached to the upper future.

Eff. Ch. Calyx five-toothed, gibbous below. Cor. phyllonoceous; standard short, placed beneath the wings; fruit, a legume.

Sp. 1. C. Siliqua trium. Common Judas-tree. Linn. Sp. Pl. 1. Mart. 1. Lam. 1. Wild. 1. Lam. Pl. 328. (Siliqua fylhebra rotundifolia; Dast. Pin. Arbor Judae; Dast. Ræ. hill.) "Leaves orbicular-heart-shaped, smooth." A tree, from twenty to thirty feet high. Trunk upright, with a dark-green bark; branches irregular, spreading. Leaves alternate, petiolated, quite entire, thickish, pale green above, greyclad underneath, deciduous, with diverging leaves proceeding from the extremity of the petiole; stipules oblong, membranous, opposite, caduous. Flowers red, or bright purplish rosy-colour, sometimes white, appearing before the leaves in lateral racemes on the branches, and sometimes on the trunk of the tree. Legumes five or six inches long, near an inch broad, resembling the cave of a knife, whence their French name is derived. The flowers are grateful to birds, especially parrots, who often make great havoc among them and prevent the fruit from coming to perfection. On account of their agreeable pungency they are used by the French as an ingredient in salads, and are sometimes pickled. A native of the southern parts of Europe, flowering in April and May. Cultivated by Gerard in 1597. 2. C. canadensis, Linn. Sp. Pl. 1. Mart. Lam. Wild. (Ceratia gigantea macrozona folio, Pluk. Alm. 95.) "Leaves acuminate-heart-shaped, pubescent." Common in Japan and American Territories. Resembling the preceding in habit, but smaller and less beautiful. La Mareck affirms that its leaves, as well as those of the common kind, are quite smooth: A native of most parts of North America. Cultivated by Miller in 1790.

Cercis, in Gardening, contains hardy deciduous trees of the following kind; of which the species are the common Judas-tree (C. Siliqua trium), and the Canada Judas-tree, or Red-bud tree (C. Canadensis). The first in its native place rives with an upright trunk to the height of twenty feet, covered with a dark brown bark, dividing upwards into many irregular branches, with the leaves placed irregularly on the branches, on long footstalks; they are of a pale green on their upper, and of a greyish colour on their under side, and fall off in autumn. The flowers come out in the spring, with the leaves, on every side the branches, and many times from the stem of the tree in large clusters, arising from the same point, on short peduncles; and are of a very bright purple colour, being in full beauty before the leaves have attained half their size; and the wood is very beautifully veined with black and green, taking a fine polish. It is a native of the Levant, &c.

It has varieties with white flowers; with flesh-coloured flowers, but without the beauty of the first, and with broader pods.

The second sort grows to a middling size in the places where it is a native; but it has in this climate rarely rises with a stem more than twelve feet high, but branches out near the root. The branches are weaker than in those of the first sort; the leaves are downy and terminate in points. The flowers are also smaller; but the trees are equally hardy, thriving in the open air. It is a native of North America, where it is known by the name of Red-bud, from the appearance of the flower-buds in spring before the leaves come out. And the wood is of the same colour and texture as in the first kind.

Method of Culture. These plants are raised by sowing the seeds in the spring season, as about March, in beds of common ground, to the depth of half an inch. When the plants appear, they should be kept clean, and occasionally watered; and when of sufficient growth to be removed into the nursery, planting them in rows at the distance of one foot, and two feet between the rows. After they have remained in this situation for two or three years, they become proper for planting out in the shrubbery parts of pleasure grounds.

They are also capable of being raised by layers and cuttings; but they seldom succeed in well in these ways as in the former. They have a highly ornamental effect when planted out in the clumps, borders, and other quarters, among hardy, flowering, deciduous trees of other kinds in the garden or pleasure-grounds.

CERCITAE, in Ancient Geography, a people placed by Ptolemy in Attica Smyrna.

CERCITAE, Grand Circle, in Military Language, is that which the fregisants and, behind them, the corporals, formed every evening at an appointed hour, to receive orders. After the grand circle, a small one was formed in each regiment, were the orders were renewed or repeated to the fregisants of each regiment, who communicated them to the officers of their respective companies. This form was observed under the old government of France.

CERCODIA, in Botany, Soland. La Mareck, Juss. Gart. See Ulmogatis.

CERCOPHII, in Ancient Geography, a name given by Ovid to the inhabitants of the island of Paphaeus.—Alfo, a name given to banditti or robbers, who occupied part of the coast of Aegina, near the Melampygian rocks, on the confines of the territories of Locera and Melis. See Herodot. lib. viii. c. 216.

CERCOPHII, a town of Asia, in the Greater Phrygia. Ptolomy.

CERCOPITHECUS, in Zoology, a name given by Aldrovandus, Maregrave, and other writers, to several species of the monkey tribe. GneUins forms a distinct f-chion, in the Simia genus, of the Cercopitheci, or those with elongated tails, after the name of Aristeus, Simia cyno-furus,
furus, Hamadryas, Veter, and nearly twenty other species are of this family. See Simia.

CERCOPONEDRAS, in Ancient Geography, a kind of rod or palse in Greece, between mount Oeta and the country of the Trachinians, according to Herodotus; which was occupied by the Cercopi. It was by this palse that the Persians advanced to surprize the Greeks who defended Thermopylae. This palse commenced at Afopus, continued through an opening of the mountain called Anopaeus, and having reached the summit of the mountain, terminated near the town of Alpen, the first in the country of the Locrians, on the borders of the Mieans, near the rock called Melampus, where was the habitation of the Cercopi. Count de Choiseul-Gouffier discovered this path in his passage from Athens to Larissa.

CERCOLOS, in Medicine, a preternatural extension and tumidity of the female clitoris, so as to project beyond the labia pudendi.

CERCUS, in Ancient Geography, a hill of Asia Minor, in Bithynia.

CERCY LA TOUR, in Geography, a town of France, in the department of the Nievre, and district of Nevers; 8 miles E.N.E. of Decize.

CERDA, John-Lewis de la, in Biography, a native of Toledo, who entered among the Jeluius in 1574. His literary fame reached Italy, and gained him the particular edicem of pope Urban VIII. His "Commentary on Virgil," 3 vols. fol. has been several times reprinted, and is a work of minute research, and great accuracy, but devoid of taste. His "Commentary on Tertullian's Works," begun in 2 vols. but not completed, is a work of similar character to the former. Cerdà died in 1643.

CERDAINE, La, a country of the Pyrenees, situated partly in Spain, in the province of Catalonia, and partly in France, in the territory formerly called Roufllon; Puy-lerda is the capital of the former, and Mont-Louis of the latter.


Sp. C. — A large tree. Leaves alternate, petiolated, oblong, acute, entire, even, shining. Flowers white, with red veins, in much branched terminal panicles. A native of Peru. The wood, when the tree is first cut down, has an extremely fetid smell, resembling that of a fox's urine; it afterwards changes to that of garlic, and finally assumes an agreeable pungent odour. The dried leaves and bark are used by the Peruvians as articles of cookery.

CERIDESORA, in Ancient Geography, the name of the place where Cerdic the Saxon leader landed, when he invaded Britain in 495, and where he found the Britons drawn up in battle-array to oppose him. This place, according to Camden, was on the coast of Norfolk; but as this is improbable, some learned men have supposed it to be Callith or Calldhore at the entrance of Southampton river. Others again seek for it at Charford; and Carte thinks, nor is his opinion improbable, that it was Charmouth in Dorsetshire; a place afterwards famous for hostile invasions.

CERDON, in Geography, a town of France, in the department of the Ain; four leagues S.E. of Bourg en Bresse.

CERDONIA, in Ancient Geography, Cerdonia, a place of Italy belonging to the Hirpiini.

CERDONIANS, in Ecclesiastical History, a sect who maintained most of the errors of Simon Magus, Saturninus, and the Manichees.

They took their name from their leader Cerdo, a Syrian, who came to Rome in the time of pope Hyginus, about the year 140; and there abjured his errors, but he did this in appearance only; for he was afterwards convicted of perfiling in them, and accordingly was cast out of the church again. Cerdo affected two principles, the one good, and the other evil: between these, he imagined an intermediate kind of deity, of a mixed nature: this half, according to him, was Creator of the world, and the God that appeared under the old law. To his jurisdiction the Jews were subject; and idolatrous nations were under the empire of the evil principle. The good Being, whom he called unknown, was the father of Jesus Chrifti, who, he taught, was only incarnate in appearance, and was not born of a Virgin; nor did he suffer death, but in appearance. He was a great admirer of virginity, and recommended it to his followers. He rejected or despised the Old Testament; but probably received the books of the New Testament as other Christians did. Marcion, his disciple, succeeded him in his errors: whence the Marcionites.

CERYLUM, in Ancient Geography, a place on the confines of Thrace and Macedonia, near a maritime burgh, in the country of the Argiliani, and in the vicinity of the town of Amphipolis, according to Thucydides and Lyco- phon.

CERE, Cera, in Ornithology. See Ornithology.

CERE, St. in Geography. Cere, a town of France, in the department of the Lot, and chief place of a canton, in the district of Figeac; 10 leagues N.E. of Cahors. The place contains 3798, and the canton 12,169 inhabitants: the territory includes 235 kilometres, and 12 communes. N. lat. 44° 52'. E. long. 1° 47'.

CERE-CLOTH, found of cere, cera, wax, and cloth, denotes cloth impregnated with glutinous matter, for the purpose of being applied to wounds or bruises, or for other uses.

CEREA, in Geography, a town of Italy, in the Venetore, belonging to the lalte of Venice; 4 miles W. of Legnano. At this place a battle was fought, in 1796, between the Austrians and French; in which the latter kept the field, and the former lost 100 men killed and 350 prisoners.

CEREALES edile, two officers of ancient Rome, appointed under Julius Cæsar, to have the superintendency of the corn and grain for the provision of the city. They also presided in the cerealia. See Edile.

CEREALES ludi, solemn sports held in honour of Ceres, wherein the matrons represented the grief and lamentation of Ceres for the los of her daughter Proserpine, and her travels to find her again.

CERALIA, in Antiquity, feasts of Ceres instituted by Triptolemus, son of Celeus, king of Eleusine, in Attica, in gratitude for his having been instructed by Ceres, who was supposed to have been his nurse, in the art of cultivating corn and making bread.

There were two feasts of this kind at Athens; the one called Eleusinia, the other Thesmophoria.

What both agreed in, and was common to all the Cereal- lla was, that they were celebrated with a great deal of regi- mony and purity; so that it was esteemed a great pollution to meddle, on those days, in conjugal matters.

It was not Ceres alone that was honoured here, but also Bacchus.
CER

Cereus. The victims offered were hogs, because of the waste they make in the products of the earth. Whether there was any wine offered, or not, is matter of much debate among the critics. Plautus and Macrobius seem to countenance the negative side; Catu and Virgil, the positive.

The cerealia passed from the Greeks to the Romans: Q. Memmius' edile, being the first who introduced these rites into Rome, as appears from a coin of this magistrate, on which is the figure of Ceres, holding in one hand three ears of corn, in the other a torch, whiff her left foot trod on a serpent; with this inscription, "Memmius Edilis Cerealia primus fecit." The Romans held them for eight days successively: commencing, as generally held, on the fifth of the ides of April. The women alone were concerned in the celebration, and were all dressed in white: the men, likewise in white, were only spectatores. They eat nothing till after fun-fet; in memory of Ceres, who, in search after her daughter, took no repast but in the evening. The festival closed with a banquet and public horse-races.

After the battle of Cuma the festival was so great at Rome that there were no women to celebrate this feast because they were all in mourning, so that it was omitted that year; but after the second Punic war, it was celebrated with an acclam of splendid gifts, presents, paintings of chariots, crowns, and rich plunder taken from the enemy, being carried in the procession. According to Macrobius, an egg made part of the feast, being an emblem of Ceres.

Cerealia femina, an appellation given by some to what we call leguminos, or pulse. Dr. Cullen (Med. Med. vol. i. p. 274.) refers several farinaces to three different heads, under the titles of Cerealia, Leguminos, and Nutes oleo. By this appellation, he saies they may be distinguished as containing more or less of succarino and only matter, or as there are in proportion to one another. In the cerealia he supposes the farago to be larger in proportion to the oil; in the leguminos, the oil to be somewhat larger in proportion to the farago; and in the nutes oleo, the proportion of the oil to be ill greater. But he is of opinion, that in the several farinaces the nourishment they afford is in proportion to the oil they contain. Under the title of cerealia are commonly included the seeds of the several graminaceae or culmiferous plants, that are employed as the food of men. To this head he refers barley, rye, millet, rice, oats, maize, and wheat; subjoining to his account of each appropriate reflection, and he then enumerates other farinaceous substances which are not of the tribe of gramina, but very much of the same farinaceus nature with those, such as buckwheat, fago, falop, potato, and chestnut. See each of these articles.

Cerebelli inferior, in Anatomy, is an artery, which comes off from the vertebrai. See Arteries.

Cerebelli superior, is a branch of the basilar artery. See Arteries.

Cerebellica, in Ancient Geography, Clelethle, a place of Gaul, between Valenica and Anguilla.

Cerebellum, in Anatomy, that portion of the contents of the cranium, which is contained in the lower fissure of the occipital bone, and covered by the tentorium. See Brain.

Cerebri anterior, is the anterior branch of the internal carotid artery. See Arteries.

Cerebri media, is the large posterior branch of the internal carotid artery, which runs in the sifura Sylvii. See Arteries.

Cerebri posterior, or profunda, is a branch of the basilar artery. See Arteries.

Cerbites of Knorr, in Zoology, one of the syno- nyma of Madrepora Areola, which see.

Cerebrum, in Anatomy. This term in common language denotes the brain in general; but anatmilists confine it to that part of the encephalon, which occupies all the upper part of the cranium: indeed by far the largest portion of the cavity. See Brain.

Cerebrum jovis, in Isidoryology, a name given by Ennius the post to a peculiar fill of the labros kind, called by the generality of authors cornus; it is distinguished by Artedi from the other species of the same genus, by the name of the labros, qui surus autem ab o. See Anatomy.

Cereolium, in Botany, folio glutinos, Hall. See Scandix cereolium.

Cereolium annuum nodosum, Morif. See Scandix nodos.

Cereolium folia triplicato-pinnatis, Hall. See Chero- phyllum folio.

Cereolium laetifolium bifurum, Mor. See Chero- phyllium bifurum.

Cereolium rugofolis folio, Bocc. See Chero- phyllum arcentum.

Cereolium folis bifuratis, Hall. See Chero- phyllum aurum.

Cereis, in Botany, a name used by some authors, and supposed to have been used by the ancients for the filguatrum, or 'Judas's tree. See Ceriis.

Cerejae, a composition of wax and oil.

Some also give the same denomination to the oleum cerea, otherwise called butter of wax.

Cerements, cloths dipped in melted wax, with which dead bodies were infolded when they were embalmed. Thus the term is used by Shakspeare:

"Let me not burn in ignorance, but tell
Why canopied bones, buried in earth,
Hve we burn their ceremonies?"

Ceremonial is used for the set or system of rules and ceremonies which custom has introduced for regulating our behaviour; and which persons of each, either out of duty, decency, or civility.

Ceremonial, in a more particular sense, denotes the manner wherein princes and their ambassadors use to receive and treat one another. The ceremonial is a kind of law introduced by compact, custom, prescription, &c. which sovereigns and their ambassadors are to observe at their interviews, that none of them may either receive more or less marks of respect than they are entitled to. Some distinguishing three occasions on which the ceremonial is to take place: viz. when princes meet in person; when they write to each other, and when they send ambassiodors. There are endless disputes among sovereigns about the ceremonial: some endeavouring to be on a level, and some to be superior, to others. Numerous schemes have been proposed for fixing the piece and rank of each prince; but they have not been accepted of by any, except some alternate princes, as they are called in Germany. See Precedency.

Ceremonial is more particularly useful in speaking of the laws and regulations given by Moses, relating to the worship of God among the ancient Jews.

In which sense, it amounts to much the same with what we otherwise call Levitical law; and stands contradistinguished from the moral, as well as the mundane.

It is disputed, whether the observation of the sabbath be a ceremonial or a moral law. See Sabbath.

The ceremonial law prescribed the forms, usages, rites, &c. relating to sacred places, utensils, priests, levites, prophets, congregations, garments, feasts, sacrifices, sabbaths, &c.

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CER

Most of the ceremonial laws of the Jews had some relation to those idolatrous customs which had been established among them before the publication of the levitical law.

CEREMONIALE, a book in which is prescribed the order of the ceremonies to be observed in certain actions and occasions of solemnity and pomp.

The ceremonial of the Roman church is called ordo Romani. The Roman ceremonial was first published by the bishop of Coreya in 1510; at which the college of cardinals were in faudizand, that some of them voted to have the author as well as book burnt, for his tenacity in exposing the sacrilegious ceremonies to the eyes of the profane people.

CEREMONIEUX MILITAIRES, military ceremonies or ceremonial. See Chevaliers.

CEREMONY, an assemblage of several actions, forms, and circumstances, tending to render a thing more magnificent and solemn. The word comes from the Latin ceremonia, quali Cereris munia, on account of the great ceremonies used in making the offerings to Ceres; or because the first religious ceremonies were those of Ceres. Hence Cicero calls "Ceremon antiquissimum religiosisimum principem omnium factorum quo spiritum gentis hunts."

We have an ample and magnificent account of the religious ceremonies and customs of all the nations in the world, represented in figures designed by Floris, with historical explanations, and divers curious illustrations, &c. Ceremonies & Coutumes Religieuses de tous les Peuples du Monde, 6 tom. fol. Amst. 1735.

M. Porree, in 1646, published a history of ancient ceremonies; tracing the rise, growth, and introduction of each rite into the church, and its gradual advancement to superstition therein. Traité des Anciennes Ceremonies. Amst. 1646, 12mo.

Many of them were borrowed from Judaism; but more, as it should seem, from Paganism.

Dr. Middleton has given a fine discourse on the conformity between the popish and pagan ceremonies; which he exemplifies in the use of incense, holy water, lamps and candles before the shrines of the saints, votive gifts or offerings round the shrines of the deceased, &c. In effect, the altars, images, croffes, processions, miracles, and legends; nay, even the very hierarchy, pontificate, religious orders, &c. of the present Romans, he shews, are all copied from their heathen ancestors. Who then can doubt of the idolatry of popery, when we see the profane people of Rome worshipping at this day in the same temples, at the same altars, sometimes the same images, and always with the same ceremonies, as the old Romans? See Middleton's Letter from Rome, and Prefatory Discourse in his Works, vol. iii.

Ceremony is also applied to those expressions or tokens of respect and honour which people pay to each other, out of mere civility and good breeding.

Ceremony, habi of, denotes the ornaments and external badges of a profession, dignity, or office.

Ceremony, officers of, those whose business is to see the customary ceremonies duly observed in actions of pomp and solemnity. Such are marshals, serjeants at arms, &c.

In our court is a master and attendant of the ceremonies: the French have a grand master of the ceremonies, as well as a master and attendant.

The master of the ceremonies is an officer instituted by King James I. for the more honourable reception of ambassadors and strangers of quality. He wears about his neck a chain of gold, with a medal under the crown of Great Britain, having on one side an emblem of peace, with this motto, "Berti pacifici," and on the other an emblem of war, with "Dieu et mon droit." His salary is 300l. per annum. The attendant of the ceremonies executes the office of master in all respects, whenever the master of the ceremonies is absent. He has a salary of 141l. 13s. 4d. per annum. The dignity of the ceremony is an officer subordinate to both the others, with a salary of 10l. per annum. There are also several officers of ceremonies in public places, and in private families, &c. whose business it is to direct and prevent the arrangements that are necessary for preserving a due regard to rank and decorum.

In churches of the Roman communion there are also masters of the ceremonies, to see that every thing be performed as prescribed in the ritual.

Ceremony, in the Royal Navy, the form used in receiving the principal officers on board, or in passing any of his majesty's ships; which is as follows. All flag officers are to be received on board his majesty's ships with a guard of arms and heat of drum; which, for the admiral, or flag-officer commanding in chief, is to be a marshal; for an admiral, three flags; for a vice-admiral, two; for a rear-admiral, one; but the first captain to the admiral, or commander in chief of the fleet or squadron, is to be received on board by a guard only. If any of those officers present one of his majesty's ships with his flag at the head of his boat, the same ceremony is to be observed.

Cerences, or Cerance, in Geography. A town of France, in the department of the Manche and Channel, and diocese of Coutances, 24 leagues N. of Coutances.

Cerens, a town of France, in the department of the Sarthe; 10 miles S. of Le Mans.

Cerenzza, or Gerenzza, a town of Naples, in the province of Calabria, seated on a rock, with a bishop's seat; 10 miles N. of St. Severina. N. lat. 39° 43'. E. long. 17° 12'.

Cereolium, in Botany. A name used by Pliny to express the gingidium, an embellishitious plant of the nature of the chervil or cereolium; and it is very probable that this name is only a false spelling of that word. Columbia makes the cereolium and gingidium different; but it may only be that in different ages they applied these names to different species of the same genus of umbelliferous plants. Neoplatonists tell us, that the gingidium of the ancients was called by the latter writers bassiaum; a name very well expressing its seeds, which are long and slender, and are pointed at both ends.

Ceres, in Astronomy, a new primary planet, discovered on the 1st of January 1801, by M. Piazzi, astronomer royal at Palermo in Sicily. This is an intermediate planet between the orbits of Mars and Jupiter, and appears as a star of the 8th magnitude, being probably about the size of the moon. Its distance from the sun is about 23 times that of the earth, and its periodical time nearly 4 years and 2 months. Since the arc of its orbit through which this planet runs during the period it was observed by Piazzi was but small, no great degree of accuracy can be expected in stating the elements of its theory: the following, however, communicated by Dr. Hutton of Woolwich to Mr. O. Gregory, and published in his "Treatise on Astronomy," 1803, are the most exact yet known:

Place of the ascending node - - 2° 20' 59" 50'
Inclination of the orbit - - 10° 47
Place of the aphelion - - 2° 39' 57"

Time of the passage through the aphelion - - January, 1801. 1:33:2

Eccentricity - - 0.0304
Log. of the greater semi-axis - - c.4156586
Time of the sidereal period - - 4.13 years.

These
Ceres.

Thefe particulars are deduced from calculations made by Dr. Burchardt at Paris on the orbit of this planet confidered as an ellipse, and communicated to the celebrated astronomer M. Von Zach, on the 21st of June 1801. This ellipse, he fays, represents, within a few seconds, the latitudes and longitudes of five obervations; and he adds, it would have been easy to obtain a greater degree of accuracy; but he thought it quite fuperfluous, as the arc run through is fo small.

Dr. Herchel, who classifies this planet, as well as that difcovered by Dr. Olbers of Bremen (see Pallavis), under the new denomination of Afteroids (which he has published, in the Phil. Trans. for 1802, part 2., a variety of obervations which he made on these two celestial bodies. Calculating from the obervation, in which he had great reafon to confide, he inferred that the angle under which Ceres appeared, in the circumstances which he minutely defcribed, was only **φ**2159 or **φ**2.

The mean distance of Ceres from the fun, according to the moft recent information, and which he admits as sufficiently accurate for his purpofe, is 2.0624; and its geocentric longitude and north latitude at the time of his obervation (April 1802), were about 28° 26' 15" 20'. With these data, Dr. Herchel proceeded to calculate the distance of Ceres from the earth at the time of obervation, partly by the usual method, and, when the elements were wanting, by a graphical process, sufficiently accurate for his purpofe. The computed distance of Ceres was 1.674; and thence he found, that its diameter, at the mean distance of the earth from the fun, would subtend an angle of **φ**35127, and that, consequently, its real diameter is 161.6 miles. When we confider the size of this new star, there can be no great reafon to expect that it should have any fatellite. Dr. Herchel made many obervations, with a view of ascertaining this point; from the refult of which he infers, that two very small ftars which he observed may be fatellites; but the supposed fatellites are fo small, that, with a 20-feet telescope they require a power of 300 to be seen; and the planet fhould be hidden behind a thick wire, placed a little out of the middle of the field of view, which must be left open to look for the supposed fatellites. However, the retention of a fatellite in its orbit, it is well known, requires a proper mafs of matter in the central body, which it is evident these newly difcovered ftars do not contain. The colour of Ceres is reddily, but not very deep; though it is much more reddily than Pallavis.

The name of Ceres was given to this planet by M. Piazzi, its difcoverer. But other names have been fuggected as more appropriate. Some have propofed the name of Venera; alliziing to the god who fabricated the arms of Achilles in the heavens near the god of war. Prof. Reimar of Hamburg is of opinion, that it fhould be called Cupid; for he would be the nearest (reckoning downwards from Venus) to Mars, the lover of Venus. Others fuggected that the name of Cupid would be proper, because it conveys an idea of blindfefs; for the new star has the appearance of a ftar only of the 8th magnitude, and cannot be seen by the unaided eyes of men. In Italy it will perhaps retain the name of Ferdinandum Sidus, and in France that of Planetz Piazzi, till time and circumstances shall have otherwife decided. A friend of M. Von Zach expreffed the order of the eight planets (Pallas not being difcovered) in the following lines:

"Mercurius primus; Venus altera; Terra deiné; Mars pothea; quin tam incendé vis vidiscit Hera. Jupiter hanc ultra effe. Sequitur Saturnus; et illum Uranus egregidet; non autum dicere fummus."

Mr. Macaulay, and other philosophers, expreffed, about Vol. VII.

Sicily, Attica, Crete, and Egypt claim the honour of her birth; but general fuffrage favours Sicily, where she had her ordinary residence in a delightful part of the island called "Enna," in which were beautiful meadows watered with perpetual springs. Accordingly, Le Clerc fays, (Bibl. Univ.) that the name of Ceres was Did, and that she was queen of Sicily, where she rendered her reign illustrious by teaching her fubjects the art of agriculture, as well as by eftablifhing feveral laws concerning policy and the property of lands, that every one might reap what he had fown without molestation: and from these circumstances this queen acquired the honourable difiinction of being confidered as the goddess of corn and of the earth. In her youth she was extremely beautiful, and as fable reports, her brother Jupiter fell in love with her; and the fruit of the amour, obtained by the deception of transforming himfelf into the figure of a bull, was Plerephata, Proferpine, or Hecate. Pluto, falling in love with Proferpine, took her away, and mounting his chariot drawn by four borches, purfued his way direcdy to hell, in oppofition to the remonfances of Minerva, who vainly endeavoured to difuade him from the defign. Ceres, apprized of this circumstance, traversed sea and land in search of her daughter; and after having travelled by day, she lighted a torch, as it is faid, in the volcano of Mount Etna, and continued her fearch by night. In her fruitless rambles the fame near the lake of Syracuse, and perceiving her daughter's veil floating upon the water, she concluded that her ravithers must have made their escape that way. At length she was informed by Arethusa, the nymph of a fountain, whose waters flowing from Elia into Sicily, glide under the bottom of the sea and in the confines of Styx, that she had seen Proferpine, and that she had been ravished by Pluto, who had made her queen of hell. She intreated her at the fame time not to indulge any further refentment againft the earth, which had become barren since she had withdrawn her precious gifts. Upon this intelligence Ceres mounted her chariot, and traversing the immense regions of the air, arrived at Olympus, and prefenting herfelf at the foot of Jupiter's throne, demanded of him her daughter. Jupiter having appeased the anger of Ceres by affuring her that the match of Proferpine with Pluto..."
CERES.

Pluto was not disadvantageous to her, and by decrees, that Proserpine should remain six months of the year with her husband, and the other six months with her mother, she bethought herself how she might avenge the calamities occasioned by licentious and famine. As Attica had been more distressed than other countries, she went to Eleusis, where, after having shivered Triptolemus, the son of Cecrops, sovereign of the country, and having instructed him in every thing that related to agriculture, she left him her chariot, and ordered him to travel through the earth in order to teach its inhabitants this necessary and useful art. Triptolemus, having traversed Europe and Asia, arrived in Scythia at the court of Lyconus, a tyrannical prince, who, for attempting to affright his children, was transfixed into a lynx, an animal which was the symbol of cruelty. The ancient historians agree with the poets in their account of several particulars above recited. Strabo (i. vii.) mentions the meadows of Enna whence Proserpine was carried off; and Cicero (in Verri.) seems to admit the fact, and has given us an elegant and ornamented description of this place. Diodorus Siculus also says, that Sicily, of all the countries on earth, had been most distinguished by the favours of Ceres, and that the goddess had fixed her ordinary residence in this island. "The Sicilians," says he (lib. v. c. 2.), "hold by tradition from their ancestors, that their island is consecrated to Ceres and her daughter Proserpine; some poets have written, that at the marriage of Pluto with their princesses, Jupiter gave them Sicily for a perpetual present; and the historians, who are accustomed the most faithful, say, that it was in Sicily that Ceres and Proserpine showed themselves to men for the first time, and that this island is the first in the world where corn grew." Homer, the most celebrated of the poets, has followed this tradition, when he says, speaking of Sicily:

"The soil until'd a ready harvest yields,
With wheat and barley wave the golden fields,
Spontaneous wines from weighty clusters pour,
And love defends in each profuse show."

Pope's Odyss. ix. 123.

This author proceeds to give a description of the fields of Enna, whence Proserpine was carried off; and relates all the other circumstances of this fable much in the same manner as we have above stated them. He also adds, that the Syracusans have a custom of offering oblations every year, each according to his abilities, near the fountain Cyane, which Pluto made to spring up, when in that place he opened a way to himself with a blow of his trident; and that after those private sacrifices they make a public offering of bulls, whole blood they shed over the same fountain. As Attica, says the vase author, was the country, which, next to Sicily, was most honoured with the favours of Ceres, the Athenians intuited, from respect to her, not only sacrifices, but the Eleusinian mysteries, which became venerable for their sanctity and antiquity. See Eleusinia. The Sicilians also, besides the sacrifices which they offered at the fountain Cyane, instituted feasts in honour of Ceres and Proserpine; and they celebrated them in a manner suitable to a people on whom these goddesses had conferred so many distinguishing tokens of regard. These feasts they placed in different feasts of the year, in allusion to the different appearances of the corn. The rape of Proserpine was celebrated about the time of harvest, and the search of Ceres in seed time. The latter lasted fix days, with splendid and magnificent accompaniments. Whilst this feast continued, it was also customary to intermix in conversation some wanton expressions, because by such kind of intercourse Ceres had been diverted from her affections for the loss of her daughter. Besides the cultivation of corn, Diodorus informs us that Ceres had given laws to the Sicilians; and for that reason she was deemed by the Egyptians by the people. "It was not wonderful," adds the historian, "that she could have given men two more valuable pretexts than the supply of the necessaries of life and instructions how to live virtuously. The rape of Proserpine has been represented by most mythologists merely as an allegory, which had an obvious relation to agriculture. However, some ingenious authors, in the number of whom we may reckon Don Pelezon and Le Clerc, relying upon the authority of Diodorus Siculus, have referred this event to real history. Several chronologists, and particularly the celebrated sir Isaac Newton, confining in the relations of Greek writers, have endeavoured to fix the time when Ceres lived; to determine the date of her expedition from Sicily to Athens; and to mention the year of her death, and the worship that was paid to her not long after. Banier, however, notwithstanding these authorities, is perfused that we are not to look in Greece for any other Ceres than the Isis of the Egyptians, nor for other mysteries beside those of that goddess. We are unquestionably certain, he says, that almost all the gods of the Greeks and their worship came from the eastern countries, and especially from Egypt, with the colonists that had peopled Greece at different times; and if there be any concerning whose transportation we may be confident, they are Bacchus or Isis, and Ceres or Isis. Accordingly he thus accounts for the origin of the fable. Greece was infested with a severe famine under the reign of Ezechtheus, as we learn from Diodorus Siculus (lib. xviii.), and also from Ovid, who has amply and beautifully described it. The Athenians, whose soil was not very fertile, were more distracted by it than their neighbours. Ezechtheus, on this occasion, sent to Egypt for corn; and his messengers brought back with them, not only a supply of corn, but the worship and ceremonies of the divinities who preceded over agriculture. The distress they had suffered and the dread of its renewal induced them to adopt the mysteries of a goddeess, who was thought competent to secure them from it. Triptolemus at the same time received that worship into Eleusis. Ambitions of being the first priest of Ceres or Isis, he not only enjoyed plenty himself, but took care to afflit his neighbours by teaching them the mysteries in which he had been instructed. Sicily had adopted these mysteries some time before, and hence it was said that Ceres had come from Sicily to Athens. It was added, that her daughter had been ravished, because the corn and fruit, indicated by her name, had ceased for some time to yield subsistence. Moreover, it was said that Pluto had carried her away to hell, because the same fruits had remained all that time as it were buried in the earth; and Jupiter's decision of the quarrel between Ceres and Pluto intimated that the earth was again covered with new harvests.

This is the account that is given of the introduction of the mysteries of Ceres into Sicily and Greece. If, however, some learned men, with Diodorus Siculus, incline to maintain, that there really was a Ceres in Italy, who gave instructions and regulations relating to agriculture, we may suppose, for the satisfaction of such, that she, having left her daughter, and come to Attica in quest of her, taught Triptolemus the mysteries of Isis; and that the Greeks having ranked her afterwards among the deities, her worship was thus at length confounded with that of the goddesses of the Egyptians. As Triptolemus was one of those who gave the best entertainment to Ceres when she arrived in Attica, it was hence fabled that this goddeess had taught him the art of agriculture, and sent him in her chariot drawn by winged dragons, to propagate this art among mankind. It
was added, that she nursed him with her own milk; thus intimating the care she had taken in the education of this prince. All these mysterious fables, as well as the arrival of Ceres in Attica, which is so finely represented upon a marble tomb, ingeniously explained by M. de Boze, in a dissertation published in the 4th volume of the Memoirs of the Academy of Belles Lettres, have no other foundation, as Banier conceives, but the introduction of the worship of Ceres into Greece, and especially into Attica. Triptolemus, who reigned there, came to Eleusis by sea, in order to carry corn into different countries, where at the same time he taught the mysteries of Ceres, of which he himself was priest. Before he set out, he had sown corn in a field of Attica, as we learn from the 10th of the Arundel Marbles; this, according to the author now cited, (Mythology, &c. b. iv. c. 10.) is the key and solution of this whole fable; for it refers to the time when the worship of Ceres, so ancient in Egypt, was received in Greece; and not to that of agriculture, which had been known there long before; unless we choose to understand it of a new method of cultivating the ground, which the Greeks learned in their travels into Egypt, and reduced to practice at this time. The marbles now quoted fix this date under the reign of Erechtheus; that is, according to the commentators on these marbles, 1426 years B.C. or about 280 before the Trojan war. The Arundelian marbles, however, point out three dates of these events, which are not ranged in the same manner with that of other authors who speak of them. In the first of those eras, viz. the 12th, they represent Ceres as coming into Attica; in the 13th, they say that Triptolemus began to sow corn in the fields of Eleusis; and in the 14th they mention the rape of Proserpine; so that the arrival of Ceres at Athens precedes the rape of her daughter ten years. Blair, in his Chronological Tables, refers the arrival of Ceres in Athens to teach the inhabitants the art of growing corn, and her sending her son Triptolemus through the roll of Greece, to the year 1283, B.C. Newton, in his "Chronology," refers it to the year 1590, B.C. The hazard to which Triptolemus was exposed in his travels gave rise to the fable of Lyceus, already mentioned; and that of his being drawn in a chariot by winged dragons is taken from an ambiguity in the Phenician language; in which the word used in this history signifies either winged dragons or a ship adorned with iron hooks, as we are told by Bochart (Hieroz. l. 3. c. 14.), and after him by M. Le Clerc. Banier, however, inclines to the opinion of Philochorus, cited by Ennius, who says, that this ship was taken for a flying dragon, because it had upon its prow the figure of a dragon.

Before the amour of Ceres with her brother Jupiter, fable reports, that she had another with Neptune, the fruit of which was the famous horse Arion, or as the Thelphusians and Phigalians relate, a daughter, called by the Arcadians Hera. In reference to this circumstance Paunofias says, (Arcad. lib. viii.) that upon mount Elaius, in Arcadia, 30 stadia from Phigala, Ceres had a cave into which she retired, clad in mourning, so that she was called black Ceres, and that the Phigalians dedicated to her memory on this spot a wooden image, having the body of a woman, and the head of a horse, and bearing in one hand a dolphin, and in the other a dove. When this statue was accidentally burnt, the Phigalians forgot the worship of Ceres, and neglected her feasts; upon which the gods punished them with a severe drought. In this distress they consulted an oracle, which informed them, that if they did not re-establish the worship of Ceres, a famine would prevail to such a degree as to oblige them to eat their own children. At length Pan, as he hunted inArcadia, discovered her retreat, and acquainted Jupiter with it; and the god, by the intercession of the Parcae, appeased her, and restored her again to the world; in consequence of which, as the fable reports, the earth produced corn and fruits. He fed (in Theogon.) informs us, that Ceres had another amour with the hero Jasion, by whom she had a son, named Plutos, who was born in the island of Crete, and became very powerful both by sea and land; and who, having brought agriculture to perfection, as the means of acquiring wealth, was called the god of riches.

Ceres was distinguished by a great variety of appellations, the principal of which were "Magna Mater," and "Mater Maxima," and the was honoured in many places with feasts and sacrifices. The most customary offerings presented to this goddess were a pregnant sow and a ram; and they also consecrated to her the crane, the turtle-dove, the sea-fish, called Sumbelat, and the winged serpent. Of vegetables, corn was the most usual offering to her, and with this they decorated her images, and her garlands were formed of navette and rape-seed; but flowers were prohibited, because Proserpine was carried away whilst she was gathering them. The poppy was faced to her, not only because it grew among corn, but because in her diftresses Jupiter gave it her to eat, that she might sleep and forget her troubles. In spring they crowned her images with the stems of graminous plants; and in her sacrifices they made oblations of wine to her. Cicero mentioned an ancient temple dedicated to her at Catania in Sicily, in which the offices were performed by matrons and virgins only; no male being admitted on this occasion. Ceres, according to the abbe Banier, was usually represented of a tall majestic stature, fair complexion, languishing eyes, and yellow or flaxen hair; her head crowned with a garland of poppies, or ears of corn; her breasts full and swelling; holding in her right hand a bunch of the same materials with her garland, and in her left a lighted torch. When feated in a car or chariot, she is drawn by lions, elephants, or winged dragons. Mr. Spence, in his "Polymetis," observes, that the face of Ceres is a very pretty one, and from some expressions in the poets, he concludes, that she was a beauty of the brummell kind. Her head, he says, is often crowned either with corn or poppies, and her robe falls down to her feet, which, in the language of the flattery, denotes dignity. There is one objection that may be made, says this writer, to the beauty of Ceres; as the figures of her which he has seen generally represent her breasts as none of the smallest. Virgil, in his Georgics, gives us an idea of Ceres, as regarding the laborious husbandman from heaven, and blessing the work of his hands with success. Ceres has been no where exhibited with more beauty than on a medal of Metapontum, in Magna Graecia, and another found at Naples, in the collection of the duke of Castiglione, with the common reverence of an ear of corn, and a mace on its blade. On these coins, the goddess appears with her veil thrown behind her vellum; her head, besides the ears and blades of corn, crowned with an elevated diadem in the manner of Juno; and her hair over her forehead, in beautiful disorder, falling in front, and hanging freely, as if to indicate her affliction for the rape of Proserpine. She sometimes holds in her hand a vase, and with this vase is a name, which the she was worshipped by the Achaeans, under the name of "Nemesis." (Athens. Dict. xii. p. 461.) The drapery of Ceres, in allusion to ripe corn, should be yellow; more especially as the is distinguished by Homer by a corresponding epithet. Ceres is found winged on ancient monuments; with a head-dress in the form of a turban a little elevated, called "Pall." She is thus exhibited on a mutilated statue in her temple at Eleusis, bearing on her head, according to Po-coke, a circular ornament about two feet in height. Ceres is often seen accompanied by the horse Arion; and she is frequently
frequently found, not only with torches in her hands, but with a modius, the symbol of fertility, and the mycic calathus, placed either on her head or at her sides. On an enameled bronze in the collection of Stothard, she is represented in an erect posture over the head of an ox, holding in her left hand a ear of corn, and in her right the head of a ram.

The general character of this goddess, Ceres or Damater, says Bryant (Anal. Anc. Mythol. vol. ii. p. 335) is innocent and rural, that it might be imagined nothing cruel could proceed from her shrine. Nevertheless, there was a time, when some of her temples were as much dreaded as those of Selene and the Cyclopi. They were courts of justice; whence she is often spoken of as a lawgiver. (Ovid. Metam. i. 5. v. 351.) She is joined by Cereus (Orat. in Verr. 5. sect. 2.) with Libera; and the name of the deities, "a quibus initia vitae, atque victus, legum, morum, manufactudinis, humanitatis, exempli hominibus, et civitudinis, ac diphera effe dicantur." The deity, to whom she was a succitator, continues Bryant, was Ex, the fun; who was primarily worshipped in their temples. Accordingly Ceres was the deity of fire, according to this learned author; and hence at Cithæ she was called Coryæ, Ceres, a title of the fun. Her Roman name Ceres, exemplified by Herchius Coryæ, was by the Dorians more properly rendered Carys; and it was originally the name of a city, called Naxos; as many of the deities were erroneously called by the names of the places where they were worshiped. Chios is Charis, the city of fire. Hence, as a personage, Ceres is made the wife of Vulcan, on account of her relation to fire. Her title of Damater was equally foreign to Greece; and came from Babylonia, and the east. Hence it should seem extraordinary, that she should ever be esteemed the goddess of corn. This notion, says Bryant, arose in part from the Grecians not understanding their own mythology. The towns of Ceres were Plautain, or Pyrdæae; so called from the fires, which were perpetually preferred in them. The Grecians interpreted this name Pyrdæae; and rendered what was a temple of Cronus, a granary of corn. Hence they made it a repository of grain; but this was a secondary use to which these places were appropriated. They were properly sacred houses, where a perpetual fire was preserved. Many of these temples were dedicated to the deity under the name of Persephone, or Proserpine, the supposed daughter of Ceres. The persons who resided in these temples are represented as persons of great strength and stature; and hence the Cereyanides, whose name was derived from Cereyia, Ker-Coryæ, signifying the temple of the deity, and who were famous for many achievements, such as wrestling, &c. were the priests of Ceres or Damater, who seem to have been tired of their servitude, and glad to get rid of them, as we are informed by the poet. (Ovid, Hes. v. 431.)

Ceres represenations in Sculpture. Herodotus in Ethiopia, after describing the gods of Egypt, affirms his opinion that Homer and Hesiod first among the Greeks, gave names and forms, employments and honors to the gods of their country. That this popular theology had its beginning about the time affirmed by Herodotus, seems very likely, in a variety of collateral evidence. The learned Fabricius, in his EUB. Grec., begins by observing that no Greek writer's work is extant, older than Homer. The theology of Homer and Hesiod is totally different from that of the ancients, and their prejudices in philosophy; and rush of the Orphics remains as bear any resemblance to it, as are considered more modern. The art of sculpture affords testimonies of the time kind; many small bronze statues of early Greek worship were barbarous imitations of common nature; and, although it is to be supposed some of them are intended for divinities, few are accompanied by symbols. When writing began to be used, sculpture improved its representations; and the divinities were supplied with emblems of their offices, not very distant from the time mentioned by Herodotus. There appears of this early sculpture in the valuable collection of Mr. Paley Knight, one of which appears to be a Ceres, with the modius or calathus on her head. This goddess is also represented on a Greek ivory-carving lately in the Villa Althami, published in Wirckelman's Monumenta Inedita with the calathus on her head, the sceptre in her left hand, and the ear of corn and poppy in her right hand. She is represented on various bas-reliefs, and on the Greek vases, with two torches, in relation to the search for Persephone.

The noble fragment of this goddess's stature, anciently worshipped in her renowned temple at Eleusis, has been brought to England, and placed in the university of Cambridge, by the zeal and perseverance of our countryman Dr. Clark. The fragment is one piece of marble, seven feet high from the top of the calathus, which rests on the head, to the bottom, which terminates at the girdle, a little below the breasts. The height of the calathus is about two feet; the head is one foot six inches; the calathus is ornamented with folds of corn, the hoists, leaves of vine, and a vase. The features of the face are obliterated. The hair is collected in one large braid, which is tied and falls between the shoulders; her tunic is secured by a bandage, crossed between the breasts, and buttoned with a Medusa's head; the zone a little lower terminates the fragment. Strabo says, the temple of Ceres was built by Ictinos, who also built the parthenon or temple of Minerva, in the citadel of Athens, and was the cotonarius of Phidias. The fragment perfectly agrees with this account, and is of the grandest style of Greek sculpture.

CERESIUS, in Antiqu. Geography, Tyra, a river of Italy in the territory of the Leponiti.

CERES IUS, Lago di Lugano, a lake of Italy in the same territory.

CERESIOL, in Geography, a town of Italy, in the district of Mantua, 13 miles N.W. of Mantua.

CERESSUS, in Antiqu. Geography, a fortified place of Greece in Beotia, according to Pausanias; belonging to the Thespians.—Allo, a town of Spain in the Tarragona, in the country of the Jastani, according to Pocelyn.

CERET, in Geography, a town of France, and principal place of a district in the department of the Eastern Pyrenees, situated at the foot of the Pyrenees on the river Tech, over which is a bridge of one arch, supposed to be the highest and broadest in France. The place contains 289 houses, and the district 625 inhabitants; the territory comprehends 441 square kilometres and 15 communes. At this place the commissioners of France and Spain met, in 1665, to settle the bounds of the two kingdoms. Ceret is 5 leagues S.W. of Perpignan. N. lat. 42° 28' E. long. 2° 46'.

CERETAPA, in Antiqu. Geography, a town of Alba Minor, in Picatia, P. L. 23. This town began to strike imperial Greek medals, under the authority of its praetor, in honour of Antonine, M. Aurelius, Commodus, and Severus. Dr. Hunter possessed an autonome medal of bronze, with the legend KEPTALION, which Dr. Combe ascribes to Ceretapa.

CERETIA, in Botany. Thik. See Hymenaea.

CERIUS, in P. L. 21, 22. Bauh. See CACTUS.

CERIS, in Gard.ot. See CACTUS.
CERFENNIA, a place of Italy on the Valerian way, between Alba Fucens and Corfinium, according to the Itinerary of Antonine.

CERIGLANO, or Cigliano, in Geography, a town of Naples, in the province of Bariacena; 15 miles S. of Tricario.

CERIGNA, A. L., a town of Naples, situated on a lofty ground, in the province of Capitanata; famous for a victory obtained here, in 1709, by Condulma over the victor of Nemours, who was slain in the commencement of the battle; 20 miles S. of Minturno. It contains about 12,000 inhabitants. Between 50 and 60 years ago an earthquake almost totally destroyed it, and it is not yet thoroughly rebuilt; the streets are crooked and dirty, and the houses are all low, as the owners dare not raise them high for fear of another check. The eighty-first columna milliaria, inscribed with the name of Trajan, is the only fragment of antiquity observable in this town. The commodities of the place are sheep, horses, and corn; the breed is black and gristy, but well-tailed. The present possessor of this town is Pignatelli, count of Egmont. refident in France, who farms it out at 150,000 ducats a year (2 fold.).

CERIGO, in Geography, an island of the Greek Archipelago, well known under the ancient appellation of Cythera. is separated from the Morea by a narrow strait. It is dry, and mountainous, and produces neither corn, wine, nor wine, sufficient for the inhabitants; some of the valleys, however, are fertile, and it abounds with sheep, horses, goats, turtles, and falcons. Although it had formerly few good towns, it now chiefly furnishes a rendezvous for pirates. The circumference is about 50 miles; and the inhabitants are Christian Greeks, subject to the Venetians, who charge the produce every two years. By the treaty of Campo Formio, in 1797, it was surrendered to the French, together with other Venetian islands. See CYPHALONIA.

Cerigo, according to Thucydides, (Voyage, t. i. p. 22.) was called Porphyry by the ancients, on account of the quantities of porphyry found in it.

Cerigo, a town of the above island. seated on its western coast on a sharp rock, surrounded by the sea, and defended by a castle. It has a small harbour, and is the seat of a Greek bishop. N. lat. 36° 20'. E. long. 23° 11'.

Cerigo, in Natural History, a name by which many authors have called that remarkable American animal called the Opossum.

The Americans in some places call this animal, in their language Caricpaya; and it is probable that this name Cеризо is only a corruption of that word, though not be received generally in the world as a proper name, and used as such by M. de Buffon, Barzanka, Nermenberg, and many others.

CERIGOTTO, in Geography, a small uninhabited island in the Greek Archipelago, between Cerigo and Candia; commonly called Regina; about 5 miles in compass. N. lat. 36° 21'. E. long. 23° 13'.

CERILLI, in Ancient Geography, a place of Italy in that part of Magna Graecia, called Bruttium, situate on the sea-coast, at a small distance S.W. from Pandataria.

CERILLUM, a place of Italy in the district of Manifesti, 17 miles W. of Messina. This place contains 1,400, and the county 1,784 inhabitants; the territory includes 624 kilometres, and 14 communes.

CERINES, the ancient Cerica, a foot-port town of the island of Cyprus, with decayed walls, defended by a castle; the see of a bishop, suffragan of Nocera. N. lat. 35° 22' E. long. 35° 24'.

CERINI, Giovanni Domenico, in Biography, an historical painter, was born at Perugia in 1596, and studied under Guido and Domenichillo; from whom he acquired a very beautiful tone of colouring, and a graceful disposition of his figures; and he particularly excelled in giving elegant and noble airs to his heads. He died in 1681. Pillington.

CERINTH, among the Ancients, was used by some to express the rudeness called by others and barbarians and barbarous, and by some crude. See Wax.


Gen. Ch. Nat. Perinthus deeply five-cleft, permanent; segments oblong, equal. Cer. monopetalous, campanulate; tube short, thick;ifice naked and produced; border tubular, swollen, a little thicker than the tube, five-cleft at the summit. Stam. Filaments five, very short; anthers acute, long, two-celled, bilab at the base. Fil. Germ, two-cleft; style filiform, the length of the filaments; stigma obtuse. Pericarp. the permanent calyx. Nuts two, bony, juicy, somewhat egg-shaped, outwardly gibbous, two-celled. Seeds one in each cell.


described by Allioni under the name of *maculata*, and said by him to be perennial.

**Cerinthus maritima procumbens**, Dill. Elt. See *Pulmonaria maritima*.

**Cerinthus echoides**, Scop. See *Onosma echoides*.

**Cerinthus** in Gardening, furnishes a plant of the ornamental, hardy, flowering annual kind; of which the species cultivated is the great honeywort (*C. major*), which rises with stems eighteen inches high, and more, round, smooth, branching, and leafy; the leaves are glaucous, becoming blue by age, smooth, without prickles, but dilated about the edge, and dotted with white; the branches are lacy and nodding, with flowers among the leaves, hanging on long peduncles. It is a native of Italy, flowering in June. It has varieties, with smooth leaves and purple flowers, and with prickly leaves and yellow flowers.

**Method of Culture.** These plants may be raised by sowing the seeds annually in the autumn or early spring months in patches, in the borders, clumps, or other parts. The autumn sowings should be made as early as possible. They also often arise from the full-blown seeds; and should be managed as other hardy annuals. They are proper for being planted out about the apiary, or in the small beds or borders in the shrubbery or other parts of pleasure-grounds, where they produce variety.

**CERINTHANS**, in Ecclesiastical History, called also *Marinians*, a sect that took its name from *Cerinthus*, contemporary with St. John, towards the close of the first or commencement of the second century; said to have been a native Jew, educated at Alexandria, and to have lived at Antioch; who formed a singular system of doctrine and discipline, by combining the doctrines of Christ with some of the opinions and errors of the Jews and Gnostics. Some learned moderns have represented Cerinthus as a vicious pervert; but Dr. Lardner is of a different opinion; and he says, that nothing of this kind is charged upon him by the writers of heresies; not by Irenæus, nor Epiphanius, nor Theodoret, nor the rest. Cerinthus abridged the creation of the world, and the legislation of the Jews, to a created being, who derived from the Supreme God extraordinary virtues and powers, but afterwards became apostate and degraded. He supposed that *Iēsous* was a mere man, born of Joseph and Mary; but that, in his baptism, the Holy Ghost, or the Christ, who was one of the *Deos*, descended upon him in the form of a dove; and that he was commissioned to oppose the degenerate god of the Jews, and to destroy his empire. In consequence of which, by his meditation, the man *Iēsous* was fixed and crucified; but *Christ* ascended up on high, without fulfilling at all. He recommended to his followers the worship of the Supreme God in conjunction with his Son; he required them to abandon the lawgiver of the Jews; and though they were permitted to retain circumcision and the rites of the Mosaic law, and, according to Irenæus, this was the principal error of Cerinthus, that he was for joining the law with the gospel; yet they were to make the precepts of Christ the rule of their conduct. For their encouragement, he promised them the resurrection of the body; after which the millennium was to commence: under the government of *Christ* united to the man *Iēsous*; and this he represented as consisting in eating and drinking, mirthful entertainments, and other festivities.

Some authors ascribe the book of the Apocalypse to Cerinthus, adding, that he put it off under the name of St. John, the better to authorize his revenues touching Christ's reign in the flesh: but it is observed by the bishop of London, in his third Pastoral Letter, p. 58, that his millenary date was not the life of saints, as the Apocalypse represents it, but the life of libertines: and it is even certain that he published some works of this kind, under the title of *Apocalypses*.

That Cerinthus was a Millennium is affirmed by Theodoret, though neither Irenæus nor Epiphanius makes any mention of it. Nevertheless, Le Clerc seems barely convinced that this error is rightly imputed to him. If there be any truth in the accounts of his being a Millennium, it is highly probable (says Dr. Lardner) that he respected the apostle John, if the Revelation be a work of that apostle. Several writers, who did not like the Millennium doctrine received by many Catholics, affirmed the book of Revelation, upon which they chiefly built, to be a work not of St. John, but of Cerinthus. Theodoret says, that whether he wrote himself in the name of John, or only appealed to it in support of his opinions, it is a proof of his having respected that apostle: and if he did, it is probable he received 'is dipel', and the epistle generally ascribed to him. Irenæus says, that John wrote his gospel to contain the doctrine lately taught by Cerinthus, and long before by the Nicolaitans; and St. Irenæus has somewhat to the like purpose concerning the occasion of St. John's writing his gospel. Some have asserted, that the Cerinthians received the gospel of St. Matthew to counteract their doctrine of circumcision, from Christ's having been circumcised; but that they omitted the genealogy. This latter assertion is founded on an erroneous interpretation of a passage in *Epiphanius*; whereas the true meaning of the said passage is, that the Cerinthians preferred this gospel to the others, because of the genealogy; from whence they thought they could prove Christ to be really a mere man, born of Joseph and Mary. It has been said also, on the authority of *Epiphanius*, that they disapproved the epistles of St. Paul, because that apostle held circumcision abolished. Of the truth of this there may, however, be some reason to doubt, from what *Epiphanius* himself states elsewhere. For he informs us that there was a tradition, that when some of them had died without baptism, others were baptized for them, but at the time when they should have hereafter rised up at the general resurrection, they should be punished for that omission. And it was supped that St. Paul refers to it in 1 Cor. xv. 29. He afterwards argues against them from *Habakuk*, and from St. Luke's and St. John's gospels, which seems to imply, that they rejected these parts of scripture, as well as the gospel of St. Matthew, some part of St. Paul's writings, and the Revelation of St. John. Upon the whole, says Dr. Lardner, it is certain, that the Old Testament, and several of the books of the New Testament, were received by Cerinthus. This candid and impartial writer questions whether the opinions of the Cerinthians concerning the person of Jesus be rightly represented. They might speak of Jesus as a man only, though they thought him to be born of a virgin. That they allowed this may be argued with considerable force, if they received St. Matthew's genealogy, as it is probable they did. They allowed the Holy Ghost to have descended upon Jesus at his baptism; which is agreeable to our gospels. But by the Holy Ghost they probably did not mean a person but a power, as *Epiphanius* expresseth it; and as to what is said that the Holy Ghost, or the Christ, was imp flible, and left Jesus to suffer aloce, their real opinion may have been only and no more than this, that the divine nature in Jesus, or the power that came down upon him at baptism, by which he wrought miracles, did not suffer. A story has been related concerning Cerinthus, of which we shall subjoin to this article a brief account. There are some, says Irenæus, who have heard Polycarp say, that John, the disciple of the Lord, going to bathe at Ephesus, and seeing Cerinthus already in the bath, came out again in
haste without bathing, saying to those who were with him, "Let us flee hence, lest this bath should fail, while Cerinthus the enemy of the truth is within." The same story is told with different circumstances by Epiphanius. But the truth of it has been questioned. It is observable, that Irenæus, though personally acquainted with Polycarp, does not say that he had it from him; but that there were some who heard him say as much. It is not at all likely, that the apostle John should go to a public bath; and, therefore, Epiphanius says, in order to account for this impropriety, that John was moved by the Spirit to go thither; and Theodoret affirms, that he went thither on account of some indiscretion under which he laboured. Irenæus and Theodoret say, it was Cerinthus; Epiphanius that it was Ebon, who was in the bath. There are other different circumstances in the relations of this matter, and also other objections against the whole story; and, indeed, some of the ancients who mention it speak of it only as an uncertain report, particularly Theodoret. Mothias's E. H. vol. i. Cave, H. L. vol. p. 36. Lardner's Works, vol. ii. p. 86. vol. ix. p. 316, &c.

CERINTHUS, in Ancient Geography, a town of Greece, in the island of Euboea, situated on the eastern coast, N.E. of Chalcis.

CERISAY, in Geography, a town of France, in the department of the Two Æres, and chief place of a canton in the district of Thionas; 24 leagues S.S.E. of Chatillon-sur-Sarthe. The place contains 930, and the canton 5,444 inhabitants; the territory includes 217 1/2 square kilometres and 13 communes.

CERISIERS, a town of France, in the department of the Yonne, and chief place of a canton in the district of Joigny; 4 leagues N.E. of St. Florentin. The place contains 1,221, and the canton 9,398 inhabitants; the territory includes 207 1/2 square kilometres and 9 communes.

CERISY-la-Salette, a town of France, in the department of the Channel, and chief place of a canton in the district of Cuxances; 2 leagues E. of Cuxances. The place contains 2,045, and the canton 14,958 inhabitants; the territory includes 140 kilometres and 11 communes.

CERITE, in Conchology, Achatus's name of Muræx alcea. See Murex.

CERITES, in Ancient Geography, a people of Italy, inhabiting Ceri, in Etruria. They received into their cities the Vestals who fled from Rome on the arrival of the Gauls; and the Romans granted them the right of freedom, without that of suffrage.

CERITES, the wax-stone, a name used by some old authors for that yellow agate usually called caracates.


Sp. C. - Root annual. Stem five or six feet high. Leaves alternate, petiolate, large, lanceolate, almost entire. Flowers white, peduncled, in long, simple, straight, terminal spikes; bracteoles oblong. A native of Cochinchina, in cultivated ground.

CERLIER, in Geography. See Eriach.

CERMENATI, John Dr., in Biography, a man of letters and historian, was a notable and famed of Milan, and flourished in the earlier part of the 14th century. In 1312 he was deputed by his countrymen as envoy to Guisarni, vicar of the emperor Henry VII. His history of his native city, comprehending, besides its origin, situation, and the character of its inhabitants, all the occurrences in it from 1307 to 1313, is written with uncommon force and precision, and in a style of unusual elegance for that period. We have two editions of it by Muratori, the last in the 9th volume of his Collection of Italian historians, 1790. Cermenati was living in 1337. Mont. Tiraboschi.

CERMORUS, in Ancient Geography, the name of a gulf and small town of Macedonia, on the frontiers of Thrace; placed by Phryn between Amphipolis and Philidium.

CERNA, in Geography, a river of Piedmont, which runs near the Seina, 3 miles N.W. of Vercell.

CERNACHE, a town of Portugal, in the province of Beira; 4 miles S. of Coimbra.

CERNAY, a town of France, in the department of the Upper Rhine, and chief place of a canton in the district of Belfort; 5 leagues N.E. of Belfort. The place contains 1,858, and the canton 9,111 inhabitants; the territory includes 140 kilometres and 13 communes.

CERNAY-en-Dormois, a town of France, in the department of the Marne; 10 miles N. of St. Menehould.

CERNE, in Ancient Geography, an island near which Hanno cast anchor, situated on the coast of Africa, in the Atlantic Ocean. He says, in his Periplo, that it was at an equal distance from the shores of the Colonnes, and from the coast of Carthage. On this island he is said to have built a fort, and established a colony. In the time of Scylax the island of Cerne became a term in navigation for large buildings. The colony of Hanno maintained itself in this island, and it was always the depot of the Carthaginians on the south of Africa. The situation of this island, however, is not clearly ascertained; so that ancient authors have much differed with regard to its position.

CERNES, a town of Ethiopia, near the ocean, according to an ancient chronicle, cited by Cafaubon in his notes on Strabo.

CERNE, or Cerna-Albus, in Geography, a small town in Dorsetshire, England, conflating of four or five indifferently built streets, is situated in a pleasant valley, surrounded by steep hills, and watered by the river Cerne, from which it derives its name. A market (Wednesday) was granted in the fifteenth of king John, and is well frequented. Three fairs are held here. The trade of the town is chiefly confined to matting and brewing, though some bands are employed in a silk manufacture. The beer brewed here is equal, if not superior, to any in the kingdom. Cerne is only remarkable for the remains of its abbey, which, according to William of Malmsbury, Camden, and some others, was founded by St. Augustine, whose zeal in the conversion of the Saxons to the Christian faith is said to have induced him to visit these parts, where, according to the monkish legends, he performed several miracles. There does not appear, however, any decisive evidence that Augustine ever travelled so far from Kent, or that any missionary arrived in the west of England before Birinus, which was 32 years after the time of the English apostle. The most early intimation of any religious foundation here that can be depended upon occurs about the year 570, when Eadwald, or Edwaid, brother of St. Edmund the martyr, king of the East Angles, greatly affected by the murder of his unhappy brother by the Danes, declined the crown, and committed himself, fixing his retreat near this place, where Almer afterwards founded a monastery of the Benedictine order. A gate-house, and some few fragments of the abbey only remain. Cerne is 120 miles W. from London: the population was, under the late act, returned at 8,479, number of houses 1,057.
From this town ascends an immense chalk hill, which is
toumed by a very large entrenchment, called Tredle hill; on
the declivity of this eminence may be traced a gigantic
figure, cut in the chalk, in the manner of the famous white
horse in Berkshire: though whether of a similar origin and
antiquity is doubtful. It represents a man holding a club in
his right hand, and extending the other; the whole figure
measures about 180 feet in height. Hutchins's History of
Dorsetshire. fol.

CERNETANI, in Ancient Geography, a people of Italy
in Campania, mentioned by Pliny.

CERNETZ, in Geography, a town of Switzerland, in
Lower Engadine, situated on a small rich plain, bounded by
two ridges of mountains converging at both extremities, and
producing wheat, barley, flax, and abundance of rich pasture;
24 miles S.E. of Coire.

CERNIA, in Ancient Geography, a town of Cyprus, on
the northern coast, N.E. of Salamis.

CERNIN, S.r., in Geography, a town of France, in the
department of the Cantal, and chief place of a canton in the
district of Aurillac. The place contains 4141, and the can-
ton 8429, inhabitants; the territory includes 233 square
and 6 communes.

CERNITIS PALUS, in Ancient Geography, a kind of
marsh situated in Thrace, near the mouth of the Styron.
CERON, in Geography, a town of France, in the de-
partment of the Marne, and district of Chalons; 8 miles S.
of Chalons.

CERNU, a town of Africa, in the kingdom of Morocco;
7 miles from Safia.

CERNUA, in Ichthyology, the name of a small fresh water
fish of the perch genus, better known by the titles of the
ruff, or ruff, and pope, and among the old writers by that
of aperoth and perca minor. It is caught in several of the
English rivers, though far more local than the common
perch. This is the perca cerina of modern naturalists. See
Perca.

CERNOUS, in Botany, drooping, a term applied by
Linnaeus to the peduncle of a flower. It denotes a greater
and more determinate degree of downward curvature than is
expressed by nutans, or nodding; as in bidens radiata and
helianthus annuus. See.

CERO, in Geography, a town of Italy, in the Veronese;
6 miles N.E. of Verona.

CEROHYTHOS, in Antiquity, a method of painting in
wax, tinted and coloured with pigments for the purpose,
and applied with pencils.

The word is compounded of κερός, cero, ceras, and χέω,
fundo, I melt down. Plin. Hist. Nat. lib. xxxv. cap. 11. and
lib. xvi. cap. 14.

CEROCONA, in Entomology, the name of one of the
Fabricius genera of coleoptera insects. See Meloe.

CEROMA, originally denoted a mixture of oil and
wax, with which the ancient wrighters rubbed themselves,
not only to make their limbs more fleck, and less capable
of being laid hold of, but more pliable, and fit for exercise.
The name ceroma is sometimes applied by ancient phy-
icians to a crepe or creceloth.

The champions, ready to engage in the palestra, having
frilled themselves naked, were first anointed with oil, then
fired over with dust, to which was halfly added wax.
From this last ingredient, this composition was denominated
ceroma, from cero, ceras.

CEROMANTIA, an ancient method of divination, by
means of wax melted over a vessel of water, and let drop in
three distinct spaces; observing the figure, situation, dilance,
and concretion of the drops.

CERON, in Ancient Geography, a country of Asia in Af-
syria, famous for its odoriferous trees. Josephus says that
in his time it presented remains of Noah's ark.—Alfo,
A fountain of Greece, in the Erythée; a country of Thet-
falys, according to Pliny.

CERONE, DOMINICO PEDRO, in Biography, maestro di
cappella to the vicerey of Naples, while that city and kingdom
were in the possession of the Spaniards: though himself an Ita-
larian, and born in the Venetian state, he published, in the Spa-
nish language, the most ample, correct, and useful myrnai-treat-
tises that appeared in any country during the 17th century;
entitled "El follejado yスタッfoe," Naples, 1613, not 1619, as
Walter says. See Dominican Bibliography, p. 279. It was
copied at Antwerp in folio, 1619. This scarce and truly
valuable work for counterpoint, and all the arcana of fugue,
canon, double counterpoint, augmentation, diminution, &c.
occurs in nearly 1000 folio pages. Though his rules for dou-
ble counterpoint are good, we shall recommend to the musi-
cal student the instructions on this subject given by Pedro
Martius, as more accessible, if not more clear; and the examp-
les given by Salvi, of whom we shall speak hereafter, as most in-
telligible and elegant. The study of this species of com-
position is strongly recommended by regular bred musicians,
and practiced by composers of the first clafs.

CERONES, in Ancient Geography, probably the same
people with the Crones mentioned by Plutonii as
inhabitants of the isle of Albion, were, according to Hor-
ley, the most ancient inhabitants of Lochabar, and of part
of Koffe.

CERONIA. See Cerine.

CEROPEgium, in Botany, (from κερός, keiros, a cand-
delabrum or lamp-stand) Linn. gen. 302. Schr. 431. Wild.
Gen. Ch. Cal. five-toothed, or five-leaved, permanent.
Cor. monopetalous, tubular or campanulate, sometimes
ovarian at the base; border five-cleft, converging. Stam.
Filaments five, in the base of the corolla, small. Pfyl. Style
searcly apparent; iligmas two. Peric. Follicles two, very
long, cylindrical, erect, one celled, one-valved. Steds nu-
umerous, imbricated, crowned with a pappus.
Eff. Ch. Contortae. Follicles two, erect; seeds fra-
thery on the border of the corolla converging.

Wild 1. (Notta-noden-vallii; Rheed. Med. 9. tab. 16.)
"Leaves egg-shaped, mucronate; umbels pendulous;
flowers erect." Stam. twining, slender, round, green or
redish. Leaves opposite, petioled, egg-shaped, thick,
soft, smooth. Flowers reddish, in axillar umbels, at first
pendulous, afterwards erect, the common peduncles
continuing pendulous. A native of the East Indies. 2. C.
tuberosa, Wild. 2. Roxb. Cor. 1. tab. 9. "Leaves egg-
shaped, acute, umbels erect; root creeping, tuberoso; 
A native of waste ground in the East Indies. 3. C.
bullosa, Wild. 3. Roxb. Cor. 1. tab. 7. "Leaves obo-
veeves, elliptical, culipdate; umbels erect; root bulbous; 
Distinct from the preceding. Leaves large and different in
form. Flowers only half the size. Bulb solitary, depreiied.
A native of dry woods in the East Indies. 4. C. hybro-
ner, Linn. Sp. 2. Mart. 2. Lam. 2. Wild. 4. "Leaves egg-
shaped; peduncles two-flowered." Stem scabose;
Leaves opposite, quite entire. Peduncles axillary, most frequently
two-flowered. Flowers opposite to the peduncle, not re-
exed but extended in a right line. A native of the island
of Ceylon. 5. C. annua, Wild. 5. Roxb. Cor. 1. tab. 10.
"Leaves lanceolate, fertile peduncles with about two
flowers;

CEROPHEL, in Ancient Geography, a place of Thrace, being one of the places which the Romans assigned to the Goths for their dwelling.

CEROPHEL, a people placed by Ptolemy in Africa Propria.

CEROSUSUS, a place in the Ionian sea, between the island of Melita and Macedonia, in the Adriatic sea.

CEROSTRATUM, in Ancient Writers, denotes a sort of picture composed of pieces of horn; answering to what among us is called MOSAIC WORK. Some write the word cerosstratum, and suppose it primarily to denote a sort of pavement composed of pieces of wood, inlaid and joined with slips of horn, variously coloured and figured. Sallustus will have cerosstrata to denote a method of painting, or enamelling with wax, otherwise called CEROCYHTOS.

CEROU, in Geography, a river of France, which runs into the Aveiron.

CERQUOZZI, Michael Angiolo, called M. A. delli Bartogic, in Biography, a painter of battles, formed himself with regard to Hyle and the telection of his subjects on Bamboccio, but differed from him as to the character and phnyography of his figures, painting those of Italy more Dutch or Flemish sorts. The tints of both are strong and vivid. Whilt Bamboccio excels Cerquozzi in landscape, the latter is superior in the spirit of his figures. His principal work is in the palace Spada at Rome, in which he has represented an army of fanatic Lazzaroni floating appeals to Mafo Ancio. He died in 1663, at the age of 60 years. Filkington by Pufeli.

CERRATO, Paul, a Latin poet, descended of a noble family, was born at Alba in Monteferrant, in 1434; and though by profession a lawyer, he acquired very great literary reputation. Several editions were printed of his epithalamion, written in Latin verse, on the nuptials of William marquis of Monteferrant and Anne d'Aletton in 1593; but his principal performance was a poem "De Virginitate," in three books, heroic measure. Scaliger the elder reckons Cerrato among the first pocts in Italy, though he says he had so much accustomed himself to the lofty style, that he could not defend to the familiar, but would describe a fly in terms as elevated as he would a hero. His works are inserted in the "Delicte Pétarum;" and the last separate edition of them, with an elegant bibliographical memoir prefixed, was given by Signor Joseph Vernazza at Vercelli in 1758. Merci, Tiraboschi.

CERRETANI, in Ancient Geography, an ancient people of Spain, who dwelt along the Pyrenees, near the Vasc. They are mentioned by Strabo, Ptolemy, and Pliny; the latter of whom distinguishes them into Juliani and Aug. Julius Cesar gave them the right of freedom, and Augustus incorporated them into a smalllination, and extended their borders to those of the Vasc. CERRI glono, and CERRETO, in Botany, J. Bau. Park. and Ray. See QUERCUS AGLENA.

CERRETO, in Geography, a town of Italy in the province of Umbria; 15 miles W. of Nurnia.

CERRITO, a town of Naples, in the province of La- vora, the residence of the bishop of Telefa, with a cathedral and collegiate church, and three convents; 18 miles N.N.W. of Benevento.

CERRO, a town of Italy, in the duchy of Milan; 18 miles W. of Como.

CERRUS, in Botany. See CERRI glono.

CERRUS, in Ichthyology, a name given by some old writers, Pliny, Martial, and others, to a fish called by other writers *fiaris*, and *mela candida*. They speak of it as being distinguished from the rest of the fishes in the same tribe, by having a black foot in the middle of each side, and the pectoral and tail fins being red. As the fish is certainly of the *sparus* genus, this description left us by the ancients is not entirely satisfactory, there being at least thirty distinct fishes of this genus, which pollute the characteristic lateral spot they mention. Artedi describes the cerasus as *sparus macula nigra* in utroque latere medio, pinnis pectoralibus caeruleus rubricus. It is generally believed that the cerasus, and the *sparus fiaris* of modern ichthyologists are the fame species. See SPARUS FIARIS.

CERSUMUN, in Ancient Geography, a town placed by Ptolemy in the interior of the island of Curieca.

CERSUS, or CERSEUS, a river of Aisa, which ran between the defiles of Syria, according to Xenophon.

CERTAINTY. See CERTITUDE.

CERTITUDE, in Law, denotes a plain, clear, and dilineated setting down of things, so that they may be understood. 1 Rep. 121. A convenient certainty is required in writs, declarations, and pleadings, &. But if a writ abate for want of it, the plaintiff may have another writ; it is otherwise if a deed become void by uncertainty, as the party may not have a new deed at his pleaure. 11 Rep. 25. 121. Dyer. 83. That has certainty enough, which may be made certain; but not like what is certain of itself. 3 Rep. 97. See PLEADING. See also DRY, FINE, and WILL.
CERTHIA, a genus of birds among the "wee, which has the bill arched, slender, somewhat trapezoidal, and pointed; tongue acute; feet formed for walking.

This is the common character of its genus as it stands in the last edition of the Linnean System. In General Synopsis by Dr. Latham it is defined rather differently; that writer describes it as having the bill flender, incurved, and sharp pointed; nostrils small in general, but sometimes pretty large and covered with a membrane; toe in have uncertain legs, and black feet, toes placed three before and one behind; back too large, claws hooked and long; and tail confined of twelve feathers. The character of the genus confinna in Index Ornithologists corresponds more closely with that assigned it by Gmelin, namely, bill bent, flender, and pointed; toe variety; feet formed for walking; tail composed of twelve feathers.

The main tribe of this tribe bear a near resemblance in a variety of particulars, and distinctly in the plumage, and beauty of plumage, to the Trechus or humming-birds. Some authors have united them as forming only one particular family. This has been objected to because the groups are not confined to any climate, being found in all parts of the world, while the humming-bird is most with only in the warmer parts of America, the species, besides, feed on nectar, and is often in the Humming-birds only of the nectarine flowers which it extracts from flowers. There are, indeed, a few species of creepers that have the tongue long and tubular as in the humming-birds, but the greater part of them have the tongue short and pointed; in form it is rather long, and flat, as at the tip, and in others the sides of the tongue are divided. Their habits and modes of life are different; the creepers, feeding chiefly on insects, are almost constantly observed creeping gaily up and down trees in search of their food, while the humming-birds hover on the wing over the flowers which furnish it food like the bee; the creepers breed in the hollows of trees and lay many eggs; the humming-birds, on the contrary, vary little more than two eggs, and build the nests very differently; preferring the covert of a bush to the hollow of a tree; their nests are generally observed perched on a branch of a tree or among the flowers, and sometimes among grass and other low herbage.

CERTHIA Familiaris is one of the most universally distributed species of this genus, though generally believed to be no where common, it is found in Asia and America, and in most parts of Europe. The species is a brownish color, beak white, tail feathers, and face marked with a white edge. Toon. Brit. Stoc.

This is the common or European creeper, it is sometimes called the French author, a bird is often observed in this country; and in the north, yet, generally well known as a British species. It is described under various names by authors. Krzeczak in 1749 described it as C. flavifrons; Kenn. and Latham describe it as C. flavifrons and Bodd. and Buffon Le Général Cert. 2. Our species Cert. is about five inches and a half in length. The bill is flender than the upper mandible brown, and the lower white; head and upper part of the neck brown, breast with black; wings covertes varied with brown and black; breast and belly dull white, tail long, and confiding of twelve feathers that slope off to a point; legs and claws grey. It feeds preferably on insects, which it finds in the crevices, and holes, in trees, and branches of trees. The nest is usually built in the hollow of a tree, and consists five or more eggs of light yellow, marked at the end with spots and streaks of a dark wine color.


This species is described by Scopoli as being nearly the same size as the common form, of which he supposes it may be only a local difference or a variety. We may rather conclude, if his description is correct, that it is not a local difference of the same, but it may be a variety, and not necessarily a distinct species. He mentions a blue; it stands from the base of the bill, and deliquesces down the back of the neck: and a rudimentary spot on the throat: the head brown, and the legs black. Habit. Caracas.


This length of the species is five inches and a half; the bill is dull brown, and dull: the upper parts of the head, back, and body are green with a gloss of violet on the head; beneath black: the vent brown; the sides of the wings are green on the wing-coverts. This was first described by Dr. Latham from a specimen in the British Museum.


Length eight inches. Bill an inch and three quarters, brown, red at the base: legs black brown. Described from a specimen in the late Leveque Museum that was brought from the Friendly Islands in the South Seas. It is in motion in the left voyage of Captain Cook under the name of Hoolow.


The length of this bird is seven inches. Bill an inch and three quarters long, black and very much curved; the under mandible a quarter of an inch shorter than the upper. The bill and eye a pale brown flesh-colored plumage white; pyle olive green, palest green, and somewhat yellowish; legs dusky brown, with the feathers just above the knees, white. This species inhabits the Sandwich islands, and is one of these birds the fathers of which are employed by the natives in the manufacture of the celebrated velvets of their cloaks. An elegant check at this definition formed of the feathers of this kind of creeper, and decorated with a deep border of red and yellow feathers, was brought by our back navigators from Oehyon, and deposited among the artificial rattles in the late Leveque Museum. There is understood to have been the only article of dress formed of the truth of this bird by the English, although slow and other velvets of feathers were worn on all sorts of great public occasions by the chiefs in the Sandwich islands. A similar kind of dress is not so cheap that as it be worth reporting to know what the value these ibloedeas attach to the articles of cloaks composed of the cloaks of this bird, while those composed of red and yellow feathers were to be exchanged on easy terms. The cloak was the property of one of the
chieftain warriors of Owylhice who among others were tempted by curiosity on board English ships; its beauty attracted the notice of an officer in the expedition, Lieutenant Williamson, who wished to purchase it, but the chick being considered by the owner as extremely valuable, his proposals were rejected. The officer offered him a double barrelled gun for it, which was refused; and he afterwards offered his regimental coat which was refused. Some time after, however, the owner of the chick observed in the corner of the cabin a bottle and basin of common white or Queen's ware, and was so struck with the novelty that he hastily fetched them up in his arms, and throwing his cloak upon the floor without further ceremony jumped overboard, and swam ashore with his prize, which very fortunately he bore off unbroken.

**Coccinea.** Scarlet: wings, and tail black. Formerly, some species inhabit the Sandwich Islands, the feathers of which are chiefly employed by the natives in the formation of their fine lace-like cloaks, and other parts of dresses; and in their grotesque feathered ideas. The length is six inches. Bill three quarters of an inch long, and much curved, the colour pale brown. Some birds have the fore-head buff colored, and a mixture of buff and dusky black about the head and neck which are supposed to indicate thiofe not yet arrived at their perfect plumage. Obs. This is called by Born Polyommus. Cercis viridaria, Lath. 

**Sovi-manga.** Green, beneath yellowish; rump olive; breast brown; with two transverse bars, one brown, the other blue; tail black. Genl. Cercis. Makingaria violacea, and le Grimpereau violet de Madagascar, Brill. 


**Sovi-manga.** Size of a woodpecker, Length above four inches; bill three quarters of an inch long and black; tongue rather longer than the bill, and black. The head, throat, neck, upper part of the back, scapulars, and wing-covers, are shining green, with an olive gloss; lower part of the back, rump, and upper tail coverts olive brown; breast brown, with a blue band, and below that another of chestnut; belly and under tail coverts pale yellow. On the shoulders a spot of deep yellow; tail black. The feathers edged with green, except the outer feather, which is grey brown for half its length, and the next tipped at the end with the same. Legs and claws black. The female is smaller than the male, and has the upper parts olive-brown: the under parts yellow with a tinge of olive. Inhabits Madagascar.

**Manillensis.** Green, glossed with blue and violet; beneath greyish olive; neck barred with green, blue, violet, and yellow; wings fuscous. Genl. A native of Manilla; scarcely four inches long. Obs. There are two yellow spots between the shoulders, and the upper wing-coverts are black. This is considered as a mere variety of coccineus by Latham. Ind. Onl. Dufau calls it norn-manga de Louisiane.

**Boroncosa.** Green and fuscous; beneath varied with grey; rump yellow; wings and tail blackish. Genl. Le Sou-manga à la pointe de Bay Am. Buff. Grimpereau à la pointe de Bay Am. P. clad. Yellow capped creeper of Louisiana. The length of this bird is about five inches. The bill black; upper part of the head and body greyish brown; the crown black, inclining to olive; under parts grey and yellow variegated; sides fuscous; tail blackish; legs black. Inhabits the hill of Bounbon.

**Violacea.** Two middle tail-feathers very long; body glossed with violet: breast and abdomen pale yellow. Genl. Cercis violacea. Linn. Cercis longicauda minor capitis bona, Buff. Sou-manga à la queue et à capicion violet, Buff. Petit grimpereau à longue queue du cap de bonne efeance, Buff. Pl. cula. Violate-headed creeper, Lath. This is rather more than six inches in length. Bill blackish, and near an inch long. The head, neck, upper parts of the back, scapulars, lesser wing-coverts bright violet, glossed with green; lower part of the neck bluish, lower part of the back, rump, and upper tail coverts, olive brown; breast, belly, and under tail coverts bright oranges; sides of the body orange; with a mixture of olive; tail blackish brown, wedge-shaped, with the two middle tail-feathers an inch longer than the rest; the colour blackish brown, edged on the outside with olive; legs and claws blackish.

**Inhabits the Cape of Good Hope.** The nest, which consists of materials of a silky nature, is constructed with great art. Lev. Muf.


This is a large species. Length nine inches. The bill an inch and a quarter; the plumage is green, with a gloss of coppery; between the bill and eyes a black velvety stripe; under the shoulders a fine yellow spot; greater wing-coverts and quills blackish, edged with green; tail black, two middle feathers exceed the rump by two inches and a half in length, and are edged with gold, and coppery on both sides; claws and legs black. The female has the head and upper parts of the body of a greenish brown, with a mixture of bright green; rump green, with the quills and tail black; body beneath yellowish, with a mixture of green feathers on the breast; two middle tail-feathers nearly as long as in the male, but so narrow as almost to resemble a thread. A native of the Cape of Good Hope.


Length near seven inches and a quarter. Bill two-thirds of an inch, and blackish. The head, neck, back, rump, belly, sides, scapular, upper and under tail-coverts, and upper wing-coverts are of a fine golden green, glossed with copper, and the breast is a beautiful red; on the lower part of the belly is a mixture of white. The greater wing-coverts and tail are brown; tail blackish, edged on the outside with green gold; two middle tail-feathers rather more than two inches and a half longer than the rest, and very little rounded at the end; legs blackish. The plumage of the female is tinged with brown above, beneath yellowish, mixed with brown, the middle tail-coverts white, sprinkled with brown and blue. This species inhabits S. negl.

**Philipina.** Two middle tail-feathers very long; body greenish grey, beneath yellowish white. Genl. Linna, &c. Cercis philippina, Brill. Grimpereau des Philippines, Buff. Cercis grimpereau de l'île de Lunes et Surleg, in Wel. Philippine creeper, Lath. Length near five inches. Bill three quarters of an inch and three quarters; bill and legs, with the clasping black; tongue tubular; two middle tail-feathers black, glossed with gold; the rest blackish, and white at the tip.

**Cyana.** Blue, with the under part, shoulders, wings, and tail black; legs fuscous. Genl. Cercis Brunniceps caerulea, Buff. Chalcisicalis Marwnt. Caille bleu, Buff. T. 12
Aurantia. Green, beneath yellowish; throat orange; wings and tail black. Gmel. Orange-breasted creeper, Lath.

Discovered by Smeathman in Africa. The length is four inches. Bill about three quarters of an inch long, curved, and black. The head, throat, hind part of the neck, back, and wing coverts green; quills and tail dull-black; legs black.


This kind inhabits Ceylon. The length is four inches and a quarter. Bill nearly an inch long, curved, and black; upper part of the head, eyes, and back of the neck, and back green; chin, throat, and breast, deep blue; blue on the belly paler; on each side the neck, between the blue and green, yellowish white; quills and tail black; legs yellow, with black claws.


Inhabits Surinam. This is about half the size of the common creeper. The head, back, wings, and tail are green.

Aucalis. Black; head, collar, breast, and lower middle of the back red; tail equal. Gmel. Cardinal creeper, Lath.

Described from a specimen in the Leverian museum. It is the same size as our common creeper. Bill the length of the head, and curved, black, and white at the base; tongue long, and eliuated half way down from the tip; between the bill and eye a streak of black which encircles the eyes; wings and tail black; legs lead coloured, claws black. Inhabits the cultivated parts of the island of Tanna, and is known there by the name of kyameta. It subsists on the nectarious juices of flowers like the humming-bird.

Carpentaria. Olivaceous; chin and throat orange; breast ferruginous; abdomen ash-coloured; at the base of the lower mandible on each side a yellow wattle. Gmel. Whispered creeper, Lath.

A specimen of this singular species brought by our navigators from Tonga-Tabou, or Amsterdam Isle in the South seas, was preserved in the late Leverian museum. The length was seven inches and three quarters. Bill an inch long, and rather bent; tongue longer than the bill, and divided or hal its length into four segments like threads; wattle at the base of the bill surrounded by a patch of yellow feathers which extends under the eye; the plumage brownish olive-green, darkish on the middle of the black; belly inclining to ash-coloured; legs blue black; claws black.


The length of this bird is six inches. The bill is an inch long; moderately bent and dark brown; with a pale orange spot in the middle. General colour of the plumage brown; belly very pale brown; tail brown and even at the end; legs black, claws long and hooked. Inhabits islands in the South seas.


Inhabits the south of Europe and Asia. Frequent old walls in search of insects, especially spiders; is solitary and migrates in autumn.


Length three inches and a half. A black streak extending...
from the bill to the eye; quill feathers edged with 
braffy. This inhabits the Cape of Good Hope.

Capeensis. Fuscous; tail feathers blackish; outer ones 
fringed with white on the outside. Gmel. Certhia capitis 
longi sp. Briff.

Caracarica. Olivaceous, beneath yellow; tail fea-

Inhabits the Philippine isles. Length four inches. Bill 
three quarters of an inch long, and black; tongue forked.

Body above olivaceous; under parts yellowish white, deepest 
on the breast; down the middle of the neck as far as the 
breast a deep violet stripe; upper wing-coverts violet; quills 
white; tail feathers black; edged with rufous, and 
whitish at the tips; legs and claws black.

Jugularis. Somewhat griscous; beneath yellow; throat 
violaceous; two exterior tail feathers yellowish at the tip. 

Length three inches and a half. Inhabits the same coun-
try as the last, and is suppos'd by some writers to be only a 
variety of it.

Olivacea. Olivaceous; beneath fuscous; orbits whitish. 
Gmel. Certhia olivacea madagascariensis, Briff. Soui-manga 
olive a gorge pourpre, Buff. Grimpereau olive de Madagascar, 

Length four inches. Bill above half an inch long, and 
black; colour of the upper parts, from the forehead to the 
rump, dull olive green, inclining to brown on the forehead 
and crown; the under parts grey brown; round the eyes 
whitish; quills and tail brown, with a tinge of olive green; 
the two outer feathers white at the end; legs pale brown. 
Inhabits Madagascar.

Dr. Latham supposes this may be the female of the 
Ceylonese creeper, certhia zeylonica.

Carula. Blue; ocular band, throat, wings and tail-
feathers black. Linn. Scopoli, &c. Certhia ceylonica caru-
a, Briff. Aoeo bicornis, papiloto vaoca Seba. Certhia of 

A native of Cayenne, where, according to Seba it makes 
its nest with great art in the shape of a retort, which is 
upended from some weak twig at the end of a branch of a 
tree, with the opening downward. The nest at the en-
trance is a foot in length, the nest itself being quite at 
the top, so that this bird has to climb up this funnel-shaped 
opening to gain access to its nest. The nest being so flat-
found is secure; neither monkeys, snakes, nor lizards, daring 
to venture at the weak extremity of the branch to the nest 
as it would not support them. The outside of the nest is 
composed of dry filks of grass, the lining of foister 
materials. This bird is four inches in length. The bill is three 
quarters of an inch long, and black; the head fine blue; legs 
yellow, claws black.

Brasiliaca. Black; crown of the head gold-green; 
rump, chin, and throat violaceous; breast purple-tawny. 
Gmel. brasiliense violacea. Briff. Guit-guit vert et violet, 
Buff. Black and violet creeper, Lath.

This kind inhabits Brazil. Length three inches and a 
quarter. Bill rather exceeding half an inch, and black; 
crown of the head is fine green gold; tides of the head, hind 
part of the neck, back and scapulars deep velvets black; 
lower part of the back and rump, rufous wing, and upper tail 
coverts violet, with a glows like polished steel; belly black; 
throat chestnut brown; quill black; tail black edged with 
violet.

Variegata. Varied with blue, black, yellow, and 
white; beneath fialron coloured; crown red; hind head 
blue. Gmel. Certhia americana varie, Briff. Guit-guit varie, 
Buff. Variegated creeper, Lath.

This species inhabits America. The length is five inches. 
Bill three quarters of an inch in length. The cheeks, and 
below the eyes are blue and white mixed; hind part of the 
neck, back, and rump undulated with blue, black, yellow, 
white; scapulars, under-wing, and tail coverts, quills, 
and tail the same.

Cayana. Glosby-green, beneath friated with white; tail 
feathers greenish, the lateral ones blackish within. Gmel. 
Certhia viridis cayennensis, Briff. Certhia corpore fupina viridis, 
gult latens, Buff. Trans. Guit-guit vert tachet, Buff. Ca-
yenne creeper, Lath.

Length four inches. Bill three quarters of an inch and 
black; upper part of the head, neck, back, and rump, fine 
peafh green; scapulars, upper wing and tail coverts the same 
throat, and a small spot between the nostrils and eye rufous; 
the back, each feather margined on both sides with green; 
under parts of the body green, with a mixture of blue; 
two middle tail-feathers wholly green, the red black-
ished, edged with green; legs and claws grey. The female 
leg the plumage more omissible, and is deliante both of the 
rufous spot between the nostril and eye, and that on the 
throat. Inhabitats Cayenne.

Chalybea. Glosby-green; breast red, with a fleec blue 
Soui-manga a collier, Buff. Grimpereau du cep de bonne so-
quence, Buff. pl. enl. Purple Indian creeper, Edwards. Col-
lared creeper, Lath.

Length four inches and a half. Bill near an inch long 
and black. The head, neck, throat, and upper parts of the 
body green gold, glossed with coppery; breast a beautiful 
red, neck green, and separtated from the red by a fleec-blue 
collar, changeable to green. The belly, sides, thighs, and 
under tail coverts grey, with a mixture of yellowish on the 
lower parts of the rump and sides; tail shining black; outer 
margin of the ten middle tail feathers green gold, and all 
tipped with grey; legs and claws black. The female differs 
in having yellow flaps on the sides according to Briffon. 
Buffon thinks this may be a young bird of the Limnene 
Certhia fumigalenis, and suppose's further the Limnene 
Certhia capensis may be the female. It is a native of the 
Cape of Good Hope.

Negalandia. Violaceous-black; crown of the head 
and chin green gold; breast scarlet. Gmel. Linn. &c. 
Certhia fumigalenis violacea. Briff. Soui-manga violet a poilure 
grande, Buff. Senegal creeper, Lath.

This species is five inches in length; bill nearly an inch 
and black; top of the head and throat green gold, glossed 
with coppery; ret of the body above and beneath violet; 
feathers on the neck and breast greenish, tipped with red; 
thighs violet brown; greater wing-coverts, quills, and tail 
brown; legs and claws blackish. A native of Senegal.

Afra. Green; abdomen white; breast red; rump blue. 
Gmel. Soui manga vert a gorve rouge, Buff. Red-breasted 

Length about four inches and a half; the bill an inch 
long, and dullky; head, neck, back, and wing-coverts thin-
green, glossed with burnish'd gold and copper; on the 
breast a bar of red; upper tail-coverts blue; greater wing-
feathers and tail dark brown; belly, thighs, and under tail-
coverts white; legs black. Inhabits the Cape of Good 
Hope.

There are two or three varieties of this species, one having 
the abdomen cincereus; a yellow tuft under the wing; and 
the tip of the tongue blw; and another has the chin, throat, 
and breast blue-purple, with a pectoral red band. Latham 

confiers
CERTHIA.

considers the Ceylonian *Ficedula rubra* as a variety of this species.


Length six inches; bill three-quarters of an inch long, and black, with the white tip; tongue fuscated; head short, and foie part of the neck glov-round; last part of the neck, back, and feathers pendant; -head; last part of the back, upper tail-coverts, violet changeable to green and gold; lower part of the belly yellowish olive; tail black, with a steel-like gloss, edged externally with violet, and glossed with greenish-gold; legs and claws brown. Female olive-green above, beneath olivaceous yellow. This species inhabits all the Philippine islands, and has a note like that of the whirengale.

Obi. There is a variety of this bird with a violet color, &C. *gula violacea* of Gmelin. It is called by Somner *Grinnelum tristis* de *L'isle de l'Olonese,* and by Bouillon *Sommangia a gage violacea et poilure rouge.*


Size of a chaffinch; length five inches and a quarter; bill three-quarters of an inch long and white; head and throat; velvety black; hind part of the neck, back, rump, feathers, upper wings, and tail-coverts, and quills fine green; fore part of the neck, breast, belly, sides, and under tail-coverts blue; tail deep green. This species inhabits America, and seems liable to vary considerably; the three following are described as different varieties of this species.

*Certhia fissa,* Gmel. Green, with the cap black. This is the fissa of the first, and has the upper mandible blackish, the lower white, and both yellow at the base. In this the throat is not black as in the first, the black passing downwards just below the eye on each side, and as far as the nape behind; legs lead colour. Inhabits Surinam, Briss., and Guiana. Damer it calls this the *Green black cap flycatcher.*

7. Green, with white chin, and crown of the head blue. *Gainulit vert et bleu a gorger bleue,* Buff. *Blue-headed green flycatcher, Edwards.* Size of the hat, but the tip of the head, and back wings, are blue; the throat white; plumage above green; legs yellowish; and claws black. Inhabit some country as the hall.

8. **Entirely green:** *Gainulit toute vert,* Buff. *Grinnell vert et CABAN,* Buff. *Entire green creeper, Edwards.* This is not less than the rest, it is in the head longer, and rather more incurved than black, and somewhat paler at the base; plumage above green, beath paler; found in Cavendish, and other parts of South America.


Inhabit Virginia. Length four inches and a half; bill one inch and a half long. This bird is said to fly well.


Length five inches. Bill as much long, and black; fore part of the head, upper part of the neck, and rump of the body black; brown wings; rufous red at the tip; tail black. Inhabit Brazil.


This bird inhabits Bengal; the length is three inches and a quarter; bill short and black; quills and tail blackish; legs black.

*Sangüineus.* Deep red; wings, and tail black; abdomen dull; vent white. *Gmel. Grinnell cervin,* Latth. *Length five inches, inhabits the Sandwich Islands. This is the old,* and the following, tillit is the female of *Certhia philippia.*

*RUNDA.* Red; wings and tail black; vent white. *Gmel. Stark's creeper, Latth.*

Inhabits the islands of the South seas. Length scarcely four inches; the bill half an inch long, very little bent, and black. General colour of the plumage scarlet; except the wings and tail; lower part of the belly and vent white; legs and claws black. *Lev. Muf.*


This bird inhabits Jamaica. Size of a wren; bill black; head, throat, neck, back, feathers, upper wing and tail-coverts fine black; from the base of the bill extends a white stripe passing over the eyes to the end part of the head; breast upper part of the belly, sides, edges of the wings, and rump fine yellow; lower part of the belly, with the tingals, and under tail-coverts white; tail black, with all the feathers, except the two middle ones, with white tips; legs and claws black. The yellow beaked creeper of Edwards is supposed to be the female. Gmelin makes it a var. f.

Several varieties of this bird are described by authors, one of which, the *Bulauna tingamy of Catchby, Certhia babamjfi,* Briss. is rather larger than the first described kind. General colour fuscous, pale yellow beneath, with at pale; lower part of the abdomen and vent brownish; eye-brow white. This inhabits the Bahama islands; and there is another *Certhia obsoloteana,* Muf. Carls. of a length rounded above, beneath yellow; eye-brow yellow; in general purple green; vent white; bill, legs, wings, and tail fulvous. Length five inches. The birds inhabiting the sweet places of the lego-mastics, which they extract through the crevices of the rocks.

*CINNAMONICA.* Cinnamon colour; beneath white. *Gmel. Cinamena creper,* Latth. *Length five inches; bill rather long and black; tail formed as in *Certhia famandica*; legs dull.


Length
Length four inches and a half. Inhabits India. The bill and tail are black.

_Anisurus_. Cinerous; beneath green; head and collar yellow; breast red; wings black. _Gmel. Polytmus ambiguiorys._


The length of this bird is four inches and a half; bill nearly one inch and pale yellow; upper part of the head light shining red; throat and fore part of the neck green; tail deep red; legs and claws pale yellow. Supposed to inhabit New Spain. Schæs mentions a variety of this bird with a black head, avicula de tatacex Nova Hispania; Grimperau rouge à tête noire du mexique.

_Cineréa._ Cinerous; rump and wing-coverts green; wingsfuscous, abdomen yellow with; vent white; tail black. _Gmel. Cineréus creper._ Lath. Inhabits the Cape of Good Hope. Length nine inches.

_Nové Hollandiae._ Black; beneath streaked with white; eye-brows and spot near the ears white; quills and tail-feathers edged with yellow. Lath. Ind. Orn. A native of New Holland.

_Size of the Nightingale._ Bill dusky pale at the tip; nostrils covered with a membrane; tail rounded, with the two outer tail-feathers tipped within with white; legs pale. White's Hist. New Holland.

_Incana._ Somewhat fuscous; neck and wings hoary. Inhabits New Caledonia and is of a small size. Anderon.

_Peregrina._ Olive, beneath yellow; wings with a pale billid band; tail somewhat fuscated; two outer tail-feathers tipped within with white. Lath. Ind. Orn. Obf. This is of the middle size, and has the bill, wings, and tail dusky. Lear. _Muf._

_Verticalis._ Olivaceous green; beneath all coloured; crown green; wings and tail fuscous. Lath. Ind. Orn. 


_Grisea._ Greyish; beneath reddish; tail cuneated; a middle feathers brown, lateral ones grey; and all barred with black at the tip. Lath. Ind. Orn. Inhabits China. The bill and legs are yellow.

_Pratincoleps._ Black; fore part of the neck purple; wings and tail yellowish green. Muf. Carf. &c.

_Venus._ Gold-green; fore-head, chin, broad peafowl band, and rump violet; wings brown; belly yellow. Shaw. Nat. Mife. Inhabits Sierra Leona.

_Tabacina._ Two middle tail feathers very long; head, neck, and upper part of the body fuscous-coloured, beneath green; tail blackish green. Lath. Ind. Orn. Length eight inches and a half.

CERTIFICANDO de recognitio stipule, in Lath. is a writ commanding the mayor of the staple to certify to the lord chanceller a full tape taken before him, where the party himself detains it, and refuseth to bring in the same. Reg. Ord. 132. There is the like writ to certify a full tape merchant; and in divers other causes. Br. 144. 155, &c.

CERTIFICATE, a testimony given in writing, to assure and notify the truth of any thing to a court of justice, or the like. See Testimonial.

A certificate is sometimes made by an officer of the court, where matters are referred to him, or a rule of court is obtained; containing the effect and tenor of what is done. The clerks of the crown, affix, peace, are to make certificates into B. R. of the tenor of incumbrances, convictions, &c. under penalties by stat. 34 & 35 Hen. VIII. c. 14. 3 W. & M. c. 9.

CERTIFICATE of Ayle, in Lath. See Assise and Certification of Ayle, &c.

Certificate for offends, relates to the cause of the plaintiff, who, in an action of trespass, is allowed no more costs than damages, when the jury give less damages than 40s. unless the judge certify under his hand that the proceed or title of the land came chiefly in question. To this rule there are two exceptions: the one is grounded on stat. 8 & 9 W. III. c. 11. whereby the plaintiff obtains half costs, if the judge certify that the trespass was willful and malicious. The other exception is by stat. 4 & 5 W. & M. c. 23. which gives full costs against any inferior trademans, apprentices, or other disdinate person, who is convicted of a trespass in hawking, hunting, fishing, or bowing another's land. Blackst. Com. vol. iii. p. 214.

Upon this state it has been adjudged, that if a person be an inferior trademans, as a clothier for instance, it matters not what qualification he may have in point of estate; but, if he be guilty of such trespass, he shall be liable to pay full costs. Ld. Raym. 149.

CERTIFICATE into Chancery. If a question of mere law arises in the course of a cause in Chancery, as whether by the words of a will, an estate for life, or in tail, is created, or whether a future interdict, devised by a tenant, shall operate as a remainder or an executory devise, it is the practice of this court to refer it to the opinion of the judges of King's Bench or Common Pleas, upon an advising dated for that purpose; wherein all the material facts are admitted, and the point of law is submitted to their decision, who then upon hear it solemnly argued by counsel on both sides, and certify their opinion to the chancellor. And upon such certificate the decree is usually founded. Blackst. Com. vol. iii. p. 453. See Case settled, &c.

CERTIFICATE of Bankrupcy. See Bankrupt.
Certificate, trial by, is a mode of trial allowed in such cases, where the evidence of the person certifying is the only proper criterion of the point in dispute.

Thus, 1. If the issue be whether A was absent with the king in his army out of the realm in time of war, this shall be tried by the certificate of the marshal of the king's host in writing under his seal, which shall be sent to the judges. Litt. 6102.

2. If, in order to avoid an outlawry, or the like, it was alleged that the defendant was in prison, ultra mare, at Bordeaux, or in the service of the mayor of Bordeaux, this should have been tried by the certificate of the mayor; and the like of the captain of Calais. But when this was law (2 Roll. Abr. 584.), those towns were under the dominion of the crown of England. And therefore, by a party of respon, it should now hold that in similar cases, arising at Jamaica or other places belonging to the crown of England, the trial should be by certificate from the governor respectively.

3. For matters within the realm; the customs of the cities of London shall be tried by the certificate of the mayor and aldermen, certified by the mouth of their recorder; upon a sum from the party alleging it, that the custom ought to be thus tried; or else it must be tried by the country. As the custom of distributing the effects of freemen deceased; of enrolling apprentices; or that he who is free of one trade may use another; or if any of these points or others similar to them, come in issue. This rule, however, admits of an exception, where the corporation of London is party, or interested, in the suit; as in an action brought for a penalty inflicted by the custom; which shall be determined by a jury, and not by the mayor and aldermen, certifying by the mouth of their recorder. Co. Litt. 74. 4 Burr. 248. Bro. Abr. 2 trial, pl. 69. Hob. 85. But see 1 Term Rep. 423. If the recorder shall have once certificated a custom, the court is in future bound to take notice of it. Doug. 380.

4. In some cases, the sheriff of London's certificate shall be the final trial, as if the issue be, whether the defendant be a citizen of London or a foreigner, in case of privilege pleaded to be sued only in the city courts. Co. Litt. 74. Of a nature somewhat similar to this is the trial of the privilege of either university, when the chancellor claims cognizance of the cause, because one of the parties is a privileged person; in which case, the charters, confirmed by act of parliament, direct the trial of the question, with regard to privilege, to be determined by the certificate and notification of the chancellor under seal; to which it has been usual to add an affidavit of the fact: but if the parties be at issue between themselves, whether A is a member of the university or not, or on a plea of privilege, the trial shall be by jury, and not by the chancellor's certificate. 2 Roll. Abr. 5485.

5. In matters of ecclesiastical jurisdiction, as marriage, general bailiary, excommunication, and orders, these and other like matters, shall be tried by the bishop's certificate. As if it be pleaded in abatement, that the plaintiff is excommunicated, and issue is joined thereon; or if a man claims an estate by defeasance, and the tenant alleges the defendant to be a bailiff; or if in a writ of dower the heir pleads no marriage; or if the issue in quare impedit be, whether or not the church be full by subscription;—all these, being matters of mere ecclesiastical cognizance, shall be tried by certificate from the ordinary. But in an action on the case for calling a man a bailiff, the defendant having pleaded in justification that the plaintiff was really so, this was directed to be tried by a jury; because, whether the plaintiff be found either a general or special bailiff (see B新冠疫情下的医疗问题）the justification will be good; and no question of special bailiary shall be tried by the bishop's certificate, but by a jury. Co. Litt. 74. 2 Lev. 279. Hob. 179. Dyer, 79. Ability of a clerk pre-entitled, admission, institution, and deprivation of a clerk, shall also be tried by certificate from the ordinary or metropolitan; because of these he is the most competent judge; but induction shall be tried by a jury, because it is a matter of public notoriety, and is likewise the corporal avulsion of the temporal profits. Rejection of a benefice may be tried either way; but it seems most properly to fall within the bishop's cognizance. 2 Inst. 632. Shaw P. C. 88. 2 Roll. Abr. 573. &c. Dyer, 339.

The trial of all customs and practice of the courts shall be by certificate from the proper officers of those courts respectively; and what return was made, on a writ by the sheriff or under-sheriff, shall be certified by his own certificate. Blackfi. Com. vol. iii. p. 323, &c.

Certificate, in the Royal Navy, a certain written instrument, signed by the proper officer or officers, to substantiate, at any time, the validity of any civil transaction on board a ship of war, without having recourse to personal evidence which in all cases would be troublesome, and in many impracticable. The captain gives certificates to the several officers under his command, stating the time they have served on board his ship, or under him, and their behaviour during that period; other certificates are signed by the captain and master captain, master and boatwain, doctor and the purser, &c.

Certificate of assize of novel disseisin, in law, a writ granted for re-examining a matter passed by affize before justices. It was used where a person appeared by his bailiff to an affize, brought by another, and has lost the cause; but having something more to plead for himself, not tried by his bailiff, he obtained a writ to the sheriff to call both the party from whom the affize passed, and the jury that was impounced on the same, before the said justices at a certain day and place, to be re-examined. It was called a certificate, because mention is made in it to the sheriff, that upon the party's complaint of defective examination, as to the affize passed, the king hath directed his letters patent to the justices for the better certifying of themselves, whether all points of the said affize were duly examined. Reg. orig. 860. F. N. B. 181. Bradton, lib. iv. c. 13. Horn's Misc. lib. iii. This writ is now wholly superseded by the remedy afforded by means of new trials. See Assise.

Certificate's military certificates. There are of various kinds according to the several objects or purposes they relate to; and the different descriptions of persons empowered to grant them, in order to verify or give undeniable proofs of facts, whether they be governors, commanding officers, commissaries of war, officers of detail, staff officers, paymasters, officers of cities, or communities, &c. They are chiefly reducible, however, to the following heads, viz.

A certificate from a field-officer to the commander in chief affirming the eligibility of a young man to a commission in his majesty's service.

The certificate of an officer upon honour, that he does not exceed the regulation in the purchase of his commission.

The certificate of a general officer to affirm and prove the lollies, which officers under him may have sustained in the field.

The certificates of colonels of regiments to the board for the admission of proper officers to the hospital at Chelsea.
Certificates from magistrates to identify the persons of recruits, and to affirm that they have enlisted themselves voluntarily into the service, and that the articles of war have been read to them.

Certificates from regimental surgeons, whether men when they join are fit and proper objects to be enlisted.

Certificates from ditto of men's being fit objects to be discharged.

Certificates of commanding officers for furs, &c.

Certificates of surgeons and apothecaries to prove that they have paid proper examinations.

CERTIMA, in Ancient Geography, a very strong town of Spain, in Celtiberia, which was taken by Crassus.

CERTIORARI, or CERTIORARI FACTAS, in Law, an original writ issuing out of the court of chancery or K. B. directed in the king's name to the judges or officers of inferior courts commanding them to certify, or to return the records of a cause there depending, to the end that the party complaining may have the more sure and speedy justice before the king, or justices assigned by him for determining the cause. Fitz. N. B. fol. 212. This writ is either returnable in the king's bench, and then hath these words, nobismittis, "fend to us;" or in the common bench, and then hath juticiarists neniae de banco, "to our justices of the bench;" or in the chancery, and then it has in cancellariae nenia, "in our chancery, &c." or into the court of parliament, or into that of the lord high steward of Great Britain, in case of indictments against a peer.

A writ of certiorari may be had at any time after indictment found and before trial, to certify and remove indictments, with all the proceedings on them, from any inferior court of criminal jurisdiction into the court of King's-bench, the sovereign ordinary court of justice in causes criminal.

And this is frequently done for one of these four purposes: either, 1. To consider and determine the validity of appeals or indictments, and the proceedings thereon; and to quash or confirm them as there is cause: or, 2. In order to have the prisoner or defendant tried at the bar of the court of King's-bench, or before the juries of Nisi Prius, where it is certified that a partial or insufficient trial will probably be had in the court below: or, 3. In order to plead the king's pardon in the court of K. B.'s; or, 4. To issue process of outlawry against the offender, in those counties or places where the process of the inferior judges will not reach him. 2 Hal. P. C. 210. It is at this stage of the prosecution, that indictments found by the grand jury against a peer must in consequence of a writ of certiorari be certified and transmitted into the court of parliament, or into that of the lord high steward of Great Britain; and that in places of exclusive jurisdiction, as the two universities, indictments must be delivered, (upon challenge and claim of cognizance,) to the courts therein established by charter, and confirmed by act of parliament, to be there respectively tried and determined.

A certiorari may be granted at the instance of either the prosecutor or the defendant; the former as a matter of right, the latter as a matter of discretion; and therefore it is seldom granted to remove indictments from the judges of gaol-delivery, or after issue joined on confession of the fact in any of the courts below. On indictments of perjury, forgery, or for heinous misdemeanors, the court will not generally grant a certiorari to remove at the instance of the defendant. But in particular cases, the court will use their discretion to grant a certiorari; as, if the defendant be of good character, or the prosecution be chargeable or attended with oppressive circumstances. 2 Hawk. P. C. c. 27. 4 Burr. 749. Lord Raym. Vol. VII.
Geo. II. c. 17, against reducing artificers, Nor on 25 Geo. II. c. 30, against brothe houses. Nor on 29 Geo. II. c. 42, against bailing, &c. Nor in 32 Geo. II. c. 21, for preserving fish in the Thames. Nor on 30 Geo. II. c. 24, for selling garbage in public houses, Nor on 31 Geo. II. c. 26, for regulating broad. Nor on 2 Geo. Ill. c. 28, for preventing thieving boatmen. Nor on 3 Geo. III. c. 16, against dog-lieners. See on this subject 2 Hawk. P. C. c. 7.

By lat. 11 and 2 D. and M. c. 13, no artificer shall be granted to remove any accounts, unless laid by the chief justice, or, in case of the failure, by one of the other judges. By 5 and 6 W. and M. c. 11, and 8 and 9 W. III. c. 53, a certiorari may be granted in vacation time by any of the judges of B. R. and security is to be found before it is issued. In case of certiorari granted in vacation, the name of the judge and party applying shall be indorsed on the writ. See Hamb. Co. 92. No judgment or order to be removed by certiorari without a notice found to the amount of 50l. 5 Geo. II. c. 19. Certiorari to remove convicts, orders, or processings of justices, must be applied for within six calendar months, and upon 6 days' notice to the justices; 15 Geo. II. c. 18, Str. 91.

A writ of certiorari, when issued and delivered to the inferior court for removing any record or other proceeding, as well upon indictment as otherwise, supersedes the jurisdiction of such inferior court, and makes all subsequent proceedings therein erroneous and illegal: unless the court of B. R. remands the record to the court below, to be theretried and determined. But if a certiorari for the removal of an indictment before justices of peace be not delivered before the jury be sworn for the trial of it, the justices may proceed. And they may set a time to complete their judgment after a certiorari delivered. 2 Hawk. P. C. c. 27. Ld. Raym. 1515. A certiorari removes all things done between the telle and return. Ld. Raym. 835, 1935. And as it removes the record itself out of the inferior court, therefore if it remove the record against the principal, the necessary cannot be tried there. 2 Hawk. P. C. c. 29. And if the defendant be convicted of a capital crime, his pernmu be removed by Hamb Corpus, in order to be prefer in court, if he will move in arrest of judgment. And herein the cause of a conviction differs from that of a special verdict. Burr. 930. Although on a Hamb Corpus to remove a pern, the court may bail or discharge the prisoner; they can give no judgment upon the record of the indictment against him, without a certiorari to remove it, but the same stands in force as it did, and new pleas may be filed upon it. 21 P. C. 211. If an indictment be out, but the offence is illegal, where four persons are indicted together; a certiorari to remove this indictment again two of them removes it not as to the others, but as to them the record remains below. 2 Hale's Hil. 214.

If a cause be removed from an inferior court by certiorari, the pledges in the court below are not discharged, because a defendant may bring a certiorari, and thereby the plaintiff may lose his pledges. Skin. R, p. 244, 245. A certiorari from K. B. is a superficid to restitution in a forcible entry. 1 Hawk. P. C. c. 64.

The return of a certiorari is to be under seal; and the person to whom a certiorari is directed may make what return he pleases, and the court will not stop the filling of it, on affidavit of its falsity, except when the public good requires it: the remedy for a false return is action on the cafe, at the suit of the party injured; and information, &c. at the suit of the king. 2 Hawk. P. C. c. 27. If the person to whom the certiorari is directed, do not make a return, than an affidavit of the fact, at the suit of the person, is awarded, and then an attachment. Comp. r. 165. Blue comm. vol. iv. Jacob's Law Dictionary by Tomlin.

CERTIFICATE, or Certissions, is a special and particular action in a town. For instance, in the town of Dunncroft, a certiorari to try a man for being drunk. CERTITUDE, or Certainty, is clearly a quality of the judgment, imparting an opinion in the mind to the proposition we affirm, or the strength with which we adhere to it.

Certitude is of the same nature with the evidence that produces it: the evidence being the things that the mind sees and considers, i.e., when the idea of certitude is in the judgment, which the same makes of these things.

The following distinguish two kinds of certitude: the one of speculation, arising from the evidence of the things; the other of adhesion, which arises from the importance of it: which last they apply to matters of faith.

Further, the scholons distinguish there other kinds of certitude, with regard to the three different kinds of evidence, in which they are.

Certitude, metaphysical, is that arising from a metaphysical evidence: such is that which a geometricalian has of the truth of this proposition. 'That the three angles of a triangle are equal to two right ones.'

Certitude, physical, is that arising from physical evidence: such is that which a man has, that there is fire on his hand, when he feels it blaze and feels it burn.

Certitude, moral, is that founded on moral evidence: such is that which a person has, that he has got, or hold a cause, when his attorney and friends lend him an expost notice of it, or a copy of the judgment, &c.

Moral certitude is frequently equivalent to metaphysical certitude. Thus a criminal who hears his sentence read, frequently makes no doubt either of his condemnation or execution; and yet has nothing, here, beyond a moral certitude; for metaphysical certitude he has none; neither has he any physical certitude, except as to what relates to the reading of the sentence, and to the action of the executioner, when he takes him into his possession.

It is observed by Mr. Kirk in his "Essay on Human Liberty," (Irith Trans. vol. vii. p. 575.) that certainty differs from necessity in this, that what is necessary cannot, and what is certain will not, fail to happen. What is necessary is certain, but not vice versa. Whilst that is said to be morally necessary, whole non-existence is contrary to the laws which moral agents could rightly and powerfully govern their conduct; we, on the other hand, call that future object certain, which will not fail to come to pass. He further observes, that certainty is an ambiguous term; as it at times denotes the reality of an object, at times the firm perception of the mind of the reality of an object. In the first it is opposed to imperfection or non-existence; in the third, it is opposed to uncertainty or more probability. See PROBABILITY AND CHANCE. See also Liberty and Necessity.

In the "Philosophical Transactions," for 1669, (vol. xxii. p. 359-365,) we have an algebraic calculation of the degrees of moral certitude, arisit from human testimony in all its cases; whether immediate, mediate, conversing, oral, or written.

The author thereof shews, that if the report pass through several reporters' hands before it arrive, each conveying 1/4 of certitude; after twelve transmissions, it will only be an equal lay, whether it be true or not: if the proportion of certitude be
CERT-MONEY, Head-money, a common fine, paid yearly, by the chiefs of several nations to the lords thereof; and sometimes to the hundred, pro certo lete, for the certain keeping of the cet.—This, in ancient records, is called cerum lete.

CERTONIUM, in Ancient Geography, a town of Asia Minor, between Aradymium and the river Caicus, according to Xenophon.


CERVANTES DE Saavedra, Miguel, in Biography, universally recognized as the author of Don Quixote, was born probably of an honorable family, as some say in the province of Andalufia in Spain, or according to others at Madrid, in the year 1549. He seems to have had every advantage of education, and to have been a matter in polite learning. But in other respects fortune was not very indulgent to him. He served many years in the army of Mark Antony Colonna in no higher station than that of a private soldier. In that capacity he fought at the battle of Lepanto, under Don John of Austria, in 1571, where he had the misfortune, or, as he rather thought it, the honour to lose his left hand. In this expedition, or in his service as chamberlain to cardinal Aquinava at Rome, he amassed a certain portion of wealth; for in his captivity at Algiers, during 5½ years, which commenced in 1574, when he was taken by a Barbary corsair, he was then well furnished with money, which he liberally distributed among his fellow-captives. The high price of his ransom and his frequent free manner of living exhausted his dote and reduced him to the distresses of penury. However, his reputation for poetic talents had been already established in his own country; and it derived such accessions by the publication, in 1584, of his first part of Don Quixote, a poem in six books dedicated to Alonzo Colonna. About the same time he wrote many dramatic pieces, which were acted with applause on the Spanish theatre, and which acquired him both money and fame. But though his supplies were considerable, his want of economy and unbounded generosity disdained them as they occurred; and he had also married a wife, which involved him in additional expense. Accordingly, he was actually confined in prison for debt, when he composed the first part of "The History of Don Quixote;"—a work which every body admires for its humour; but which ought also to be considered as a most useful performance, that brought about a great revolution in the manners and literature of Europe, by banishing the wild dreams of chivalry, and reviving a taste for the simplicity of nature. In this view, the publication of Don Quixote forms an important era in the history of mankind. Don Quixote is represented as a man, whom it is impossible not to esteem, and who has cut through understanding, and the goodness of his heart; but who, by his own thought and day upon old romances, had impaired his reason to such a degree, as to mistake them for history, and form the design of traversing the world, in the character, and with the accompaniments, of a knight-errant. His distempered fancy takes the most common occurrences for adventures similar to those he had read in his books of chivalry. And thus, the extravagance of these books being placed, as it were, in the same group as the appearances of nature and the real business of life, the hideous disproportion of the former becomes so glaring by the contrast, that the most attentive reader cannot fail to be struck with it. The perfom, the pretentions, and the exploits, of the errant-knight, are held up to view in a thousand ridiculous attitudes. In a word, the humour and fature are irreducible; and their effects were instantaneous. This work no sooner appeared than chivalry vanished. Manhood awoke as from a dream. They laughed at themselves for having been so long impeded on by absurdity; and wondered they had not made the discovery sooner. They were astounded to find, that nature and good sense could yield a more exquisite entertainment than they had ever derived from the most sublime phrenzies of chivalry. This, however, was the case; and that Don Quixote was more read, and more relished, than any other romance had ever been, we may infer from the sudden and powerful effects it produced on the sentiments of mankind, as well as from the declaration of the author himself; who tells us, that upwards of 12,000 copies of the first part (printed at Madrid in 1605) were circulated before the second could be ready for the press; an amazing rapidity of sale, at a time when the readers and purchasers of books were but an inconsiderable number compared to what they are in our days. "The very children (says he) handle it, boys read it, men understand, and old people applaud the performance. It is no sooner laid down by one than another takes it up: some reading, some laughter, and some wounding for a fight of it. In fine (continues he) this history is the most delightful, and the least prejudicial entertainment, that ever was seen; for, in the whole book, there is not the least shadow of a dishonorable word, nor one thought unworthy of a good catholic." Don Quixote occasioned the death of the old romance, and gave birth to the new. Fiction from this time divulged herself of her gigantic fize, tremendous aspect, and frantic demeanour: and, descending to the level of common life, converted man as his equal, and as a polite and cheerful companion. Not that every subfrequent romance-writer adopted the plan, or the manner of Cervantes; but it was from him they learned to avoid extravagance and to imitate nature. And now probability was as much praised, as it had been formerly neglected. The publication of the first part of this work appears to have been the means of liberating the author from prison and obtaining for him from the great a considerable degree of patronage. Nevertheless, the court and kingdom of Spain have by no act of solid bounty exasperated them-

Clas. and ord. pentamia monogynia.

Gen. Ch. Cad. perianth bell-shaped, five-clawed. Cor. zone. Five scales inserted into the middle of the calyx. Pyl. germ superior; stigma saccate. Pet. nut egg-shaped, one celled, surrounded by the calyx, which has increased in size and become fleshy. A shrub; native of Peru. Cavaniès, pl. 475, has figured another specie with alternate, petaled, oblong leaves, covered with rust-coloured hairs and small white flower, in terminal and axillary panicles.

CERVARIA, in Ancient Geography, a promontory at the extremity of Gallia Narbonensis, on the coast of Spain. Its present name is Cerrevo.


CERVARIA, Boafr. Pin. See Trachemium cerervum.

CERVARO, in Geography, a town of Naples, in the province of Principato Citra; 9 miles E.N.E. of Policastro.

CERVELIERE, in Military Language, a sort of casque, helmet, or defensive armour for the head.

CERVELLE, a French word, literally signifying brains. The French make use of the phrase, manie fans cerevelle, when the miner works in earth too loose and devoid of cohesion, that it will neither stand nor support itself at the sides, nor at the top of the gallery, and he is under the necessity of having recourse to contrivances to obviate this defect.

CERVERA, in Geography, a river of Spain, which runs into the Segre, a little above Lerida, in Catalonia. Also, a city of Spain, and capital of a vency, to which it gives name, in the province of Catalonia. It is situated in a mild, delightful vallay, which is extremely fertile, and surrounded by hills, on one side of chalk, on the other of lime stone. This part of the country, between the Noya, which runs into the Lobregat, and the Segre, which joins the Ebro, is the highest land in this part of Catalonia. The university in this city was founded by Philip V. A. D. 1725, and has commonly about 900 under-graduates, chiefly designed for employment in the church and at the bar, with few for medicine. Cervera is about seven leagues N.W. of Tarragona. Also, a town of Spain, in the province of Catalonia, shored on the coast of the Mediterranean, between Roses and Collioure. Also, a town of Spain, in New Cadis; 6 leagues from Cenca. Also, a cape of Spain, on the coast of Catalonia: and another on the coast of Valencia.

CERVETTO, the elder, in Biography, an Italian performer on the violincello, of great merit, who arrived in England in 1738; and was remarkable from several circumstances besides his professional abilities. He was an honest Jew, had the largest note, and wore the finest diamond ring on the forefinger of his right hand; had a son (who is still living) who, during childhood, surpassed his father in tone and expression on the violincello; and who, in later years, was as much noticed at the opera for his manner of accompanying recitative, as the vocal performers of the principal characters for singing the airs. The rivalry between the admirable Croll detail and the younger Cervetto, in their youth, did them as much good in their struggles for excellence, as in later years their friendship has done honour to their hearts. Another remarkable circumstance in the history of the elder Cervetto, so long and so well known at Drury-lane play-houfe, is, that he extended his existence to 160 years complete, with the character, not only of a good musician, but a good man.

CERVI, in Geography, a small island of the Grecian Archipelago, near the coast of the Morea, on the south side of the entrance into the gulf of Kolokitha; 6 miles N. of Cerigo.

CERVI CORNIA. See HART'S HORN.

CERVIA, in Geography, a modern built town in the state of the church, and province of Romagna, near the Adriatic sea, about half-way between Caffarnatico and Savio, which, at the beginning of the last century, entirely changed its situation, on account of the infalubrity of the air, having formerly stood a quarter of a mile dillace from the sea. The new city is built with beautiful broad streets, which, for the greatest part, are under covering. By an inscription over one of the gates it appears, that popes Innocent XII. and Clement XI. removed the city of Cervia for the benefit of a more falubrrious air in the year 1703. Without this gate, suate on the side of the city opposite to Savio or Ravenna,
is a beautiful and broad canal, through which, in June, July, and August, (when the seafon is hottest and driest), the water is let out into a low piece of ground covered with rushes and weeds, about half a mile in length, and in some places as broad. Here the heat of the sun totally exhausts the water, and the salt remains at the bottom and sides, to the great profit of the court of Rome. The papal provinces Urbino, Ferrara, Ancona, Bologna, and Romagna, that lie near the Apennine mountains, derive from these salt-works the greatest part of the salt they use. Cervia is the seat of a bishop, suffragan of Ravenna, from which it is distant S.S.E. 15 miles, and 144 N. of Rome.

CERVICAL arteries, in Anatomy, some arteries which are distributed about the neck. See ARTERIES.

Cervical nerves, those which come off from the medulla spinalis, where it is lodged in the vertebrae of the neck. See NERVES.

Cervicalis, or Cervicis Descendens, is a slender muscle at the root of the neck, closely connected to the upper part of the faculolumbaris. It arises from the three or four upper ribs, near their tuberces, and is inserted into the same number of transverse processes of the lower cervical vertebrae. It extends the neck, and at the same time twits it to one side. This muscle is the transversalis gracilis of Winslow.

Cervicara, in Zoology. See Antelope Hygargae, the white-faced antelope.

Cervicaria, in Botany, a term used by some authors to express the thysia of the sheep, or fletter libanotis of Theophrastus.

Cervicaria, is also a name given by fome to the tracheium.

Cervicus transversus, in Anatomy, a small muscle at the back of the neck, connected to the upper end of the longissimus dorsi, and lying close to the cervicalis descendens. It arises from the transverse processes of the four or five upper dorsal vertebrae, and is inserted into as many of those of the neck. It is generally connected with the cervicis descendens and tracheo-mallolens. Winslow calls it transversalis collis major. It carres the neck backwards, and at the same time twits it towards its own side.

Cervieres, in Geography, a town of France, in the department of the Rhone and Loire; 6 leagues S.W. of Roanne.

Cervinara, a town of Naples, in the province of Principato Ultra; 12 miles S.W. of Benevento.

Cervine Antelope, of Pennant, antelope bulalis, in Zoology, Herpado; of Osipyan and Arvidus, bubulus of Pliny, Gfetor, Aldrov, and Jovit, yacchum of the Bible, bucephalus of Cej. op. Gefu. quad. and Ray, capra dorcas of Hortuyn, antelope bubulus of Pallas, bubulus of Buffon, vache de barbante de Axt. Parif, and Valent, is a species of antelope, whose horns are thick, twisted spirally, annulated, bent in form of a lyre, almost straight, and upright at their ends; the head and tail are somewhat lengthened. Pall. Sp. Zool. Erkell Lib. Mam. This animal inhabits Africa, especially Barbary, and is also found near the Cape of Good Hope, and in Arabia. It is about four feet high, having an appearance between the general form of the deer and ox tribes, with its head resembling that of an ox; its horns are about 20 inches long, very strong and black, almost close at their bases, and distant at the points; the general colour is a reddish brown, the belly, inner side of the thighs, and a space about the rump are white, with a dark coloured band on the ridge of the back, the upper part of the fore-legs, and hinder parts of the thighs; the tail is about a foot long, terminated by a tuft of whitish hairs, and resembles that of an ase. It feeds solitarily, gallops heavily, and yet very swiftly, and fights on its knees: its flesh is reckoned rather dry. This species, according to Mr. Pennant, is the animal called "Hart-beed," at the Cape; and Sparman describes it under the same name in the Stockholms Transactions; though the figure of the hart-beed, in his journey to the Cape, differs very considerably in the form of the horns, which bend much backward, at their ends, from which it is more probably the species called Antilope Koba.

Cervini, in Ancient Geography, a people placed by Poelen by on the western coast of the island of Corsica.

Cervione, in Geography, a town of the island of Corsica, or French department of Golo; 20 miles E. of Corté.


Cervix, in Anatomy, is a Latin term denoting that part of the body which we call the neck. The adjective derived from this term is applied to several parts about the neck, as cervical arteries, cervical nerves, &c.

The word cervix is also used in the anatomical description of various parts of the body, where it indicates some contract or diminution in size; as cervix of the femur, of the humerus, of the bladder, of the uterms, &c.: for which we refer to the individual articles.

Cerumen, a thick, viscid, bitter, excrementitious humour, separated from the blood by proper glands placed in the meatus auditory, or outer passage of the ear.

This is also called cerumen auritum; in English, ear-wax. See an account of experiments on cerumen, to discover the belt method of disolving it; with the cause of deafness. Lond. Med. Obserr. &c. vol. iv. p. 193.

It is by some ranked in the class of medicines; especially that species of it obtained from the human ears, and which is used both internally and externally.

Cervocamelus, in Zoology. See Camelus glama.

Cervon, in Geography, a town of France, in the department of the Niévre, and district of Clamecy; 3 miles E. of Corbigny.

Ceruse, Cerussa, or White Lead. The mode of manufacturing this article was long made a particular secret, and it still continues so with some manufacturers; the following account is obtained from a visit to the works of a respectable house in that line.

The first operation in making ceruse is melting the blue or white lead, (the former quality is the better for this work,) into a cauld or mould which shall form each sheet nearly two feet long, about five inches broad, and about the sixteenth of an inch thick, that it may with convenience roll spirally up so as to leave the space of half an inch or an inch between each coil, and thus be placed vertically in earthen pots in shape like garden pots, and capable of containing from 1 pint to six pints each; these pots are made with one projection or more riling within on the middle, so as to prevent the lead rolling on the bottom; on the base the coil is placed perpendicularly, and upon its top edge, another piece near one foot across is laid horizontally: about half, or a whole pint, wine meurere, according to the size of the pots, of strong vinegar, or other acid liquor, is poured into each pot, but care ought to be taken that it does not quite touch the lower edge of the leaden spiral; the principle acted on here being to exposer as much surface as possible to the action of the acid vapour: each pot ought to hold about 21 pounds avoirdupois weight, and having also a cover of the same metal placed tight upon its mouth, by which means nearly the whole of the item will have an ob-
Many manufacturers have a pair of horizontal flumes like those of the flour-mill for the purpose of grinding it in oil.

A patent was obtained in this business by Mr. Richard Pitcock, of Newcastp upon Tyne, to prevent him from the
advantage of substituting exhausted tenant's back in the place of horse-litter, or mixing a proportion of th., one with
the other.

Cerussa makes a beautiful white colour, and is much used by the painter, both in oil and watercolours. It makes the
principal ingredient in the Esmalts used by the ladies for the
compotier. Taken inwardly, it is a dangerous poison; it
loses its pungency, spoiling the health of teeth and
hardening wrinkles, and all the symptoms of old age.

The exterior use of it as a paint or enamet, for it is said
that it has been fo used, is attended with very disagree-
able, and, in the end, with fatal consequences. Its
effects in nervous affections are terrible; witness the case of Mr.
Bartholomew, See a curious account of it, in the
Hist. Trad., vol. i. part i. N. 2. an. 1754.

Cerussa is the only white hitherto found fit for painting in
oil; the discovery of some other white for this purpose is
defirable, not only from the faults of cerussa as a paint, but
also from its injuring the health of its manufacturers, and
producing a dreadful diftance, which lead all its preparations
frequent occasion, called the Colic of
minerals, or the Colic of painters.

The Chinese make an use of this preparation of lead,
which it is easier to see the advantages of than to comprehend
the manner in which they are brought about.
The China vessels when they have been baked and finished as to
the matter, and even covered with their varnish, will yet receive
into their very substance, the colours which those people
mix up with an addition of cerussa, and, as some of the
old accounts say, of copperas and salt-petre; but though
these latter ingredients had been to add, the cerussa
alone supplies their place at this time, at least in very many
things. It would be worth while to try an admixture of cerussa
with the colours used in the painting of glass; and this,
after a second baking, might perhaps be found to incor-
porate itself in the same manner that it does into China
ware, and recover the long secret of letting in the finest colours,
without hurting the transparency.

CERUSSE of antimony is a perfect oxyz of antimony, pre-
pared by nitre. See ANTIMONY.

CERUSSE, CERUSA ACETATA, in Pharrnacy. Both the
cerussa, and particularly the acetated cerussa are largely
employed in medicinal purposes. An acetated oxyz of lead,
formed different from the fugar of lead, forms the common
COUMAR'S Extract. For an account of the different pharma-
cutical preparations of this metal with their respective uzes, see
the article LEAD.

CERUTI, Frédéric, in Biography, an Italian philolo-
gist, was born at Verona in 1541, educated in France,
and at first followed the profession of arms. But being taken
to Rome by his first patron the bishop of Agen, who
wished to promote him in the church, he declined that mode of
life and returned to his native place, where he married,
and opened a school, which was much frequented. He
became one of the heads of the academy of Moderati, and
maintained a correspondence with several persons of the most
eminent literary characters. In 1585, he published at Ver-
a an edition of Horace, with a paraphrase, and, in 1597, a
similar edition of the fatares of Petrus and Juvenal. He
likewise published a Latin dialogue "On Comedy," and
another "De recta Adolescuentorum Institutione," and
a collection of Latin poems. He left in MS. a translation of the
"Anthologia." Ceruti died in 1579.
CERVULA, or CERVULUS, in Middle Age Writers, a kind of sport, celebrated by pagans, and after their example by the Christians, on New-Year's day; when they ran about in masquerade, dressed in imitation of deer, and other beasts. We find divers customs of the fathers, and decrees of councils against the observance of this ceremony. Even hares were composed, and falling preferred for that day, ad octavum quadragesimae confessurium. D-Cange.

CERVUS, in Fazification, a sort of forked leaf; as paliade, planted sometimes in the middle of the ditch, sometimes in the bottom of the lane, close to the foot of the inner slope thereof, sometimes on the bank between the inner edge of the ditch and the part of the retrenchment to prevent the approach and ascent of the enemy, and to annoy and围绕 him in attempting to force or carry such a work. Cervi were also sometimes planted in holes, or terres de boeuf at some little distance, to impede and prevent the attack of an enemy. Caesar made use of cervi near Alesia, as appears from the c., 72, of the 7th book of his commentaries De Bello Gallico.

Cervus, in zoology, a genus of quadrupeds, in the order Perissodactyla. The horns are solid, branched, thick-at tip, covered while young with a downy skin, and annual; front teeth in the lower jaw eight; tails none, or sometimes one solitary on each side, in the upper jaw.

Species.


This is truly an alpine species, inhabiting for the most part the woody summits of the mountains of Hircania, Russia, and Siberia, in the summer; and descending into the plains only in winter. It is larger than the red-buck, and is observed to become hairy in winter. At other times the body is of a deep reddish-brown, with the lower part and limbs paler; round the nose, and on the sides of the lower lip black; the tip of the lip, and also the rump, are white. The horns are tuberculated at the base. Ears white, and villous within, fringed with a few long black hairs; and instead of tail, a broad cutaneous excrescence.


Should the elk of Europe and Asia, and the moose deer of America be the same animal, it will rank as the largest species of the cervine tribe extant at this time, to our knowledge, either in the old or new continent. It has been usual with writers to consider the history of the two kinds together; and, for the sake of perspicuity, it will not be amiss to follow their example, referring ourselves hereafter an opportunity of stating, in a few words, how far we differ from this generally received opinion. The elk, when full grown, is scarcely inferior to a horse in size. In shape it is much less elegant than the rest of the deer kind, having a very short and thick neck, a large head, horns dilating almost immediately from the base into a broad palmated form; a thick, broad, heavy upper lip, hanging very much over the lower very high shoulders, and long legs. The colour is a dark greyish-brown, much paler, or whiten on the legs, and beneath the tail. The hair is of a strong, coarse, and elastic nature, and is much longer on the top of the shoulders, and ridge of the neck, than on other parts, forming together a kind of buffish mane; beneath the neck also the hair is of considerable length, and in some specimens of the animal, a foot of caruncle, or excrescence, covered with long hair, is pendent from beneath the throat; a circumstance spoken of by Linnaeus as part of the specific character of the animal, but which is more visible at some particular seasons than at others, and is sometimes wanting. The eyes and ears are large; the hoofs broad, and the tail extremely short. According to Pennant, the greatest height of the elk is about seven hands; and the weight of such an animal about 1229 pounds. The horns have been known to weigh 56 pounds, and to measure each 32 inches in length. The female is rather smaller than the male, and has no horns. This applies only to the American moose, which is observed to arrive at a greater magnitude than the European kind.

The elk of Europe and Asia is found abundantly in Sweden and Norway, in the woody tracts of the Russian dominions, and in Siberia; but not in the flat countries of the Arctic regions, nor in Kamtschatka. The American moose inhabits the Isle of Cape Breton, Nova Scotia, the western side of the bay of Fundy, Canada, and the country surrounding the great lakes, almost as far south as Ohio; both in the old and new continent these animals preferring the colder climates. The elk refedes principally in the midst of forests, for the convenience of browsing the boughs of trees; because it is prevented from grazing with facility on account of the shortness of the neck, and disproportionate length of the legs. They often have recourse to aquatic plants, which they can readily obtain by wading into the water. Sarmatin tells us they are very fond of the flowering trefoil, Anagrysa fistuta, and will uncover the snow with their feet to procure it. When passing through the woods, they raise their heads to a horizontal position to prevent their horns from being entangled among the branches. Their gait is remarkable; their general pace is described to be a high, shambling, but very swift trot, the feet being lifted up very high, and the hoofs clattering much during their motion, as is the case also with the rein-deer; in their common walk they lift their feet very high, and will, without difficulty, step over a gate five feet high. They feed principally in the night, and whenever they graze are observed to choose an ascending ground, for the greater convenience of reaching the surface with their lips. They ruminate like an ox. The rotting season is in autumn. The female brings forth two young at a birth, in the month of April, which follow the dam a whole year. During the summer they keep in families. In deep snows they collect in the forests of plains, for protection from the inclemency of the weather, under the shelter of those evergreens. The elk, though naturally of an inoffensive and peaceable disposition, displays a considerable share of courage when suddenly attacked, defending himself with great vigour not only with his horns, but also by lashing violently with his hoofs and feet, in which he is so dextrous, as easily to kill a dog, or even a wolf, at a single blow. The flesh of the moose is extremely sweet and nourishing: the Indians say, that they can travel three times farther after a meal of moose, than after any other animal food. The tongues are excellent, but the nose is said to be perfectly narrow, and is considered the greatest delicacy in Canada. The skin makes excellent buff, being soft, strong, and light. The Indians dyes the hide, and after soaking it for some time, fibrtech and render it supple by a lather of the brains in hot water. They not only make their snow-shoes of the skin, but after the chace cover the hull of their canoes with it, in which they return home with the spoils of their chase.

The hair on the neck, withers, and hams of a full grown elk is of considerable use in making mattresses and faddles; and the palmated parts of the horns are further excavated by the Indians,
Cervus.

Indian, and converted into ladies, and other culinary articles.

The chase of the moose deer forms an important occupation among the natives of North America, and is performed by them in various methods. The first is the most simple, and is conducted in the following manner. Before the lakes and rivers are frozen, multitudes of the fowges assemble in their canoes, and form with them a vast crescent, each horn touching the shore. Another party perform their share of the chase among the woods, surrounding an extensive tract, letting loose their dogs, and preying towards the water with loud cries. The animals alarmed by the noise, fly before the hunters, and plunge into the lake, where they are killed by the other fowges in their boats, who are prepared to receive them with clubs and lances. Another method pursued at times by the hunters is more artful. They enclose a large space of ground with fakes hedged with branches of trees, and forming two hides or a triangle. The bottom space opens into a second space completely triangular. At the opening are hung numbers of fakes made of flaps of raw hides. The Indians, as before, assemble in great troops, and with all kinds of noxes drive into the first enclosure not only the mooses, but the other kinds of deer, which abound in that country. Some foregoing their way into the last iift triangle, are caught in the fakes by the neck or horns; and those which escape the fure and pass the opening find their fate from the arrows directed at them from all quarters. They are often killed with the gun. When first dislodged, the animal falls down, or squats, as if disabled, for a moment or two, at which instant the hunter fires; if he misses, the moose gets off at a swift trot, making at the same time a prodigious clattering with the hoofs, like the rein deer, and will oftentimes run 20 or 30 miles before he comes to bay, or takes to the water. The usual time for this diversion is the winter. The hunters avoid entering on the chase till the fun is strong enough to melt the frozen crust with which the snow is covered, otherwise the animal can run over the firm surface: they wait till it becomes soft enough to impede the flight of the moose, which makes up to the shoulders, flounders, and gets on with difficulty, while the sportsman pursues at his pace on his broad rackets, or snow-shoes, and makes a ready prey of the disfutted animal. A ncient superstition has prevailed that the elk is naturally subject to the epoplely, and that it finds its cure by scratching its ear with the hoof till it draws blood; and in consequence of this notion the hoofs of the elk form an article of the ancient materia medica. A piece of the hoof was anciently set in a ring, and worn as a preservative against the complaint above mentioned; and sometimes the hoof was held in the patient's hand, or applied to the pulse, to the left ear, or suspended in such a manner from the neck as to touch the breath. The hoof has been used by the Indians in the making of matches; they apply it to the heart of the person afflicted, and make him hold it in his left hand, and rub his ear with it. They also use it in the colic, vertigo, pleurisy, and purple fever, paltering the hoof, and drinking it in water.

It should be farther mentioned, that, although the synonyms referred to by naturalists for Cervus alces are repeated in the above account, we wish to impress on the reader our distrust of their accuracy in some leading points. Perhaps on further investigation, the European elk and the moose deer of America may prove, as we suspect, to be two distinct species. With regard to the enormous palmated, full-sided horns that are sometimes dug up in Ireland and other parts of Britain, a more positive opinion may be advanced; they are certainly not the horns of the moose deer, as most writers imagine. In point of size they vary far exceed the horns of the largest moose, and in their appearance differ so materially that they could not possibly be belonged to that animal; they have long beams to support the palmated part instead of short ones, as in the moose; they are also stronger and thicker, and are commonly from 10 to 12, or sometimes 15 feet from tip to tip. It requires no argument to prove that such stupendous horns cannot be referred to any species of the Cervine race at present known, and that they must of course have belonged to some species either totally extinct, or hitherto undiscovered.


The Rein Deer, when full grown, according to Peemant, is four feet six inches in height, the body of a somewhat thick and square form, and the legs shorter in proportion than those of the common stag. The general color is brown above, and white beneath, but as it advances in age it often becomes of a greyish white, and sometimes almost entirely black; the hair on the under part of the neck is of much greater length than the rest, and forms a kind of hanging beard in that part. Both sexes are furnished with horns, but the horns of the male are much larger, and more of the male the female. The hoofs are long, large, and black, as are also the falk or secondary hoofs behind; and these latter while the animal is running, by flapping against each other, make a remarkable clattering sound that may be heard at a considerable distance. No animal of this tribe appears to vary so much in the form and length of the horns as the rein deer. In general the horns are remarkable for their great length, and funderdeds in proportion, and are furnished at the base with a pair of brow antlers, and at the extremity with widely expanded and palmated tips directed forwards; towards the middle the horn rises another large branch, which turns upwards, and is branched at the tip; the remainder of the horn runs on to a great length in a backward direction, and is more or less ramose at the extremity. In the young and middle aged rein deer the horns are remarkably slender. Geffner gives the figure of a full grown male rein deer, which Linnaeus has pronounced to be a good representation of the animal, and in this, the horns which extend horizontal along the back even project beyond the tail.

The height of the domesficated rein deer is about three feet; of the wild ones, four. It lives to the age of sixteen years. The female goes with young thirty three weeks. The male calls his horns annually at the end of November, the female not till the fawns about the middle of May.

The rein deer is celebrated for its services to the simple and harmless inhabitants of Lapland, who, undisturbed by the founds of war, or the troubles of commerce, lead a kind of pastoral life even within the frozen limits of the arctic circle, and have no other cares than those of providing for the rigours of their long winter, and of rearing and supporting their numerous herds of rein deer, which may be said to constitute almost their whole wealth; and which are used not only for the purposes of food, but for travelling occasionally over that frozen country during winter. To the Laplander this animal is considered as at once the substitute of the horse, the cow, the sheep, and the goat. The milk affords them cheese, the flesh food, the skin cloathing, the teadons bow-frings, and whenipl, thread, the horns glue, and the bones spoons. During winter it supplies the want of a horse and draws their sledges with amazing swiftness over the frozen lakes and rivers, or over the snow which at that season covers the
the whole country. A rich Laplander is sometimes poiffed of a thousand rein deer. In autumn they seek the highest hills to avoid the Lapland gad-fly, which at that time deposits its eggs in their skin, and in many instances proves fatal to the animal. So dreadful is this scourge, that the moment a single fly appears, the whole herd perceive it, and betray every symptom of terror by their gestures, flinching, and toffing their heads, and running about for shelter, or to avoid the stroke of their diminutive but cruel enemy. The chief food of the rein deer is a species of lichen, commonly called the rein deer moss, which covers vast tracts of the northern regions, and on which these animals particularly delight to browse. In summer they readily procure it in vast plenty, and in winter dig with their feet and brow antlers through the snow to obtain it. The Lapanders devote their whole care to the management of these useful animals, occasionally housing and nursing their herds during winter; and attending them in summer to the tops of the mountains.

The mode of travelling in flegdes drawn by the rein deer deserves mention. There are in Lapland two races of the rein deer, the wild and the tame. The latter are preferable for drawing the fledge, to which the Laplander accustoms them betimes, yoking them to it by a strap which goes round the neck and comes down between the legs. The fledge is extremely light, and covered at the bottom with the skin of a young deer, the hair turned to slide on the frozen snow. The person who sits on this guides the animal with a cord, fastened round the horns, and encourages it to proceed with his voice, and drives it with a goad. The wild breed are by far the strongest, but these often prove refractory, and turn upon their drivers, who have then no other resource but to cover themselves with the fledge, and let the animal vent its fury upon that. But it is otherwise with those that are tame; no creature can be more active, patient, and willing; when hard pushed they will trot nine or ten Swedish miles, it is said, or between fifty and sixty English miles at one stretch; but in such a case the poor obedient creature fatigues itself to death, and if not killed, to relieve it from misery, will die in a day or two after. In general they can go about thirty miles without halting, and without any great or dangerous effort. This, which is the only mode of travelling in Lapland, can be performed to advantage only when the snow is glazed over with the ice; and though it be a speedy method of conveyance, it is inconvenient, dangerous, and troublesome. The Samoieds consider them as animals of draught. The Korekij, a nation of Kamtschatka who keep immense herds of rein deer, also train them to the fledge. They usually harness two to each carriage, and it is said they will travel 150 versts in one day, a distance equal to about 112 English miles.

The rein deer is a native of the northern regions. In Europe its chief residence is in Norway and Lapland. In Asia it frequentes the north coast as far as Kamtschatka, and the inland parts as far as Siberia. In America it occurs in Greenland and does not extend farther north than Canada. The Samaeds, the Edquamaus, and the Greenlanders, all of whom poiffes this animal, consider it principally as an object of chase. Among the two half people the flesh constitutes their chief article of food. They eat it either raw, dried fresh, or dried and smoked with the frow lichen. The weared hunters will drink the raw blood, but it is usually dressed with the berries of the heath. The skin dressed with the hair on is soft and pliant, and is employed in making their drës, the inner lining of their tents, or as blankets. The tendons serve for bow-stringes, and when split are the threads with which they sew their jackets.

Before the Greenlanders became acquainted with fire arms

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they were accustomed to take the rein deer by what was called the clapper-hunt; in which the women and children surrounded a large space, and, where people were wanting, fit up poles capped with a turf in certain intervals to terrify the animals; they then with great noise drove the rein deer into the narrow diles, where the men lay in wait, and killed them with harpoons and darts. But they are now become scarce in Greenland. The rein-deers are found in the neighbourhood of Hudfon's bay in amazing numbers. Columns of eight or ten thousand are seen annually passing from north to south in the mouths of March and April, driven out of the woods by musktoes. They go to rut in September, and the males soon after shed their horns; they are at that season very fat, but so rank and musky as not to be eatable. The females bring forth their young in June, in the muff feuelted spots they can find, and then they likewise lose their horns. In autumn the deer with their fawns migrate northward. The Indians are very attentive to their motions, for these animals constitute the chief part of their dres, as well as food. They often kill numbers for the sake of their tongues only; at other times they separate the flesh from the bones, and preserve it by drying it in the smoke. The fat which they also save, they sell to the English in bladders, who use it for frying instead of butter. The skins also are an article of extensive commerce with the English. The Indians kill great numbers of them in the winter, and during the migratory seasons, lying in watch in their canoes, and ipearing them while swimming over the rivers, or from one island to another. Authors make several varieties of the rein deer; what is called the Greenland Buck, and Greenland deer, has the horns round, and covered with a hairy skin; Capra groenlandica, Ray, and var. greenlandicus, Gmel. Another variety, the Caribou of Hudfon's bay, has the horns straight with one branch at the bafe turned backwards, \gamma Caribou. Gmel.


The flag is a native of almost all the temperate parts of Europe as well as Asia. It also occurs in some few parts of Africa, and pretty generally in North America; in which latter country it occasionally arrives at a larger size than in the whole continent, with the exception of Siberia, where Pennant informs us it is found of a gigantic magnitude. The flag varies in different countries very considerably, so much indeed as to induce us to believe that travellers and other writers have oftentimes confounded animals of very different species under this general title in speaking of the productions of distant countries. Most commonly the flag is about three feet and a half high, and of a reddish brown colour, beneath white. Sometimes it is of a very dark or blackish brown; sometimes of a pale or yellow brown; and, lastly, infallile occurs of flags being entirely white, which last are mentioned both by Aristotle and Pliny, but as rare. The horns also vary as to the size and number of ramifications, according to the age of the animal. Erxleben mentions three distinct varieties of the flag (Cervus Elephas) independent of the common European kind, namely, Tiffel, Hippelapus B. Larger, with the hair on the neck longer. Cervus G. german, C. Brill. \gamma Eraphus, Aristotle. Tippalam. Pliny. Tragelaphus, Gemin. Hippelaphus, &c. Gmel. Second, Cerfis, \gamma C. C. minor. Salis. Enl. Cerf de Cerfs, Buff. This is smaller than the last and has the body fucous. Third, C. Canadensis, C. Gmel. C. cervus amphihipus. Enl. with very ample horns. Cervus Canadensis, Brill. Stag of Virginia, Dale. Stag of Carolina, Lawton. Stag of America.
Cervus. The histories of all these varieties are to intimately blended with each other by writers that they can only be considered under one general head. The flag, says the ingenious Buffon, is one of those innocent and peaceable animals that seem designed to embellish the forest, and animate the solitude of nature. The elegance of his form, the lightness of his movements, the strength of his limbs, and his branchy horns, with which his head is decorated, contrive to give him a high rank among quadrupeds, and to render him worthy the admiration of mankind. The size and stature of these animals differ according to the places they inhabit: those which frequent the valleys, or the hills abounding in grain, are larger and taller than those which feed upon dry and rocky mountains. The latter are low, thick, and short; neither are they equally swift, though they run longer than the former: they are also more vicious, and have longer hair on their heads; their horns are commonly short and black, like a hunted tree, the bark of which is always of a darker colour, but the horns of the flags which feed in the plains are high, and of a clear reddish colour, like the wood and bark of trees that grow in a good foil. These little flags never frequent the lofty woods but keep constantly among the coppices, where they can more easily elude the pursuit of the dogs. The Cornish race appears to be the smallest of these mountain flags. This kind is fearfully more than half the height of the ordinary fawn, and may be regarded as a terrier among flags. His colour is brown, his body short, and his legs short. Buffon seems convinced, however, that the size and stature of the Cornish flag, and of flags in general, depend on the quantity and quality of their food, for, having reared one of this breed at his house, and fed him plentifully for four years, he was much taller, thicker, and plumper at the age than the oldest flags in his woods, though those were of a very good size. The flag appears to have a fine eye, an acute smell, and an excellent ear. Like that of the cat and the owl, the eye of the flag contracts in the light and dilates in the dark, but with this difference, that the contraction and dilatation are horizontally, while in the first mentioned animals they are vertically. When the flag billets, he raises his head, erects his ears, and perceives the sound from a great distance. When going into a coppice, or other half-covered place, he stops to look round him on all sides, and scents the wind to discover if any object be near that might disturb him. Though rather timid, he has curiosity and cunning. If any one whistles or calls to him from a distance, he stops short, gazes attentively, and with a kind of admiration; and if those who disturb him have neither dogs nor offensive weapons, he commonly paws along quietly, and without altering his pace. He appears to listen with great tranquillity and delight to the shepherd's pipe, and the hunters sometimes make use of this instrument to embolden and deceive them. They will follow the sounds of music for miles, proceeding while they hear it, halting the moment the players cease, and again advancing when the music recommences. In general the flag is lees afraid of men than of dogs, and is never suspicion, or uses any art of concealment, but in proportion as he is disturbed. He eats slowly, selecs his food with care, and, after his stomach is full, seeks a place to lie down and ruminate at leisure. He seems to perform the act of rumination with less facility than the ox, and it appears only by violent efforts he can cause the food to rise from his first stomach. This difficulty arises from the length and direction of the passage through which the aliment must pass: the neck of the ox is short and straight, but that of the flag is long and arched, and therefore greater efforts are required in rumination.

In winter and spring the flag does not drink, the dews with which the tender herbages is surcharged being then sufficient to satisfy his thirst, but during the parching heats of the summer he frequents the brooks, marshes, and bountains, and in autumn is so over-heated that he laches every where for water to bathe and refresh his body. He then swins with more care than at any other time, on account of his latines, and has been observed cooling very large rivers. It has been affered, that in the feation of love, flags will throw themselves into the sea, and pass from one island to another at the distance of several leagues in search of the hinds. Pontoppidan tells us that the Norwegian flags, which are only in the dioceses of Bergen and Drothenheim, have been seen to swim in numbers across the limits from the continent to the adjacent islands, resting their heads upon each others cruppers, and that when those who lead are fatigued they retire behind, and the most vigorous take their places. The flag leaps still more nimbly than he swims, and, when pursued, can readily clear a hedge or paling of six feet height. The alimento of the flags differs according to the seasons. In autumn they search for the buds of green shrubs, the flowers of the heath, and leaves of barmiles. In the winter, during the snow, they strip the bark off the trees, and feed upon that, and the mosses which they find on the trees; and in mild weather they browse in the corn fields. In the beginning of spring they go in quest of the cattens of the trembling poplar, willow, and hazel, and the flowers and buds of cornel. In summer, when they have abundance and variety, they prefer rye to all other grain, and the black berry bearing alder (ramnas frangula) to all other wood.

Stags, in general, call their horns sooner or later in the spring, in proportion to their ages. It seldom happens that both horns fall off at the same time, the one generally preceding the other by a day or two. The old flags call their horns first, which takes place about the middle of February, or beginning of March: those in the seventh year or upwards, do not call their horns before the middle of March: a flag of six years sheds his horns in April: young flags, or those from three to five years old, shed their horns in the beginning, and those which are in the second year not till the middle or end of May. But in all this there is much variety: for some the old flags sometimes call their horns sooner than those which are younger; and besides, the shedding of their horns is advanced by a mild, and retarded by a severe and long winter. As soon as the flags call their horns, they separate from each other, the young ones only keeping together. They no longer haunt the deep recesses of the forest, but advance into the cultivated country, and remain among brush-wood during the summer, till their horns are renewed. In this season they walk with their heads low, to avoid rubbing their horns against the branches. The horns of the old flags are not half completed in the middle of May, and acquire their full size and hardeness before the end of July. Those of the young flags are in proportion later both in shedding and renewing their horns. When full grown, the animals rub them strongly against the boughs of trees, or any other convenient object in order to free them from the skin which covers them, and is then become useless; and by the beginning of Augt they begin to affine the full strength and confidence which they retain throughout the remainder of the year.

Soon after the flag has cleared off the exuberant skin from the horns, he evinces an inclination for the female. By the end of Augst, or beginning of September, they leave the coppice, return to the forest, and begin to search out their favourite hinds; they cry with a loud voice, their neck and
CERVUS.

throat swell, they grow refillics, traverse the fallow grounds and plains in open day, and dart their horns against the trees and hedges. In a word, they seem transported with fury, and range from place to place till they have found their females, whom they have to pursue and overcome, before they submit to their pleasure. If two flags approach the same hind at this time a combat ensues: if their strength be nearly equal, they threaten, plough up the earth with their paws, make a terrible noise, and dart upon each other with the utmost fury. Their battles are carried on to such extremities, that they often inflict mortal wounds with their horns; nor is the combat ever concluded but by the complete defeat or flight of one of them, when the conqueror enjoys the fruit of his victory, unless another male happens to appear, and then a second combat is sure to ensue. The oldest flags are commonly victorious, because they are fcerer, and possessed of greater strength than the young ones. The old flags are the most ardent and Inconfluent, having commonly several females at the same time, and when they have but one they remain attached to her but a few days before they go in search of a second, with whom they remain a still shorter time, and then wander to others. The rutting season lasts about three weeks, during which period they cat but little, and are strangers to all repose; night and day they are on foot, ranging about, fighting with the males, or enjoying the females, and of course when the rutting season is over are fo wafled, meagre, and fatigued, that they require a length of time to recover their strength. They then retire to the borders of the forest, and graze on the bell cultivated lands, where they find food in abundance, and where they continue till their strength is restored. The rutting season, among the old flags, commences about the 1st, and concludes about the 20th of September; with those of fix or seven years old it begins in the middle of September, and ends the beginning of October; with the young flag it begins about the 20th of September, and lasts to the 15th of October, by the end of which month the rutting is all over, except among the prickets, who, as well as the young hinds, are the latest in coming into season: thus, by the beginning of November, the rutting time is entirelyfinished, and, at that period, the flags, being in the weakest condition, are most easily hunted down. In those seasons, when acorns are plentiful, they recover in a very short time, and a second rut will take place towards the end of October, but this is always of a much shorter duration than the first. In warmer climates, as the seasons are more forward, the rutting season begins sooner. Aristotle tells us, in Greece it commences the beginning of August, and concludes towards the end of September. The hinds go with young eight months and a few days, and seldom produce more than one fawn, which they bring forth in May or the beginning of June. They take the greatest care to conceal their fawns, and will even present themselves to be chained in order to draw off the dogs, and afterwards return to take care of their young. All hinds are not prolific, and some of them are even barren: these kinds are more gross and fat than the others, and are sooner in heat. It is also said some hinds have horns like the flags. The young are not called fawns after the first month, then the knobs begin to appear, and they take the name of knobs, which they bear till their horns lengthen into spears, and then they are called hinds and pricket. Though they grow very fast, they do not quit the mother all the first summer. In the winter they all report together, and their hinds are more numerous as the flags is more severe. In the spring they divide, the hinds retiring to bring forth; and they are only the prickets and young flags which then keep together. In general the flags are inclined to associate, and it is only from fear or necessity that they are ever found dispersed. At the age of eighteen months the flags are capable of engendering, for those brought forth in the spring of the preceding year will couple with the hinds in autumn. The flag continues to increase in size till he has completed his eighth year. As the flag is very quick at first in his growth, a year does not pass before this redundancy will itself. If birth brought forth in May, the horns begin to appear in May following, and continue to increase till the end of August, by which time they are full grown. The longevity of the flag, which became proverbial among the ancients, is in some degree a vulgar error, for though the animal, compared with many quadrupeds, may be fully considered as long lived, since it is suppos'd in some instances to arrive at the age of 35 or 40 years, yet it is by no means possible of the longevity ascribed to it by some of the ancients. Ariftotle discontributes this silly prejudice; but it was, as Buffon observes, again revived in the days of ignorance, and supported by the story of a flag that was taken by Charles VI. in the forest of Sens, with a collar upon the neck bearing this inscription, "Caesar hoc me donavit!" the people rather choosing to believe this flag had lived a thousand years, and had received his collar from a Roman emperor, than that he came from Germany, where the emperors assumed the name of Caesar. In Britain the flag is become less common than formerly; its excessive victuallings during the rutting season inducing most people to disperse with this species, and rear the fallow deer, which is of a more placid nature, in its stead. Some attempts have been made to render the flag domestic, by treating them with the same gentleness as the Laplanders do their rein-deer: and it appears, in the Isle of France, where the Portuuguese had introduced the European breed, they had so far succeeded by degrees as to render them quite domestic, many of the inhabitants keeping large flocks of them. But when the French took possession of that island they destroyed most of those domesticated flags, Valmont de Bro- mare asserts that he saw in Germany a few, or "attelage," consisting of a fix flags, that were perfectly obedient to the curb, and active to the stroke of the whip; and in the magnificent stables of Chantilly, in the year 1626, were fifteen flags that were occasionally harnessed to a small chariot, in which they carried two persons. The flesh of the old flags is very bad; that of the female is not amiss, but the flesh of the young fawns is still better. The skin and the horns are the most useful parts of this animal. The skin makes a pliable and durable leather, and the horns, being extremely compact, solid, hard, and weighty, make excellent handles for knives, and other instruments... Stags are still found wild in the Highlands of Scotland, in herds of four or five hundred together, ranging at full liberty over the vall hills of the north, some of which grow to a great size. Pennant says, upon the authority of Mr. Farquharson, that one of these wild flags weighed 344 pounds, exclusive of the entrails, head, and skin. Formerly the great Highland chieftains used to hunt with the magnificence of eastern monarchs, affumbling four or five thousand of their clan, who drove the deer into the toils, or to the fixation their hinds had placed themselves in. But as this pretense was frequently used to collect their vassals for rebellious purposes, as act was passed prohibiting any allusion of this kind. Stags are like the wives met with on the moors that border on Cornwall and Devonshire; and in Ireland on the mountains of Kerry, where they add greatly to the magnificence of the romantic scenery of the lake of Killarney. Pennant is persuaded that the flag is not a native of America, and considers the deer known to...
in that country by the name of flag, as a distinct species. It has been already mentioned that the American flag is a variety, C. canadenis, of Eirichelen. The Americans hunt and shoot these animals, not so much for the sake of the flesh as of the fat, which serves as tallow in making candles, and the skins, which they dispose of to the Hudson's Bay company. They are caught principally in the inland parts, near the vicinity of the lakes.


The fallow deer is considerably smaller than the flag, and is of a brownish-bay colour, varying, in different individuals, to deeper or paler, and is spotted on the back with white; and sometimes, though rarely, the whole of the back is white. Colour beneath, and on the insides of the limbs, whitish. Tail rather longer in proportion than that of the common flag, white beneath, and commonly banded on each side by a defining streak of black; but the principal mark of distinction between this species and the flag is the form of the horns, which, as in the flag, are peculiar to the male, and are erilated at the upper part, and palmated or divided into processes which are continued to a considerable distance down the horn. An antler or simple flander proceeds from the base of each, and a similar one at some distance above this, which pointing somewhat forwards. In its general form the animal resembles the flag, but is smaller, and of a more gentle disposition.

The manner of the fallow deer resembles those of the flag, but he is observed to be less delicate in the choice of his food, eating a variety of vegetables which are refused by the other. He also prefers his venison better, and even after the rutting season he does not appear exhausted, but continues in nearly the same state throughout the year. He browses closer than the flag, and is for that reason more prejudicial to young trees. At the second year the fallow buck seeks the female, and like the flag is inoffensive in his attachments. The doe goes with young eight months and some days. She commonly produces one fawn, sometimes two, and very rarely three. They are capable of engendering from two years of age till fifteen or sixteen, and seldom live more than twenty.

The horns of the fallow buck, like those of the flag, are shed every year, but at a somewhat later period, happening about fifteen days later. At their first appearance they resemble a pair of soft, turned knobs, or tubercles, and are covered with a villous skin; they gradually enlarge, lengthen, and widen at the tops, and when fully grown, the skin which had served to protect and nourish the young horn becoming withered, is rubbed off by the animal, the impression of the blood vessels still remaining on the complete horn, in the form of so many ramified furrows. During the rutting season they are neither so furious nor so violent in their action as the common flag. They never quit their own pastures in search of the females, though they will dispute and fight furiously for the possession of them. It often happens when there is a number in one park, that they will divide into two parties, and engage each other with much resolution; but these contests generally occur from a wish they both have to graze upon some particular spot. Each of these parties has its chief; these head on the engagement, and the rest follow under their direction. One victory is not sufficient, neither party yielding upon a single defeat; but as the battle is renewed daily, the weakest are at last compelled to retire to some secluded part of the park, and be content with the worst palurage. This animal is not so universal as the common flag, and is even rare in some parts of Europe, as in France and Germany. They abound in England, but are chiefly confined to parks. In Spain it is said to arrive at a tree near equal to that of the common flag. It is found in Greece, Palestine, the north of China, and in Persia. The fallow deer in America have been introduced there from Europe; for the animal called the American fallow deer is of a very different kind, and is peculiar to the new continent.


This animal resembles the fallow deer, but is taller, has a longer tail, and is of a lighter colour; the horns are more slender with numerous branches on the inside, and has no brow antlers. The general colour is a light cinnemon brown, the head of a deeper cast, and the belly, sides, shoulders, and thighs white, mottled with brown; the tail, which is about ten inches long, is dully above, and white below. This kind of deer inhabits all the provinces south of Canada, but in greatest abundance in the vail savannas contiguous to the Mississippi, and the great rivers that flow into it, grazing in innumerable herds along with the flags and buffaloes. This species is supposed by some to extend as far as Guinea, and to be the back of that species, which is said to be about the size of an European buck, with short horns bending forward at their extremities. This opinion is erroneous, the backi being now ascertained to be a very distinct animal (*Cervus mexicanus,* Grmel). The Virginia deer are sometimes tamed and used by the Indians, after being properly trained, to decoy the wild, especially at the rutting season, within the range of the hunters' markets. Both bucks and does breed from September to March, after which the does secrete themselves to bring forth, and are found with difficulty. From this time the bucks keep separate till the rutting season in September following. The deer begin to feed about twilight; and sometimes in the day-time, but then only in the rainy season, otherwise they rarely venture to quit their haunts. These animals are very vivis and always in motion. Those which live near the shores are lean and bad, and are greatly troubled with worms in their head and throat, the larve to doubt of various insects that like the toban, and esfiri, or gad-fly, deposite their eggs in the flesh of the animal. Those which frequent the hills and savannas are better, but the venison of these is dry. In hard winters they are offered to feed much on the different species of yucca or liring-molls, which hang from the trees. Thes, in common with the other cloven-footed quadrupeds of America, are very fond of salt, and resort eagerly to the places impregnated with it; they are also always seen in great numbers licking the earth in the spots where the ground has been torn by torrents or other accidents. Such spots are called licking places in America, and the hunters are sure to find plenty of game in those situations; for notwithstanding they are so often disturbed they soon return again in droves to their favourite haunts.

The deer are of the first importance to the Indians. The skins form the greatest branch of their traffic, by which they procure from the colonists in exchange many of the articles of life. The flesh is their principal food throughout the year, which they prepare by drying it over a clear gentle fire, after cutting it into small pieces, and, in this state, it is not only capable of long preservation, but is very portable in their sudden excursions, especially when reduced to powder.
powder. That the skins form an article of very extensive commerce will not admit of doubt; so long ago as the year 1764, no less than 25,007 skins were imported, according to Mr. Pennant, from New York and Pennsylvania. The trade is at present still more considerable.

**Axis.** Horns ramose, round, and erect; summit bind; body sottied with white. Erxleb. Schreber, &c. *Axis,* Phil. Ray, &c.

This animal, which is known by the name of the Ganges flag, is one of the most beautiful species of this genus. Its size is nearly that of the fallow-deer, and its colour an elecraf light russet brown, dhotly and beautifully marked with numerous white spots; the under parts are paler, and a line of white generally separates the colour of the upper from the lower parts; the tail resembles that of the fallow-deer, and is reddish above and white beneath. The species is said to be very common in some parts of India, about the banks of the Ganges, and in the island of Ceylon. It is described by Pliny, among the animals of India, and is said to have been ferred to Baeceus. It has been introduced into Europe, and is occasionally seen in parks and menageries. They are readily tamed and seem to suffer little from a change of climate.

Pennant makes two varieties of the spotted Axis, the middle Axis and great Axis. The middle Axis is described as being of a light russet colour, but never spotted. Sometimes, however, it is said to vary into white, and in that state is considered as a great rarity. It inhabits dry hilly forests in Ceylon, Borneo, Celebes, and Java, where it is found in very numerous herds. The flesh is much esteemed by the natives, and is dried, and salted for use. The existence of the great Axis is ascertained from a pair of horns in the British Museum, resembling those of the former in shape, but of a larger size. They measure two feet nine inches in length, are of a whitish colour, and strong, thick, and rugged. Pennant conjectures they were brought from Ceylon or Borneo, having been informed by Mr. Loten, who had long resided in the former of those islands, that a very large kind of flag as tall as a horse, and of a reddish colour, with tritifurcated horns, existed there as well as in Borneo. In the latter island, where they are said to frequent low marshy tracts, they are called water flags.

**Porcine.** Horns slender, trifurcated: body above fulvous, beneath cinereous, Schreber. *Porcine deer,* Penn.

The length of this animal is three feet and a half; height two feet and a half; horns thirteen inches long, and the tail eight inches. The body is thick and clumsy, the legs fine and slender; the colour on the upper part of the neck, body, and sides brown; of the belly and rump lighter. Mr. Pennant's description of this species was taken from a specimen in the collection of the late Lord Clive, and was brought from Bengal. It is also said to be found in Boreas, where it is called the hog-deer from the thickness of its body. Of their feet, Mr. Pennant says, are made tooth-boppers in the same manner as those of the smaller kinds of antelopes and minks.


This animal, which is described by Buffon under the name of Cerf-cochon or Hog-deer, is a native of the Cape of Good Hope. Dr. Shaw considers it as a probable variety of C. Porcine, and the French writers of the present day think it only a variety of the common flag. If the depictions of this little known animal be correct, we should however rather incline to admit it as a distinct species, and under this idea name it Africanus. It is the same fize as the flag, but the limbs are not fine and slender as in that animal; they are on the contrary short and thick; the legs and hoofs are very small; the fur fawn coloured, darklet on the back, and spotted like the Axis with white; the eyes are black; and the upper eyelids furnished with long black hairs; the nose is black; head reddish-white intermixed with grey; ears large with white hairs within; and the tail fawn-coloured above, beneath white.


This species is the size of the common or European Roe buck, and of a reddish colour, but when young, is often spotted with white. The horns are thick, strong, and rugged; they bend forward, are about ten inches long, and trifurcated at the upper part, but vary sometimes in the number of processes. The head is large: eyes large and bright, and the neck thick. The flesh is said to be far inferior to the venison of Europe. This inhabits Mexico, Guiana, and Brazil.


The flag, says Buffon, as being the noblest inhabitant of the wood, occupies the most secret thodes of the forest, and the elevated ridges of mountains, where the spreading branches form a lofty covert, while the roe, as if an inferior species, is content with an humbler residence, and is seldom found but among the thick foliage of the younger trees, and brack wood. But if he is inferior to the flag in dignity, strength, and stature, he is endowed with more grace, vivacity, and courage. He is superior in gaiety, restfulness, and sprightliness. His figure is more elegant and handom: his eyes more brilliant and animated. His limbs are more supple, his movements quicker, and he bounds seemingly without effort, with equal vigour and agility. His coat or hair is always clean, smooth, and glossy. He never wallows in the mire, like the flag. He delights in dry and elevated places, where the air is pure. He polishes also more cunning and fine, conceals himself with greater address, is more difficult to trace, and derives superior resources from inutility, for though he has the misfortune to leave behind him a stronger scent than the flag, which redoubles the armor and appetite of the dog, he knows how to withdraw himself from their pursuit by the rapidity with which he begins his flight, and by his numerous doublings. He never delays, like the flag, to protract his address till his strength fails him, but as soon as he finds the first efforts of a rapid chase unsuccessful, he repeatedly returns by his former tracks, and after confounding by these opposite movements the direction he has taken, after intermixing the last emanations to those of the former course, he flies from the earth by one great bound, retreats to one side, where he lies down flat on his belly, and in this situation allows the whole troop of his deceived pursuers to pass close to him without attempting to move.

The roe differs from the flag and fallow deer, in disposition, temperament, manners, and almost every natural habit.

Instead
Instead of herding together, they live in separate families; the
fire, dam, and young form a little community, and never ad-
mit a stranger into it. They are covetous in their amours,
and never unfaithful like the flag. During the period in
which they are engaged in the task of nurturing a new family,
they drive off the former brood, as if to oblige them to
yield their place to those which are to succeed, and to form
new families for themselves; but when this feast is passed,
the fawns again return to their mother, and remain with her
some time; after which they separate entirely, and remove
to a distance from the place which gave them birth.

The female goes with young five months and a half,
and brings forth about the end of April or beginning of
May. The hinds, or female flags, on the contrary, go with
young above eight months, and this difference is alone suffi-
cient to prove that these animals are to remote from each
other in species as to prevent their ever intermixing or pro-
ducing an intermediate race. By this difference, as well as
that of figure and size, they approach the goat, as much as
they recede from the flag, and go with young nearly the
same time. The female, when about to bring forth, retires
to the deep recesses of the forest. In ten or twelve days
the fawns acquire sufficient strength to enable them to fol-
low her. When threatened with danger, the hides them in
a close thicket, and to preserve them herself to be the
object of pursuit. But notwithstanding all her care and anx-
ity, the young are sometimes carried off by men, dogs,
or wolves. This is, indeed, the time of their greatest de-
struction. As the rose loves hills, or plains on the tops
of mountains, they never stay long in the deep recesses of
the forest, nor in the middle of extensive woods, but give the
preference to the skirts of woods which are surrounded with
cultivated fields, and to open coppices which produce the
berrv-bearing alder.

About the end of the first year, when the fawns are sepa-
rated from their parents, the first horns begin to appear, in
the form of two knobs, much less than those of the flag.
Contrary to those of the flag, which are cast in the spring
and renewed in the summer, the horns of the roe fall off at
the end of autumn, and are replaced in the winter. When
the roe-buck has renewed his horns, he rubs them against
the trees, like the flag, in order to free them from the velvet
skin with which they are covered, and this commonly happens about
the month of March, before the trees begin to shoot. The second horns of the roe have two or three antlers on each side; the third three or four; the fourth four or five, and after this their horns are seldom furnished with a farther
number of antlers. The horns of the old ones are dif-
tinguished after this by the thickness of their ftems, the
largetnes of the bar, pearlings, &c. As long as the horns
continue soft, they are extremely feifiable: of this Buffon
describes a striking example. The young fount of a roe-
buck's horn was carried off by a hawk, the animal was
stunned, and fell down as if he had been dead. The shoot-
er, who was near, seized him by the foot; but the roe-buck
suddenly recovering his senses and strength dragged the
man, though he was strong and alert, thirty paces into the
wood. After killing him with a knife, it was discovered
that the roe had received no other wound.

As the female roe goes with young only five months and
a half, and as the growth of the fawn is more rapid than that
of the flag, the duration of her life is much shorter, seldom
extending perhaps beyond twelve or fifteen years. They
are delicate in their choice of food, and require a great deal of
exercise, free air, and much room, which is the reason
they are unable, after the first year of their growth, to reful
the inconvenience of domestic life. They may be tamed,
but can never be rendered obedient or familiar. They al-
ways retain a portion of their natural wildness, are easily
terrified, and then run with fuch violence against the walls
that they often break their limbs. However tame, they
may be apparently, they are not to be tamed, and the males
are subject to dangerous caprices; they take averse to certain perons, and make furious attacks with
their horns, the blows of which are sufficient to throw a
man on the ground, after which they continue to trample on
him. The roe-buck bellows, but largely than the flag, neither is his voice so strong or loud. The young ones
utter a short and plaintive cry, mi mi, by which they indicate
their want of food. This sound is easily imitated, and
the mother, deceived by the call, will come up to the very muz-
dle of the hunter's gun.

In winter the roes frequent the thickest coppices, and
feed upon Bramble, broom, heath, and the catkins of
the hazels and willows. In spring they repair to the more open
brush-wood, and eat indiscriminately the buds and young
leaves of other trees. They never drink except in the very
height of summer, when the weather is hot in the extreme,
the moit dews with which the herbage at other times
abound being sufficient to alylay their thirst. The flesh
of the roe is excellent when in good order, but the quality of
the venison depends much on the country they inhabit;
and even the bell countries produce good and bad kinds.
The flesh of the brown roe is preferred to that of the red
fort. All the males after the age of two years have the
flesh hard and ill-taile, but that of the females though far-
ter advanced in age is more tender. That of the fawns,
when very young, is fofe and soft, but at the age of eigh-
teen months, it is in the highest state of perfection. Those
which live in plains and valleys are not good; those which
come from moit countries are ftil worfe: those brought up
in parks are inupid; and, lastly, there are no good roes but
those of dry elevated countries, interapered with hills,
woods, cultivated and fallow land, where they enjoy plenty
of air, food, freedom, and solitude; for those which have
been often disturbed are meagre, and the flesh of those which
have been often hunted is inupid.

The roe was formerly very common in Wales, in the North
of England, and in Scotland, but at present the species exists in
no other part of Great Britain but the Scottish Highlands,
and even there are far from common at this period. In
France they were more frequent, but for the last fifty years
their numbers have been rapidly diminishing. They are
found in Italy but very rarely, and they are much scarcer in
Sweden and Norway than formerly. According to Pen-
nant, the fift that are to be met with in Great Britain are
in the woods on the south side of Loch Rannoch, in Perth-
shire; and the last in those of Langwell, on the southern
borders of Caithness, but they are most numerous in the beautiful
forests of Invercauld, in the middle of the Grampian hills.
In Ireland they are unknown.

The usual size of the roe is three feet nine inches from
the nose to the tail; the height before two feet three inches, but
behind two feet seven inches. The tail is about an inch
long; the horns fix or eight inches long; the general colour
of the animal reddish brown, with the romp white. Like
other quadrupeds it is sometimes found perfectly white, and
Buffon mentions, upon the authority of Count Neillis,
a race of cold black roes that exists in a very small German
district called the forest of Luca, in the dominions of the
King of England as duke of Lunenburg. This variety is
said to be contantly the same, resembling the common fift
in size, and every other particular except in colour.

MUNTJAC. With trisected horns originating from a
cylindrical
Cervus, sacred, were a fort of priests, whose office was to pronounce lence in the public games and sacrifices, publish the names of the conquerors, proclaim feasts, and the like. The priesthood of the ceryces was annexed to a particular family, and the descendants of Ceryx, son of Emolopus. To them it also belonged to lead solemn victims to slaughter. Before the ceremonies began, they called silence in the assembly, by the formula, IN CERNUS CRON WAS CRON, answering to the SABAT LAUTUS of the Romans. When the service was over they dismissed the people with this formula, ANON VIU O, ITS MIFFA ES.

Ceryx, in Cynology, a name by which Pliny and other old authors have called a variety of shells in the Lucinum and nucites genus.

Cesarini. See Cesalpinus.

Cesar, in Logic, a mode of syllogisms in the second figure wherein the major proposition and conclusion are universal negatives, and the minor an universal affirmative. Such is,

CE No man who betrays his country deserves praise.

SA Every virtuous man merits praise.

RE Therefore no man who betrays his country is virtuous.

Cesarea, in Geography, a town of Achaia, in the province of Caramania; 40 miles S.E. of Yercup.

Cesari, Giuseppe, in Biography. See Arinas.

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Ceryx, in Cynology, a name by which Pliny and other old authors have called a variety of shells in the Lucinum and nucites genus.

Cesarini. See Cesalpinus.

Cesar, in Logic, a mode of syllogisms in the second figure wherein the major proposition and conclusion are universal negatives, and the minor an universal affirmative. Such is,

CE No man who betrays his country deserves praise.

SA Every virtuous man merits praise.

RE Therefore no man who betrays his country is virtuous.

Cesarea, in Geography, a town of Achaia, in the province of Caramania; 40 miles S.E. of Yercup.

Cesari, Giuseppe, in Biography. See Arinas.

Cesar, in Geography, a mountain of Cervus, sacred, whose office was to proclaim lence in the public games and sacrifices, publish the names of the conquerors, proclaim feasts, and the like. The priesthood of the ceryces was annexed to a particular family, and the descendants of Ceryx, son of Emolopus. To them it also belonged to lead solemn victims to slaughter. Before the ceremonies began, they called silence in the assembly, by the formula, IN CERNUS CRON WAS CRON, answering to the SABAT LAUTUS of the Romans. When the service was over they dismissed the people with this formula, ANON VIU O, ITS MIFFA ES.

Ceryx, in Cynology, a name by which Pliny and other old authors have called a variety of shells in the Lucinum and nucites genus.

Cesarini. See Cesalpinus.
C E S

vi\nAm on this occasion to his own counsel. Of his letters, orations, and disputations, many are published in the acts of the councils to which they belong. Du Pin’s E. H. of the 17th century, vol. xii. p. 87. Moreri.

Cesarini, Virgilio, the descendant of a noble family, was born at Rome in 1595, and at an early age perfected himself in almost every kind of literature, so that he was regarded as a universal genius. He was not only learned in the Greek and Latin languages, but profoundly skilled in philosophy, astronomy, history, geography, medicine, jurisprudence, oratory, and poetry. Cardinal Bellarmino compared him to the famous Pico della Mirandola, and he was honoured with a medal which bore the head of Pico and his own united under a crown of laurel. He was a very distinguished member of the academy of Lyceum, and intimate with prince Frederic Cesi, its founder. Urban VIII. made him one of his chamberlains, and designed him for the cardinalate; but his course of honour terminated in 1624, at the early age of 30 years. His admirable intellectual qualities were united with modesty, civility, and private worth. His only publication was a collection of Latin and Italian poems, the former of which display singular elegance and amenity, though the style was not rendered perfect for want of time. Several of them are printed in a collection, entitled “Septem Illustrium Virorum Poemata.” Antwerp, 1602, and since reprinted. At the request of cardinal Bellarmino, he had undertaken an ample demonstration of the immortality of the soul, which, with some other works, remained incomplete. His bult, in marble, was placed in the capital with a pompous eulogy. Favorite, a learned prelate, wrote his life. Moreri. Gen. Biog.

Cesario, Sr. in Geography, a town of Naples, in the province of Otranto; four miles W.S.W. of Lecce.

Cesara, in Ancient Geography, a town of Spain, between Arrico and Seguina, in the itinerary of Antolino. Petlemy, who calls it Cesara, says, that it was a town of Celtiberia, in the Tarragonensis.

Cesedium, a temple of Asia, in Pamphylia. Polybius says, that it was dedicated to Jupiter, and that it served as a citadel to the town of Scylas.

Cesum, a town of Asia, in Cilicia, according to Piny.

Cesena, in Geography, a town of Italy, in the province of Romagna, seated on the road from Rimini to Ravenna, on the river Savio, at the foot of a hill, on which stands a ruined citadel, the seat of a bishop suffragan of Ravenna. It has good churches and convents, and the houses are generally well built; 18 miles S. of Ravenna. Near it, on a hill, stands a Benedictine convent, to which belongs the church of Sta. Maria del Monti de Cefena.

Cesena, an ancient town of Gallia Cispadana, situate to the S.E. of Forum Lanci. It is said to have been founded by the Galli Senones, 301 years B. C. It remained under the power of the Heruli, and was beleaguered without effect by Theodoric. This prince, however, gained possession of it after the death of Odoacer, when Lovere, the commandant, surrendered it to him, A D. 491. Having suffered much in different wars, it was partly consumed by a fire.

Cesenatico, a small sea-port of Italy, inhabited chiefly by fishermen, in the Adriatic, in the province of Romagna, which has an excellent harbour and commodious canal, with a bridge, erected in 1516, near which are two fine marble pillars of the Corinthian order; 8 miles N.E. of Cefena.

Cesi, a town of Italy, in the province of Umbria; seated on the edge of a lofty mountain, or rock, exposed to the sun during its whole course from its rising to its setting.

Cesion, or Cesena, in Ancient Geography, a town of Julia, in the tribe of Isflachar, according to the book of Joshua. It was given to the Levites of this tribe, who were of the family of Gerben.

Cesius, in Botany, a name by which some authors express the common daceu flesihitis, wild carrot, or bird’s nest.

Cesules, in Geography, a town of Hungary; 5 leagues N. N.E. of Stul-Wielenburg.

Cespedes, Pablo (Paulo or Paul) de, in Biography, an eminent historical painter of Spain, was born at Cordova, of which he was afterwards dignitary, between the years 1530 and 1542. He was a man of extensive talents and profound erudition, so that, by the Spanish writers, he has been extolled as an universal genius. He travelled twice to Rome in order to perfect himself in the art of painting, to which he was peculiarly addicted; and he formed his style after that of Michael Angelo, whom he also imitated in uniting architecture and sculpture with painting. During his residence at Rome, he supplied a flat to a famous antique trunk of Seneca in white marble; and when the original head was afterwards discovered, that of Cefpedes was thought to be superior. He also painted in fresco at the Trinita Monti at Rome and in other places. On his return to Spain he adorned with his performances the churches of Seville and other cities in Andalusia; but his principal pictures are found at Cordova. His Last Supper in the cathedral is singularly famous, both for variety of expression and tone of colouring, in which last quality he is thought to have approached the manner of Correggio. His drawing, anatomy, and perspective, are eminently correct. The element in which he was held by federico Zuccari isexcused by the following anecdote. When this artist was applied to by the bishop and chapter of the cathedral of Cordova for an altar piece, he peremptorily declined the commission, alleging that while Pablo de Cefpedes was in Spain, there would be no occasion to send into Italy for pictures. As an author, Cefpedes wrote a treatise on the antiquities of the church of Cordova, proving it to have been a temple of Janus. Some of his works on painting are lost. His moral character was exemplary. He died at his native place in 1608, and was buried in the cathedral. Piglinton by Fuseli, Cumberland’s Anc. of Spanish Painters, vol. i.

Cespitose, in Botany, producing several items from the same root, so intermingled and matted together as to form a turf.

Cessaress, in Geography, a territory northward of Patagonia in South America, in the 54th degree of S. lat. inhabited by a mixed tribe of that name, descended from the Spaniards, being the crews of three ships that were wrecked on this coast in 1540.

Cessat Exeunt, in Law. In trespass against two persons, if it be tried and found against one, and the plaintiff takes his execution against him, the writ will abate as to the other; for there ought to be a cesso exequior, till it is tried against the other defendant; 1 K. B. iv. 11.

Cession, the act of intermitting, discontinuing, or interrupting the course of any thing, work, action, or the like.

Cession of arms, in a Military Sense, signifies a total discomfiture or suspension of warrlike operations or acts of hostility for a limited time during a state of warfare. See Captitation.

Cession, Cessatio a divinis, in the Roman Church, is a penalty inflicted for any notorious injury to the church, by putting a stop to all divine offices, and the admission of
of the sacraments, and by depriving Christians of church-burial.

CESSAVIT, in Law, a writ, which lies by the statute of Gloucester, 6 Edw. I. c. 4, and of Wellm. 2, 13 Edw. I. c. 21 and 24:1 when a man who holds lands of a lord by rent or other services, neglects or ceases to perform his services for two years together; or when a religious house has given it, on condition of performing some certain spiritual service, as reading prayers or giving alms, and neglects it: in either of which cases, if the ceftor or negliger have continued for two years, the lord or donor and his heirs shall have a writ of cessavit to recover the land itself. F. N. B. 228.

This, in some instances relating to religious houses, is called cessavit de contario. By the statute of Gloucester, the cessavit does not lie for lands let upon fee-farm rents (cessavit de foro), unless they have been void and uncultivated two years, and there be not sufficient diligence upon the premises; or unless the tenant hath so enclosed the land, that the lord cannot come upon it to distrain. T. N. B. 209. 2 Inst. 298.

For the law prescribes the simple and ordinary remedies, by dillref, &c. to this extraordinary one of forfeiture for a cessavit; and therefore the same statute has provided further, that upon tender of arrears and damages before judgment, and giving security for the future performance of the services, the proceed shall be at an end, and the tenant shall retain his land; to which the statute of Wellm. 1, conforms, so far as may stand with convenience and reason of law. 2 Inst. 401. 402.

The statute 4 Geo. II. c. 28 (which permits landlords who have a right of re-entry for non-payment of rent, to serve an ejectment on their tenants, when half a year's rent is due, and there is not sufficient diligence upon the premises) is in some measure copied from the ancient writ of cessavit; especially as it may be satisfied and terminated in a similar manner, by tender of the rent and costs within six months after. And the same remedy is, in substance, adopted by statute 14 Geo. II. c. 16, § 10, which enacts, that where any tenant at rack-rent shall be one year's rent in arrear, and shall defect the demised premises, leaving the same uncultivated or unoccupied, so that no sufficient diligence can be had; two judgments of the peace (after notice affixed on the premises for 14 days without effect) may give the landlord possession thereof; and thenceforth the lease shall be void. By Stat. Wellm. 2. § 2, the heir of the demandant may maintain a cessavit against the heir or assigns of the tenant. But in other cases, the heir may not bring this writ for cessavit in the time of his ancestor; and it only lies for annual service, rent, and such like; and not for homage or scutage. Terms de la ley. New Nat. Brev. 463, 464.

The lord shall have a writ of cessavit against tenant for life, where the remainder is over in fee to another; but the donor of an estate-tail shall not have a cessavit against the tenant in tail; though if a man make a gift in tail, the remainder over in fee to another, or to the heirs of the tenant in tail, the lord of whom the lands are held in immediate, shall have a cessavit against the tenant in tail, because he is tenant to him. Ibid. If the lord distrains, pending the writ of cessavit against his tenant, the writ shall abate. The writ cessavit is directed to the sheriff, "to command A. B. that, &c. he render to C. D. one meagre which he holds by certain services, and which ought to come to the said C. by force of the statute, &c. because the said A. in doing these services had ceased two years, &c." Blackl. Comm. vol. iii. p. 252. Jacob's Dict. by Tomlins.

Cesse, signifies an affliction or tax, and is mentioned in the Stat. 22 Hen. VIII. c. 3. Cesse, or Cesse, in Ireland, is an exaction of viatuals, at a certain rate, for soldiers in garrison. Vol. V. 71.

Cessenon, in Geography, a town of France, in the department of Herault, and district of St. Pons; 3 leagues N. of Beziers.

Cessero, in Ancient Geography, a town of Gallia Narbonensis, on the frontiers of the Lectesages, according to Pliny. This town was built in a valley, near the river Aravis or Erault.

Cessieux, in Geography, a town of France, in the department of the Ile-de-France, and district of La Tour-du-Pin; 27 miles W.S.W. of Lyons.

Cessio Benimiris, in Scots Law, the name of that action by which an insolvent debtor may apply for liberation from prison, upon making over his whole real and personal estate to his creditors.

Cession, in a Legal Sense, an act whereby a person surrenders up and transmits to another person, a right which belonged to himself.

Cession is a general term; the species whereof are a surrendor, relinquuiment, transfer, and subrogation; which see.

Cession is particularly used in the Civil Law, for a voluntary and legal surrender of a person's effects to his creditors, to avoid imprisonment.

This practice still obtains in France and other countries; and is done by virtue of letters patent granted in favour of the poor and honest. The cession originally carried with it a mark of infamy, and obliged the person to wear a green cap or bonnet; at Lucca, an orange one: to neglect this, was to forfeit the privileges of the cession. This was originally intended to signify, that the cessionary was become poor through his own folly.

The Italian lawyers describe the ceremony of cession to consist in flinging the bare breech three times against a stone, called lypis virgariis, in the presence of the judge. Formerly it consisted in giving up the girdles and keys in court. The ancients used to carry at their girdles the chief utensils wherewith they got their living; as the lvnter his escritoire, the merchant his bag, &c.

The form of cession among the ancient Romans and Gauls was as follows. The cessionary gathered up duit in his left hand, from the four corners of the house; and, flinging on the threshold, holding the door-post in his right hand, threw the duit back over his shoulders; then stripping to his shirt, and quitting his girdle and bag, he jumped with a pole over a hedge; hereby letting the world know, that he had nothing left, and that when he jumped, all he was worth was in the air with him.

The judicial cession is that which is made by a merchant or trader, who is actually kept in prison by his creditors, and who being absolutely incapable to satisfy them, petitions a court of judicature for leave to make cession. This judicial cession is certainly compulsory on the part of the creditors; since the debtor is commonly allowed the benefit of a cession by an order from the judges, notwithstanding the opposition made by the creditors to prevent it; which renders this cession more infamous than that which is voluntary. See Bankrupt.

Cession, in the Ecclesiastical Laws, is one manner of vacating or voiding an ecclesiastical benefice.

Cession is an implicit kind of resignation, under which a person does some act, or takes on himself some charge, which is inconsistent with his holding the benefice of which he was before possessed.

By statute 21 Hen. VIII. c. 13, if a clerk have one benefice of 81. per annum, or upwards (according to the present valuation in the king's books), and takes another, of what value soever, with care of souls, and without dispensa-
tion; the former living is, ipso facto, void; and this kind of voidance of a living is called cession. See Dispensation.

In case of a cession under the statute, the church is so far void upon institution to the second living, that the patron may take notice of it, and prevent if he pleases: but it seems that a lease will not expire from the time of institution against the patron, unless notice be given him; but it will from the time of inducement. 2 Hild. 202. 3 Brev. 1564.

What is called cession in other benefices, is called consecration in relation to a bishoprick; for if an incumbent be made a bishop, his benefice is said to be void by consecration; and to such benefice or benefices the king shall present for that time, whoever is patron of them; in other cases the patron may prevent. See Consecration.

CESSIONARY, a bankrupt. Sometimes it denotes an assignee.

CESSITANUS, in Ancient Geography, an episcopal town of Africa, in Mauritania Cæsariaca.

CESSOR, in Law, one dilatory and delinquent in his duty, or service, and who thereby incurs the danger of the law, and is liable to have the writ cessevi brought against him. When it is said the tenant cessevi, it is meant, he cessevi to do his duty, or service, to which he is bound.

CESTAROLLS, in Geography, a town of France, in the department of the Tarn; 3 leagues N. of Alby.

CESTRI, il PAPA MARC' ANTONIO, d'Arzo Minor Conventual e Cavalliero dell' Imperatore, in Biography, an Italian vocal composer of music, of considerable eminence in the 17th century. He set an opera for Venice, in 1641, called Orontea, which was revived at Milan, with the same music, in 1662; at Venice, 1666; at Bologna, 1669; and again at Venice, 1683; always colsa Musica fissa, during 34 years!

It has been extremely difficult to find any of the music of the early operas that was not printed. Luckily, a scene of Cesti's celebrated opera of Orontea, composed in 1641, and afterwards so frequently revived, was found in the music-book of Salentorina, in that painter's own handwriting. (See Hist. Mus. vol. iv. p. 67.) This air is supposed to have been the first strain in measured melody that was introduced at the termination of a scene of recitative.

Ces is said to have been a disciple of Cardinari, which is hardly reconcilable with the date of this opera, as Cardinari did not begin to be known at Rome till after the year 1642. Adami says, that Cesti was admitted as a tenor singer in the Pope's chapel, in 1660; and that "the most celebrated of all his operas, of which five were composed for Venice, was La Doria, il lumi maggiore del sec Teatro." This opera first appeared at Venice, 1665, and was not only revived there in 1667, and 1667, but frequently performed with great applause in the other principal cities of Italy. Songs have, since these times, been so much composed to display the peculiar talents and abilities of singers, that operas can never be successfully revived but where the same performers, who sang in them originally, happen to survive, and to be engaged at the same theatre: which is not likely to happen at the distance of many years. Indeed, if, contrary to the chances against it, such a concurrence of circumstances should take place, twenty or thirty years generally make such havoc with fine voices, fine taste in singing, and fine feelings in judging, that it is by no means certain that they would then please the same critics as much as formerly.

The number of cantatas that Cesti produced, seems incalculable; as in every old library or collection of Italian old vocal music, that we have examined abroad and at home, we find more of his cantatas than of any other author. At Chrift Church, Oxford, in the collection of Dr. Aldrich, in the British Museum, in the d'Arcy collection of the late Earl of Hakluyt, in that of Lord Keeper North, of Sir Roger L'Estrange, and of all the ancient families who cultivated music in the 17th century, we found innumerable cantatas by Cesti; and it appears in these cantatas, that he was a great impoyer of recitative. See Opere, Cantata, and Recitative.

CESTILLI, in Ancient Geography, a town of Italy, in Lomia, at a small distance E. of Quadrata, and N. of Riconagius.

CESTISSA, a town of Lower Pannonia, according to Ptolemy. The Itinerary of Antoninus marks it on the route from Lomia to Sirmium, between Leuconium and Ghibe.

CESTRATUM, a work enamelled, or painted with a cession. The word is also written cestredum and cestrema.

CESTREUS, or rather Cestus, in Idiodyogy, the name of a fish described by old writers as being of the mullet kind, but having a much smaller and narrower head, and its sides variegated with much shorter longitudinal lines. From this description we suppose the Gmelian Cannabis Girusnovi must be intended, a fish which Ray describes as a mullet (Mytilis americanus), and Klein as Cestus ausurus, gibusus intertextis, osculis ellipticis, pinis albicantibus, pinna dorso maxima. See Cannabis Girusnovi.

CESTRI, in Ancient Geography, an episcopal town of Afa, in Iauria.

CESTRINA, a small country of Epirus.

CESTRON, in Antiquity, the infrument wherewith they painted or enamelled, in horn, or ivory.

CESTROPHEONODUS, or rather Cestrophi Helenus, of Aetides, or of Tereus, tragula, and Cydonus, funda, a sort of military engine with a fling, for throwing barbed darts or javelins. Also, the dart or javelin itself, which took its name from the fling with which it was thrown, and is said to have been balanced with feathers as an arrow, and pointed at both extremities. It was made use of by the Macedonians, under Perseus, against the Romans.

CESTROS, or Cestrius, in Ancient Geography, a river of Pamphylia.


Gen. Ch. Cal. one-leaved, tubular, very short, toothed, erect. Cor. monopetalous, funiculo-shaped; tuba cylindrical, very long, slender, orifice roundish; border five-leaved, spreading, short; segments equal. Stam. filaments five, bifidum, attached longitudinally to the tube of the corolla, in some species furnished with a little tooth in the middle or towards the base; anthers roundish, within the tube. Pyl. germ superior, cylindrical, egg-shaped; the length of the calyx; style filiform, the length of the flaments or longer; stigma thickish, obtuse. Peric. berry egg-shaped, one celled. Linn. sect. two celled, Adamson, Lam. Seeds several, angular, affixed to a thick receptacle in the middle of the berry.


Obf. Cestrum observes, that though there may possibly be two cells in the germ, there are no traces of a partition...
in the ripe berry. It appears to us that La Mareck considers the receptacle as a partition, which he ought not to have done, unless that receptacle had been so extended through the middle of the berry, as to cut off all communication between its sides.

Sp. 1. C. notatum, Lam. Sp. Pl. 1. Lam. Encycl., and Ill. i. Pl. 112. fig. 1. Mart. 2. Wild. 2. Gart. tab. 77. fig. 9. (f. jucinifolius, Dill. Elih. tab. 153. fig. 185.) "Flowers peduncled, somewhat racemous, greenish; filaments toothed; berries white." A shrub from six to nine feet high, branched in its upper part. *Branches* cylindrical, fleshy, dotted, generally inclining to one side. *Leaves* near four inches long, linear and a half broad, alternate, petioled, ovate-lanceolate, smooth, green, sometimes spotted with yellowish white. *Flowers* in axillary bunches. *Berries* a little smaller than a pea. A native of the island of Cuba, flowering in August and September, where, on account of its yielding a pleasant smell in the evening, it is called the *Lati of the Night*. Cultivated long since by the Dukes of Beaufort at Badminton, and thence known by the name of Badminton Jasmine. It does not ripen its berries in England. 2. C. Parqui, Mart. 7. Lam. Ill. 2. Wildl. 3. L'Herit. Stirp. 4. tab. 36. (C. Jamaicaefae, B. Lam. Encycl. Parqui. Vahl. Fenn. obs. 3. tab. 32.) "Leaves narrow-lanceolate, filigule; flowers somewhat racemous, falcate, yellowish green; berries brown." A fett shrub, about six feet high. *Stems* several, upright, round; *branches* alternate, spreading, round, with a few tubercles. *Leaves* alternate, lanceolate, very acuminate at each end, entire, somewhat waved, smooth, bright green on both surfaces, spreading; petioles very short; *filaments* linear. *Flowers* fimbriate or nearly so, smelling sweet in the night; bracte linear, acute, spreading; calyx two lines long, smooth, persisting; corolla inserted into the receptacle, almost naked; tube eight lines long, club-shaped at the top; *filaments* of the border lanceolate, acuminate, spreading and finally turned back; flowers closing the tube with their teeth, pubescent at the base, the length of the tube; *anthers* two-celled, yellow; stigma oblate-lingulate, exca-vated, large. *Berry* small, egg-shaped. *Seeds* three or four, angular. A native of Cutili. Introduced at Paris from seeds sent by Dombey. 3. C. auriculatum, Mart. 6. Lam. Ill. 5. Wildl. 4. L'Herit. Stirp. tab. 35. (C. he-diiuma, Lam. Encycl. 2. Hediium, Vahl. Fenn. obs. 23. fig. 3.) "Flowers pedunculated, somewhat panicled; filigules carse, surrounding the branch." A fett shrub, about fifteen feet high. *Branches* round, olive green or ash-colour, almoat linoace. *Leaves* alternate, four inches long, one inch and a half broad, petioled, oblong-lanceolate, acute, smooth, entire, green, but paler underneath; *filaments* axillary, of the same form with the leaves. *Flowers* greenish, with a tuige of dull red, nearly feathery, in terminal and axillary clusters; bracteae few, linear; calyx somewhat hairy, pitted clove; corolla somewhat hairy on the outside; tube swelling at the top; divisions of the border linear-lanceolate, very sharp, two-furrowed, spreading; *filaments* very short, without teeth. *Berry* with about five seeds. A native of Peru, where it is used externally to cleanse foul ulcers, and internally in the venereal disease. It is also regarded as a pectoral. According to Father Feni, it yields, during the night, a pleasant smell, resembling that of myrrh, which, as soon as the sun rises, is changed into a highly offensive colour, and so continues during the whole day. Dombey observed it in wet places about Lima. It was introduced into this country about 1774, but has rarely flowered, and never bore fruit. It flowers in winter.

4. C. vespertinum, Lam. Mutt. 226. Mart. 2. Lam. Ill. 4. Wildl. 6. (C. Jamaicaefae, Lam. Encycl. 2. Jatrinium, Burm. Amer. tab. 77. fig. 1. Ixora alternifolia, Jacq. Amer. tab. 177. fig. 8.) "Flowers fimbriate, nearly 1. file; border acute; berries ovate-shape, dark violet." A tree, twelve feet high. *Stem* not very strong. *Leaves* alternate, on short petioles, length double the breadth, acute, quite entire, green on both sides, concave, with the edges raked and waved. *Flowers* crowded, in nearly sessile filiculae, greenish-white, often tinged with purple or violet, alternate, separated by ovate-elongate bracteae; tube very slender; border with five acute expanding segments; *filaments* without a tooth. *Berries* resembling an olive, but only half the size, nearly black. *Seeds* four, oblong. A native of the West Indies. Cultivated by Miller in 1779. 5. C. pallidum, Lam. Encycl. 4. Ill. 5. (Jatrinum buonis folins, Sloan. Hist. jam. 2. p. 96. tab. 204. fig. 2. Syringa laureola Jamaicaefae, Plum. Alm. 329. tab. 64. fig. 3.) "Racemes compound, axillary; flowers small, pale; berries inversely egg-shaped, dark blue." The synonyms are referred by Linnéus to C. notilum, but La Mareck asserts, that it is a perfectly distinct species resembling C. lurifolium in the form of its leaves, and C. vespertinum in the colour of its fruit, and clearly distinguished from all the three by the smallness of its flowers. A shrub, seven or eight feet high. *Branches* smooth, thick let with leaves near the summit. *Leaves* alternate, petioled, oval-acute, an inch and half broad, smooth, dark green. *Flowers* scarcely fix lines long, pale or yellowish, smooth; border expanded; segments short, rather acute. A native of Jamaica, described by La Mareck from a dried specimen in the herbarium of Jullieu. 6. C. falciflorum, Wild. 5. Vahl Eclog. 1. p. 24. "Filaments toothed; leaves egg-shaped, attenuated, smooth; racemes axillary, somewhat compound; *branches* climbing." A native of St. Martha. 7. C. bir-

...
labeled, incumbent, half within the tube; germ superior, egg-shaped, five-channeled, smooth, on a rather large five-corned receptacle; style somewhat thickened at the top, rather shorter than the stamina; stigma obtuse, imprest. Dr. Smith and La Mark. 10. C. venenatum, Willd. 8. Thumb. prod. 35. "Leaves lanceolate-oblong, coriaceous; flowers filiform." It seems nearly allied to the preceding, but distinct. Willd. 11. C. tomentosum, Linn. jnn. frimp. 150. Mart. 4. Lam. Enc. 7. Ill. 8. Willd. 9. "Flowers crowded, terminal, filiform; branches, leaves, and calyxes downy." The form of the flowers and leaves bear the same as C. diurnum, but, in addition to the difference expressed in the specific character, the calyxes are larger, the corollas coloured, the tube shorter, and the border more ample. 3. C. diurnum, Lam. Sp. 11. 2. Mart. 5. Lam. Encyc. 8. Ill. 9. Willd. 7. L'Herit. flrmp. nov. 74. (Jasminoides, Dill. eth. 156. tab. 154. fig. 165.) "Petals pedunculated; corolla white; border obtuse, reflexed; leaves ovate-lanceolate." Stem from ten to twelve feet high, slender, with a cinerea bark, dividing at the top into many smaller branches. Leaves alternate, petiolate, near three inches long, one and a half broad, oval-oblong, acute, smooth, deep green above, pale under, shining, evergreen, in confluence resembling those of spurge laurel. Flowers small, white, smelling sweet in the day-time, and thence called Lady of the Day, growing almost in umbels; common peduncles axillary, from one to three inches long; corolla five lines long; segments four, oval, reflexed, waved, and almost crimped at their edges; filaments toothless. A native of Chili and the West Indies. 13. C. epiphyllum, Linn. 11. 112. fig. 2. flowers ill-drawn. "Leaves opposite, lanceolate, nervous, somewhat coriaceous; flowers falcate, filiform, axillary." A native of Africa, observed by Sonnerat. 14. C. nervosum, Mart. 9. Miller 5. "Leaves opposite, lanceolate, with translucent nerves; peduncles branched." Stem fimbriate, five or six feet high, covered with a brown bark, and dividing at top into very small branches. Leaves about four inches long, little more than one broad, smooth, light green. Flowers white, axillary, towards the ends of the branches, four or five on each peduncle, without scent; tube of the corolla fimbriate at the base just above the calyx, contracting towards the mouth; segments of the border broad, flat. Sent to Mr. Miller from Carthagena in New Spain. Nearly allied to the preceding, if not the same.

Cestrum, in Gardening, affords plants of the shrubby exotic flowering kind, of which the species are the night-smelling Cestrum, (C. nocturnum,) and the day-smelling Celatum, or Ballard Jasminae, (C. diurnum); and other more tender species may be cultivated for variety.

The first of these rises with an upright stalk, about fix or seven feet high, covered with a greyish bark, and divides upward into many slender branches, which generally incline to one side, and are garnished with leaves placed alternate, near four inches long, and one and a half broad, smooth on their upper side, of a pale green, and, on their under side, they have several transverse veins, and are of a sea-green colour, having short foot-stalks; the flowers are produced at the ends of the leaves, in small clusters hanging upon short peduncles, each flatening four or five flowers, of an herbaceous colour, appearing in Angulf, but which are not succediced by berries in this climate. It is a native of the island of Cuba, &c.

And the second species rises with an upright stalk, to the height of ten or twelve feet, being covered with a smooth light green bark, dividing at top into many smaller branches, with smooth leaves near three inches long, and one and a half broad, of a lively green colour, and the consistence of those of the spurge laurel; these are ranged alternately on the branches. Towards the upper part of the flowers come out the flowers from the wings of the leaves, blanding in clusters close to the branches, which are very white, shaped like those of the first sort, and smnel sweet in the day-time, whence it had the appellation of Lady of the Day. The berries are smaller than in the first sort. It flowers in the autumn, and is a native of the Havannah, &c.

Method of culture. In these plants the mode of increase is either by seeds or cuttings; but as the former cannot be easily procured, the latter is the more common method of practice. The seeds should be sown in pots filled with light friable fresh earth in the early spring season, and plunged in a gentle hot-bed. After the plants are sufficiently strong, they should be removed into separate pots, shade and a little water being given occasionally, till they are well rooted again, and become perfectly established.

The cuttings must be made from the side shoots, to the length of five or six inches, and be planted in pots of fresh earth in the former season, plunged them in a bark hot-bed, a little water and shade being given till they have taken firm root; and in both methods the plants require to be kept afterwards in pots filled with light earth in the stove of the hot-hose.

The evergreen flowered nature and fragrance of these plants afford a fine effect, when placed in assamblage with other shrub exotics.

CestuU, a French term, literally signifying he or him; frequently used in our law writings. Thus,

Cestu que truff, he is in truth for whom, or to whose use or benefit, another person is enfeoffed or seized of lands or tenements. By Stat. 29 Car. II. c. 3. lands of cestus que truff may be delivered in execution.

Cestu que vis, one for whose use any lands or tenements are granted.

Cestu que vis, he to whose use another man is enfeoffed of land or tenements. 1. Rep. 135.

Feeholders to ueses were formerly deemed owners of the lands; but now the possession is adjudged in cestus que vis, and without any entry he may bring affile, &c. Stat. 27 Hen. VIII. c. 10. Cro. Eliz. 46. See Usc.

Cestus, among Ancient Poets, a fine embroidered girl dressed worn by Venus, to endow with a faculty of charming, and conciliating love. The abbe Winkelman observes, that this goddes, when dreffed, has always two cintures; one immediately beneath the breast, and the other round the lower part of the body, above the hips. In proof of this observation, he refers to the Venus of the Capitol, and the statue of the goddes in the possession of lord Egmont. It is the lower cinture which is properly the cestus of Venus. When Juno, wishing to inflame the heart of Jupiter, solicited and obtained the loan of this mysterious girdle, she put it, according to Homer, not upon the ordinary cinture, immediately under her breast, but where Venus wore it, below: for that such is the true sense of the word cintura. (ll. 1. 149. v. 216.) Is evident from the context, which informs us, that Juno was already encompassed with a zone, profusely adorned with fringe. (v. 181.) Of this mystic cestus 11omer has given the following description, (l. 14. v. 215—217,) which we shall here subjoin in the words of his translator:

In it was ev'ry art, and ev'ry charm,
To win the wifh, and the coldelt warm:
Fond love, the gentle vow, the gay defire,
The kind deceit, the full-reviving fire.
Persuasive speech, and more persuasive signs, 
Silence that spoke, and eloquence of eyes."—Pope.

This fiction, which is extremely beautiful, has been happily imitated by Tasso, in his magic cincture of Armida.

The cincture of virginity, *sona virginea*, or *cingulum virgineum*, which was worn at Rome by females newly married, before they surrendered themselves to their husbands, was also called *cifius*. It was formed of wool, and served as the symbol and defence of the modesty of the married female; and it was reserved for the bride-groom to untie this mystical cincture. Whence *sonam solvere* was used to denote being married. Thus Catullus (iv. 14.):

"Quod polliit sonam solvere virgineum."

The expression of untying the cincture signified, among the Greeks, the first mutual acros of the married pair. Accordingly, the scholiast of Apollonius, (Argon. i. 281.) lays, that the females of Athens consecrated at this period their cinctures to Dana, who had in this city a temple, where she was honoured under the title of *λατερη*, or the deity who united the cincture.

The word is also written *cifum*, and *cifon*; it comes from *συγγερ*, a girdle, or other thing embrodered, or wrought with a needle; derived, according to Servius, from *κυται*, punzere; whence also *inclusus*; a term used at first for any indecency by undoing the girdle, &c. but now restrained to that between persons near akin. See *Incerc*.

*Cestus, Cestus, Ceste*, in *Antiquity*, a large leathern gauntlet loaded with lead or other metal, which the ancient Athlete used in their exercises for disputing the prize of pugilism. The Greeks had four kinds of celtus. The fist was of an ox hide not dried, and dried, and was called *τύρα*, or *τυραννικός*. The second was loaded with metal, and called *μυμφυκτές*. The third was made of fine and soft thongs, leaving the fist and fingers uncovered. And the fourth was the large globular gauntlet fist mentioned, and called *Στάσις*. See *Cestus*.

*Cesure*, or *Cesura*, in *Poetry*. See *Cesura*.

*Cetaceous Animals*, in *Zoology*. See *Cete*.

*Cetuum*, in *Ancient Geography*, a promontory of India, in that part which was S.E. of the island of Taprobana, according to Ptolemy.

*Cetaria*, a town placed by Ptolemy on the western coast of Sicily.

*Cete*, in *Zoology*, the seventh order of mammalia, in the Linnaean System of Animals, including the four genera, *Monodon*, narwhal; *Balaena*, whale; *Physeter*, cachalot; and *Delphinus*, dolphin. The cetaceous tribe has one or more spinales placed on the fore part of the skull; no feet; pectoral fins without nails, and tail horizontal.

It is well observed by the late Mr. Hunter, in one of his papers on the whale (Phil. Trans.), that the cetaceous order of animals has nothing peculiar to itself, except living in the same element, and being endowed with the same powers of progressive motion as those fishes which are intended to move with considerable velocity. The popular idea of cetaceous animals being fishes is so strongly impressed on the public mind, that it can never, perhaps, be entirely removed, for the critical observations of naturalists appear too subsite to be generally examined, and of consequence to be commonly understood. The cetaceous tribes live in the same element as fishes, and, partaking somewhat of their external figure, will ever be considered as appertaining to that class of animals by the less informed portion of mankind. Ray and Willughby, and, after their example, Pennant, are the only writers of any moment who acquiesce in this popular prejudice, with the exception of the earlier authors. The writings of Ray and Willughby appeared before the time of Linnaeus, or it is likely they would have been reconciled to the arrangement of the latter: it was through the observations of Linnaeus chiefly that the world became acquainted with the true distinction between the animals of the cetaceous tribe, and fishes, as founded on anatomical investigation. Pennant was acquainted with the circumstances that induced Linnaeus to place them with the mammals, but notwithstanding considered it more natural to follow Ray, and place them in the rank of fishes, because, as Ray observes, "the form of their bodies agrees with that of fish: they are entirely naked, or covered only with a thin skin; and they live entirely in water, and have all the actions of fish." Much as we respect the talents of our illustrious countryman, Ray, it is difficult to perceive, in the present instance, sufficient reasons for preferring his arrangement to that of Linnaeus. The fish is founded on a vague resemblance in external figure between cetaceous animals and fishes, without regard to their internal organization, while the latter relies on an unshaken basis; it was the result of much anatomical investigation, and a due consideration of the nature, habits, and affinities of these two tribes of animals. We need only add, on this point, that the recent observations of that great comparative anatomist, Mr. Hunter, have perfectly eviscerated the accuracy of the Linnaean distribution of these animals, and that it has obtained the further countenance of Dallas, Schrifer, Fabricius, Mulker, Bonnaterre, and many other naturalists of distinguished celebrity in Europe at the present day.

Cetaceous animals, or, as Dr. Shaw expresses them, "fish-formed mammalia," have lungs, intestines, and other internal organs formed on the same principle as in quadrupeds; and, indeed, on strict comparison, the principal differences that exist between them will not be found very considerable; one of the most material seems to consist in their want of posterior legs, the peculiar structure of the tail supplying that defect; this being extremely strong and tendinous, and divided into two horizontal lobes, but which has no internal bones. Like quadrupeds, they have a heart furnished with two auricles, and two ventricles, and their blood is warm and red: they breathe by their lungs, and not by means of gills, as in true fishes. In their amours they agree with quadrupeds: the female produces her young alive, which rarely happens among fishes, and she suckles them with her teats, as in the true mammalia. The structure of their brain, their sexual organs, flomach, and liver resemble those of mammiferous animals. Their skin is smooth, or not covered with scales; and their tail is placed in a position the very reverse of fishes, in being always flat and horizontal, instead of vertical. The cetaceous animals of the cachalot and dolphin genera have the mouth armed with conic teeth; the whales with horny laminate in the upper jaw; and the narval with teeth, or tuls of enormous length. They are neither singular nor ferocious. Their stomachs are large, and divided into chambers to the number of five, as in the whale and porpess, or even seven, as in the narval. In the last particular they seem to constitute an intermediate link between carnivorous and herbivorous animals, approaching nearly to ruminating quadrupeds; but differ in subliming on animal food, as they live chiefly on animex, medusae, and other zoophytes, on cetaceous animals, and on small fish. See the articles *Monodon*, *Balaena*, *Physeter*, and *Delphinus*.

*Ceterach*, in *Botany*, Bough. Pin. See *Aspleniun ceterach*.
CETRACH, in the Male in Molise, an official, agglutinative plant; the same with what is otherwise denominated opilium and solpoderion. See Aspernum.

This plant flanks recommended as an excellent diuretic, and a promoter of the menstrum. The whole plant is to be used, and should be gathered in the month of September. It is given by force in jaundices, in quartan agues, and in obstructions of the spleen; but it is much neglected in the present practice. In some parts of Ellice, where it is common on the walls of their churches, and on the tombs in the church-yards, the common people tell us wonders of its effects in the stone.

CETERIS paribus. See CETERIS paribus.

CETIAH, in Ancient Geography, a river of Asia, in Carmania.

CETII, a people of Asia Minor, in Media; mentioned by Homer, and Strabo. The latter says, that Eurytipius, their king, had his territories about the Caicus, near Cilicia. They probably took their name from the river Cetios, which traversed their country, and discharged itself into the Caicus.

CETINA, in Geography, a town of European Turkey, in Dalmatia; 32 miles S.W. of Modlar.

CETIS, or CETTS, in Ancient Geography, a country of Asia Minor, in Cilicia-Trachis. It was the seat of a priest-hood founded by Apos, son of Teucer, and of which the pontiff was also the sovereign.

CETIUM, a place of Norica, between Carnagieus and Adraste, according to the Itinerary of Antonine.

CETUS, a mountain of Norica, according to Ptoleomy, and in the Itinerary of Antonine marked between Vindobona and Adraste. Bucshing luppis that the ancient Cetin is a ridge extending from near the source of the river Save, towards the Danube, about 6 English miles on the well of Vienna, where it is called Leopoldsburg. The general name is the Kalenberg; which see.

CETODRIGA, SERVAIA, denoting the town of fishers, and inhabited by fishermen, belonged to Laustria. Without tracing the origin of this city, with some fanciful antiquities, to Tubal, who say that he came into Spain in the year from the creation, 5521, we may affirm, with greater probability, that it had suffered much about 22 years B.C. by an African pirate or sovereign (Bogud), who, having landed at Portus Aemebali, and pillaged the adjacent dwellings, founded the Prontomontium Saecum (Cape St. Vincent), and took possession of the town by surprise. The inhabitants were put to the sword, without distinction of age or sex; and the town was then sacked, its walls destroyed, and its buildings set on fire. Other Portuguese authors say, that Marcus Portus Cato, after having conquered the Spaniards, destroyed Cetubriga. Another opinion has prevailed, which attributes the destruction of this ancient city to an earthquake. In its vicinity, to the extent of more than a league, there have been found the ruins of many buildings, and abundance of antiquities; and as no medals have been found belonging to the period immediately subsequent to that of Heraclea, it is probable that Cetubriga was destroyed either in his time or from aet. 1.

CETON, in Geography, a town of France, in the department of the Orne, and district of Montargis; 10 miles S.E. of Bailleul.

CETRA, in Ancient History Language, a short brickier or short figure target, which was very light, and used by the Athenians and Spartans, and was made, as some fays, of the lath-fish; and as others of elephant's skin, but occasionally, it is probable, of both. From the great reman-

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CEVA, in Geography, a city and fortress of Italy, in the
principality of Piedmont, and called Aosta, the capital of a
marquisate, situated on the Tanaro; a plain surrounded by
hills, at the extremity of the country, which extends from
the Apennines to the Tanaro, and from thence to the
northern part of the martm-Alps. It was anciently cele-
brated for its cheese, made of ewe's milk. This cheese,
called by the Italians "Rubiola," is much esteemed, even
at present, and sold not only into Piedmont and the Milanese,
but other more distant parts. The hills about Ceva also
produce excellent wine; great quantities of chestnut grow
at the foot of the mountains, and excellent truffles are found
on the neighbouring plains. It was formerly an indepen-
dent state; but in 1395 a great part of the domain was
sold to the town of Aili, whence, in 1571, it came to the
house of Savoy. In 1543, it was besieged unsuccessfully by
the French; and in 1584, a sudden inundation beat down a
great part of the walls, destroyed the bridges, houses, and
churches, and drowned many of its inhabitants; and in
1625, and the five following years, a pestilential disease car-
ried off the greater number of the inhawtants. Ceva was
taken by the French, in the month of April, 1795. It has
one collegiate church, and three convents. It is distant 40
miles from Genoa, and 25 S.E. from Turin. N. lat.
44° 20'. E. long. 7° 51'.

CEVADILLA, SERADILLA, or SARADELLA, i.e. Horde-
dulum, little barley, in Brittany, the South American name of
the Hordeum exoticae cauculium of Caspar Bawin, taken
up by him, Ray, and Perkins, on the authority of Nicho-
las Monardes, who attributes to it the habi of the Euro-
pean barley, with a seed not larger than that of the com-
mon flax, but possessed of highly acrid qualities, of which
the inhabitants of New Spain avail themselves in the cure of
gangrene and other foul ulcers. He says they have the
same effects as corrosive sublimate, or the actual cau>
try; and that the mode of using them is to sprinkle a little of
the powdered seed upon the part, or for the greater safety, to
dilute it with watery liquors, and apply that mixture
in the mixture.

IN limnus's "Anteqnates Academici," they are said to be the most effectual of all medicines for destroying
venereal and other cutaneous infections in children. In our country they are very
rarely met with, but in France they have been ranked among the officinals and obtained the name of the Capuchin
powder. They have been administered internally for the expulsion of worms; but caution is necessary in the use of
166, &c.

CEUDUM, or CEVELUM, in Ancient Geography, a place of
Battic Gaul, marked in the table of Pliny on the
route from Noviomagus to Attacac or Attacac, and sup-
poited by M. D'Anville to be the present Cuyi.

CEVENNES, in Geography, the principal center of
the primitive mountains of France, arising to the level of
the Rhone, seeming to run from north to south, and sending out
various branches towards the east and west. The principal
branch runs along the river Ardeche towards Ales. An-
other traverses the Rhone, on the side of Tournon and
Vicane, towards the plains of Dauphiné. Another branch
forms the mountains of Beaujolais, passing by Tarare, Au-
tun, &c. till it be lost at Avallon. This is about 70 leagues
in length; but in breadth sometimes not more than a league;
it contains the copper mines of Chevi and St. Bel, and some
lead mines. Coal is also found in the desolations. A fourth
branch separates the basin of the Loire from that of the
Allier, and forms the mountains of Poitou. It passes Roanne
on the one side and Thiens on the other, and is lost to-
wards St. Pierre le Montier. The plain of Montriflon
is bounded by this and the last granite branches. A fifth
branch separates the basin of the Allier from that of the
Cer, and passes by Clermont to Montlucon. A fifth
stretches towards Limoges; another from the Dordogne
towards the Garonne; and an eighth branch divides Don-
tin, with the counting of the Cevennes from the
rally dry and barren, and are most entirely formed of steep
rocks; and yet skill and industry have converted them into
fertile lands, so that a soil which, in past ages, would not have
afforded subsistence for one family of savages, does at this
moment support two or three hundred thousand
inhabitants. M. Chapital has described two processes, which are prac-
tised for this purpose. It is a well known fact that the wa-
ters which flow down the sides of a mountain carry the
earth along with them, and wear furrows or ravins of a
greater or less depth, according to the hardnees of the rock
and steepness of the descent. By a series of these progres-
seve degradations the harder rock is laid bare, deep ravins
are cut in the face of it, and every source of which the cul-
tivator might avail himself is utterly destroyed. The inha-
bitates of the Cevennes have found means to correct this
double effect of the waters. In order to fill up a ravin,
they begin by razing at the foot of the mountain a wall
consisting of loose stones quite across the ravin,
and of a height corresponding to its depth. This wall
forms a kind of dyke, opposing its brink to the current of
the waters, and suffering them to pass through while they are
clear; but when, after a storm or sudden shower, they become
turbid, and bring down earth and stones, these substances
are deposited against the wall, while the waters escape through
the stones nearly pure. By the continuance of this proc-
ees, the triangular space above the wall at length is filled.
At the other extremity of this plat of new formed ground,
another such wall as the first is built, and this in the same
manner detains the earth and vegetable mould, thus forming
a second piece of ground. By a succession of similar oper-
atons, other platforms are produced; till at length the
whole ravin is inverted, even to the summit of the moun-
tains, into a number of platforms of good ground, forming
steps one above the other. Under these circumstances, the
waters no longer run in destructive torrents down the sides
of the mountains, but flow gently along the level ground,
or are filtered through the porous earth deposited against
the walls that detain and support it. Thus the mountain,
which formerly preferted to view a scene of desolation, is
made to exhibit amphitheatres of vegetable ground capable
de the richest cultivation. When these natural difficul-
ties are overcome, the husbandman plants the vine against the
upper part of the wall; on the small platforms above de-
scribed he plants mulberry-trees, and cultivates potatoes, In-
dian corn, and every kind of grain; varying his culture to
the greatest advantage on this virgin soil, which is well wa-
tered, and in general of the highest fertility. The vines,
trees, and other vegetable products render the ground firm,
and defy the floods of subsequent times.

By another process the inhabitants of the Cevennes give
fertility to the slope of a calceous mountain. Most of
these mountains are formed by beds of stone about half a
yard in thickness; and the different strata constitute strata
one above another, corresponding to the strata of the
mountain. The cultivator, in order to render all these layers
of equal bread, breaks away the rock, and employs
the fragments in contructing a low wall on the edge of the
platform itself. He then fills the cavity with a bed of vege-
table earth, taken out of the cliffs of the rock, or con-
veyed
veyed on his back from the foot of the mountain, where it has been gradually depopulated by the waters. In this man- ner, under unremitting labour, the soil of the mountain becomes covered with low walls parallel to each other, which confine beds of vegetable earth from one to three yards in width. When these beds of earth are removed, and the walls over-torn by a violent storm of wind or rain, the inhabitant of the Ceylon exerts himself, in preventing or repairing the destructive ravages of the elements. At the first indications of an approaching storm, he clothes himself in a long garment of oil cloth, with an enormous hat of tinned iron, firmly fixed by means of straps. Thus defended, with a mattock in his hand, he drains the water to the feet of his trees, and collects the fruits in cavities, which he had previously formed in the rock itself. By these laborious exertions he constantly prevents inundations, and procures water for his grounds at times when the burning heats rendered them necessary. Such instances of agricultural exertion are not frequent in the Ceylonese; and by such methods one of these mountains is converted, from a flate of arid barrenness, to a high degree of fertility, and covered from its base to the summit with trees, fruits, grain, and other useful productions. This practice of converting the sides of mountains into platforms for the purposes of agriculture is common in China, and gives a singular aspect to the country around Canton; but by the inhabitants of the Ceylones the barren mountains themselves, instead of being left in a state of nature, are rendered fertile.

CEVERTA, a town of Naples in the province of Calabria, Italy; 10 miles N.N.E. of Bova.

CEURAWATH, the name of a particular sect of Danians in the East Indies, who hold the metempsychosys with so much superstition, that they will not kill the leaf insects; their pricks carry a piece of them over their mouth, that no flies may enter. All the other sects of Danians have an aversion for this; and continually exhort their auditors to fling all discord and contention with them. See DANIANS.

CEUTA, in Geography, a sea port town of Africa, in the kingdom of Fez, and province of Gibr, on the south coast of the Mediterranean, belonging to the Spaniards, and serving as a harbour for small vessels. It is the seat of a bishop, suffragan of Lisbon. This place corresponds with the Ethiopia of Polybius, and probably with the Septant of Pliny, who intimates, as others have done, that this latter name was derived from the seven hills in its neighbourhood, called by Mel Sepun Towers. It has been conjectured, that it was built by the Carthaginians, and afterwards belonged to the Romans, by whom it was colonised. In the time of the Greeks it was a station of great eminence; being the metropolis of the places which they held in the Transsahara. It was afterwards abandoned to the Arabs and the Moors by Count Julian; and taken from the Moors in 1499 by J. de la con, king of Portugal, and continued annexed to that crown till the revolution in 1642, when it fell to Spain, and was finally ceded to that country by the treaty of Lisbon in 1598. It has been no less considerable for its advantageous situation at the entrance of the Mediterranean on a rising ground, which is the nearest point to the Spanish coast; than for the beauty of its public buildings and the strength of its walls and outworks; and it has still a good palace and noble cathedral. The Moors laid siege to it in 1697, and have occasionally kept it in a state of blockade since that time. It is distant from Gibraltar about 5 leagues. N. lat. 35° 49'. W. long. 5° 23'.

CEYLON, an island of the East Indian ocean, that lies between 7° 51' and 6° 52' N. lat.; and between 79° 52' and 31° 56' E. long. It is situated at the entrance of the bay of Bengal, by which it is bounded on the north. On the north-west it is separated from the Coromandel coast by the gulf of Mannar, a narrow strait, full of islets, and impassable by large ships. It is distant about 60 leagues from Cape Comorin, the southern point of the peninsula of India, which divides the Coromandel and Malabar coasts. Its circumference is computed to be about 900 miles; and its length from point Pedro at the northern extremity (9° 51' N. lat.) to Donderhead or Dunderhead at the southern (5° 51' N. lat.) is about three hundred miles. Its breadth is very unequal, being in some parts only from 40 to 50 miles, while in others it extends to 60, 70, and even 100. Towards the southern parts it is much broader than in the northern, and nearly resembles a land in shape; and the peninsula of Jafnapatham has received from the Dutch the name of "Hamiled," and point Pedro they call "Ham- erle." Point Major Rennell (See Memoir, p. 449.) has collected a variety of observations, tending to ascertain the true figure of this island.

Ceylon is the Taprobana of the ancients; though they very much differed in fixing its position. Prior to the age of Alexander the Great, the name of Taprobane was unknown in Europe. In consequence of the active curiosity with which he explored every country that he visited, some information concerning it seems to have been obtained. From his time almost every writer on Geography has mentioned it; but their accounts of it are so various, and often contradictory, that we can scarcely believe that they are describing the same island. Strabo, the earliest writer now extant, who has given any particular account of it, affirms that it was as large as Britain, and situated at the distance of 7 days according to some reports, and according to others, of 2 days' sailing from the southern extremity of the Indian peninsula; from which, contrary to what is known to be its real position, he describes it as stretching toward the coast above 500 stadia. (Geog. ii. 124, 183, 192, 1. xv. 101.) Pomponius Mela, the author next in order of time, (De Situ Orbis l. iii. c. 7,) is uncertain whether he should consider Taprobana as an island, or as the beginning of another world; but as no person, he says, had ever visited it, he seems to incline toward the latter opinion. Ptolemy (Nat. Hist. l. c. 22.) though his description of this island is more ample, involves every thing relating to it in additional obscurity. After enumerating various and discordant opinions of Greek writers he informs us, that ambassadors were sent by a king of that island to the emperor Claudius, from whom the Romans acquired the knowledge of several particulars, which were formedly unknown; particularly that there were 500 towns in the island, and that in the center of it there was a lake 155 miles in circumference. These ambassadors were astonished at the sight of the Great Bear and Pleiades, which were conceptions that did not appear in their sky, and were still more amazed when they beheld their shadows pointing towards the north, and the sun rising on their left hand and setting on their right. They also affirmed, that in their country the moon never went until the eighth day after the change, and continued to be visible only to the sixteenth. Such are the particulars, some of which are totally groundless, which Ptolemy relates, and in which he acquiesces without a dissenting observer. Ptolemy, though living near the age of Ptolemy, seems to have been altogether unacquainted with his description of Taprobana, or with the Embassy to the emperor Claudius. He places that island opposite to Cape Comorin, at no great distance from the continent, and delineates it as stretching from N. to S. no less than 15 degrees, of which he supposes to be S. of the equator; and it's representation of its dimensions had been just, it was well entitled from
from its magnitude to be compared with Britain. (Ptol. i. viii. c. 4.) Agathemerus (ibid. ii. c. 8. apud Hudson. Geogr. Minor. vol. ii.) who wrote after Ptolemy, and was well acquainted with his geography, considers Taprobana as the largest of all islands, and aligns to Britain only the second place. Milled by these accounts of the ancient geographers, the moderns have entertained very different sentiments concerning the island in the Indian ocean, which was to be considered as the same with the Taprobana of the Greeks and Romans, and therefore some learned men have erroneously maintained that Sumatra was the island corresponding to the description of Ptolemy and Pliny. The opinion more generally received, is, that the Taprobana of the ancients is the island of Ceylon; and not only its vicinity to the continent of India, but the general form of the island, as delineated by Ptolemy, as well as the position of several places in it, mentioned by him, establish this opinion with a great degree of certainty. Under the emperor Justinian, Colinas, an Egyptian merchant, in the course of his traffic, made some voyages to India, whence he acquired the name of Indiscoulite; and from him we learn, that the island of Tap oobana, which he supposed to lie at an equal distance from the Persian gulf in the west, and the country of the Sinu on the east, had become, in consequence of the commercial situation, a great stock of trade; that into it were imported the silk of the Sinu and the precious spices of the Eastern countries, which were conveyed thence to all parts of India, to Peria, and to the Arabian gulf. To this island he gives the name of "Sickleda" (ibid. xi. 3:36) nearly the same with that of "Scandia" or "Serendib," by which it is still known all over the east. Colinas further informs us, that in most of the cities in India he found christian churches established, in which the functions of religion were performed by priests ordained by the archbishop of Seleucia, the capital of the Persian empire, and who continued subject to his jurisdiction. According to his account, however, none of these strangers settled in India, were accustomed to visit the eastern regions of Asia, but were satisfied with receiving their silk, their spices, and other valuable productions as they were imported into Ceylon, and conveyed thence to the various parts of India. These churches were established by the Nestorians, who sent mercenaries from Persia into India, and particularly into Ceylon. Our knowledge of this island, and other parts of India, was further extended by means of the commercial spirit and successive voyages of Marco Polo, a Venetian of noble family, who, about the middle of the 13th century, explored many regions of the east, which no European had ever visited. He also visited in person Java, Sumatra, and several islands contiguous to them, the island of Ceylon, and the coast of Malabar as far as the gulf of Cambay; to all which he gives the names they now bear.

In the traditionary accounts which are current among the Ceylonese, nothing occurs besides a mere catalogue of some of their princes, accompanied by a long list of high foundling titles, and some uninteresting details of their petty wars and commotions. From some of these accounts, which have been recorded in MS. we learn, that Lankaw Petti Mahadasin, or the much beloved offspring of the always moving fun, who lived at a distant period, was sovereign of the whole island. His two grandsons, however, quarrelled about the possessions which had been allotted to them; and at last compromised their disputes by dividing the island between them: to the one were allotted the interior parts which form the present kingdom of Candy (Candy), and to the other the whole of the low country bordering on the sea-coasts. This division gave rise to a long series of civil wars, and has the example of partitioning the kingdom among the children of the sovereign; and hence we find that there were not less than six or seven princes who reigned at the same time over separate divisions of Ceylon. After a variety and succession of quarrels between its princes, Ziraale Darnu Seria Adaileen disbursed all his competitors, and firmly established himself as its sole monarch. He married his cousin, who was famed for her personal charms, as to acquire the name of "Rone Wandigge," or the beautiful queen. From this union sprang the princes who ruled over Ceylon, when it was first visited by the Portuguese.

The carthell period at which we can look for any authentic or interesting information, is that of the arrival of the Portuguese under Almeida, in the year 1505 or 1506. Being accidentally forced by storms of weather into one of the harbours of Ceylon, he was hospitably received by the inhabitants; and perceiving the advantages that might result from the situation of the island, and its valuable productions, he thought it an object worthy of his attention to cultivate a closer connection with the natives, to which they were also inclined, with the view of defending themselves against the attacks of the Arabs. Almeida, upon being introduced to the king of Ceylon, found it difficult in persuading him to pay an annual tribute to the Portuguese, on condition of their protecting his coasts from external invasion, with which he was then threatened by the Zamarins of Cochim on the Malabar coast, and a rajah who reigned on that part of the Coromandel coast opposite to Ceylon. At this time the inhabitants consisted of two distinct races of people. The savage Bolas (see Cothmus) then occupied, as they do now, the large forests, particularly in the northern parts; and the rest of the island was in the possession of the Cinglefe. The towns of the sea-coast were not ravished from the latter people by foreign invaders; and their king held his court at Columbo (see Coteuse), which is now the European capital of Ceylon. Cinnamon was even then the principal product, and the staple commodity of the island, as appears by the tribute paid by the king to the Portuguese, which consisted of 250,000 pounds weight of cinnamon. Almeida, whose attention was attracted by the rich harvest which the cinnamon of Ceylon presented to commerce, soon endeavoured to secure these advantages by forming a Portuguese settlement on the island; but this conduct roused the jealousy and indignation of the native princes. The reigning sovereign was a Brahmin, and encouraged a trade which his subjects then carried on with the Moors and Malabars of the continent; and they, fearing lest their traffic should be cut off by these strangers, began to foment jealou5ies between the king and the Europeans. Although Almeida had obtained the monarch's permission to traffic with the natives, and to build a fort at Columbo, the Moors contrived to induce the king to repel his grants, and to revoke them. After a vigorous contest, and in consequence of some internal troubles which then distracted Ceylon, the king was obliged, in 1522, to renew the original treaty, and to grant full permission to build a fortres at Columbo. A contest, however, ensued, in which the Ceylonese were completely defeated: and the Europeans acquired fuel superiority, that the king, despairing of recovering Columbo, only thought of preventing the Portuguese from extending their possessions. With this view he erected a strong fortres at Sittavavea, 35 miles from Valentia, and fortified the palls of Cuddavelli and Gara-waddil, which led into the interior of his dominions. The Portuguese, on the other hand, began to foment internal discontents among the natives. The king was weak and irresolute; and as the encroachments of the Portuguese increased, and they began to treat the natives with great cruelty, as ambitious

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ambitious person of low birth, named Raja Singa, feized the advantage of the moment, and by his talents and intrepidity rose to the highest rank and power. Such was his ascendency over the king, that none of the nobles were undaunted in order to satisfy his jealousy and ambition; and he terminated his career by murdering the king himself; and usurping the throne. Raja Singa gratified the people by a long course of implacable hostilities against the Portuguese; but the natives themselves soon found that the cruelty of this usurper knew no bounds. At length his subjects of the low lands, exasperated by his barbarities, sought relief from the Portuguese, who readily availed themselves of the occasion. It was at this time they had at first an opportunity of exploring the N.W. parts of the island. Among those who fought the protection of the Portuguese, were two sons of Viana, who, in consequence of an interregnum excited by him against Raja Singa, had made himself master of several of the internal provinces. These young men, having escaped the usurper, were kindly treated by the Portuguese, converted to their own religion, and baptised under the names of Don Juan and Don John. One of them was to be appointed king, and the other generalissimo; and in return for these promised benefits, they were to marry Portuguese ladies, and to own subjection to the crown of Portugal. In the mean while it was publicly announced, that Don Juan was to marry Donna Catherina, the daughter of the late king Adafeyn, who had been murdered by Raja Singa. As this prince was the lawful heir of the whole empire, the Portuguese, who were his odious and avowed protectors, were enabled to form a powerful party among the natives against the usurper, and to obtain over him a decisive victory. Upon this, they immediately crowned Don Juan king, and put him in possession of Candy. Don John, however, offended by this preference of his brother, contrived to poison him, and to seize the royal authority. The Portuguese auxiliaries were soon summoned to quit the dominions of Candy; and Raja Singa taking the field, threatened Don John and his adherents with the most cruel death. A desperate battle was fought between the two usurpers, and the issue was the complete overthrow of Singa, who soon after died. After his death, Don John found another competitor in his minister Janiere undaan, who, having taken possession of his master's domains, proclaimed himself king, and applied to the Portuguese for succours, which were readily granted him. The Portuguese, who had received a reinforcement from Goa, marched against Don John, gave him a complete overthrow, and obliged him to take refuge in the woods. In consequence of this advantage, they began to tamper with the inferior princes, and attempted to persuade the Ceylonese to acknowledge the sovereignty of the king of Portugal; but the natives were unanimous and urgent in their request, that Donna Catherina, the daughter of their beloved emperor, should be placed on the throne. The Portuguese contented this proposal, hoping that her youth would allow them to exercise an uncontrouled government under the mask of her authority. During the festivities that took place on her return from Mannaar to Candy, Don John, in the disguise of a beggar, attempted to set fire to Candy; but frustrated in his object, a reward was offered for apprehending him, and he escaped with difficulty. The Portuguese thinking their power secure, renewed the exercise of their wonted pernicious and cruel policy. The natives, incensed by the injuries they suffered, formed a league against their oppressors, at the head of which was Janiere, who had been seduced by the Portuguese with the promise of marrying Donna Catherina, after she had been quietly seated on the throne; and who resented the delusion by opening a negotiation with Don John, to whom he offered the dominion of the low lands, provided he was allowed to retain an undisturbed possession of the interior. The Portuguese, on discovering their correspondence, caused Janiere and his attendants to be murdered in the palace of Candy, where he then resided; upon which all the other princes, with their troops, immediately fled from the Portuguese camp, and the young queen halted her company, threatening the Portuguese with the effects of their treachery. Accordingly the Portuguese, against whom the natives combined, were obliged to leave Candy, and to retreat towards the coast. They were pursued, however, by the Ceylonese, and in the end overpowered. Don John, availing himself of the victory, made himself master of the forts of the interior; compelled the princes, who had joined the Portuguese, to sue on their knees for mercy; and completed his career by marrying Donna Catherina, then 12 years of age. After many fruitless conquests, the Portuguese were overpowered by the natives; but they had contrived at an early period to secure the most important part of the island, viz. the sea-coasts, where the valuable spices were produced. Under Albuquerque, the successor of Almeida, the rich low lands around Colombo and to the northward of it already formed a part of their dominions, and the natives from that time forward only obtained possession of them during some accidental incursions. Albuquerque extended his views to other parts of India; and Ceylon, instead of being made the centre and guardian of the Portuguese possessions in that part of the globe, continued to be cultivated by them chiefly on account of its own natural productions. The Portuguese conducted their government in a manner that abanoned instead of conciliating the attachment of the natives; and beside other acts of insult and oppression, they treated their religious opinions with contempt, and persecuted those who held them with the most wanton cruelty. At length the religious bigotry of the Portuguese completely triumphed over their real interests; and the Cinglee regarded with horror strange gods, who seemed to delight in blood, and chose rather to leave the tea-coasts to their enemies, and to seek refuge for themselves and their grotesque idols in the mountains of the interior. Thither they were pursued by their tyrannical invaders, and in return the Cinglees made frequent incursions on the tea-coasts, and often destroyed the richest plantations. This defultory warfare continued for almost a century, with much bloodshed, and no real advantage to either party. As the jurisdiction of the interior was at this time parcelled out among a variety of petty princes, each of whom was the sovereign of his particular tribe, or separate valley, the policy of the Portuguese led them to stir up animosities among them, and to prevent their making a common cause for the deliverance of their country. By acts of this kind they gradually extended their dominions into the interior of the island; and wherever they became masters, their avarice and bigotry prompted them to perpetrate such cruelties as have ever since rendered the name of an European hateful to the ears of a Cinglee. In this state of disaffection, the Cinglees were offered powerful assistance by the Dutch, whose admiral, Spilbergen, in the year 1622, ventured to approach the coasts of Ceylon; and the natives, from their hatred of the Portuguese, gave him a very favourable reception. At the time of their arrival, Don John was looked upon as emperor of the island; and to him Spilbergen was introduced, with the assurance that he and his countrymen were the invertebrates of the Portuguese, and that they would effectually aid the Ceylonese in expelling the Portuguese from their island. The king of Candy received this proposal with great joy: "Tell your countrymen,"
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said he, "that if they will only be willing to build a fort in this island, myself, my wife, and my children will be the first to supply them with the necessary materials." The Dutch lost no time in availing themselves of the advantages that were offered; and next year Schaad de Wert and Van Warneck arrived with seven ships, and in a conference with the king, proposed to conclude a treaty. A serious dispute, however, occurred, and Don John, under the sudden impulse of resentment, caused the Dutch commander, De Wert, and his attendants, to be instantly murdered. The king soon repented of this rash act; and it is said that to the day of his death, which happened soon after, he lamented the murder of the Dutch. After the death of Don John, the inferior princes, hitherto awed by his authority, began to assert their independence; and the prince of Ouvé, the most powerful among them, openly applied to the supreme dominion. The capreolus Donna Caterina, however, soon succeeded, by her activity and address, in reducing those disturbances. She rejoined an alliance with the Portuguese, and afterwards married Converrat, a kinsman of the late king, and sent a deputation to the Dutch, requesting their alliance against the Portuguese. The Dutch expressly complied; and in 1612 Marcellus de Bouchover arrived at Ceylon as ambassa-
dor from the States of Holland, and was received with every possible mark of distinction; a chair of gold being prepared for him, and also robes of white, which is the royal colour. He concluded with the king a treaty, consisting of 33 articles. Among other stipulations, it was agreed that a per-
manent peace should be established between the Dutch and Candians; and in case of an attack by the Portuguese, the Dutch agreed to reftitute with them all their forces. In return, the king allowed the Dutch to build a fort at Cottaram. They were also allowed to erect at Candy warehouses for goods. The king likewise engaged to convey all the mer-
chandise of the Dutch to Candy, and whatever they pur-
chased in his dominions to Cottaram at his own charge. All his subjects were to be at liberty to traffic with the Dutch, who were allowed to export all sorts of merchandise free of duty. He also engaged to deliver to them all the cinnamon grown in his country, to be paid for in goods at the usual exchange rate. The king stipulated further not to grant free commerce to any European nation, without the express consent of the Dutch. The cumbens agreed upon by both parties were to be shared equally by the contracting powers. The king agreed to furnish the Dutch with tim-
ber, and other materials for ship-building, at a moderate rate, and he obliged himself to dispose of all his precious flowers and pearls to the Dutch, at a fair rate; and they, on their part, stipulated to supply him with fett jewels and other valu-
able ornaments. The king alone was to have the power of coinin money, or to fix its value; and any subjects of either power who were convicted of coining base money were to be put to death. All the officers of the Dutch company were to be exempt from his majesty's jurisdiction, and to be tried for any offence by their own countrymen; and the same privilege was reciprocally extended to the subjects of the king. All prizes taken on the coasts of Ceylon were to be shared equally between the contracting parties, provided the prisoners be ransomed and not put to death. Prizes were to be granted by the Dutch officers to such of his ma-
Jesty's subjects as intended to trade in the parts possessed by the company, and the same from the king to the Dutch sub-
jects intending to traffic in his dominions; and all who traded without such prizes were liable to be feized, and to have their goods confiscated. The contracting parties engaged to do their utmost to preserve inviolate the stipulations of this treaty, the principal of which have been above recited, and to give full satisfaction for any damages incurred by the violation of them, as well as to inflict severe punishments on those who were guilty of infringing them. This treaty, which was concluded in the name of the king of Candy and the prince of Orang out, displayed much seeming moderation on the part of the Dutch; and it would have been happy even for their own interest, if they had maintained the same moderation in their transactions with the natives, after hav-
ing gained a firm footing in the island, while they were attempting to obtain a settlement by the arts of seduction. The Portuguese were alarmed at this alliance, and attempted to prevent its effect; but their efforts, though renewed with vigour for several successive years, proved ultimately unsuccess-
ful. In 1656 the Portuguese were reduced to the neces-
sity of surrendering Columbo to the Dutch, after a siege of seven months, and a loss to the combatants of not fewer than 3000 lives. By the fall of this place, an end in fact was put to the dominion of the Portuguese, about a century and a half after their first arrival. In 1658 the Dutch, under Vander Gocs, took Manzar, and the Portuguese were flung up in Jaffnapatam, the only fort remaining in their po-
fession. At length, after another futile defence, a Portuguese fleet, which attempted to relieve the place, being defeated, and no hope of succour being left, the garrison surrendered, and the Portuguese were thus totally driven from the island.

The joy of the Ceylonese, on being rescued from the yoke of these tyrannical invaders, and their gratitude to their deliverers, at first knew no bounds. The king of Candy voluntarily paid the expenses of their armaments in cinnamon; and conferred upon his new allies the principal possessions, from which he had by their alliance expelled the Portuguese. Among these were the port of Trincomalee, and the fortresses of Columbo. The former of these, which lies on the N.E. part of the island, is that harbour which renders Ceylon the most valuable station in the Indian Ocean. Columbo was originally built by the Portuguese in the S.W. of the island, in the heart of that tract most cele-
brated for the production of cinnamon, as the most commodi-
dous for collecting that staple production of the country. Along with this port, the king of Candy also bestowed on the Dutch the towns of Nigumbo and Point de Galie in the same quarter, together with a large tract of rich land ad-
joining to them. The Dutch appeared exceedingly grateful to the Candian monarch for all these concessions; they as-
fumed only the humble appellation of "Guardians of his couls;" and began to fortify the different stations put into their hands, merely, as they said, for his security; and the Candians were so well convinced of the good intentions of their new allies, that they affidled them to the utmost of their power in completing their operations. The Dutch took this opportunity of increasing the strength of their principal port at Columbo; enlarging the town and render-
ing the fortifications as complete as possible. Their port of Trincomalee they also endeavoured to secure against any attack either from an external or a domestic enemy. Their numbers in the mean while were daily increasing by the ac-
sess of new adventurers from Europe. The parts assigned to them were the best fitted for cultivation in the island; and they lost no time in turning them to the best account. By means of these prudent measures, and persevering industry, the colony was soon brought into a flourishing state, and was able to depend upon its own internal resources. During this period, they maintained the most friendly intercourse with the natives, and this conduct, besides favouring the un-
interrupted prosecution of their plans of improvement, was also of very considerable benefit to their commerce. If the

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Dutch
Dutch had professed in the same wife and moderate policy, it is probable that Ceylon would, in process of time, have become as profitable to them from their intercourse with the natives, as if it had been wholly possessed by Dutch settlers. But the ruling passion of the Dutch, their avarice, soon began to over-reach itself; and by rapaciously seizing every opportunity of gain, they quickly dishonied and alienated the natives. By pushing their polls farther and farther into the interior, and fixing upon every spot that seemed to be fit for cultivation; and at the same time by increasing their demands on the king for the protection they afforded him; the king soon found that all the cinnamon which grew in his dominions was insufficient to gratify the “Guardians of his coals.” At length, enraged by their repeated exortions, he fell suddenly upon their settlements, and committed the greatest devastations. This breach between the Candians and the Dutch was succeeded by a long course of hostilities, which occasioned the shedding of much blood, and afforded no permanent advantage to either party. The Dutch, however, were the greatest losers. Their affairs in the interior, amidst woods and desarts, were dearly purchased; whilst the incursions of the natives into their cultivated poffessions on the coasts, though in general easily repulsed, often destroyed the labour of years. Several of the Dutch governors were induced by these considerations to attempt the restoration of tranquility, rather by conciliating the natives than by measures of violence and force with them. Accordingly they sent ambassadors to the Candian king, with rich presents, and with various expressions of respect. They wrapped their letters to him in silk embroidered with gold and silver, and their ambassador carried them all way on his head, the highest token of respect known in that country; and in these letters, they dignified the king with the high-founding titles usually conferred upon an eastern monarch. Such conciliating measures, though not often adopted, produced effect. The renewed oppressions of the Dutch were the confident signal for the renewal of hostilities between them and the natives, in which the Dutch were frequently great sufferers; though European discipline and Dutch perseverance generally surmounted all difficulties, occasioned by the woods and forftesses to which the natives retired. The Dutch, however, suffered much from the climate, which, in the interior parts, is exceedingly unhealthy to Europeans. See CANDY. Indeed, the behaviour of the foreign nations, which have successively invaded Ceylon, has tended greatly to nourish sentiments of independence and of allegiance and attachment to their native kings among the inhabitants, and the crudities of the Portuguese and Dutch have so exasperated them against all Europeans, that it will require much pains to reconcile their minds to far as that any confidence can be rep fed in them. These and similar causes combined to frustrate the attempts of the Dutch at forming a settlement in the interior of the island; whilst the difficulties which they encountered made them affect to despise the advantages which they could not attain. But notwithstanding they seem to have been convinced that it was impracticable to retain possession of the interior, yet their own misfortunes had shown to many of jealousy between them and the Candians, that they were often obliged to have recourse to arms. The last great war which they carried on with the natives was about the middle of the 18th century. In 1764 they penetrated into the heart of the king’s dominions, and made themselves masters of Candy. But after experiencing great hardships from the climate, and from the activity of the natives, they were at last obliged to evacuate the capital. Notwithstanding the disasters which they suffered, they continued to harass the king of Candy; and, particularly, by depriving him of salt at pleasure, they compelled him to comply with all their demands. In 1866, he was under a necessity of acceding to a treaty which greatly curtailed his dominions, and reduced him almost to the condition of a prisoner at large in those that remained to him. All those parts of the in-coal, which had not formerly belonged to the Dutch, were now ceded to them, with the addition of several other advantageous tracts. They insisted that the king should have no intercourse with any other power, and that he should deliver up all foreigners or subjects of other princes, who should happen to come into his dominions. All cinnamon which grew on the coasts was deemed as exclusively Dutch property; and the natives, by way of special privilege, were allowed quietly to cut and carry it to the several Dutch factories in the island. The cinnamon that grew in the woods was allowed to be, in some degree, the property of the natives; they were obliged to peel and sell it to the Dutch at a six-fold per pound; that is, a coin of nominal value, which exchanged for about the worth of two flings' weight of their copper money. Independently of cinnamon, the other productions of the island were not over-looked; but the king of Candy was also obliged to stipulate, that his subjects should gather the pepper, cardamoms, coffee, and cotton growing in the interior, and sell them to the Dutch at certain very low prices. A certain proportion of elephant’s teeth, areca nut, and betel leaf, together with a share of the precious stones found in the country, formed part of the tribute imposed on the natives. The number of elephants to be delivered up was so in the two seassons, which the Dutch transported to the eofficial coast of the continent, and fold to the native princes there at very high prices, as the elephants of Ceylon are accounted superior to all others. The pearl fisheries on the west and north-west shores, where the pearl-banks are situated, formed another acquisition to the Dutch by this treaty. Several persons from the Malabar coast, and other parts of the continent, had established cotton manufactories in the northern towns of the island, particularly at Jaffnapatam; all of which were now given up to the Dutch. In return for these valuable acquisitions, the Dutch acknowledged the king of Candy to be the emperor of Ceylon, with a long file of otherounding titles, which served only by their mockery to aggravate his mortification; and under which magnificant appellations, they engaged, as his dutiful subjects, to pay him a tribute, and to send ambassadors yearly to his court. The most important stipulation, on the part of the Dutch, was that of supplying his people with salt, free of expense, and in such quantity as to equal their consumption. The article of tribute was soon infringed; and, indeed, scarcely one stipulation of the treaty was fulfilled with good faith. By this treaty the Dutch obtained a monopoly of all the valuable productions of the island, and left to the king and his subjects only the hard condition of aiding them in availing themselves of their acquisitions. Such degrading and harsh terms naturally exasperated the Candians and cherished, in their breasts, the most rooted and inveterate hatred to their oppressors. The consequence was a renewal of hostilities; and about 20 years ago the Dutch again penetrated into the king’s country; but they were so vigorously attacked by the natives that general de Moun, then a colonel in the Dutch service, narrowly escaped being cut off with a large detachment near Sattvav, and got back to Caledonia. At length hostilities, which were unravelling, were discontinued by mutual consent. The Dutch were chiefly anxious to prevent any connexion from being formed between the natives and foreign; and the king of Candy was resolved, to prevent any intercourse between his subjects and a nation, which
which he found ready on every occasion to deprive him of his rights in order to gratify their own avarice. A few articles of no great value, such as betel-leaf, araca, and coconuts, were occasionally smuggled by the natives down to the Dutch provinces; but these practices, when discovered, were severely punished by the king.

Such was the situation in which affairs stood between the Dutch and the native Ceylonese, towards the commencement of the late war. It was now about 140 years since the Portugueze had been finally expelled, and no other European power had since that time been able to acquire a permanent footing on the island. Soon after the expulsion of the Portugueze, about the year 1672, the French seem'd inclined to dispute the possession of Ceylon. Accordingly they appeared off the island with a large fleet, entered into a treaty with the native prince, and avowed their determination to expel the Dutch. But their enterprise planned without wisdom was executed without spirit, and imaginary obstacles prevented the French from even attempting to gain a settlement on the island. Towards the conclusion of the American war the English made a more formidable attempt against the power of the Dutch in Ceylon. A fleet, under the command of Sir Edward Hughes, having on board a detachment of land-forces, commanded by Sir Hector Munro, was dispatched about the beginning of the year 1782, to attempt the reduction of this island. This enterprise, which commenced prosperously, by gaining possession of fort Ollenburg, a strong fort in the vicinity of the bay of Trincomalee, afforded an encouraging prospect of speedily reducing the whole island; and Lord Macartney, then governor of Madras, determined to lose no time in securing and improving this valuable acquisition. But dilatory measures, always incompatible with success in military operations, afforded to the French admira Suffren an opportunity of taking possession of Trincomalee, and of mooring in the bay a fleet of thirty-fee of the line. Although the British fleet, after being refitted in the roads of Madras, arrived off Trincomalee, and notwithstanding its inferiority in numbers, attacked and routed the French; the latter found a secure retreat under the cannon of these forts, which their activity, and the want of precaution on the part of their enemies, in not leaving a garrison and stores sufficient to undergo a siege, had suffered to fall into their hands. Thus, the attempts of the English to attain possession of Ceylon were, for this time, frustrated. As the harbour of Trincomalee, which is equally secure at all seasons, offered to the English the means of obviating disadvantages to which the coast of Coromandel is subject, it must be evident, that, on the final rupture with the Dutch, our countrymen would again attempt to gain possession of it. Accordingly, the junction of the Dutch with the French republic in the late war was the signal for the commencement of our operations against their colonies in the East. In 1795, a body of troops was detached for the conquest of Ceylon; and this enterprise was crowned with success, after a course of military operations which will be detailed in describing the several places where they were carried out.

After this abridgment of the history of Ceylon, we shall now proceed to give a particular account of the island itself; which is become of peculiar importance to this country, since, by the fifth article of the treaty of Amiens in 1802, the Dacian republic has ceased and guaranteed, in full property and sovereignty, to his Britannic majesty, all the possessions and establishments in the island of Ceylon, which, previous to the war, belonged to the republic of the United Provinces, or to the Dutch East India Company.

In approaching this island from the sea, it presents to view a frither green, and more fertile appearance than most parts of the Malabar and Coromandel coasts. All the flat tracts on the sea-shore are bounded by beautiful tropic, or groves of cocoanut trees, while the intermitive plain is covered with rich fields of rice; and the prospect commonly terminates in woods, which cover the sides of the mountains, and display a verdant foliage through every season of the year. The eastern coast appears bold and rocky, and a few reefs of rocks run out into the sea on the S.E. between Point de Galle and Batacoo. The deep water on the eastern shore admits the access of the largest vessels in safety; and if that side of the island be the least fertile, its other defects are amply compensated by the harbours of Trincomalee and Batacoo. The north and north-west coast from point Pedro to Columbo is flat, and indented with considerable inlets of the sea; the largest of which extends almost quite across the island from Manilappatt to Jaffnapatam, on the N.W. point of the island, forming the peninsula of Jaffnapatam. Several of these inlets form small harbours, accessible to vessels of small size. The interior of the island abounds with steep and lofty mountains, covered with forests and full of almost impenetrable jungles. The woods and mountains completely surround the dominions of the king of Ceylon; and the island is divided by the most lofty range of mountains nearly into two parts, to completely separated from each other, that both the climate and feasons on either side are essentially different. These mountains also terminate the effect of the monsoons, which set in periodically from their opposite sides; so that not only the opposite sea-coast, but the whole country in the interior, suffers very little from these storms. The monsoons set in much sooner on the western than on the eastern side of the island. On the west side, the rains prevail in the months of May, June, and July; and this is the season when they are felt on the Malabar coast. This monsoon is very violent, being accompanied with dreadful storms of thunder and lightning, together with vall torrents of rain, and violent south-west winds. In the meanwhile, the northern parts of the island are very little affected, and are even generally dry. In the months of October and November, when the opposite monsoon sets in on the Coromandel coast, the north of Ceylon is affected, and scarcely any impression is felt in the southern parts, with the exception of some particular rains. These monsoons pass slightly over the interior of the country, which nevertheless experience dreadful storms. During its own periodical season, in March and April, the rain descends in torrents, and the thunder and lightning are extremely awful. The days and nights in this island, lying near the equator, are of nearly equal length; the variation, during the two seasons, not exceeding fifteen minutes. The feasons are more regulated by the monsoons than by the course of the sun; the cool season being at the summer solstice, while the western monsoon prevails. The spring commences in October, and the hottest season is from January to the beginning of April. The heat, in the day, is much the same throughout the whole year; but in the rainy season, the nights are much cooler. Upon the whole, the climate is much more temperate than on the continent of India; as the heat is lessened by the constant sea-breezes, and it is not annoyed by the hot and suffocating land-winds. The shade of the bushes furnishes a tolerably cool retreat. In the interior of the country, however, where thick and close woods and the hills crowd upon each other, the heat is greater by many degrees than on the sea-coast, and the climate is often very sultry and sulthorious.

The principal harbours in the island for large ships are Trincomalee and Point de Galle; and they also anchor, and
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from the beginning of December to the latter end of March, moor securely, in the roads of Columbo. Smaller coastering vessels find shelter in several other inferior ports; i.e., as Batacalo, Matura, Dambat, and Cultura, on the S.W.; and on the N. and W., Negombo, Chilaw, Colombo, Mannar, and Point Pedro. At all these ports are rivers of greater or less magnitude, that empty themselves into the bay; and these rivers, which are very shallow, deep, and navigable to some distance for small craft, are very beneficial to the inhabitants of the parts that are adjacent to the several ports, as they furnish a cheap and easy conveyance of their produce and merchandise to places where the European vessels wait to receive them. See Candy. Defides the rivers with which Ceylon abounds, it has many lakes and canals of considerable extent, communicating with them, particularly in the neighbourhood of Columbo and Negombo. Along the coasts there are roads and stations for travellers; but they are, in many places, rugged and steep, and accommodated with large tracts of heavy sand; and, besides, they are rendered dangerous by the multitude of wild hogs, buffaloes, and elephants, which infest them. These animals are met with particularly from Chilou to Mannar on the west side of the island, and from Matura to Batacalo on the east. Since the English have had possession of the island, the roads have been greatly improved. The soil of Ceylon is, in general, sandy, with a small mixture of clay. In the S.W. parts, however, particularly about Columbo, there is much sandy ground, very rich and productive; which is chiefly occupied with cinnamon plantations. The island does not produce rice enough for the use of its inhabitants, but requires annual supplies from Bengal, and other places on the continent. The culture of rice, however, has increased since March 1802; and many tracts on the west coasts, hitherto wild, marshy, and uncultivated, have been applied to this purpose.

The island of Ceylon was originally divided into a number of distinct petty kingdoms, separated by rivers and mountains, and subject each to its own independent sovereignty. In process of time it was reduced under the dominion of the king of Candy, who divided it into a few large provinces, from which the native titles which he still retained. These provinces were Candy, Colton, Matura, Dambool, and Siutucca, which included the rich districts on the west coast. The chief of these was Candy, which is. These provinces were subdivided into districts, known by the name of "Corlas," and corresponding to our shires or counties. These subdivisions are still continued in the parts wrested from the natives by the Dutch, and the government of each is given to the civil and military officers, who hold posts in their vicinity. The great divisions of the island are now reduced to two; the one comprehending those parts that are under the dominion of Europeans, and the other those which still remain in the possession of the natives. The European dominions, it is ob- served, like a ring, completely encircle the territories of the king of Candy. The capital of the European dominions is Columbo; which is, though Trincomalle (see Trincomalee) is of much superior importance, on account of its excellent harbour. The next port to Trincomalle on the N.W. is Malecote; which is; and beyond, in the northern direction, the extremity of the island is flanked out into an oblong peninsula, by a branch of the sea, which penetrates across the island, except that a small strip of land remains, which is very mantled at high water. This district is named Jaffna-patam; which is. Dependent upon this district or Jaffna, and at a small distance in the N. to the N.W. of Point Pedro, are several small islands, which the Dutch have named Delit, Hearum, Leyden, and Amsterdam. These islands they employed in breeding horses and cattle, as from their excellent pasturage they are better adapted to this purpose than any part of Ceylon; and the English government has adopted the same system. The woods, towards the interior, separating this district and others from the king of Candy's dominions, are inhabited by a race of savages, supposed to be the aboriginal inhabitants of the country, and from them which fed. The narrow strip which lies between this side of the island and the continent is called the gulf of Mannar; which is. Between Manner and Badulla (which is. the Coromandel coast, is a line of sand-hills, called "Adam's bridge," (see Colombo), and Ramas bridge, in a tradition that the god of this name came by this way into Ceylon. This tradition is connected with a variety of others that sublimate among the natives, who universally believe that Ceylon was either the paradise in which the inhabiter of the human race resided, or the spot on which he first trod on being expelled into the celestial paradise. Accord. Adam's bridge, is, in their opinion, the way by which he passed over to the continent; and force imagine, that the gulf of Mannar, like the Red Sea, in scripture history, closed after him to prevent his return. But these traditionary tales, it is an almost universally received opinion, that Ceylon at some distant period formed a part of the continent, and was separated from it by a vast great convulsion of nature. Nor is this improbable, if we consider the narrowness of the intervening space, and the numberless shallows with which it abounds. Defides, the appearance of the soil and the surface of the country, on the west coasts of Ceylon, and the opposite continent, very much resemble one another. A tract of flat calcareous rocks seems to run quite across Adam's bridge; and it is found to the water's edge on both shores, and in the low islands that lie on the passage. In proceeding along the coast of Ceylon from Mannar, the country is sandy, wild, and barren; equally deficient in accommodation and provisions. The woods are too much infected with wild animals, that it is very dangerous to travel this way without a proper guard. Here are none of those lofty eminences which diversify the landscape of S. E. India; and the scenery is much less varied than the tract of low flat land; but farther in land there are rice and paddy fields, with some scattered hedges. This appearance continues about 50 miles to the southward of Mannar, when the wood and jungle again begin to approach the shore, and to cover the whole surface of the country, till at Colombo the cinnamon woods show the commencement of the district of Negombo. About twelve miles onward from Mannar is the village of Arippo, where the civil and military officers who attend the pearl-fisbery reside during the season. For their accommodation they have built here a "Choultry," or line-barracks, which also serves for the reception of occasional travellers. Arippo is the only place in this quarter where good water can be procured. Here is also a chapel for persons of the Roman Catholic persuasion, consisting chiefly of the Parawas and Malabars, who resort hither during the season of the pearl fisbery. It is their custom devoutly to offer up their vows and offerings before they commence diving for the oysters. In the neighbourhood of Arippo the woods are full of deer and wild fowl, which are brought by the Cingle-seafarers to the officers flat-shie during the season of the fisbery. About twelve miles from Mannar lies the bay of "Covelong"; which is. In sailing along from Mannar to Columbo, a distance of about 150 miles, the coast presents in general nothing but the most drear and barren appearance, except where it is covered by almost impenetrable jungles. Detachments are posted in some
some few places for the protection of travellers; but the road is far for the great part extremely bad, and the country is much infested with buffaloes and elephants. At Pomparró in a broad lake, which cannot be passed during the rainy season; and besides, there occur in the way two or three broad rivers, as the Mofalere and Mahâragh, which rise from the mountains in the interior. The first post at which you arrive is Culpenten; which fee. For an account of Puttalam, Chilas, and Nigumbo; see the extracts. From Nigumbo southward the road is extremely pleasant; being shaded the whole way, and provided with a number of resting places for travellers. About half-way to Colombo is a very large "Chouletry," or bazaar, to which the officers of the garrison frequently resort on shooting parties. It is situated on a very delightful spot in the midst of a picturesque country, abounding with fiphe and several species of game. For an account of Colombo, the capital of the Dutch dominions in Ceylon; see Colombo. The country round this capital is, for several miles, flat and very rich; diversified with fields of rice and pasture, and a variety of groves, in which the cocoa-tree is most copious; and embellished with gentle eminences, together with a number of small rivers, lakes, and canals. shady roads everywhere intersect the country, which prevails to view country fests and gardens; and on the banks of the river Mutwal is an elegant building, in which the governor resides; and there are also on the fame banks and in the adjoining groves several temples of the natives. Cinnamon trees abound, both wild in the woods and cultivated in the gardens. The road from Colombo lies by the sea-side for six miles, as far as Gal-kettie, a small village, in which a church for the accommodation both of the Dutch and Cingalese; and from hence to Pantura, a distance of 12 miles, the road is well shaded, and agreeably diversified by a part of the cinnamon gardens, which crosses this tract. From Pantura to Colomera, (which fee), an interval of 10 miles, the whole country seems to be one delightful grove; and the road appears like a broad walk through a shady garden. In tracing the easterm coast, we find Barbareen and Bentot, (see Colomera), and at length arrive at Point de Galle, for an account of which, fee that article. About 20 miles to the south is Billigamne or Bolligam, seated on a bay formed by an indenture of the coast, well inhabited by fishermen; and at the distance of 10 miles from Point de Galle lies Matura; and about four miles from Matura is the most southern point of Ceylon, called Dondre-bead. See Matura and Dondre-bead. For an account of the principal places in the European dominions on the easterm side of the island; see Batticalo and Trincomalee.

It appears, from the survey of this island, made by captain R. Percival, and delineated in a manner no less entertaining than instructive in his "Account of the Island of Ceylon," which has enabled us to enrich this article with interesting information, that the internal wealth, as well as the population of the European dominions," lies on the west and south-west coasts; while that lucrative station for shipping, which renders Ceylon of so much importance to our other East Indian dominions, lies at the opposite side, and in the most barren quarter of the island. The present state of the roads is such as almost entirely to preclude all intercourse by land between the opposite sides of the island, which are thus prevented from imputing their advantages to each other. In time, however, these defects may in a great measure be remedied; and many beneficial plans have already begun to be executed by the intelligent officers who at present command in the island. It is probable also, that in time the poorer lands in the north and east parts may be employed to raise the necessaries of life, while the rich plains around Colombo are entirely devoted to its valuable spices.

The inhabitants of the sea-coasts of Ceylon are composed of a variety of different races. At Colombo, in particular, the natives of every country in India appear to have their representatives; and the manners and customs of these distinct tribes are such as belong to their native countries. Besides the native Ceylonese, who live under the domination of the Europeans, and who are denominated Cingalese, the coasts are chiefly inhabited by Dutch, Portuguese, and Malays. The Dutch, who are born and reared in India, are very different in their habits and modes of life from those of Europe. The chief trait that distinguishes their original Dutch character is their fondness for gin, and tobacco. In other respects they adopt the customs and little habits of the country. A Ceylonese Dutchman refers to his situation, and begins the day either with a walk, or with sitting down by his door in a loose robe and night-cap to smoke a pipe. This, with a glass of gin, fills up the first hour. At 7, a dish of coffee is handed to him by his slaves, and his lounging posture and pipe are again resumed. He afterwards drolies, and either goes to business or to pay visits, in which he usually takes a pipe and glasses at every hour where he calls; and in his salutations on these occasions he is very ceremonious. If he prolongs his visit, he throws aside part of his dress, and puts on a night-cap, and then he and his companions smoke and talk till noon. At 12 he sits down to dinner, regaling himself with very gross and heavy food. After dinner he refines his smoking in an undress, and then sleeps for an hour. As soon as he is again dressed, he pays his visits abroad or receives company at home; and this, with another pipe, occupies the interval till the hour of nine announces supper. Capt. Percival represents them as proverbially indolent and lazy, ignorant and stupid, without capacity, and without desire of acquiring excellence by exertion. Their children are commonly neglected, and committed to the care of slaves. Their own minds become selfish and contracted, callous to the feelings of humanity, and prone to treat their slaves with severity upon the slightest provocation, and often from mere caprice. Their women are generally treated with neglect; nor can it be expected that, in such circumstances, they should much contribute to the art of pleasuring. In the forenoon their drees is flowing, but at their evening parties they appear decked out in abundance of finery. The culture of their minds occupies as little of their attention as the adorning of their persons; their education is disregarded; and from their infancy they imbibe manners and superfluities monstrous to the female slaves to whose management they are entrusted, of which they can never afterwards divest themselves. Neglected by the men they associate with their slaves; and thus their morals are in a state of dignity or virtue, as their manners are of politeness. After marriage, much as they are disregarded by the men, they treat their husbands with great veneration and affection; consider their careness as a high honour, and are therefore extremely jealous of their favour. The Dutch ladies, while young and unmarried, drees well, and are tolerable in their persons, and many among them are pretty, and even handsome; but afterwards they contract such indelicate habits that they become coarse, corpulent, and dirty in their persons; and their drees during the day is slovenly and negligent to excess. In such a climate as that of Ceylon, and with such habits, we must not look for the bloom of health and the red and white of European complexes. There are for the most part of a pale deadly white, with some exceptions. Those who have a mixture of the native blood,
Fond, are easily distinguished by a tinge in the colour of the skin, and their strong thick black hair; marks which are not removed in the course of many generations. The women of this mixed race, of whom there are many in the Dutch settlements, sooner begin to look old than those who are wholly of European extraction. The Dutch ladies have a custom of cracking their joints, and rubbing them over with oil, which renders them uncommonly supple. The principal amusement of the younger females is dancing; and that of the married and elderly ladies consists in paying formal and ceremonious visits; on which occasions they are attended by a number of slave girls, dressed for the purpose, and walking after them, with their betel boxes, or bearing umbrellas over their heads. Their chief care consists in the female attendants, and their splendour is estimated by the number of them which they can afford to keep. Neither the persons nor the apartments of the women are in general very cleanly. Many of the elderly ladies, and most of the lower orders, chew the betel-leaf and areca nut, with a mixture of 'chunam' or lime made of burnt flesh, in order to render it hotter and more pungent to the taste. In every house, therefore, there is a number of brai seale which are used as guttering pots for the women who chew these substances, and for the men when they broke. The women are generally very neat and exact in the arrangement of their dressing-rooms, and when they receive company, these are kept remarkably clean, and the tiled floors are highly polished: but their inner apartments, and other parts of their house, are quite the reverse.

Another clafs of the inhabitants of Ceylon consists of a race known by the name of Portuguese. They are not the descendants of the European nation whose appellation they bear; but they derive their name from the hospitable descendants of that people by native women, who were scattered in great numbers over this island and all their other settlements in India. But both the manners and colour of these original Indian Portuguese are now equally lost among that race which now bears their name. The present Portuguese of Ceylon are a mixture of the spurious descendants of the several European possessors of that island, by native women; joined to a number of Moors and Mahalas. A colour more approaching to black than white, with a particular mode of dress, half Indian and half European, is sufficient to procure the appellation of a Portuguese. These people are found in all the European settlements in India, particularly in those belonging to the Dutch, who often form intermarriages with them. The manners of the Portuguese inhabitants differ from those of the Moors, Mahalas, and other Mahometans. They affect to adopt those of the Europeans. Although the black Portuguese universally profess the Christian religion, and are commonly Roman Catholics, they nevertheless retain many Pagan customs, and their religion may be considered as a compound of both. The Dutch have allowed priests and other missionaries to go among them; and many of them profess the Protestant religion and frequent the churches of the Dutch. They are in general somewhat fairer than the Moors and Mahalas; but complexions of all sorts are found among this mongrel race, from a jetty black to sickly yellow, or tawny hue. Their hair, which is black or dark brown, is worn long, and usually hid, contrary to the custom of the Mahometans. Some of their women are pretty, and much admired for their figure. The men are about the middle size, slender, lank, and ill-made. They are fond to exceed of food and wine in their dress, and never sit out without putting on their best clothes. They are lazy, treacherous, effeminate, and passionate to excess; and retain so much of the character of their boated progenitors, as to be distinguished for a ridiculous pride. They have no regular call, and are usually exempted the work race of people in India. Originally a furious and outcast brood, they retain only the blemishes which tarnished the characters of their ancestors; and they combine all the vices of the Europeans and Indians, without any of their virtues. In these black Portuguese were derived the troops, now known by the name of "Topakas," so called from their wearing hats instead of turbans, the word fez or chapeau, meaning to be a corruption of the French chef-d'oeuvre, being used in their language for a hat. They were never reckoned good soldiers, being neither so hardy nor so brave as the Scopas, and therefore they were seldom employed in the English service: the French, however, had very generally corps of them at Pondicherry, and in their other settlements.

The Malays are another race, who form a considerable proportion of the inhabitants of Ceylon. This ferocious race is widely scattered over the eastern parts of India. Their original empire lies in the peninsula of Malacca (which see); and they have extended themselves thence over Java, Sumatra, the Moluccas, and Philippines, and a great number of other islands in the Archipelago of India. The era of their first introduction into Ceylon is not easily ascertained; but the Dutch have been so allowed for many years to introduce them to this and their other settlements in Asia and Africa, for the purpose of carrying on various branches of trade and manufactures, and also to employ them as falchiers and servants. The religion, laws, manners, and customs of the Malays, as well as their dress, colour, and persons, differ very much from those of all the other inhabitants of Asia. Those of the various islands or settlements differ also among themselves, according to the habits and appearance of the nations among which they are dispersed. For, although they intermarry with the Moors and other castes, particularly in Ceylon, and thus acquire a much darker colour than that which is natural to a Malay, their characteristic features are still so strikingly predominant, that they cannot be mistaken. Those who are born and brought up in the European colonies naturally contract more of the habits of civilized society; but they never entirely get rid of their natural ferocity, though they become much less cruel and vindictive than those of their race who reside in the peninsula of Malacca and their other native possessions. The men are of a middling stature, remarkably well proportioned, and of a strong and muscular constitution. Their legs and arms are particularly well-shaped and very slender at the wrists and ankles. They are of a light brown or yellow colour, approaching, in old age, or when much exposed to the sun, to a copper hue. Their forehead is broad and flat; their eyes are small, black, and very deep sunk in their orbits: their nose is flat. Their hair is black, coarse, and black, and always moistened with a quantity of cocoa-nut oil; some of the poorer fort bind it up with a coloured handkerchief. The Malays of a higher rank wear a wide Mohriit cloth or gown, called baldjur, resembling our dressing-gowns, and composed of rich flowered silk, or party-coloured cotton, and their under dress is a veil of silk or calico, called baldjur, worn close to the body, with loose wide drawers of the same stuff. The dresses of their head is of a singular shape, and is often elaborately ornamented. Their flours or fardals are like those of the Moors. The dresses of the poorer fort consists of a piece of cotton wrapped round their waists, with one end drawn between their legs, and tucked up at the lower part of the back: the arms are left completely bare. Some
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wear a kind of vest or jacket without sleeves; but most of the sashes in the service of Europeans, instead of the piece of cloth, wear breeches of coarse stuff. None of the Malays suffer their beards to grow, but, in conformity to their religion, pluck out the hairs as soon as they appear. That of the poorer classes of the women consists merely of a large piece of coarse calico, or cotton, called a Saree; which is folded and wound round the body above the bosom, and reaches down to the ankle, or middle of the leg; the upper part is tucked up and fastened under the arm-pits. Their hair is twined up like that of the men, and fastened with a fillet or with pins or skewers, called coudes. The drefs of women of a superior station is decorated with taffe, and is very splendid. Instead of the upper garment, called badjou, resembling that of the men, some use the faledang, which is a piece of silk or muslin about five feet long, thrown loosely around the neck and shoulders, falling down before, and brought across the waist backwards. On the crown and back part of the head are stuck three or four tortoise-shell combs with plates of gold. About their necks and arms they wear chains or filagree, and are provided with earrings. The Malays make very beautiful filagree work in gold, which they use as ornaments for their persons.

The faces of the Malays are generally very ugly; and their features indicate their ferocious, treacherous, and revengeful dispositions. Some, however, have comely countenances; and many of the women might be considered as beautiful, if they were not much exposed to the sun, and had not their noses compressed. It is a common practice among them to break by compression the gristle of the upper part of their noses in infancy; a flat nose being regarded as a symbol of beauty. The men are extremely jealous, particularly of the decided preference which the women give to Europeans; nor do they ever pardon infidelity in a wife. The passions of the women are so less violent than those of the men, and they are equally capable of taking the most terrible revenge; either by stabbing the objects of their resentment, or dispatching them by poison. The Malays go naked till about 12 years of age, and are soon after married. As they are of the Mahometan religion, those of the higher castes marry as many wives as they can maintain, while the poverty of those of the lower classes restricts them to one wife. Their usual food consists of fowl, fish, rice, and vegetables. The better sort eat also beef and mutton, when killed by one of their own race, and prepared in their own manner. They hold wine in such abhorrence, agreeable to the prejudices of their religion, that they will not so much as touch their flith; nor will several of the Malay castes carry a plate which has ham or bacon on it. Their common drink is water, or the juice of the palmyn; though some will not endure to drink arrack when they can procure it. They are constantly chewing betel, or penang, and they smoke bang, from which herb they extract a kind of opium, that is used by them in great quantities for exciting their spirits.

The amusements of the Malays are limited to their dispositions, and are either bold, vicious, or ferocious. Both men and women are much addicted to bathing, which they use several times in a day. Their select amusements are gaming and cock fighting; and they are so inordinately fond of gaming, that the poorer sort will sell themselves and their families to procure the means of gratifying their passion for play; and after having lost their last flake, they often sacrifice themselves and their lucky antagonist to their despair.

The Malays have a great variety of musical instruments, which are usually employed in a band or concert, at their religious ceremonies, their marriages, and their feasts. One of their principal instruments is the gong-gong, which consists of a hollow plate of a compound metal, so contrived as to emit a very loud noise when struck. The tom tom is a drum of a peculiar form; and they have other instruments, made of bamboos bound together with iron wire, somewhat in the shape of a dulcimer.

The Malays universally profess the Mahometan religion; though with regard to some inferior points and duties, the several classes differ among themselves. They have temples and mosques dedicated to their saints and their dead, where they attend with great devotion. They value themselves much on their skill in medicinal herbs, and the application of them in the cure of diseases; and they are fond of gardening, to which they are addicted from their infancy, and in which they excel. In all sorts of cave-work, and in rattanizing couches and chairs, they are singularly ingenious; and they are accounted capital builders of bungalows, or houses of the cocoa-tree. In other respects, such as the manner of eating their viandals, and their modes of salutation, they much resemble the natives of the Malabar and Coromandel coasts; though they are sufficiently distinguished from the other natives of India, by the difference of their constitutions, and the peculiar ferocity of their dispositions.

The government, under which the Malays live in their own country, resembles in some degree the ancient feudal institutions of Europe; and, consequently, war is the business of the nation. Their arms are all suited to their savage and fanatical dispositions. These consist of a kind of dagger, called a kreefe, or Canisse (which see), in the use of which they are particularly dextrous. Before they enter upon any desperate enterprise, or act of revenge, the Malays take a quantity of opium, or, as they express it, bang themselves. (See Bangue.) Having thus previously prepared themselves, and poisoned their critics, they rush headlong into the street, stabbing every one indiscriminately that comes in their way, and at the same time vociferating amok, amok, or kill, kill, whence this horrid mode of revenge is termed by Europeans "running a muck." (See Amok.) This ferocious practice was repressed by the Dutch government at Ceylon, by the severest punishments; a reward of one or two hundred rix-dollars has been offered for the detraction or capture of those who ran a muck, and those who were taken alive having been put to death with the most execratory torments. Since the arrival of the English at Ceylon, this barbarous practice has been almost unknown; and a few private murders committed on the Sepoys and black people in the Pettah, were the only crimes of this nature attributed to the Malays during Capt. Percival's stay at Colombo. The Malays, however, in their present state are, from their ideas of morality, almost incapable of being admitted into socia life; they have no idea of revenge being a crime, and they triumph in shedding blood on such an occasion. It is hoped that the introduction of Christianity among these people will mitigate their disposition; and it is consequently of great moment that the Malays in our settlements should embrace this religion. It would serve, not only to soften their temper, but to unite them by the firmest bond with this country. The Dutch government of Ceylon had always a regiment of Malayan in their service; and this corps constituted the strength of their garrisons, as they were the only troops which maintained discipline, or displayed any fort of bravery in the field. They seemed, however, to have imbibed, by the ungenerous policy of the Dutch, such a rooted aversion from the English, that there was at first little appearance of their ever becoming our friends. Soon after the arrival of governor North on the island, he new-modelled this corps, and put it on a larger and more respectable establishment;
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and it has now obtained a place among our other regiments of the line. The Malay troops are armed and clothed much in the same manner as the European, with the exception of shoes, the wearing of which is contrary to their religion; instead of these they use a particular sort of sandal; both with their other arms they always wear their kreefes by their sides; and in the heat of an engagement they often throw down their muskets and bayonets, and, rushing upon the enemy with these kreefes, carry terror and destruction wherever they come. The patience with which the Malays submit to the sentence of their courts martial, compiled by the new regulations introduced among them, of their own native officers, who are acquainfed with their language and customs, and their refraining from revenge when they are assured that justice is intended them, afford reason for concluding, that mild and generous treatment will in the end have the effect of subduing their natural ferocity.

The far greater proportion of the inhabitants of Ceylon consists of the native Cingalese, who have submitted to the dominion of the Europeans. They retain their original appellation of "Cingalese," while those who live in other parts which acknowledge only the authority of their native princes, are distinguished by the name of "Candians," from the country they inhabit. In most parts these two classes continue to re semble each other, though they are respectively distinguished by some peculiar characteristics. Whether the Cingalese were the original inhabitants of the island, or from what other country they came, and at what period they settled there, are points of which we have no distinct account, either from them or from other persons. The distance is so small between Ceylon and the continent, that it is the most probable, and the most generally received opinion, that it was peopled either from the Coromandel or Malabar coasts. Some circumstances, however, are suggested by Capt. Percival, which seem to indicate that they have migrated from a greater distance. Their complexion, features, language, and manners are so similar to those of the Maldivians, as to afford reason for concluding that both were of the same stock. The Maldivian islands are only two or three days' sail from Ceylon; and from the dissimilarity of the habits found among them to those of the Indians on the continent, it might be argued that the natives of these islands have not directly originated from those of Hindostan.

The Ceylonese are of a middling stature, about five feet eight inches, and taller in complexion than the Moors and Malabars on the continent; but they are neither so well made nor so strong, and in appearance much riperable the Maldivians. The Candians are taller, better formed, and sleeker than the Cingalese in our service. The women are proportionably less tall than the men, are much fairer, and approach to a yellow or mulatto colour. They continually among them bides with cocoa-nut oil, with which they oil their hair. Both sexes are remarkably clean and neat in their persons and their houses; and in dressing their vessels they are scrupulously neat. In order to wash touching the vessel in which they drink with their lips, they hold it at some distance over their heads, and pour the liquor down their throats. In their diet, they are very shicklish; fruits and rice constituting the chief articles of their food. They use some fish when it is abundant, but flesh is scarcely ever where eaten. They are courteous and polite in their demeanour, and in many qualities much superior to other Indians. They neither ride nor lie; their disposition is generally mild; but when their anger is roused, it is proportionably furious and violent. Their hatred is execrable and invariable, infomuch that they will frequently defend themselves in order to obtain the destruction of the object they desire. If a Ceylonese cannot obtain victory due to his warlike nature, he goes out of his way to kill himself, if he is not in danger. This threat, sometimes executed, obliges the debtor to comply immediately, or if he be in his power, as by their law, if any man causes the loss of another's life, his own is the forfeit. "An eye for an eye, and a tooth for a tooth," is a proverbial expression which is continually in their mouths. This dreadful spirit of revenge is still cherished among the Candians; but it is mitigated, in a great degree, among the Cingalese by their intercourse with Europeans. Among the Ceylonese the distinction of rank is maintained with temperate exactness; and extends to the dimensions and appearance of their houses; so that the Candians are not allowed to whiten their houses, nor to cover them with tiles, which is a royal privilege, and reserved solely for the great king. The Ceylonese never employ nails in their houses, either from the remnant of a tyrannical prohibition, or a superstitious arising from the danger of the electrical fire in their climate. Their hats are small and low, consisting of one florio, and fastened with withies of ratten or coya rope. They are constricted of slender pieces of wood or bamboo, dashed over with clay, or covered with rice-straw, or leaves of the cocoa-tree. Round the walls are banks or trenches of clay, on which they sit and sleep; and these benches, as well as the floors of their houses, are covered with cow-dung for keeping away vermin, and preserving the surface smooth and clean. Their furniture is of the most simple kind; consisting of a few earthen pots for cooking their rice, and one or two brafs bason out of which they eat it; a wooden mortar and pestle for grinding it, with a flat stone on which to pound pepper, turmeric, and chillies for their curries; a bottle, or kind of grater, being an iron instrument like the ravel of a spur fixed on a piece of wood like a boot-jack, and used in rasping their cocoa-nuts. They use neither tables, chairs, nor spoons; but placing themselves on the ground, eat their food with their hands. The houses of the Candians are nearer and better constructed than those of the Cingalese, whose minds have been reduced to an abject state, by the successive tyranny of the Portuguese and Dutch. Their villages and towns appear like a number of distinct huts scattered in the midst of a thick wood or forest. When they are in danger of being attacked with rocks, tiles, or overthrown by inundations, they erect their huts on the run of high rocks, or on the tops of high trees. Some of them fix piles in the ground, and place upon them a fort of hurdles, which leaves room for their habitation. In order to preserve themselves from the extreme heat of the sun, they have universally the large leaf of the taproot-carried over their heads.

The Ceylonese are extremely polite and ceremonious: and as a token of respect and friendship, present each other with the betel leaf, which is chewed by persons of all ranks, and supplies the thirst in all their enterainments. They mix with it tobacco, areca-nuts, and the lime of betel root. The black flavoured occasioned by this mixture, which is indelible on the mouth, lips, and teeth, is considered as an addition to their beauty; but it renders them toothless at an early age. The Ceylonese manifest a surprising degree of gravity in conversation, even among relations and intimate friends; sitting for a long time motionless and chewing betel leaf. In their festivities they very punctually use the form common among the Indians of bringling the palms of the hands to the forehead, and then making a ferum or low bow. The natives of Ceylon are more continent with regard
regard to women than the other Asiatic people, and they treat their females with greater attention. Mr. Knox has drawn a picture of their total disregard of chastity, or any bounds to sexual intercourse, which is extremely abhorrent to the ideas not only of an Asiatic, but even to the inhabitants of the most dilute metropolis in Europe: and Captain Percival is convinced, from his own observations among the Cinglfe, and from all the accounts which he could obtain of the Cannids, that he has not in many instances exaggerated their licentiousness.

A Cingle husband is neither jealous of his wife, nor particularly offended at her infidelity, unless he be caught in the fact; in which case he thinks himself warranted in executing the rights of an Asiatic husband. Many of the men have only one wife, while others are greatly affected by the introduction of foreign words, so that it has lost in a great degree that melody and force, which are attributed to the language of the interior. In the pronunciation of the Ceylonefe there is something peculiar, as they hurry out the first part of a sentence without commanding any attention, and dwell with a loud and long accent on the concluding syllables. To or ah forms the last syllable of a great number of their words, and with this they are fond of closing. The language universally spoken among the Cinglefes who have any intercourse or connection with Europeans is the low Portuguese; and this is also spoken by the Moor and Mahabuv servants.

The Ceylonefe divide their time nearly as we do: except that their year commences on the 25th of March, and they allow for leap-year or any odd portions of time by beginning this year a day sooner or later, or by adding a day to the former year. Their months, like ours, are divided into weeks of 7 days: Wednesday and Saturday are the days on which they perform their religious ceremonies. The day, which is reckoned from Fun-tiie to Fun-fet, is divided into 15 hours, and the night also into as many; and they cut the length of the day and night subject to a little variation.

Before the arrival of the Europeans on the island, it does not appear that the Ceylonefe had contrived even the rudest species of dial. On any particular occasion, they employed a vellum with a hole in the bottom, that let out the water with which it was filled in one hour according to their division; but this rude instrument was seldom employed except at court ceremonies. The learning of the Ceylonefe confines chiefly in some pretended skill in astrology; although it appears from certain inscriptions on the ruins of some of their temples, that they formerly possessed some literature, as well as a certain refinement in the arts. Reading and writing are no ordinary accomplishments among the natives of Ceylon. Among the Cannids: they are chiefly confined to the learned men of the sect called "Gonies," who are retained by the king to execute all the writings of state, and thefe which respect religious affairs: and the Arabic is the character employed on these occasions. For writing, as they do not understand the manufacture of paper, they use the leaf of the tapis tree, and from these leaves, which are very large, they cut slips about a foot in length and a half in breadth, and about two inches broad. These slips are powdered; and the letters or characters are marked on them with a fine pointed lead pencil, like a bodkin, set in a wooden or ivory handle; and in order to render the characters more visible and distinct, they are rubbed over with oil mixed with charcoal powder. Several of these slips are strung together by a piece of twine called "Gannon." Some of the tappet-books or files, called by the natives "Oddars," are richly ornamented, and bound in burnished boards of ivory, or

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is most nearly allied to the Maldivian. Of this language there are two dialects, which differ considerably from each other and have each a separate grammar. The poetic or court language, called the "Candian Sanscrit," or more properly the "Paulee" or "Mangada," is retained in those places, where the language may be supposed to have been prefered in its greatest purity; it contains a considerable mixture of Arabic, and is accounted the most elegant as well as the most smooth and famous. Among the Cannids it is a current opinion, that Arabic is their original language, and that some mixture of the Sanscrit was introduced by a colony who came over by Adam's bridge from the continent of India. Among the Cinglefe on the coasts, the vulgar dialect, denominated "Cingle," is spoken; and it appears to have been greatly corrupted by the introduction of foreign words, so that it has lost in a great degree that melody and force, which are attributed to the language of the interior.

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even silver and gold. Letters or dispatches sent by the king formerly to the Dutch, and now to the English governor, are enclosed in leaves of beaten gold like those of the cocoa-leaf, rolled up in a cover richly ornamented, and almost hid in a profusion of pearls and other precious stones. The whole is enclosed in a box of silver or ivory, which is sealed with the Emperor's great seal.

The progress of the Ceylonese in the other arts of life bears proportion to their literature. Their agriculture remains in the rudest state; and the Ceylonese are naturally indolent in the extreme. Their soil, where it can be watered, yields, with little cultivation, a sufficient quantity of rice for their subsistence, and with this they are satisfied. Their ploughs consist merely of a crooked piece of wood, shaped so that one end serves for a handle, while the other, shod with iron, ploughs, or rather tears up the ground. After a first ploughing, the fields are flooded, and some time after they are again ploughed. The other tools employed in their agriculture are a board for smoothing their fields, which is dragged over them edgewise with their oxen; and a piece of board fastened to the end of a long pole, which serves instead of rakes. At the season of ploughing, each village makes it a common concern; every one attending with his plough and his oxen till the whole of the field belonging to that society is finished. The same method is pursued in reaping the corn. Seed-time and harvest are fea-
sons of general industry and good fellowship. The women are not employed in either of these laborious operations; their business is to gather the corn after the reapers, and to affilt in sowing it. Oxen are employed both in ploughing and in treading out the corn. For unshukling their rice, they beat it in a mortar, or more frequently on a hard floor; and if it be of a brittle kind, they boil it before they beat it. The only manure they think requisite is water. Although the labour required for the cultivation of their rice is incon-
siderable, many of them let their ground to their neighbours, less indolent than themselves, for a certain proportion of grain, which is commonly about one-third of the produce. A considerable proportion of grain is carried off by the priests for the service of their temples, or is offered up for protection and thanksgiving, both on account of the blessings they have received, and in the hope of farther affil-
ance.

The religion of the Ceylonese forms a very prominent and delfignifying feature of their character; and there are few people, if any, that are more under the influence of superstiti-
ous fears. Omens regulate their whole conduct, and even determine their destiny from their birth. When a child is born, they immediately call the astrologer, who pronounces whether it is destined to be fortunate or unfortunate. If he declares that it was born to misfortune, they often anticipate its future evils by destroying it. By various omens they de-
termine whether the business they undertake will be prosper-
ous or unsuccessful. A white man, or a woman with child, when they present themselves in the morning, are very fa-
vourable omens; but a biggar or deformed person is ac-
counted a grievous mischance, and the sight of him will prevent their proceeding on that day with any business pro-
posed, if it be in their power to avoid it. By the im-
pression of superstitious fears, the poor Ceylonese confides in the protection of all the Demon that is supposed to have the power of interfering with their affairs. When a demon is supposed to have interfered with the course of events, they say that the island is abandoned to the dominion of devils. The Ceylonese conceive fires without number to be hovering round them, and they ascribe every disease or trouble that afflicts them to the immediate agency of the demons that are sent to punish them; while, on the other hand, they regard every blessing and every instance of success, as coming directly from the hands of the beneficent and su-
preme God. In order to guard themselves against the power of inferior deities, whom they consider as wicked spirits, they wear various amulets, and employ charms and spells, imagining that they may thus ward off the influence of witchcraft and enchantments by which they think them-
seves beset on all sides. Many even of those who have been converted to Christianity, still labour under their original terror, though they believe them to be delusions. Some of the Cinglele, when their desires are disappointed and their prayers disregarded, quarrel with their deities, revile them, and even trample their images under foot. The inhabitants of the more mountainous parts of the country are distressed by their superstitious fears to such a degree, as to be driven to madness by their disturbed imaginations. The progress of civilization, and the removal of these superstitious fears, are greatly opposed by the interested arts of their priests, who contrive to direct their operation to their own emol-
mument. The devotion of the Ceylonese towards supernatural beings derives its peculiar character from their superstitious fears, and confits of various ceremonies created by them. With regard to what may be properly termed their religion, a difference of opinion has prevailed. Some have said that with a slight variation of names and forms, it is the same with that of the Hindoos; but there is little reason to ques-
tion its being founded on a different system of idolatry from that practised among the Hindoos. Many of their notions seem to be borrowed from the latter, and with these they have blended a confiderable mixture of Mahometanism. In one point, it is said, they agree with both, as well as with Christians; viz. in acknowledging one Supreme Being who made and governs all things; but they differ from the Ma-
hooncans and rigid Hindoos in another respect; for though they are unable to conquer their original superstitions, they entertain the highest reverence for the Christian religion, and some of the Cinglele have been converted without incurring fearlessly any censure from others for their apostacy. Never-
thelss, whilst these people adore one Supreme Being, more powerful than all others, they offer up their devotion to devils, animals, and the very productions of the earth. Besides the one Supreme Being, who is worshipped as the creator and ruler of heaven and earth, the Ceylonese acknowledge a number of inferior deities, as well as tormenting demons: the former, who watch over them for their good, are sup-
possed to be the souls of good men, and the demons the spirits of the wicked; but both are regarded as acting by the permision of the Supreme Being. The object of their immediate worship is Buddho, or Bouddha (which see), who is represented under a variety of different forms and images. Some have supposed that the worship of Buddho was intro-
duced into Ceylon about 40 years after the Christian era; at which time, as it is said, a violent quarrel took place be-
tween the Brahmins and the votaries of Buddho, who then formed one of the religious sects on the continent. The Brahmins, as they say, prevailed, and the Buddistes were com-
pelled to take refuge in Ceylon. The Buddistes are said to have been originally a clafs of hermits, who led a wandering solitary life, remarkable for chastity, renouncing all the pursuits of the world and all attention to property, and contented with the practice of devotion amidst the extremest poverty. Others, however, have traced the religion of Buddho to a much higher antiquity; and pretend that it was intro-
duced in the reign of Vegirajah, who came with his people to Ceylon in the 6th century before Cruill; and that

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Goutama Buddhō, the figure that is now worshipped, was supposed to have made his appearance 542 years before the birth of Chrili. Accordingly it has been supposed, that the worship of Buddhō originated in Ceylon, and that it forced from thence to ancient Hindooistan to, exterior India, Tibet, and even to China and Japan. See Boono. Between the priests of Buddhō and the Brahmins, there are principal distinctions have been noted; they lay down the priesthood; they eat flesh, but will not kill the animal; and they form no call or tribe, but are selected from the mafs of the people.

The priests of Buddhō and Buddhō are in Ceylon accounted superior to all others. They are called "Triunanes," and are held in high estimation at the court of Candy, where they are entitled with the chief management of affairs. The king has no authority over them, but endeavours to gain their good will by respecting their immunities, and conferring upon them numerous distinctions. The followers of Buddō believe in the immortality of the soul, and its transmigration into various bodies before it reaches Nimban or the region of eternity. The perfons of the Triunanes are held sacred; and the king of Candy, although his power be absolute, cannot take away their lives, or in any way punish them even for confounding against his own life. They chuse their own superiors; and their chief priest is invested with the prerogative of settling all religious disputes. They are exempted from all taxes; but they are totally debauched from wine or women. They never eat meat, or any thing that has had life. To their girdles they suspend firings of beads made of a brownish or black wood; and matter prayers as they go along. Their drefts consists of a large loose piece of yellow cloth thrown over their left shoulder, and fastened round the waist by a girdle of the same. The right shoulder, the arms, the head, and the feet, are completely bare. In one hand they carry a painted cane, and in the other an umbrella of the broad end of the talipot leaf. The temples of Buddhō are superior to those of all the other deities; for they never dedicate temples to the Supreme Being, nor represent him by any image. In the temples of Buddhō, are figures of men habitl like his priests, and placed in various postures: some of them are seen fitting crofs-legged on the ground with long burly heads of hair like their womens, while others recline at full length on the ground. In various parts of the island a number of images of the god Buddhō are found, which by their extraordinary size indicate the great reverence in which he is held. It would be endless to describe these images, and the various temples in which they are found. He has a temple at Caleme, 6 miles N.E. of Columbo; another at Ootulbodda, 6 miles from Colturna, which is much frequented; and in Bilbande Core it is an immense figure of a man 6 yards high, which stands about 10 miles N. from Matura, and is said to represent the Cotta Raja, an ancient prince who taught them the planting and use of the cocoa-nutt, and instructed them in its various salutary qualities. In the interior of Ceylon, there are many ruins of pagodas and temples, of hewn stone, and of much superior workmanship to those in the lower parts of the country. Several of them are in a state of perfect preservation; and when compared with those that have been erected in later times, they afford the strongest proof either that the Ceylonese had formerly attained a much higher state of civilization, or that the island had anciently been inhabited by a different race from its present posCifers. But many of them have suffered much from the ravages of the Portuguese.

The temples dedicated to the inferior gods are poor, mean, and contemptible, being usually constructed of clay and wood; and mere huts, one story high, without windows, and covered with cocoanut leaves. Without are elephants' heads of earthen ware, little pots, &c. in which paf- fengers deposit their oblurations; and at the doors is a pole or flag, near which sits a priest who remains there the whole day; and within are "swamis" or sacred images of different construction, such as gigantic figures of men with boars' heads, representations of bears, birds, and pieces of conccrned armour, and some very indecent figures of men and women. The priests of the inferior deities, called "Ganes," are easily diftinguished from the Triunanes by the little respect that is paid to them. They are continually met with in their wandering excursions over the island, and are a set of lazy, impudent vagabonds, who live well on the extortions which they practice on the people.

The superlition of the Ceylonese supplies ample provision for the support of their religious establishments. The Can- dians allow certain portions of land and particular taxes to maintain their priests and religious houses; whilst the inferior priests support the temples and themselves by their own dexterity. A11 divines are accounted immediate indications of the divine wrath, a time of sickness is the season when the temples are thronged, and when the priests expect their principal harvest. There are several particular festivals which are held by the Ceylonese in honour of their gods, and for the purpose of conciliating their favour. In the month of June or July at the new moon, called "perah," a solemn and general concourse takes place to the various religious reforts on the island. At Candy this festival is celebrated with great pomp, and is attended by the king with his whole court. In November, at the time of full moon there is another festivál, which is celebrated in the night. These festivals, which are more solemn and splendid in the dominions of Candy than among the Cinglese of the coast, are very numerous, amounting in the whole to 48. Thole in honour of Buddhō are not held in the temples, where he is unformly worshipped, but on a high hill, called "Hammalka," or Adam's peak, one of the highest in Ceylon, and at the distance of about 30 miles to the N.E. of Colombo, and at a consecrated tree, denominated the "Bo- gaha," which see. Notwithstanding the many religious ceremonies and superflitions that prevail among the Ceylo- nese, they are far from being such devotees and zealots as any of the sect on the continent. They are firm believers in the doctrine of the immortality of the soul, and the resur- rection of the body. It is their opinion, that the souls of the just are immediately after death admitted into the ranks of gods, and that their ancient prophets and good kings are long since employed in exercising the powers of this station; while, on the other hand, the souls of the wicked, particularly of unjust tyrants and impious priests, are supposed to have been cast into wild beasts and reptiles. The Ceylonese are rigid pre- ductarians, and believe that people are born to their peculiar deities, whether good or bad, which they are incapable of avoiding by sober living. They imagine, however, that their calamities may be alleviated by spells and charms, and they place considerable reliance on giving alms; and hence the Ceylonese are very liberal in the distribution of charity. Prefents to their priests and alms to their beggars are considered by them as essential acts of goodness. The Cinglese in our service, whilst natural ferocity is in a great measure subdued, reserve a certain proportion of their food for the poor; nor do they withhold relief from the Malabar or Moor who asks it. They extend their compassion even to the brute creation, so that during certain festivals or feasts of devotion, they refrain from killing any living creature, and subsist wholly on herbs and fruits. The Cinglese, who are naturally abstemious, frugal, and free from covetousness, are
are never tempted by idleness to purloin the property of their neighbours; but the Cadians, though endued with much more pride and spirit, are by no means so condescending or hasty. The burial among the Ceylonese are not attended with any particular religious solemnity. Mr. Knox states, that in his time it was customary to burn the dead, particularly the bodies of persons of distinction. But this practice, if it still continues in any part of Ceylon, has escaped the researches of Captain Percival; and it must therefore be rare, and confined to the remote parts of the interior. The ceremonial of burial is very simple; the body being wrapped in a mat or piece of cloth, and carried to some unfrequented spot, where it is deposited.

Captain Percival has pointed out, with his accurate discrimination, some particular shades of difference which arise between the Cadians and Cinglese, both from the nature of the country they respectively inhabit, and from the more frequent intercourse of the latter with foreigners. These chiefly relate to their political situation, and their forms of administering justice, which, among the Cinglese, are of course considerably affected to those of the people who hold them in subjection. The Cinglese, he says, are a quiet inoffensive people; exceedingly grave, temperate, and frugal. In their application to labour, though their bodies partake of the indolence of their minds, they are capable, when roused, of considerable active exertion; but being less robust than the Moor or the Mahbar race, they never make good palankeen bearers, or cookies to carry burdens. They are gentle, charitable, and friendly, and have fearlessly any of the faulty, treacherous, and designing arts, which are often found among the Cadians. The countenance of the Cadian is erect, his looks haughty, his men lofty, and his whole carriage marked by the pride of independence. The humble yielding deportment of the Cinglese, on the other hand, with the patient or rather abrupt endurance which is depicted in their faces, plainly denotes the dependent and helpless state to which they are reduced. A mild and equitable government, with a strict administration of justice, cannot fail to conciliate the minds of these people who have already been trained to submission, and an unbounded reverence for Europeans. As the natural diffidence of the Cinglese are mild and humane; their morals except in the promiscuous intercourse of the sexes, are far from being depraved. The Cadians, who have acquired warlike habits, are thus induced to look with contempt on the Cinglese, who are almost entirely unacquainted with the use of arms.

The dress of the poorer sorts of the Cinglese indicates their indolence and wretchedness; and the women of this clafs are employed in performing all kinds of drudgery work, and in bringing the fruits and vegetables to market. Persons of superior rank pay particular attention to their drees. They wear a piece of calico wrapped round their waists, which either hangs loose down to their ankles, or is drawn together between the legs, in the form of wide trousers. The body is covered by a jacket with faws, having the appearance of a shirt and waistcoat, and is buttomed at the neck and wrists. The buttons are numerous, and they are either of silver, gold, or precious stones. To their ears they fix enormous earrings, which are adapted for receiving them by applying pieces of wood to the orifices in their infancy. The shoulders and body are left completely bare. On their heads they wear caps of various shapes, and others of them coloured handkerchiefs, as fancy fuggests, or the rules of their caste prescribe. The dress of the higher rank of women is similar to that worn by the black Porouilfe ladies; and that of the young Cinglese females is so elegant, nor are their appearance and manners disagreable.

The Cinglese are ingenious and expert artisans, and display their dexterity in gold, silver, and carpenters' work. The number of persons employed in all sorts of handcraft work renders furniture, and other similar articles, both good and cheap. The Cinglese supply the English garrisons with beef, fows, eggs, and other such articles, at a very moderate rate, as they seldom use them for their own consumption: beef, in particular, they never talle, as the cow is an object of their worship. Some of them drink arrack, and all ranks use toddy both as a medicine, and for the sake of the liquor itself. The vessels which they use for holding the juice of the palm-leaf and cocoa-tree is a kind of the betel-tree, resembling in colour and texture bleached sheepskin, and being as strong and better adapted for retaining liquor. Fows are plentiful, and sold at from 4d. to 8d. each; eggs at 2d. a dozen; and a good dish of fish may be bought at from 1d. to 1d.

As the Cinglese live under the protection of the British government, they are subject to our laws and forms of administering justice, except in very few points, with regard to which they are permitted to retain their ancient customs. The same laws of inheritance remain among all the Ceylonese; the hands defend to the eldest son, if the father makes no will; but a certain proportion of the property must always be appropriated to the maintenance of the widow and the younger children. The Cinglese under the British dominion are governed by the native magistrates, the controlling power residing always in the servants of the British government. All our possessions in the island are divided into coves and districts, the subordinate superintendence of which is assigned to the "Moodelers," or native magistrates, who are always chosen from among the chiefs of the nobles styled "Hondrews," and "Mahondrews." The nobles, or "Mahot-drews," from whom the Moodelers are chosen, form a particular casta completely distinct from the others, and their appearance, dress, and manners indicate superiority to the rest of the natives. These Mahondrews are rather than the other Cinglese, from their being left exposed to the sun; when they go abroad, they are entitled, by their rank and wealth, to be carried in coolies or palankeens; or when they go on foot, their attendants hold over their heads the leaf of the talipot. In public their servants carry their umbrellas and betel-boxes, which latter are usually made of ivory, tortoise-shell, silver, or calamander wood inlaid. In their own hands, they carry a small silver box, like a watch, to hold their elman. In their manners they are very affable, and much more polite and engaging than the natives of the continent of India. They are partial to the Europeans, who have been accustomed to treat them with confidence and gentleness; and on all occasions they have manifested a desire of copying the manners of the Europeans. Their dress is very rich, and combines the ancient European with the Asiatic. They are fond of magnificence, and particularly at their wedding-feasts they are anxious to exhibit their splendour.

Many of the Cinglese have been converted to the Christian faith; and whilst some profess to be Roman Catholics, others attend the Calvinist and Lutheran worship; but the fundamental principles of Christianity are understood by fearfully any one of them. The natives of Ceylon, says Capt. Percival, belonging to our settlements, are already become much attached to the English; and there is every reason to expect that their prejudices against foreigners will soon be done away by our liberal conduct towards them. For an account of the Cadians, see CANDY. Of another clafs of the inhabitants of Ceylon, a brief account has already been given under the article Bedahs. These Bedans, or Vaddas, are scattered over
CEYLON.

over the woods in different parts of the island; but they are
moll numerous in the province of Bintan, which lies to the
N.E. of Cundy in the direction of Trincomalee and Batticalo.
Here they are completely savage, and have never entered into
tangue or intercourse with the native, or have fiercely
ever been seen by them. They acknowledge no authority
before that of their own chiefs and religious men. Thole
that border on the district of Jafrapatam, and the tribes that
inhabit the W. and S.W. quarters of the island, between
Adam's peak and the Raygam and Pсадam corles, are the
only Bedahs who have been seen by Euro peans; and they are
much less wild and ferocious than those who live in the forests
of Bintan. The Bedahs, as they acknowledge no power
but that of their own chiefs, adhere, from generation to gen-
oration, to their own laws and customs, without the slightest
variation. They subfiit entirely by hunting deer and other
animals, with which their forests supply them. The flesh
of these animals, and the fruits that grow spontaneously,
comprise their whole food. They sleep either in trees, or at
the foot of them; and in the latter cafe secure themselves
from wild beasts by placing thorns and bushes all round them.
As soon as the leafy noife mules the apprehension of a Be-
dah, he climbs up the tree with the utmost expertness and
celerity. The dogs of the Bedahs are remarkable for their
fugacity, and not only readily trace out game, but also dif-
tinguish one species of animals from another. Those faith-
ful animals constitute their chief riches. When their daugh-
ters are married, hunting-dogs form their portion; and a Bed-
dah is as unwilling to part with his dog as an Arabian with
his horse. Thole Bedahs who converse with the other natives
are represented to be courteous, and in address far beyond
their rate of civilization. Their religion is little known;
they have their inferior deities, corresponding to the demons
of the Cinglee, and observe certain festivals. On these occa-
sions vacuums of various forts are placed at the root of a tree,
and the ceremonies of the festival coniit in dancing around
them. Their origin has never been traced; but they are
supposed to have been the aboriginal inhabitants of the
island, who, upon being overwhelmed by their Cinglee in-
vaders, preferred the independence of savages to a tame sub-
milion. For another account of them, see BEADAH.

At the head of the clans of quadrupeds in this island, and
superior to those of the same species found in any other part
of the world, are its elephants. See ELEPHANT. Of the
animals applied to domestic purposes Ceylon produces but
few. The horse and sheep are not natives of this island, and
can scarcely be made to thrive when imported. The hor-
sest, which are bred on the small islands beyond Jafrapa-
tam are a mixture of the Arab and the common horse of the
Carnatic. They are chiefly used for drawing gigs and other
light vehicles for pleasure; the Manilla, Pygu, and Atcheen
horses are also used for these purposes. Sheep, as well as
horses, are much dearer here than in any other part of In-
dia. Sheep, in particular, sometimes fetch 10 and even 20
times the price they bear on the opposite coast of Comor-
del. In Ceylon horses are never employed in servile work, or
for drawing burdens. As they are scarcely ever castrated,
they are so spirited and vicious as in some degree to be un-
it for these purposes. The oxen of Ceylon are remarkably
small, generally of a black colour, and fearlessly exceed in
size our calves of a year old; the beef, however, is fat, and
tolerably good. The price of an ox is about 11, 5s. fler-
ling. These bullocks, though small, are very useful, and
are employed in drawing artillery, and conveying burdens
which are too large for the coolies to carry, and which they
draw in cartes, known in the island by the name of "barlies.
They are long, narrow, clumsy vehicles, with the body
reling on a beam, which projects like the pole of a car-
rriage, to the end of which is attached cross-wise a piece of
wood, very thick, and about six feet long. Under it are
hoops for the necks of the oxen, which are kept fast
quiry, so that the whole weight of the load rests on the
neck and shoulders of the cattle, while they drag the cart
along. The sides of the cart are composed of thin boards,
the fins of buffaloes, or split bamboos; while a strong
polt of wood is placed at each of the four corners to give it
shape or hold it firm. The bottom is formed of boards, or
interwoven bamboos: the axle tree and wheels resemble
those of the thirf trucks, or cars, being blocks of wood
rounded. Buffaloes, which are much larger and stronger
than the oxen, are much more frequently employed in draw-
ing burdens. Thole animals are found in great numbers
on the island, both wild and in a tame state, and are all of
the same species and appearance. See BUFFALO. The
markets of Ceylon are well supplied with pigs, which may
be always had at a moderate price from 5s. to 10s. The
forests of this island are rendered dangerous by beiges of
prize and noxious reptiles of various kinds. Varieties of
deer and elk are every where met with in the woods and
jungles. Hares, like the common ones of Europe, abound
in every quarter of the island. The wild hog is more ef-
teated than the tame; and the wild bears, which are large
and fierce, add much to the dangers of the Ceylonic forests.
The smaller species of tiger infests the woods; but the lar-
ger kind, called the royal tiger, is not an inhabitant of the
island. Ceylon has also the tiger-cat, the leopard, jackals,
the hyena and bear, great number of monkeys of different
species, and a variety of porcupines, racoons, armadillos,
fquirrels and mungooses; the ichis unum, iloroune, orifling,
fox, several species of rats, and the ant-eater are also animals
found in this island. The birds of Ceylon form a very nu-
merous clafs. All forts of our domestic poultry, turkics
excepted, are natives of this island; and there are few birds
found in our marshes that do not abound here. Ducks,
goose, pheasants, parrots, and parroquets, are found in great
numbers, both wild and tame, and usually in flocks. Snipe
are also plentiful in the wet season, which is the bait time for
fleeting them. The florican, which is a species of the crane
kind, about the size and weight of a large capon, lives among
the woods, and is esteemed excellent for food. The banks
of the rivers and lakes abound with florks, cranes, herons,
and water-fowl of various descriptions. Wood-peckers
are also found with beautiful top-knots of a golden colour.
Dodos, both wild and tame, form a principal part of the
birds of Ceylon and the cinnamon pigeon, in particular,
which is of a beautiful green colour, and as large as our
common fowl, forms in Ceylon at all seasons of the year.
There are a few partridges of the small red-legged kind, which
are found on the fell coats between Nigumbo and Manar.
Among a great variety of smaller birds, the honey bird and
tailor bird attract particular notice. The crows are here,
as in every other part of India, exceedingly impudent and
troublesome, and are with difficulty excluded from the
houses. Here are also kites and vultures, the Indian roller,
the yellow-crowned species of peacock, and the jungle-fowl,
which resembles our common bow, but prefers a
much more beautiful plumage and is distinguished by its
double purrs. The reptiles and insects of Ceylon are very
numerous, and there are several species very liitle known.
Serptents also abeut to the great annoyance of the inhabi-
tants; among whom we may reckon the cobra capello or
hooded snake, from 6 to 15 feet long, the cobra manila,
the most dreadful of all snakes, about two feet long,
whose bite proves instantly fatal; the whip-snake and gals-
ashes,
snakes, both poisonous, the water-snake, wood-snake, and a few other species among old ruins that are perfectly harmless. The rock-snake extends to 50 feet in length, and inhabits chiefly the rocky banks of rivers. Alligators of an immense size infest all the rivers of Ceylon, and render them every where very dangerous. The guana resembles the alligator, but is perfectly harmless. It lives in holes in the ground, is esteemed good food by the natives, and makes excellent cur, or rich foap. An immense number of toads, lizards, blood-fuckers, chameleons, and a variety of others of the same class, abound every where throughout the island. Besides the lecches which are employed in the materia medica, there is another species which infests the woods and swampy grounds of Ceylon, particularly in the rainy season, to the great annoyance of palngers. The insects of Ceylon are very numerous; but the most mischievous is a species of ant, called the white ant, which is equally destructive in the fields and the dwelling houses. Land tortoises abound in many parts of the island. The black scorpion of Ceylon is a very dangerous insect, and its sting is frequently mortal. The centipedes, or common large picers, and an overgrown beetle, called the carpenter, from its boring large holes in timber, are met with in Ceylon. Fish of every sort, in great abundance, are found in the lakes and rivers of Ceylon, as well as in the surrounding seas. Many excellent kinds of fish are caught all round the coasts of this island, and form a principal article of the food and traffic of the natives. Ceylon is particularly prolific in plants. Except in one or two species, the mangoes of Madaggen, and the mandarine orange of China, this island maintains an undeniable supe-

riority over all our settlements on the continent of India. Among the fruits which grow spontaneously are found pine-apples, oranges, pomegranates, citrons, limes, melons, plums, pumpkins, water-melons, squashes, figs, almonds, mulberries, raisins, bilberries, bog-berries, &c. We might also mention Mango, Shaddock, Malacca rose-apple or Malacca apple, the cuhho apple, the katapa resembeling our walnut, the papua or papaya of the fize of a melon, and resemb-

ling it in taffe and smell, the cudard appo, the tama-

rend, the plantain, two species of the braud-fruit tree, the cocoa tree, the betz-l-tree, several sorts of pepper, cardamoms, coffee, the palm or palmyra tree, the finger-

tree, the tea-plant, the talpot-tree, the bnyan tree, the cotton-tree, the tickwood tree, or oak of Ceylon, nando wood, fatin-wood, calalamo, manijapamcan, morinda, fndric-mal, used by the natives to supply the want of cloths, as it continues open from four in the evening till four in the morning, and remains shut during the other twelve hours, limes, the manchas tree, the true chonby, zambogo, amber- gris and coral, gum-brac, the fugar-can, the nepenthes, known among the Cinglefe by the nam of Badura, the champaca, rice, corocan, which is a small ted, like our muf-
tard, beat in a mortar and formed into cakes, and tanna, a prolific grain that requires hardly any cultivation. But the most valuable and important of all the vegetable productions of Ceylon is its cinnamon. See CI NAMON. Ceylon has long been famous for its purestextones, of which it furnishes no less than 20 different sorts. The ruby, topaz, and diamond of Ceylon or Matura, are not to valuable as those of Golconda or the Brazilis: but he sapphire, ame-
thyl, aquamarine, and tourmalin are equal to those of any other country. To the clafs of minera we may refer the diamond, the ruby, the hyacinth, garnet, cinnamon-tone, agate, amethysts, fardonex, emerald, Jasper, tourmalin, red, green, blue, and yellow, topaz, blue and green sapphire, blood fone, nephrytus, or kidney fone, white, yellow, brown, and black cryfals, cat’s eye, and cornelians. For the pears of this island; see Pearl. Lead, tin, and iron ores are found in the interior, but they are never wrought or applied to any purpose. Several mines of quickfire were wrought by the Dutch in Ceylon. Mineral waters of various kinds are supplied by springs and wells in this island. The revenue of Ceylon is an article of great importance to the British government. In 1795, the expence of Ceylon to Holland was $5,934. Berling. But this deficiency was easily made up by the cinnamon, cardamoms, coffee, and other articles sent from the island to Europe, as well as by the profits of the pearl-fishe, and the imports laid on the several articles imported into Ceylon from other parts of India. As to the sources of the revenue of the island, Capt. Percival observes, that the cinnamon and pearl fishe together produce an annual revenue of about 350,000l. Berling. All calices, cottons, and other Indian manufactures, must be exempted from importation into the island, and pay a duty of 5 per cent. The fisheries, the betel-nut, and the manufac-
ture of arrack are annually farmed out to the black mer-
chants, and the revenue derived from them amounts to at least 50,000l. per annum. From pepper, cardamoms, ele-
phants, ivory, precious fones, and a few other articles of native produce, such as cocoa-nut oil, coya-robe, &e. go-
vernment derives an annual revenue of about 800,000l. Something is also derived from a tax imposed on the rice imported for the use of the troops. Out of this revenue the salaries of the civil officers and the pay of the troops are defrayed, as well as the other incidental expences of the island, such as the erection and repair of public works. The natural strength of the island of Ceylon, and the few points at which it can be fately approached, seem to prevent it a great degree of security; nevertheless a confid-

terable military establishment is necessary to protect it com-
pletely against the powerful or an enterprizing enemy. The force formerly maintained by the Dutch on the island con-

sisted of about 3000 Europeans, and 2000 Malays, Topa-

fess, and native Cinglefs. This military establishment, rarely exceeding 5000 men, was found sufficient to repel the at-
tacks of the native princes, and from the nature of the coun-
try, of baffling the attempts of any European force that did not much exceed in number the troops stationed at any par-
ticular point. But it is not merely the defence of the island itself, that renders it necessary to maintain a powerful force here. Its fituation is such, that it affords the best points for flating those troops that are defined to protect our several establishments in India, and to act as a collant check on the native princes. Troops may be sent to any of our poiffions in the peninsula of India from Ceylon at a few ex-

cence, and in much shorter time, than from either of the pre-

ficiencies of Bombay or Madras. The smallest establish-
ment, as Captain Percival apprehends, which can be ap-
pointed to this island, must consist of at least three Euro-
pian regiments, and seven or eight battalions of native troops for the garrisons of Trincomalee, Cumburo, and the Point de Galle alone; without including the fort of Jaffa-
patam, Managan, and the other subordinate posts round the island, which will require garrifions proportioned to their importance. The tranquility and prosperity of the island, after it has been sufficiently secured by a proper military establishment, must depend upon the arrangement of the civil department, and the due administration of justice. Whilffe it remained in subjection to the Dutch, its government was absolute with regard to the affairs of the island, but sub-
ordinate to the governor of Batavia, who was considered as the governor-general of all the Dutch settlements in India. The governor of Ceylon was affixed by a council, composed of the most respectable Dutch gentlemen residing at Col-

umbo.
lumbo. The members of this council were nominated by the governor, and confirmed in their appointments by the government of Holland. For the administration of justice, a high court was established at Colombo, to which the ultimate decision in all capital cases belonged. At Trincomalee, Jaffnapatam, and Point de Galle, there were subordinate civil magistrates. And in all the inferior forts and stations through the island, there were petty courts called "Landarchs," for the more speedy administration of justice, and matters of less importance. In these the military commanders of the district usually presided. An appeal lay from all these inferior courts to the high court of justice at Colombo. The whole Dutch civil establishment, independent of the military who acted as civil magistrates, was computed to amount to 450 persons, comprehending all who were anywhere attached to it. According to the estimate of the Dutch, Ceylon ranked only as their eighth Indian government. For some time after the English took possession of Ceylon, the government was necessarily a military one, till the arrival of governor North, when the civil establishment took place. He abolished the office of provost-marshal, and the jurisdiction of the military courts, and restored the civil establishment nearly to the same form which it bore under the dominion of the Dutch. He re-established the supreme court of justice at Colombo, with a civil magistrate to superintend the police of the fort, and another in the Black Town. The various officers necessary for these departments were also appointed at the same time; and similar regulations were adopted through the other parts of the island. The petty courts in the distant parts of the country still continue to be presided over by the commanding officers of the nearest post. The government of Ceylon was for some time dependent on that of Madrid, but is now only subject to that of the mother country, and entirely uninconnected with the East India Company. For the conduct of military affairs, there is a military board established at Colombo, consisting of six members selected from the commanding officers of the several corps stationed in Ceylon. The commander in chief of the forces in the island is president of this board, and the commander of Colombo for the time being, vice-president. To it are attached a secretaries, clerks, &c. with suitable salaries. Robertson's Itinerary Description concerning India, 1799. Perevaux's Account of the Island of Ceylon. 4to. 1805. Asiatic Researches, vol. vi.

CEYAS, a town of France, in the department of Herault; 7 miles E. of Lodève.

CEYERIAT. See CEZERIAT.

CEYERIEU, a town of France, in the department of the Ain, and district of Bellay; 5 miles N. of Bellay.

CEYSSAC, a town of France, in the department of the Gironde, and district of Blaye; 7 miles S. E. of Blaye.

CEZ, a river of France, which runs into the Rhone, 2 miles W. of Cadours.

CEZIMBRA, a small sea-port town of Portugal, seated on the Atlantic, in a hollow surrounded by steep, rocky, naked summits, and close to the sea; 10 miles well of St. Carlos. The harbour is small and badly protected; and close behind the town is an old castle situated on a mountain and visible to a great distance. The town is supported by the fisheries, and yields a great quantity of fish to Lisbon. In former times, Cezimbra was more considerable.

CEZ, a town of France, in the department of the Yonne, and district of Joigny; 3 miles N. W. of Joigny.

CHA, in Commerce, a silk stuff very thin and light, made in China, which most commonly serves the inhabitants.

for a summer dress; it is somewhat like our taffeties, or lutingis.

CHA in Geography, a town of China of the third rank, in the province of Fo-kien; 25 miles S. S. W. of Yen-ping.

CHABALON, in Botany, Bank. Pin. See THEA.

CHA, in Ancient Geography, a town of Peloponnesus in Triphyila, towards the N. W. of Macilus. It was pretended in the time of Strabo, that it was inhabited by Phœrus and that it was the subject of a war between the Achaeans and Pylans.

CHAAL, a town of Arabia Felix. Strabo.

CHALDON, in Geography. See CHALONS for More.

CHALON, in Ancient Geography, a town of Cappadocia, placed by Strabo in the country called Silice.

CHALON, in the town of Avalon, according to Ptolomy.

CHALON, or CHALE, a town of Peloponnesus, placed by Josephus S. of Tyre, and in the vicinity of Ptolomy.

CHALON, a town of France, in the department of the Charante, and chief place of a canton, in the district of Confolus; three leagues S. of it. The place contains 1,441 and the canton 10,346 inhabitants. The territory comprehends 310 kilometres and eleven communes.

CHABANON, M. in Geography, a dovem member of the Aeady of Inscrip. et Bibles Litteratur Paris: apostle and uniuscous writer on various subjects of literature and criticism. But we allow him a place here only as a writer on music. In 1780 he published a work of considerable merit, entitled, Observations fur la musique et principalement fur la metaphysique de l'art. "Observations on music, and chiefly on the metaphysics of the art." This was only the first part of his plan; but in 1785 the work came out entire, under the following title: De la musique considérée en elle-même, dans ses rapports avec la poésie, les langues, la poésie, & c. le théâtre: "Concerning music, considered in itself, and in its connexion with speech, languages, poetry, and the theatre." In which he disposes of refined taste, nice discrimination, much meditation and knowledge of the subject, and an uncommon spirit of investigation.

Though our sentiments are not always in tune with the opinions and reasoning of M. de Chabanon, yet there are such enlarged views and luminous and elegant observations in analysing the sensations which music excites, in assigning reasons for the pleasures which this art communicates to ears that vibrate true to musical intervals and consonant sounds, that its useful will generate reflections on the art, and let the mind of a musician at work, who had never before regarded music but as a mere object of sense.

M. Chabanon as proved that music has its metaphysics, as well as philosophy and languages. This work therefore requires less knowledge of practical music in the reader than a mind accustomed to reflection. The author himself says that "he writes more for intelligent readers, ignorant of music, than for musicians; who neither know how to reflect nor how to think," and we are sure there are such to be found sometimes, even among greater performers.

M. Chabanon informs us, that he has studied music theoretically and practically—execution and composition—has played out of the same books with the greatest masters of all countries; and has reflected on the subject more than 30 years. Indeed, his work seems to have been the fruit of long experience and observation, and so totally independent of the variations which music has experienced of late years, that the changes in taste, and the execution leave it unaffected.
The author confers his reasoning to what he calls the most essential part of music, melody; perhaps too pertinaciously, as music now can never be regarded as complete but by the union of melody and harmony. By his definition of music, he seems to regard harmony as unnecessary to its existence. This ingredient, so essential in modern music, though deemed unnecessary in high antiquity, and though still unknown in three-quarters of the globe, would doubtless be called for in Europe, by obscure northern ears (according to Rosset) which want stimulants to put them in vibration, awaken attention, and excite pleasure.

When the author says it is impossible to conceive an agreeable melody, whence a base and chords may not be deduced, we cannot entirely agree with him: for melody is so far from always arising from harmony, that the contrary is frequently true. There are many delicate and pleasing passages in melody that cannot receive an accompaniment without injury. The Italians, whole talk and feeling in music seem more refined and acute than the people of any other country, are so sensible of this, that they frequently leave a voice thin rather than crowd it with notes of no other effect than to destroy the beauty and expression of the melody.

The superiority which the author gives to melody over harmony will please the extremes of ignorance and refinement; but the middle claths of half-bred judges and exclusive lovers of harmony, will be scandalized at the impurity of the decision which annihilates the chief merit of their favourite arts, and communicates phlegmody from good music, if not from the church.

The author discusses the question, whether music is an imitative art? and whether its original object was imitatio? but throws a doubt on its power of imitation, as well as confuses the attempt, except in some very few inferences. Nothing so true as that situation gives energy and meaning to dramatic music, which takes out of its niche seems inapert or absurd. In a theatre the scenes, drets, action, and previous business, prepare the mind of an auditor and spectator tor illusion, and enable it to afford the poet, composer, painter, and performer to deceive itself.

We can subdivide this author's opinions, refinements, and metaphysics, concerning music, and allow them to be not only ingenious, but just; except when, in order perhaps to flatter his nation, he prefers French fagging to Italian. While he confined himself to instrumental music, he reasoned like a man of knowledge, taste, and candour; but in speaking of singing, his opinions are so totally different from those of every nation in Europe, except France, that we cannot help regarding them as national prejudices. "The Italians (he says) either in swelling their tones, or by a stronger aspiration, introduce that exaggeration in their singing with which we are so much displeased. I remember having heard 20 years ago Yli amanti, when first sung a Paris by Signora Piccinelli, to the original Italian words, so splendid to such, that the audience murmured at a muile so barbarous, or at least so different from our own; till French words were ingeniously applied to the same air which had so displeased before; when it soon became, by a more sober and mitigated manner, when sung by a native of Paris, so familiar art popular, that we began to doubt whether it could ever have been sung to Italian words." All this defence of French vocal expression, or rather attack of the Italian, is a proof that this ingenious author, with all his study, practice, and experience in instrumental music, was very ill qualified to erect the public opinion concerning vocal.

M. Chabanon's book was written in the midst of the war of musical opinions between the Ghisults and Piccinelli. The author, who died in 1800, had hird very little good singing, and was left able to judge with decision on that art than of any other musical faculty or excellence. He is said to have been not only an excellent judge of instrumental composition and performance, but, among dilettanti, to have ranked high as a performer on the violin.

CHABAQUIDIC Ile, in Geography, an island of America, belonging to Duke's county in the Massachusetts. It lies near, and extends across the end of Martha's vineyard island.

CHABETUL, or CHABENUL, a town of France, in the department of the Gironde, and chief place of a canton, in the district of Libourne; 2 leagues S.S.W. of Libourne. The place contains 3,300, and the canton 11,107 inhabitants; the territory includes 383; kilometres, and 12 communes.

CHAGERIS, or CHABERIS, in Ancient Geography, a river of India, in the peninsula on this side of the Ganges, according to Ptolemy; which discharged itself by a great number of branches into the sea on the eastern side, N. of the promontory of Caligicum, and near it. See CHABERIS, Caveri-Patnam, a town of India, in the eastern part of the peninsula, on this side of the Ganges, and at the northern mouth of the river of the same name, according to Ptolemy.

CHABINUS, a mountain wholly covered with wood, according to Diodorus Siculus, who places it in Arabia Felix, upon the coast of the Red Sea.

CHABIS, in Geography, a town of Peru, in the province of Kerman, at the edge of a desert, on the confines of Segetia; 115 miles N. of Sirgan.

CHABLEAU, duchy of, a province of Savoy, which stretches along the southern bank of the lake of Geneva, as far as the Valais, which bounds it on the east; on the south it is bounded by Faucigny; and on the west by the republic of Geneva. The country, though mountainous, exhibits a delightful variety of fields, meadows, vineyards, and woods, and is well cultivated and populous. Its capital is Thonon.

CHABLAIS, in Ancient Geography, a people of Arabia Felix, who inhabited a district in the vicinity of the Nabor-naxes.

CHABLEAU, a middle-sized rope for tracking and drawing bateaux up rivers. It is impossible to row large boats loaded with provisions, &c., up violent rapids such as those of the river St. Lawrence above Montreal, or to take them up, indeed, with setting poles. Each bateau, therefore, employed in carrying provisions, ammunition, &c. from La Chine, about 12 miles higher up that river than Montreal, to the upper parts, has a rope fastened to its bow. And as it is extremely difficult for the crew of one boat to take her up some of the rapids with the assistance both of the rope and setting-poles, the bateaux, when loaded, generally start from that place in divisions or brigades, and when they reach the foot of a bad rapid, the crews of two or three of them join together, and first take up one of them, then another, and so on.

CHABLE, to stuff a heavy parcel, bundle, burthen, or weight to a rope, in order to haul and raise it up, as they do in flou-houfes and work-houfes.

CHABLES, in Geography, a town of France, in the department of the Yonne, and chief place of a canton, in the district of Auxerre, celebrated for its excellent white wine; 3 leagues E. of Auxerre. The place contains 2223, and the canton 77,566 inhabitants; the territory includes 184; kilometres, and 11 communes.

CHADNAM, or Cosea, in Commerce, a kind of muffin or cotton linen, very clear and fine: it comes from the East Indies, particularly from Bengal.
Hunting in the palestine; 68 miles N.E. of Zytomiers.

CHABON, or Chabon, in Ancient Geography, a town of Palestine, so called by Eusebius and Jerom, who place it in the tribe of Juda.

CHABONS, in Geography, a town of France, in the department of the Tierre, and district of La Tour-du-Pin; 30 miles S.E. of Lyons.

CHABOR, or Chabora, in Ancient Geography, a strong place of Alia, in Mesopotamia, situated at the confluence of the Chabor and Euphrates, according to Ptolomy.

CHABORAS, or Chaboras, Khabor, a river of Asia, in Mesopotamia, springing, according to Ptolomy, from mount Matus. It ran towards the S.W., passed near the town of Amenias, and discharged itself into the Euphrates, in the strait on which were situated the towns of Chabor and Ceresaon. Julian is said to have crossed this river on a bridge of boats. Strabo and Ammianus Marcellinus call this river Aboras. See ABORAS.

CHABORA, a town of Mesopotamia, placed by Ptolomy near the Euphrates.

CHABORAS, a mountain of Assyria, which, according to Ptolomy, lay on the borders of Media.

CHABOT, in Ichthyology, the common French name of the small fish, vaguely called by the English fisherman the miller's thumb. See COTTUS GIBBA.

CHABOTTES, in Geography, a town of France, in the department of the Aube, and district of Gap, 7 miles N. of Gap.

CHABRIA, a town of Perza, 60 miles N.E. of Afraha.

CHABRILLAND, a town of France, in the department of the Drôme, and district of Cret; 3 miles W. of Cret.

CHABRIS, a town of France, in the department of the Indre, and district of Ifournon; 7½ leagues N.N.W. of Ifournon.

CHABRIUS, in Ancient Geography, a river of Macedonia, which had its source in mount Berfouur, ran towards the south, watered the town of Anthemias, and discharged itself into the sea, Ptolomy.

CHABURA, a fountain of Alia in Mesopotamia, mentioned by Paulinias, Athenesus, and Pliny; the latter of whom says that its waters were naturally perfumed.

CHACA-HAMAR, in Geography, a town of Chine Tartary, N. lat. 44° 50', E. long. 92° 37'.

CHACAL, in Zoology, the French name of the animal we denominate jackal, canis mesomelas, Linn. Buffon calls it chacal, and hiswife calls the canis aureus of Schircher and Gmel. chocal alve.

CHACAMEL, in Ornithology, the name given by Buffon to the crying curassaw, curass vexillum. Gmel. It is also called chachalacameil in the Hift. New Spain. Fernand. &c.

CHACANGA, in Geography. See CHICANGA.

CHACA-TENGASO, a town of Alia, in the country of Ombri, 2 miles N.E. of Pochomra.

CHACAO, a port town of South America, in the island of Chiloé, where the governor usually resides.

CHACE. See CHASE.

CHACE, La Chaffe, French. Alu Cacita, Ital. in Musa, all equally imply a hunting piece, or movement, in which the French horn, fife, and flute chiefly prevail. "With early horn," an admirable long in the hunting piece, composed by Gallard for a pantomime entertainment at Covent Garden, 60 years ago, was in such favour during the middle of the 17th century, that Beards and Lew hardly ever escaped being called upon every night, for a long time, to sing it at the theatres between the acts, or in the play and farce. One of the most animated and pleasing of Haydn's symphonies is called "La Chaffe," Schobert, Kotzebue, Clementi, Duffe, Steibelt, Cramer, and other great players and eminent com¬posers for the harpsichord and piano forte, have severally published a chaffe that has never failed to please whenever well played. See RUSSIAN MUSIC.

In the "Almanac de Gotha" for 1775, there is an abridged history of music in Russia, well drawn up, and allowed by the natives themselves to be authentic. In this sketch of musical history we have an account of a band which attends some of the grandees of that empire in the chase of fo extraordinary a kind, that it was long regarded as fabulous by the rest of Europe, till the late coronation of the present emperor Alexander, at Moscow, at which splendid solemnity many of our countrymen were present, who have lent and brought hither a description of the extraordinary performance of this band, which exactly tallies with, and confirms that in the Gotha almanac 30 years ago.

We shall, therefore, under the present article on the music of the chase, give our readers, in our own language, a transcript of this part of the history of Russian music.

The lovers of the chase in Russia formerly knew no other musical instrument than an ordinary brazen horn of a spiral conical form, a little curved.

These clumsy and ill-shaped horns in themselves resembled each other in length and calibre, and, consequently, produced the same tone in tuning them together. It was not music which they produced, but a kind of frightful scream, fit at first to terrify and start game. The grand vizier, Narifkin, undertook to reform this music, or, at least, to render its effects less barbarous. With this view, he applied to one of the huntsmen of the court, named Marzich, a name which ought to be recorded in the history of music. This inventive spirit began by having 37 horns made of the same kind, but of different length and diameter, so that by each producing a different tone, he acquired a series of sounds, extending to three complete octaves. These 37 horns were distributed to as many young men of the hunt, who were taught to blow them in such a manner as to produce the clearest and sweetest tone possible. After this, they were taught musical measures, and to count the time not only of sounds but of silences, so as to know precisely when the tone of their instrument would be wanted, and for what duration, in proportion to the measure of the air or piece of music that was to be executed. This was certainly the most difficult part of the task; but the Russias accustomed to discipline and obedience, and manifesting docility, and a disposition for so pleasing an art, by a little patience on the part of the master, and great perseverance in the pupil, the undertaking was crowned with success. The reat was the business of the composer, who distributed the several parts to the performers of each note, with the reeds in whole bars and fractions, which they had to count between every two notes in their part. From this singular invention, in a short time, these young chaffurs were able to perform whatever was put before them, and they are at present in such high practice, that they play marches, airs, entire symphonies, with their allegros, andantes, and preludes, executing with alacrity and precision the most difficult compositions, embellished with fortissimis, and even demisemiquavers. During performance every one holds a paper in his hand, on which the notes, or rather the repetition of the single tone of his instrument is marked, as well as the reeds which he has to count, in order to be ready at the instant his
tow is wanted, either loud or soft, short or long, according to the pleasure of the author.

"The ear of the auditor is so deceived, that he imagines passages to be played by one instrument, which, if no one note is repeated, is performed by as many different instruments as there are notes in the melody.

"This music has the most astonishing effect, particularly in the open air, where it has room to expand without the vibration being reflected back by the echoes which these numerous instruments excite. The effect is at once grand, melodic, and pleasing; indeed, it is impossible to form an accurate idea of it without hearing it. Twenty-four or thirty common French-horns may, perhaps, if united, something approach to the same effect; but always of an inferior kind to the adjoining harmony of these Ruffian-horns, which, by the undulation and vibration of each full and round tone, which no one instrument can produce in succession with that equal force, at once amplies the ear and the heart."

At Petersburg, this music is often heard in a fine evening on the Neva, where it generally precedes the barges of the court; and we have been surprised by good judges of music with the fear now, that they have not discovered, till they were told, how this music was produced; and that, as in a belly, where no ringer has more than one bell or note to enflame, so here a man's whole life is devoted to one and the same sound or note.

CHACE of a gun. See CANNON.

CHACE, order of, or grand order of of Wartenberg, was instituted by Eberard, Duke of Wartenberg, in 1704, in allusion to his being grand master of the empire. The ensign is a cross of gold of eight points, emblazoned red, with an eagle displayed, and burslet horns. On the centre is the letter W, and over a ducal hat of the empire. The cross is worn pendent to a scarlet ribbon, from the left shoulder to the right side; as the left breast of the coat is a silver star, and the motto in a green circle is "Amicitia virtutique fides.,"

CHACE, in Geography, a town of France, in the department of the Maye and Loire, and district of Saumur; one league S. of Saumur.

CHACHALACAmetl, inORNITHOLOGY. See CACAMEL and CUCO varipes.

CHACHAPOYAS, in Geography, a jurisdiction of South America, in Peru, in the district of Trujillo. As lies without the Cordilleras, its temperature is hot, and towards the east its territories have a low situation. It is of great extent and thinly inhabited; and the products of the earth are only taken as partially furnish in such a climate. The Indians here are very ingenious in making cottons, particularly tapestry, which, by the dyes of the colours, and different of the work, exhibit an elegant appearance; the cloths, together with the flax, yield great profits to the country, as they are highly valued in the other provinces.

CHACING. See CHASING.

CHACK, in the Mongol, is taken in the same sense as but upon the hand; it is a appeal to a horse when his head is not ready; but he tucks up his nose, and makes at all of a sudden, to avoid the subjection of the bridle. Turkish horses have this fault frequently. We say, they beat upon the hand; and never the belts, nor the belt hand, can ever fix their heads. Croats, or Caucasian horses, are also subject to beat upon the hand; which proceeds from this, that the bars are too sharp and ridged, or edged, so that they cannot bear the pressure of a bit, though very so gently. If a horse had not too sensible, or too tender a mouth, he would not beat upon the hand; but in order to fix and secure his head, you need only put under his nose-band a small flat band of iron, bent archwise, which answers to a martingale. This will hinder him to beat upon the hand, but will not break him of the habit; for as soon as the martingale is taken off, he will fall into the same vice again.

CHACO, l., in Geography, a province of South America, in the country of Buenos Ayres, reckoned 200 leagues in length, and 15 broad, on the west side of the river La Plata, and bounded on the east by a chain of mountains: it is inhabited by Indian nations that are little known.

CHACONNE, French, a serious and splendid dance to music formerly written on a ground base; but that reprise has late been given up. The measure, however, is invariably that of 2, and there are frequent returns to the subject and final strain, after episodes and excursions into new modulations and styles.

The word is formed of the Spanish chacona, which may probably be derived from the Persian chace, a king, thus intimating, that this might have been a royal dance; not, as others pretend, from the Italian cacone, a blind man, the inventor.

CHACRELAS, the name of a race of people, according to Buffon, who, like the Beulas of Ceylon, are of a white colour, and inhabit the island of Java. Similar to these are the white Indians of the island of Darien, and the white negroes of Africa. Some have supposed that these people are a distinct race, inhabiting the islands of Darien, the negro country, and the island of Ceylon, all which are under the same parallel. Others imagine, that they are individuals who have accidentally degenerated from their original stock. To this last opinion Buffon inclines. The production of whites by negro parents, he says, which sometimes happens, adds great force to this theory. In the history of the French Academy we have descriptions of two of these white negroes; and Buffon adds, that they are very frequent among the negroes of Africa. This variation of nature, which is a singular circumstance, takes place from black to white only, and not vice versa: and it is no lesser singular, that all the people in the East Indies, in Africa, and America, where these white men appear, are under the same latitude.

CHACTAW Hills, in Geography, hills of America, situate in the N. W. corner of Georgia river.

CHACAWS, or flat-heads, a powerful, hardy, fat, e, and intrepid race of Indians, who inhabit a fine and extensive tract of hilly country, intersected with large and fertile plains, between the Alabama and Mississippi rivers, and in the western part of the state of Georgia, in America. To this nation belonged, not many years ago, 43 towns and villages, in three divisions, containing 12,123 inhabitants, of which 9,041, or, as some say, 6,000, were warriors. They are called by the traders Flat-heads; all the males having the hair and band part of their faces flattened when young. These men, unlike the Mixquique, are lowly and negligent in every part of their dress; but they are said to be ingenious, ferile, and virtuous men: bold and intrepid, and yet quiet and peaceable. Some late travellers, however, have observed, that they pay little attention to the most necessary rules of moral conduct; or at least, that unnatural crimes are too frequent among them. Different from most of the Indians bordering on the United States, they have large plantations, or country farms, in which they employ most of their time in agricultural improvements, after the manner of the white people. Although their territories are not one-fourth so large as those of the Micmac Confederacy, the number of inhabitants is greater. The Chactaws and Creeks are invertebrate enemies to each other.
CHADACA, in Ancient Geography, a town of Albania, placed by Ptolemy, between the Albanus and the Callius.

CHADEI, a people who inhabited the eastern part of Arabia Felix, according to Pliny.

CHADAGH, in Geography, a town of Persia, in the province of Parthian, five miles W. of Schiras.

CHIADARA, in Botany. Forst. See Geewia populifolia.

CHADBOURNE'S River, in Geography, a river of America, in the district of Maine, called by some Great Water's river, about 33 miles from the mouth of the Bornebeag pond, from which flows. It is said to have derived its latter name from a mill with 18 saws moved by one wheel, erected by one Lodgers; but the project was soon laid aside. The former name is derived from Mr. Chadbourne, one of the first settlers, who purchased the land at the mouth of it, of the natives, and whole polterney possets it at this day.

CHADCHOD, in Jewish Antiquities, Ezekiel mentions chambers among the several merchandizes which were brought to Tyre. The old interpreters, not very well knowing the meaning of this term, continued it in their translation. St.Jerome acknowledges that he could not discover the signification of it. The Chaldee interprets it pearls; others think that the oys, ruby, carbuncle, crystal, or diamond, is meant by it. Ezek. chap. xxvii. ver. 16. Cabnet. Dict. Bibl. in v.c.

CHADDER, in Ornithology, a name given by the French to the Merops Ceylouis.

CHADER, in Geography, an island of Asia, formed by a river which runs from the Ephratus to the Perian gulf, and extends from Balfora nearly to El Catt, 240 miles long, and 39 wide.

CHADISIA, in Ancient Geography, a river of Cappadocia, which runs between the town of Amida and the river Lyseile.

CHADURANOTITE, or Catharanota. (Ptol.) a people of Arabia Felix, who inhabited the southern coast opposite to the Indian ocean, near the strait in which the river Parn discharges itself.

CHEOANOTITE, a people mentioned by Strabo, and placed in Attic Sarmatia.

CHEDENI, a people placed by Ptolemy in Scandianavia.

CHELLE Canabarium. See Crab's claw.

CHEMEL, in Ancient Geography, a people of Germany, who inhabited the districts near the river Amassus, according to Ptolemy.

CHENIDES, a people of Attic Sarmatia, according to Ptolemy; supposed to be the same with the Chanoanote of Strabo.

CHERCELA, a town of Africa, in Cyrenaica.

CHERETAPA, a town of Asia Minor, in Phrygia.


Chich. Char. Col. Umbel universal spreading; partial nearly equal in the number of its rays. Also, universal generally none; partial five-leaved or more; leaflets lanceolate, concave, reflexed, about the length of the partial umbel. Perianth proper scarcely discernable. Cor. universal nearly uniform; florets of the disk often abortive. Petalos five, inrolled, heart-shaped, with an inrolled point, flat-tish; outer ones a little larger. Stem. Filaments five, simple, the length of the little umbel; anthers roundish, Pijth. Germ inferior; styles two, reflexed; stigma obtuse. Peric. none. Fruit oblong, acuminate, even, divisible into two. Seeds two, oblong, attenuated upwards, convex on one side, flat on the other. Eff. Ch. Involucr reflexed, concave. Petals inrolled, heart-shaped. Fruit oblong, even.


Obf. In this, as in all other very natural families, authors differ very much from each other in the formation of genera. L. Mackit unites the charophyllum and scandium of Linnaeus, and affords that they make a well-defined genus, which ought by no means to be broken; and which has for its essential character: fruit slender, elongated like the beak of a bird, either even or frayed, smooth or hairy. Ventenat, on the other hand, has distributed the species into three genera. 7. Charophyllum, including charophyllum sylvestris; with scandium cereolium, nodosa and adventus of Linnaeus, with the following generic character. Col. entire. Cor. petals heart-shaped or emarginate, unequal. Fruit: cylindrical, awl-shaped, smooth, either soft or rough with hairs. 2. Myrthis, a name revived from the old botanical, including scandium odorata, with charophyllum hieracinum, aurum, bulbocodium, tetrameresum, and alouo; under the following character: fruit elongated, attenuated at the summit into a short point, either even or furrowed, smooth or hairy. 3. Scandium, including scandium peten, auriculata and grandiflora, with the following character: fruit terminated by a long point, finely frilled, either smooth or rough with hairs. Dr. Mill had before made the same division, and had founded this generic character on the comparative length of the nucleus and the whole fruit. According to him the nucleus of scandix is scarcely a quarter of the length of the seed, charophyllum three quarters, and myrthis the whole length. Under the first he figured the fruit of scandium peten; under the second, of scandium cereolium; and under the third, of scandium odorata, charophyllum auriculum, C. tetrameresum, and six canadensis. See Scandix.

CHÆRUS, in Ichthyology, a name given by Strabo and other old writers to the Capricus or goatfish of later writers. See Balistes monodon.


Gen. Chæs. Cat common, many-leaved; outer leaflets lanceolate, ciliated; intermediate ones linear, ciliated at the summit; inner ones linear, fearious, faphacellated, terminated by a bristle. Receptacle naked. Seeds oval; down capillary. There are two species, natives of Peru.

CHÆTHIA, in Zoology. This is the name under which Dr. Hill describes that kind of intellinial vermes, which the English call Ear-worm. Vide Hill, Holl. Anim. p. 14. It is a species of Gardens, the fist of Muller, and aquaticus of Linnaeus. See CHÆTHIS aquaticus.

CHÆTOCRATER, in Botany, (from κρατήρ, the name of a pot, and κύτταρος, a cap.) Boc. Nouv. Dict. Flor. Peruv. pl. 35. Chæs and order, acetabria manogynia.


CHÆTODON, in Ichthyology, a genus of Thoracir fishes. The head is small, mouth curved; lips retractile; teeth numerous, close set, equal, fimbriate, flexible, and movable; eyes round, small, vertical, and furnished with a ciliated membrane; gill membranes with from three to six rays. Body broad, compressed, heavy, and generally fimbriate.
Chetodon.

The fishes of this numerous genus are, with very few exceptions, extremely beautiful, their colours remarkably vivid, and their varieties conflicting generally of stripes, lines, bands, or spots; their body covered with strong scales, which are freely denticulated at the margin; and the dorsal and anal fin remarkably broad.

Chetodon aureus, La Bandonnière dorée, of French writers, and Golden Chetodon of the English, is one of the most brilliant species of this genus. The colour is golden yellow, with a spine near the check bone. Bloch. Gmel.

This beautiful fish was figured by Bloch from one of Plummer's drawings, as an inhabitant of the Antilles. The body is oval, and except the pectoral and ventral fin, the whole is covered with scales. The colour of the body is fine golden yellow; the fins are yellow at the base, and green at the extremity; the pectoral and caudal fins are both rounded, the reti calcated. The pectoral fin contains twelve rays; ventral fin; anal nineteen, caudal fifteen, and dorsal thirty-five. Length of this fish about twelve or fourteen inches.

Chetodon imperator. Yellow, with numerous longitudinal streaks, and about fourteen dorsal spines. C. imperator, longitudinalis quatuor, is described by Bloch. L'empereur du Japon; &c. The head of this fish is large, the eyes golden, and partly surrounded by a blue arch; mouth small, with the lips large, and the jaws equal; gill membrane of two parts marked with a blue streak; lateral line near the back, and bending down at the end of the dorsal fin. This is a most splendid fin, about the same length, or rather larger than C. aureus, and has the body also of an oval form. It is a native of Japan, where, according to Ruyfch and Renard, it is in high esteem as an article of food, and is said to be richer and superior in flavour to the salmon, called, by the lard writers, der Käifer von Japan.


First described by Valentin, who informs us the Dutch in India call it Malmefje Hertog. The body is whittish with a silvery hue, rather dusky on the back; and is barred across with nine broad bands of deep blue, each of which is marked on both sides with a narrow streak of brown; the dorsal fin is edged with a blue stripe, and the anal fin marked posteriorly with four nearly equidistant lines of the same colour. The iris is white; mouth narrow; jaws equal; gill-cover of one piece; lateral line near the back, and bending at the end of the dorsal fin; pectoral fin short, elliptic and rounded. The dorsal fin contains about thirty-five rays, the fourth of which are spinous. This inhabits the Indian seas.

Chetodon guttatus. Body spotted; ventral spines two. Bloch. Gmel. &c. The body is long, narrow, covered with minute scales, above cinereous, beneath white, and spotted with tawny. The eyes are large and round, with dusky yellow iris; mouth large; jaws equal; gill-cover of one thin long piece; fins dilute of scales, with the rays branched; pectoral fin yellow-brown; dorsal and anal cinereous; tail yellow, with cinereous spots. The dorsal fin contains thirty-four rays; pectoral fifteen; ventral seven; anal twenty-three; and the tail fifteen. This species inhabits Japan, and was first described by Bloch.


This fish inhabits South America, where it inhabits on smaller fishes, insects, and other aquatic animals; it is found throughout Brazil, and in Jamaica. The body is black, but at the sides grey, and the edge of each scale is large and edged with yellow. The eyes are small, with golden irides; lower jaw longest; gill cover of two pieces terminating downwards in a spine, and covering the membrane; vent in the middle of the body; pectoral and tail fins short, rounded; the reti long, and calciated; before the pectoral fin a yellow spot. Described by Maregrave as being from nine to ten inches long, but according to the manuscripts and drawings of Prince Maurice preferred in the royal library at Berlin, the length is more than fifteen inches.


The head large, and with the bract yellow-brown, spotted with blue and marked near the gills with blue lines; iris greenish-white; mouth small; gill cover of one piece, the membrane loose; lateral line parallel with the back, and interrupted at the end of the dorval fin; vent in the middle of the body; rays of the fin branched. This species is described by Bloch as a native of the East Indies, probably by a drawing, as he observes he is unable to determine its size; he adds that it is of the number of carnivorous fishes, and that the display of beautiful colours which pervade it induced him to name it paon de l'Inde. Indian Peacock Chetodon.

Chetodon versutus. Dorval and anal fin broad; band on the tail black. Gmel. &c.

This species inhabits India. The body is cinereous, beneath paler, very thin, and covered with minute scales. The head is diftinct of scales; Iris silvery and yellowish; mouth small; lips thick; gill-covers of two pieces; lateral line arches; fins cinereous, with branched rays; very prominent of the dorsal and anal fins yellowish. This species is in particular distinguished by the extreme length and breadth of the dorval and anal fin, both of which is of a somewhat triangular shape, and nearly equal the body in point of size; the depth from the opposite tips of the dorsal and anal fins is about six inches and a half, but that of the body from the front of the head to the extremity of the tail four inches. Supposed to be the sea-bat of Willughby. The French call it, la Bandonnière à larges nageoires.

Chetodon unimaculatus. On each side, near the back, an oval black spot; dorval spines about thirteen. Chetodon unimaculatus, Gmel. Bloch, &c. A native of India; the body is of a roundish ovate form; the colour greyish-white, with transverse brown lines; back cinereous; scales large; over the eye a black band; jaws equal; lateral line parallel with the back, and nearly approaching it; fins yellowish; tail brown at the base. The dorsal fin contains about forty-eight rays; pectoral four, ventral fin, anal thirty-six, and caudal sixteen. La Bandonnière à tache. Bloch.


Inhabits the gravelly shores of the Caribbean islands near the mouths of the rivers. The body is yellow; head and lower parts whitish; with eight pale brown bands; scales large. The eyes are oblong, with silvery irides; vent near the tail; fins without scales, and with bands the rays branched, yellow on the anterior, and cinereous on the posterior.
The body is of a roundish ovate form, with the snout so greatly lengthened into a tubular form as to afford an excellent criterion of the species; the irides are yellow; jaws equal; lateral line near the back and arched. The body is whitish, with a dusky tinge on the back, and marked with five transverse, and nearly equidistant brown bands, the edges of which are milky-white. The dorsal and anal fin are very broad at the hinder part, and the former is marked with a large black spot, encircled with white; the gill-covers are scaly, and without spines; the tail with a black hand edged with white. This fish lives in all the fens of India. According to M. Hommel, inspector of the hospital at Batavia, it resides principally in the deeper parts of the sea, or the mouths of rivers, the last of which it may be supposed to visit like many other fishes during the spawning season. The manner in which this species takes its prey, though not entirely peculiar to this fish, is rather extraordinary. It lives principally on the smaller kinds of molluscs that fly near the surface of the water, and when it observes any one of these hovering or giving near it, darts from its tubular snout a drop of water with an aim to steady and certain, as to bring the insect down with it into the jaws. If the fly, or other insect which it misses out for its object, beat tell on some aquatic plant, the fish cautiously approaches within the distance of four, five, or six feet before it ejects the water, which, even at this distance, is almost certain of bringing the insect down to the surface of the water. When kept in a flate of confinement in a large vessel, it is said to afford considerable entertainment by its dexterity in taking the insects placed at a convenient distance within its reach. M. Hommel informs us, that they are preferred in the gardens and houses of the great men in India, in very large vases, for the amusement of their ladies. The fish is edible, and the fish is usually taken with the hook and line.


A native of India. The head large and flopping; irides golden; gill-cover long, narrow, covering the membrane; lateral line composed of many straight, interrupted lines running together into a single; angle towards the back; vent in the middle of the body; upper part of the body bluish-green; belly white; ventral fins long, narrow, and falcated. The dorsal fin contains about 37 rays; pectoral 14; ventral 7; and 5; and caudal 14.


Inhabits the Indian Ocean and Red Sea. The length is two feet; body blackish, at the sides brown, and beneath white. The eyes are large; teefs in the upper jaw 16; in the lower 15; gill-cover long and narrow; lateral line near the back and continued parallel with it; pectoral and caudal fin cincereus, ventral black, dorsal and anal white at the base, the red brownish. Maneavre found this species in Brail, Hafelquey in the Red Sea, and Valentyn in the East Indies. It grows to the length of eighteen inches and rarely to two feet.


The
The Argus chetodon inhabits the fresh waters of India, living principally on fishy places, where it finds an abundant supply of insects, upon which it feeds. Valentin speaks of it as a fish of excellent flavour. The body is nearly square, of a silvery grey colour, and violet on the upper parts; fins yellow; the whole body and also of the fins are marked with numerous round spots, of a dark brown colour. The irises are golden; jaws equal; gill-cover large; membrane loose; lateral line arched; vent nearly in the middle of the body; tail even at the end.


This species is mentioned as a native of all the Indian seas, and is esteemed an excellent fish for the table. The body is yellow, braced with brown; above the eyes runs a black band, which Bloch considers as one of the leading particulars of its specific definition. There is also another black band at the edge of the body, near the base of the tail, which runs from the pectoral to the dorsal and anal fins; and a third black band across the middle of the tail. The head is covered with small scales, but those on the body are large. The gill-covers are of two pieces, the membrane loose; vent near the tail; fins yellow, with branched rays, the dorsal, anal, and caudal fins edged with black.


The body is white, with six black bands. The eyes are large; aperture of the gills very large, the membrane loose; lateral line interrupted at the dorsal fin: fins large and black; tail forked. Length eight inches. Inhabits the coral reefs on the shores of Baffin, India, and Arabia.


The body is yellow, fuscated with brown, one band passing in a semicircular direction transversely through the eyes, a second nearly parallel from the back to the belly, across the pectoral fin, a third intermediate between these and the tail, a fourth at the base of the tail, and the fifth across the tail; extremitu of the caudal fin, and posterior end of the anal and dorsal fins bound. Found in Japan, and other parts of India. The French call this \textit{L'ongeur}, or \textit{Le zibre}.


The body is silver, cinnereous on the back, with thick brown bands, one on the head, another on the breast, and a third passing from the dorsal to the anal fin. The head is large, the mouth narrow, jaws equal, gill-cover of one piece and mucronated in the middle; ventral fins long, and with the anal black; tail and dorsal fin cinnereous.


The body is covered with rather large scales; colour white, with brown lines. The eyes are very large; band through the eyes black, and edged with white; gill-cover fuscated, and consisting of two pieces; fins yellowish; the rays branched; dorsal and anal fin brown at the edge; spines feen-green; near the tail a black band. Length three inches. Inhabits Jamaica.

Chetodon rotundus. Dorsal spines twenty-three; body with five pale bands. Limn. Inhabits South America and India. The body is cinnereous and rounded.

Chetodon lanceolatus. Tail entire; body with three bands, one across the eye, another across the brachial, and a third extending from the anterior dorsal fin to the tail. Gmel. \textit{Caecius}, Edward. A native of India. Form of the body lanceolate. The bands are black, edged with grey.


This species inhabits the seas surrounding the Caribbean islands, and is described by Bloch from one of Plunier's drawings and manuscripts. The colour of the body is yellow, with five narrow violet bands, and beneath brown. The head is large, and of a violet colour, with a black spot on the mouth and checks. Its upper jaw is longer than the lower; vent nearer the mouth than the tail; fins without scales; pectoral, ventral, and anal fin violet, the tail barred with yellow; dorsal fin, varied with yellow and violet; tail yellow at the base, and violet towards the edge. In Plunier's drawing, above-mentioned, the dorsal fin contained 14 spines and 20 soft and branched rays; pectoral fin 15 rays; ventral 1 spine and 6 soft rays, 3 spines and 20 soft rays, and the tail 16.


A beautiful species, described like the preceding, on the authority of a drawing by father Plunier, and which is supposed to attain to a considerable size. It is a native of the American seas. The body is of a rhombic form, deep green on the upper parts; the sides greenish, below which, near the belly, are three green lines, and three intermediate lines of white; belly yellow. The head is silverly, truncated anteriorly, with the eyes large, and mouth full larger in proportion; teeth small; gill-covers confluent of two semilunar pieces, with the membrane loose; lateral line slightly curved, vent in the middle of the body; dorsal fin green; pectoral and ventral yellow at the base, and edged with violet; margin of the anal and caudal fin green.

Chetodon Plunier. Dorsal fins two; head without scales. Bloch.

This also is an elegant species, described by Bloch from the designs of father Plunier, and named in compliment to that collector. The fish inhabits the Saronic gulf on the American seas, and is of the number of edible fishes held in most esteem for the table. The body is of an oblong form, coated with small scales. The colour brownish above, cinnereous at the sides, beneath white, and marked with six greenish-black bands. The head is brown above, at the sides white; lateral line arched; fins much fuscated, green, at the base yellow, and without scales; all the spines of the first dorsal fin yellowish. In Plunier's figure are delineated 5 spines in the first dorsal fin, and 27 soft rays in the second; pectoral 14; ventral 1 spine and 5 soft rays; anal 2 spines and 27 soft rays; and tail 12 rays.


A native of South America. The head is large, the jaws of equal length, and the lips thick; the gill-covers are broad, yellow, and covered with large scales. The body is thick, brownish, with the sides silverly, and the scales edged with violet. The lateral line is composed of oblong white scales, and is broken, or interrupted at the dorsal fin; vent in the middle of the body; first yellow, with branched rays; tail forked.

3C Chetodon
**Chetodon** Mauriti. Doralf spines eleven; anal three.


The Brazilian name of this fish, according to the above author, is *Fajacuarana*. It describes it from one of Pommer's drawings, and informs us, on the authority of Prince Maurice, that it inhabits Brazil, grows to the length of two feet, and that the fish is white, and of a good flavour. The body is long, and covered with small scales; blue on the back, and the sides paler blue, and belly white. From the back extends a very narrow black transverse band, which terminates about the middle of the body. The sides are yellowish-filvery; the mouth and operculum of the gills large; the back rather arched, with the lateral line continuous, vent near the tail; rays of the fins rufous; ventral fin yellow; pectoral dusky; and the red pale blue. This is named in compliment to the memory of the celebrated Prince John Maurice of Nassau-Singen, under whose conduct the Dutch, in 1617 and 1618, became possessed of the richest part of Brazil, and who afterwards, while governor of that country, amused his leisure hours in taking drawings and descriptions of its zoological productions.

**Chetodon Bengalesis.** Body falcated; doralf spines thirteen; anal two. Bloch. *La bandoulieere bengalesis*, ib.

This fish inhabits Bengal. The body is large, white, with a bluish back, and marked across with five bay-coloured bands. The sides are yellowish-white; aperture of the gills large; lateral line slightly arched near the back, and interrupted at the extremity; vent near the tail; fins brown at the base and edged with blue.

**Chetodon olivaceus.** Body with eight brown bands; doralf spines eleven; anal three. Bloch. *La bandouliere*, ib.

This fish inhabits Bengal. The body is large, white, with a bluish back, and marked across with five bay-coloured bands. The sides are yellowish-white; aperture of the gills large; lateral line slightly arched near the back, and interrupted at the extremity; vent near the tail; fins brown at the base and edged with blue.

**Chetodon annularis.** Brownish, with obliquely curved longitudinal breaks, and a blue ring on the lateral line behind the gills. *Chetodon annularis*, Bloch. *La bandoulieere*, ib. *Ikan batte*, Java, and *Ikan pampus* Cambodiana.

A native of India. The body is ovate, and brownish, with about five blue lines. The sides are silvery; gill-covers of two pieces; the anterior one toothed and spinous; lateral line parallel with the back; vent in the middle of the body; doralf fin pointed; anal rounded, both dark brown, banded with blue, the rest of the fins white. The doralf fin contains fourteen spinous rays, and forty-one soft; pectoral sixteen; ventral one spine and six soft rays; anal three spines and twenty-eight rays, and caudal sixteen rays.

**Chetodon collaris.** Head with two white and three black bands; doralf spines twelve; anal seven. Bloch. *Le collier*, ib.

This kind is a native of Japan. The body is of a round ovate form; colour bluish on the upper parts, and yellow beneath. The scales are very large. The head is bloping, of a brown colour, marked with two white, perpendicular stripes, and three black ones; the mouth is white; eyes large, with the iris blue; lateral line bending in an obtuse angle at the doralf fin, and interrupted at the end; pectoral fins yellow; ventral cingular; the rest yellowish, edged with brown; the doralf fin is marked with a yellow band, and the tail across the middle by a brown one. Figured by Seba, who describes it to be about five inches long.


Shape of this fish roundish-ovate; the anterior part bluish-white, the hind part black; and the whole body covered with very small scales; gill-covers confined to two pieces, and are armed with one large and several small spines; the opening of the gills large; the lateral line runs near the back; vent situated in the middle of the body; all the fins are white, except the doralf and anal fins, which are black.

**Chetodon faber.** Body falcated; the third doralf spine very long. Bloch. *Le forgeron*, Brunnnet.

This species was first described by Bloch, under the name of *Forgeron*. It inhabits the Indian and American seas; and is figured in a drawing of Plancius's, referred to by Bloch, is said to grow to the length of eleven inches. The body is silvery, ornamented with six bands of deep blue. The iris of the eye is yellow; the lateral line is arched to the form of the back, running parallel and continuous; the vent is in the middle of the body. The ventral and pectoral fins are black, and the red deep blue. This is an edible fish, and in much request for the table in South America.

**Chetodon Surinam.** Doralf and anal fin armed with many spiny rays; body banded with fuscesc; a black semilunar mark at the base of the pectoral fin. *Chetodon Surinami*, *La bandoulieere de Surinam*, Bloch.

Form of this fish ovate; colour silvery-frey, dark from the back and fins; head and body marked with seven brown bands; doralf and anal fin rather broader behind, and with the tail yellow, with a broad violet border. Received from one of the Danish missionaries in Surinam by Cremers at Copenhagen.

**Chetodon canescens.** Tail bifid; doralf spines two, third ray very long; mouth bilobed. *Chetodon*, ib. *Cetodon canescens*. Described and figured in the work of Seba as *Chetodon canescens*.

The colour of the body is greyish, and covered with very small scales. Inhabits the American and Indian seas.

**Chetodon alpinus.** Tail bifid; doralf spines three; no ventral fins. Gmel. *Linn.*, &c.

Communicated to Linnaeus by Dr. Garlen. This inhabits the Carolinas. The body is of a roundish form, without scales; upper parts bluish; jaws with a simple row of teeth; lateral line parallel to the back, and dotted; doralf and anal fins falcated.

**Chetodon acuminatus.** Tail entire; doralf spines three; third ray very long. Gmel. *Linn.* Inhabits South America and India. The body is marked with three brown bands; doralf fin seporate. *Linn.*, *Mf. Ad. Fr.*


**Chetodon argenteus.** Tail bifid; eight spinous rays in the doralf fin, and two ventral spines instead of fork. *Linn.* *Acad.* Found in the Indian seas. *Obf.* The ventral spines are short, and the third doralf fin so small as to be scarcely visible.


**Chetodon**
CHETODON. Spines in the dorsal fin eight; pectoral fin falcated. Gmel. A species of a whitish or silvery colour, dotted with fuscos; eyes large, red; lateral line curved; three first rays of the anal fin distant.

CHETODON arcuatus. Tail entire; dorsal spines eight; body with four white arched bands. Gmel. Length four inches. This species inhabits Brazil.

CHETODON leucurus. Tail entire; dorsal spines nine. the first recurved; body black; tail white. Gmel. This is of a small size, and inhabits America. Obs. The ventral fins are pointed.

CHETODON lineatus. Tail bifid; dorsal spines nine, and one on each side of the tail. Gmel. Figured by Scb, and is an inhabitant of the South American and Indian seas.


This inhabits South America and India. Its form is oblong; the head is thick; eyes large, with silvery iris; gill-cover large, spinous, serrated, and of one piece; fins rigid, with branched rays; dorsal and anal fins entirely covered with scales; ventral fins small; pectoral pellucid; dorsal spines fifteen, anal three.

CHETODON glaucus. Lateral line straight; dorsal spines five. Block. Glaucus des anciens, Gauther, &c.

Described from the drawings and Ms. of Plunier. It is a native of the American seas, and grows to the length of a foot and a half. The body is of an oblong form, and covered with moderately fixed scales, above blue, and beneath silvery, with five short narrow brown streaks; flesh good, Plunier. Obs. The eyes are small with yellow iris; mouth large; lips thick, with many bones; aperture of the gills narrower, the gill-membrane loofe; fins with branched rays; ventral very small, and terminating in a long narrow point, and with the pectoral fin whitish, the red blackish; anal fin without spines.


Length twelve inches; the snout is lengthened; the body oval, coated with minute scales, and marked with five distinct bands; the first black, two next cincere, and the two last black and cincere. Nostrils two, and placed near the eyes; aperture of the gills arched, the cover of three pieces; lateral line arched and finely visible; vent near the middle of the body; pectoral fins small, and, like the ventral, pointed; dorsal fin large and yellow; tail falcated, edged with yellow, and a black oval spot near the tail.

CHETODON longirostris. Snout cylindrical; tail unarmed; dorsal spines eleven. Broussonet.

Inhabits the Pacific Ocean. The body is compriised, and citron-coloured; beneath inflated and coated with unequal obliquely imbricated scales; the head is fleshy and brownish; beneath silvery flesh-colour; pupil brownish; iris pale glaucescent; mouth large and oblong; jaws nearly equal, with a few small unequal teeth; tongue and palate smooth; lateral line falcated; vent nearly in the middle of the body; dorsal and anal fins citron-coloured, with a black line on the posterior part, and another edged with whitish, the latt with a black spot near the tip; ventral fins citron, edged exteriorly with brownish; tail and pectoral fin pale blue, the latter yellowish at the base.

CHETODON orbiculatis. Body somewhat roundish; cinereous brown; no dorsal spines. Forlk. Fr. Arab.

Inhabits the rocky shores of Arabia. Length about twelve inches; body refringible a flat fish, spotted with black; beneath whitish; belly yellowish; scales round and entire.

CHETODON auriga. Whitish, with about sixteen oblique brown bands; fifth ray of the dorsal fin long and siliform, Forlk. Fr. Arab.

Inhabits the shores of Arabia. Length five inches; shape nearly rhomboidal, and coated with rhombic scales; the head is flat above, scaly, of a reddish-white colour, and marked with four transverse tawny bands; iris of the eye black; mouth compressed and conic; lips rounded and equal; dorsal fin black at the postellar edge; anal varied with black and yellowish white.

CHETODON nefasteus. Anterior part of the body white; posterior brown, with twelve black bands. Careto- don parte anterioire albous, poiliorre fulcens, fuscis nigris. Forlk. Fr. Arab.

Found by Forskal on the shores of Arabia. The length is three inches; the body ovate, with large rhombic ciliated scales; head conic and narrow, with a black band through the eye; lateral line curved; pectoral fins glaucescent; ventral white; dorsal and anal brown; tail black, with a broad hyaline stripe at the tip.


Observed by Forskal on the shores of Arabia. The body is oval, and covered with rhombic scales, disposed in a quincunx order, and finely toothed; the teeth are numerous, siliform, and flexible; anterior gill-cover furnished with a strong spine, nearly half an inch in length. The general colour is black, with a transverse and somewhat lunar yellow band in the middle of the body, having the horns pointing backward; the lateral line is curved and near the back; dorsal and anal fins horizontal and falcated; tail rounded, tawny, and edged with black. Forskal describes another fish, which Gmelin and others consider as a variety of the last mentioned species. "Chetodon careuleus nitidus et fasciis obliquis, lincolis violaciis." Blush Chetodon, with oblique bands, blotches, and fine violet lines. This is a native of the Arabian shores, where it is chiefly found among corals; the flesh is bitter.


Inhabits the Arabian shores. The body is an ovate oblong, covered with ferrated scales; behind the middle of the head a large transverse golden spot; the front between the eyes is elevated, flat, and falcated; gill-cover leacy on the fore part, and ferrated behind; lateral line near and parallel with the back; pectoral fins oval; ventral lanceolate; dorsal falcated behind; anal triangular; tail fin entire, rather rounded, cinereous, and dotted with yellow.

CHETODON fordidus. Oval; osh coloured brown, with four obfolete transverse bands. Forlk. Fr. Arab.

This species, which is found among the coral beds on the coasts of Arabia, is about a span in length; the body is covered with broad scales, which are membraneous at the edge; the gill-cover is bidentate at the anterior edge; lateral line near the back; fins osh-coloured brown; pectoral so.
CHETODON.

fin oval, ventral pointed; anal and dorsal fin rounded behind; tail short, ye bowish, divided into two lobes, and marked with a black spot.

**CHETODON unicorns**. Front horned; tail with two elevated ridges on each side. For. F. N. Arab.

Very abundant on the Arabian coast, where it is seen swimming in schools of two or three hundred each, and feeding on small fish. 1 grows to the length of three feet or more; the body is oblong oval form, rough, and of a shining purplish blue; the front is all blue, with an horizontal straight horn before the eyes; the teeth are rigid and disposed in one row; lips equal; pectoral fin with lateral line parallel, and near the back; aperture of the gills short; pectoral fin pointed, oval; tail truncate in the middle. Abundantly distributed, Wiliamh. Le Njeron Licenn. Cape. 

**Lett.** Uthman fish. Grew.

**CHETODON fahari.** Tail with a bony carina, situated in a red cavity on each side. For. F. N. Arab.

Inhabits the deep waters of the Arabian shores; the body is of an oval form, about three spans long, or a brown colour, with longitudinal violet lines; beneath whitish; the head is scaly; the teeth contiguous, crested, and disposed in one row; lips equal; pectoral fin with lateral line oblique; fins coriaceus, violet; pectoral fin with a yellow foot; tail truncate in the middle. This is nearly allied to *Chetodon lineatus*.

**CHETODON lineatus.** Black fuscus; tail two lobed, with a recurved spine each side. For. F. N. Arab.

This species was observed by Forskal in the Arabian seas, where they live in deep waters. A variety of this species is described under the title of *gahm*, as being of a black colour, with the base of the tail violet. The length of this fish is five inches; first spine of the dorsal and anal fin covered by the skin; posterior edges of the tail whitish, two lobed, and the lobes falcated; lateral spine somewhat subulate and movable.

**CHETODON bifasciatus.** Tail bifid, yellow, with two black bands on the head. For. F. N. Arab.

Body of an oblong oval form, and silvery; the crown is wrinkled; iris silvery; jaws full of hemispherical callosities; upper lip long; anterior gill-cover falcated behind; posterior with a bony point or process on the back part; ventral fins black; dorsal fin and tail yellow; pectoral ones tawny yellow, the other white; lateral line curved and nearer the back. Gmel. Inhabit the Arabian coasts.

**CHETODON picus.** Whitish with oblique violet lines; occular band and tail black. For. F. N. Arab.

Nearer of a rectangular form; the body covered with broad, falcated, ubiquitously imbricated scales, and marked with about eighteen violet lines, disposed in an oblique direction; on the crown of the head are five transverse tawny lines; the snout is prominent; lips equal; lateral line curved; dorsal fin black, and rounded behind; tail truncate, marked with a golden crescent in the middle, and edged with brown.

**CHETODON trifasciatus.** Head with three black bands; body with fourteen longitudinal dark lines. Trans. Lin. Soc.

Discovered by Mr. Mungo Park on the coast of Sumatra, and described in the third volume of the Transactions of the Linnaean Society. The length is three inches; colour pale brown, or brownish, and covered with rather large ciliated scales; on the dorsal fin is a black band edged with yellow; another at the base of the anal fin, and a third through the middle of the tail; the iris brown; mouth very small; gill cover of two plates; lateral line bent, and notched near the back; the back is yellowish, inclining to olive-brown; the belly silvery; fins yellow. Figured by Bloch, from a large specimen in the collection of Link, at Leipzig.

**CHETODON caniculatus.** All the spines of the fins grooved. Lin. Trans.

The body is greenish yellow above; beneath whitish with paler spots; scales small, oblong; the iris fuscous; gill-cover of two pieces; lateral line parallel with the back; vent nearer the head; its greenish and with fin spots; tail blunt. Observed at the same place as the preceding species.

**CHETODON allii.** A black band across the eyes; dorsal fin with two spines, and an occipital spot; anal spines three. *C. allii*, Bloch.

Found in India. The body is yellow above; beneath white, and covered with large scales; the jaws are equal and prominent; lips thick; gill-cover consisting of one short golden lamina; lateral line straight, interrupted at the dorsal fin; fins emerald with branched rays.

**CHETODON joffier.** A very long falciform ray, and black annular spot in the dorsal fin. *Chetodon joffier*; Le Seton, Bloch.

The body of this fish is of a roundish ovate form, with the head rather taper and produced; the colour is purplish on the back, and a ting of red and intermixture of yellow pervades the rest of the body, which is transversely falcated with about nine oblique crimson spines; through the eye passes a broad black transverse band, margined on both sides with white; the fins are yellow, with a brown marginal line on the anal and dorsal fin, and three stripes of the same colour across the tail. A native of the Indian seas.

**CHETODON falcula.** Back with two black falciform spots, edged with white. *Chetodon falcula*, La Fauville, Bloch, &c.

This inhabits the coast of Coromandel. Its general properties this resembles the last; it is a similar occular band of black, but the colours are paler, more inclining to yellow; the transverse bands, violaceous, paler and less angulated, and the dorsal fin has neither the black spot encircled by a white ring, nor the remarkable falciform ray, like the last species.

**CHETODON tricolor.** Anterior part of the body yellow; posterior black; tail and border of the dorsal and anal fins yellow, edged with red.

Dumazedie was the first author who published a figure of this species. He speaks of it as a native of Gaudouch, and describes it as a Brazilian species, on the territory of Prince Maurice. It is of a more elongated figure than the generality of Chetodons, and seems to agree better in this respect with the Labrus genus. The head and part of the body are of a fine golden yellow, the posterior part dark black, and the two colours separate abruptly in an obliquely incurvated direction, leaving the lower half of the pectoral, and the body down to the vent, fine yellow. The border of black passes without interruption into the anal fin, and posterior end of the dorsal fin, in both of which it forms a subtransversal line with the yellow border of the said fins. The tail is much incurvated.

**CHETODON kleinii.** Head marked with an occular band; dorsal in fourteen-pressed.

First described by Klein, and named after that author by Bloch. This fish is of an orbicular form. The opening of the mouth very small; the nostrils simple; iris white; gill-cover consisting of two plates; lateral line bent, and notched near the back; the back is yellowish, inclining to olive-brown; the belly silvery; fins yellowish. Figured by Bloch, from a large specimen in the collection of Link, at Leipzig.
Leipzig: its general size in the East Indies, the seas of which it inhabits, is not exactly known.

Chetodon bimaculatus. It had marked with an oval band; an annular spot and half spot on the dorsal fin. Chetodon bimaculatus, La Boudouliere a deux taches, Blasch.

This fish is of a roundish form; the back very gibbous, and the abdomen flattened; the head is sloping, lengthened, and tapering; the back is brown; sides whitish, tinged with grey; pectoral and ventral fins are red; the reft yellow at the base, and greyfift at the extremities; band across the eyes edged with white; and the black spot on the dorsal fin is encircled with a white ring; the half spot bounded on one side with a semicircular white line. inhabits the Indian seas.

Chetodon bifasciatus. Two spined below the eyes. Chetodon bicinctus, La Bandoulière a deux yeux, Bicher.

The body of this fish is of an elongated form; the head is yellow; the back blue; and the belly white. Across the head, behind the eyes, is a tranverse brown stripe; another pafs across the middle of the body, and a third between the extremity of the dorsal and anal fins, near the tail. The posterior one of the two spines below the eyes is much larger than the other; all the fins are grey. This is a native of the East Indies.

Chetodon frygoides. Golden yellow; head and six transverse bands violet. La Chetodon Frygoides, Cepede.

Described by La Cepede from the drawings and manuscripts of Plummer. The dorsal fin contains thirteen fin rays; pectoral fin one: there is a deep-pression before the eyes; the opening of the mouth is small, and the upper lip thick; gill-covers rounded. This is a native of the American seas.

Chetodon lamarkii. Golden yellow, with three longitudinal dusky stripes. Chetodon La Mark, Cepede.

The description of this species is taken by Cepede from a specimen in the museum of the Prince of Orange, the native country of which is unknown. The lower jaw is longer than the upper; the scales rounded, acute, and dentate; fifteen fin rays, and fifteen soft ones in the dorsal fin; three fin rays, and twenty soft ones in the anal fin; gill-covers armed with a very long spine.

Chetodon conguptus. Yellowish grey, with numerous black bands, and body constricted in the middle. Shaw, N. Holland, Zool.

The length of this species is about eight inches; the shape of the body inclining to an oblong square, andremarkably contracting in diameter about the middle, so as to appear constricted in that part; scales of moderate size; colour yellowish-grey, tinged on the back and part of the fins with blue; across the body eight black bands, that in the middle narrowest, on the back two very distinct fins, the rays of the first being all spiny; tail incising, though very slightly, to a lunated form. Native of the Indian seas, and22 observed about the coast of New Holland.


The length of the species described in White's Journ. New South Wales, was about four inches; the colour silver-white, darker, and with a bluish tinge on the back; head of a somewhat lengthened form; across the body seven black bars; on the back two distinct dorsal fins, of which the first consists of very long spiny rays, the third exceeding the reft in length; tail very slightly inclining to a lunated form at the extremity. Observed about the coast of New Holland.

Chetouori, in Ancient Geography, a people placed by Ptolemy in the Higher Germany, among the Curiones.

Chafalia, in Geography, the first large body of water which leaves the Mississippi, and falls, by a regular and separate channel, into the gulf of Mexico. It leaves the Mississippi in the westernmost part of the remarkable band just below the boundary, and has every appearance of having been formerly a continuation of the Red River, when the Mississippi washed the high land from Clarksville to the Bayou Tunica, or Willim's creek, the traces of which are yet visible by the lake, through which a large current still passes, when the river is high. The distance on a straight line from Clarksville to the Bayou Tunica is not more than eight miles; but by the present course of the river, it is supposd to be not less than 50 miles. If the Mississippi should break its way by a shorter course, which is not improbable, the Chafalia will again become a part of the Red River. When the Mississippi is high, the draught into the Chafalia is very strong, and has frequently carried rafts, and likewise some few flaps or Kentucky boats down it, which are generally lost. This branch, notwithstanding its size, is not navigable to the gulf of Mexico, on account of an immense floating bridge, or raft, across it, of many leagues in length, and in some places so firm and compact that cattle and horses are driven over it. This astonishing bridge, or raft, is constantly augmented by the trees or rubbish, which the Chafalia draws out of the Mississippi.

Chafe, or Chaping of a rope, or Sea-Language, is paid of a rope that is galled or fretted, or when the rope runs against any thing. The cable is chafèd in the hawse, signifies that it is fretted or begun to be worn out there.

Chafe-Wax, or Chaffee-Wax, an officer in chancy, whose business it is to fit the wax for the sealing of writs, patents, and other instruments issued thence.

Chafier, in Geography, a town of Persia, in the province of Farsil; 50 miles S. of Shiraz.

Chaff, in Agriculture, the husky substance of corn, which is separated by threshing and winnowing. It also sometimes signifies the rind of corn; thus, barley that has a thick rind is said to be thick-chaffed; and it likewise implies straw, &c. cut small for the purpose of being given to horses and other cattle, mixed with corn. This substance, which is obtained by the dressing of grain or made from straw and other matters by cutting, is highly useful in the feeding of horses and many other animals, as having much other more valuable food. Besides its advantage in the common feeding of animals, it is of vast utility in the fattening of different sorts of animals, where much luxuriant green food is given, as a dry meat; as without some sort of material of this nature they never go on well.

It has been remarked by Mr. Young, that the practice of cutting both hay and straw for all sorts of stock is one that has been found very important by many practical and intelligent cultivators of great experience; and though he admits that general observations are not equally satisfactory with that of comparative experience, there can probably be little doubt of the advantage of this mode of applying it. Besides, there are but few persons who have opportunity, time, and power, to make comparisons between the food and labour of different teams fed in the common way with hay, and with cut chaff, half or one-third straw. The opinions of the best informed and most practical persons are, however, decidedly in support of the latter method. It is, therefore, conceived that the dressing of dry hay, but the formation of giving hay cut with a mixture of straw, instead of feeding in the common way with hay, is at all events to be advised to as great an extent as can be effected.
as the saving is unquestionable; and he thinks that it should not only be practiced for the teams, but likewise for all the other fences that confine hay. He adds, that Mr. Page of Cobham, in feeding his flock, gives no hay or straw but what is cut into chaff before it is fed. The same author thinks that if racks are permitted in a stable, it is not an easy matter to prevent hogs-keepers from cramming them full of hay, especially at night. The belt contrivance he has heard of to supply the place of racks was that of Mr. Vancouver, who made, he says, a fort of hoppers the whole length of the manger, which delivered chaff from a loft above it gradually, as the hogs moved the lower lip of the hopper with their noses; in this manner supplying themselves. But a very intelligent nobleman, he observs, on trying it, found that it would not deliver regularly. This might arise, he thinks, from the dimensions not having been sufficiently attended to; for if the hopper be not of a due breadth, the chaff might arch above the moveable board, and not come down: the aperture in the manger through which it passes must necessarily, he imagines, be of a certain size, neither too wide nor too narrow. It certainly seems, in his opinion, to be a practical idea, and very capable, after some trials and regulations, of being fully applicable to common practice. It well deserves attention, especially as the expense of an experiment for one stall could not be considerable. He has often determined to try it himself, but has always been prevented by some journey or excursion taking him from home, at the moment when he could otherwise have given the requisite attention. He conceives that it would demand a manger from four to six inches wider than common ones, to render it perfect for this purpose.

In the use of this subsistence for sheep, considerable attention is necessary to the troughs in which it is given, to see that they be so secured by boards that it is not blown out of them. This is effected, according to Mr. Young, in lord Clarendon's sheep-yard in Hertfordshire, by a semicircular boarding of thin material, which covers the heads of the animals while they are feeding in the troughs.

It has been suggested by the same writer, in the third volume of the Ack of Agriculture, that when chaff is made to undergo the process of fermentation in the houes where it is deposited, by slightly water it, it is rendered "much more nutritious than when used in the common way."

Chaff, in Botany, a name given to the scales or dry membranous substances, interposed between the florets of some aggregate and compound plants, as in Dipfacus, Hopcherasi, &c. In that case the receptacle is said to be chaffy.

Chaff-Cutter, in Rural Economy, an implement constructed for the purpose of cutting hay, straw, and other substanse into chaff. Instruments of this sort confit formed simply of a box and a cutting blade; but they are at present much improved, being made of different forms and constructions, so as to perform the work with greater economy and dispatch. Mr. Cook has invented one, which, by means of a man and boy, will cut one hundred quarters a week; and when fixed to a large wheel, and turned by an animal, such as a poney or ass, will cut half the above quantity per day. Another contrivd by Mr. Neat is capable of cutting three quarters an hour, by the assiduity of two men, and costs about two guineas. An instrument for this purpose, made by Mr. James Plce, is likewise both cheap and of the most simple construction. It is fixed on a wooden frame, which is supported by four legs; and on this frame is a box for containing the straw, four feet six inches long, and about ten inches broad: at one end are fixed across the box two rollers, inlaid with iron, in a diagonal line, about an eighth of an inch above the surface; on the ends of these rollers are fixed two strong brass wheels, which take one into the other. On one of these wheels is a contract wheel, whose teeth take in a worm one large inch; on the end of the arbour is fixed a wooden wheel, two feet five inches diameter, and three inches thick. On the inner part of this wheel is fixed a knife, and at every revolution of the wheel the knife passes before the end of the box, and cuts the chaff, which is brought forward between the rollers, which are about two inches and a half sudden. The straw is brought on by the worm taking one tooth of the wheel every round of the knife: the straw being thus pressed between the rollers, the knife cuts off the chaff with as great ease, that twenty-two bushels can be cut within the hour, and makes no more noise than is caused by the knife passing through the chaff. It consists of the box into which the straw is put, and an upper roller, with diagonal projecting ribs of iron; the whole moving by the revolution of the brafs wheel, on the axis of which it is fixed. Another brafs wheel has upon it a face wheel, whose teeth take into the endless screw on the arbour, while the teeth on the edge of this wheel enter between those on the edge of the other wheel. On the axis of the latter brafs wheel is a roller with iron ribs, similar to the above, but hid within the box. The arbour has one of the ends of which it is compoted made square, and passing through a mortise in the center of the wooden wheel, which is fastened by a strong screw and nut; the other end of this arbour moves round in a hole within the wooden block; and the knife is made fast by screws to the wooden wheel, and kept at the distance of nearly three quarters of an inch from it, by means of a lip of wood of that thickness, of the form of the blade, and reaching to within an inch of the edge. The handle is mortised into the outside of the wooden wheel.

An improved machine of this sort has been invented by Mr. Robert Solomon, of Woburn, Bedfordshire, and described in the Transactions of the Society for the Encouragement of Arts, &c. With it the chaff is cut by two knives, fixed on the inside of the folies to two wheels, which are strongly connected together; the edge of the knives being at an angle of about forty-five degrees from the plane of the wheel's motion. These knives are fixed as to be forced forward by springs on the wheel, which springs are formed to adjust, and act more or less, as occasion may require, so as to give the knives as much pressure against the box as may be requisite to cut the straw. The knives are prevented from coming too forward, and occasioning unnecessary friction, by wedges being put in under the flapels; which wedges, as the knives wear, must be drawn out for to admit the knives to come more forward. With the before-mentioned provisions, it will be found very easy at any time to put on new knives, as the springs, &c. will always adjust them to their work.

On one side of the wheel is fixed a round block of wood, in which there are four holes and a movable ferce; to this block is screwed one end of the feeding-arm, running nearly horizontally to the crofs bar at the end of the box; to which crofs bar there is a pin, moveable to five different holes, by means of which, and the four holes in the block before described, twenty changes in the length of the chaff may be obtained. The straw is brought forward by the rollers in the box, the form of which has been just described, which rollers are turned from the outside by the triggers or ratchet-wheels on each side of the box, which move more or less, according to the stroke given to the crofs bar by the feeding-arm and wheel. By this mode of feeding, the straw is perfectly
and the frame of the machine is to be made very firm and strong.

In order to apply this implement to the best advantage, the inventor proposes a second box, to be placed at the end of the first; which box may be of any length, and suspended by a line and counter-weight, whereby the end of it is brought down level with aad ing the frame, and then drawn up, to do the box a declivity, to make the frame more easily come forward.

It is supposed that much advantage may be derived in this instrument from its cutting various lengths, retting during the cut, the knives being adapted to their work by regulating springs, the feeding being readily thrown off, and the pressure movable to either side. It is also well calculated to be applied to any power which may be occasionally fixed to the opposite side to that on which it is turned by hand; and, by the additional box, when used by hand, the workman will be enabled to cut for some continuance, without stopping to feed.

Where threshing machines are in use, these implements may frequently be attached to them with great advantage. There are many other instruments of this sort constructed in different ways; but those which are the least complex, and can be afforded at the cheapest rate, are the most adapted to the purpose of the farmer. See Cutting-Box

The above machine, as considerably altered and improved by Mr. Rawlins, is seen in Plate VII. on Agriculture, in which fig. 1. is a side, and fig. 2. an end view of it. The advantages of this implement are, 1st, its great simplicity; 2d. its cutting the chaff of various lengths; 3d. the frame being at rest while the knives are making the cut; 4th. The friction being less, more work of course may be done with equal labour.

A. is the handle.
B. B, the fly-wheels on which the knives are fixed.
C. the ratchet-wheels, and rollers for drawing the straw forwards.
D. the rods to work the ratchet-wheels, connected with the lever and crank.
E. the box for containing the straw.
F. the lever and weight for pressing the straw.
G. the knives.
H. the crank for regulating the cut.
I. the frame.

At fig. 3. is represented Mr. M'Dougall's patent chaff-cutter, which is a very useful instrument of this kind. In this machine the inventor has been particularly careful to construct it, that, in case it should be accidentally broken, it might be easily repaired by any common mechanic. The substance to be cut into chaff may be pressed as hard as the workman chooses, by simply placing the weight near to the end of the lever. But the chief excellence of the instrument consists in the inventor having judiciously applied a spiral groove in the room of the endless screw, commonly used by other agricultural instrument-makers, by means of which it has in a great degree got rid of friction; and the lever may rise to any height, without putting the machine out of work.

It has been remarked by Mr. Young, that the number of machines which have been invented of late years for this purpose, most of which perform their work with sufficient accuracy, leaves no farmer in the kingdom under the necessity of employing the common chaff-box, which is worked by those only who have acquired the art of making use of it, and who commonly make much greater wages per day than the ordinary pay. He observes that there is a very good machine of this sort made at Thetford, which only costs eight guineas. It has been observed by a late practical writer, that as the principal objects aimed at in the construction of these machines are, those of expedition and the levelling of manual labour, it is evident that many of those of the improved kind must answer such purposes much more effectually than such as were formerly in use, especially where they are attached to any great power, such as that of horses, water, etc., as in the case of threshing machines, or other mills, to which they are in general well suited, as has been noticed above.

Mr. Page of Cobham has, according to Mr. Young, at the trifling expense of only five pounds, added a mill-wheel to his chaff-cutter, by which means a boy and a little poney cut twenty bushels of chaff per hour.

CHAFF-MADE, a place constructed for the purpose of containing chaff. It should be situated as near to the barn, threshing machine, and flax, as possible, in order that it may receive it with the least possible labour and trouble. And in order to prevent danger, where the chaff is fluffed to undergo the process of fermentation, it should be constructed of brick work. The dimensions must be suitable to the extent of the farm, or the quantity of live flock that are kept and fed with it.

CHAFFER, or Cockchaffer, in Entomology, the common English name of the beetle, called Linnaeus, Scarabaeus melolontha, and by Fabricius Melolontha vulgaris. See Scarabaeus.

CHAFFER-COLOURERS, in Commerce, printed linens manufactured in the Great Mogul's dominions. They are imported by the way of Surat; and are of the number of those linens prohibited in France.

CHAFFERS, in our Statutes, seem to signify wares or merchandise. 3 Edw. IV. c. 4.

The original French of the statute is Chaffriers.

CHAFFERY, or Chaffery, in the Iron-Works, the name of one of the two principal forges. The other is called the tranary. When the iron has been wrought at the finery, into what is called an ane can or square mass, hammered into a bar in its middle, but with its two ends rough, the bafins to be done at the chaffery is the reducing of the whole to the same shape, by hammering down these rough ends to the shape of the middle part.

CHAFFINE, in Ornithology. See Fringilla Cuculz.

CHIAGAING, in Geography, a city of the Birman empire seated on the north side of the Irrawaddy, and opposite to the ancient capital Anga-hung, or Ava, in N. lat. 21° 56'. E. long. 96°. This city, which was once the seat of imperial residence, is situated partly at the foot and partly on the side of a rugged hill that is broken into separate eminences, and on the summit of each stands a spiral temple. These
These temples, rising irregularly above one another, form a beautiful assemblage of objects, the effect of which is increased by their being carefully white-washed and kept in repair. Chiving is the principal emporium to which cotton is brought from all parts of the country, and where, after being cleaned, it is marked for the China market. The operation of cleaning it from the buds is performed by females, by means of double cylinders turned by a lathe, which a woman works with her foot, while she applies the cotton with her hands. This city has become a place of religious resort, from the number of prays or temples erected in its neighbourhood; as well as on account of its being the principal manufactory of images or statues of the divinity, Gaudia, which are sculptured of fine marble obtained in a quarry at Makeng about 12 miles distant. Birmans are forbidden to purchase the marble of which these images are made, but they are allowed and even encouraged to buy figures of the deity actually manufactured, and to carry them to the remotest corners of the empire. Exportation of these marble divinities out of the kingdom is strictly forbidden.

CHAGNON, a town of France in the department of the Rhone and Loire, 6 leagues S. of Lyons.

CHAGNY, a town of France, in the department of the Sienne and Loire, and chief place of a canton in the district of Châlons-sur-Lyon; 10 miles N.N.W. of it. The place contains 2,143, and the canton 15,204 inhabitants; the territory includes 13,725 kilometres, and 13 communes.

CHAGRE, a river of North America, in Terra Firma, which opens into the North Sea, in 9° 18' 40" N. lat. and W. long. 81° 41' 30 miles W.S.W. of Porto Bello, and has its source in the mountains near Cruces. It was formerly called Lagarto from the number of alligators in it, and was discovered by Lopez de Gozo. Diego de Alvites discovered that part of it where Cruces is situated; but the first Spaniard who sailed down it, so as to reconnoitre it to its mouth, was Captain Hernando de la Serna, in the year 1527. Its entrance is defended by a fort, seated on a steep rock on the east side near the sea-shore. This fort is called San Lorenzo de Chagres, and has a commandant and a lieutenant; and the garrison is drafted from Panama. The fort was taken by admiral Vernon in 1740. About eight toises from the fort is a town of the same name. The housetops are principally of reeds, and the inhabitants Negroes, Mulattoes, and Mestizos. They are a brave and active people, and occasionally take up arms to the number of triple the usual garrison of the fort. Opposite, on a low and level ground, stands the royal custom-house, where an account is taken of all goods conveyed up the Chagre. Here the breadth of the river is about 120 toises, but it becomes gradually narrower as you approach its source. At Cruces, the place where it begins to be navigable, it is only 20 toises broad; and the nearest distance between this town and the mouth is 21 miles, and the bearing N.W. 7° 24' westerly; but the distance measured along the several windings of the river is no less than 43 miles. It breeds a great number of Caymanes or alligators, creatures often seen on its banks, which are impalpable, both on account of the cloveness of the trees, and the bushes, which cover the ground, as it were with thorns. Some of these trees, especially the cedar, are used in making the logs of the barks, employed on the river. The passage of the river is obstructed by the trunks of the trees that fall into it; and also by the swift currents over the shallows. The banks employed on this river are the chatas and bongos, called in Peru, bonques. The first are composed of several pieces of timber, like barks, and of a great breadth, that they may draw but little water; they carry six or seven hundred quintals. The bongos are formed out of one piece of wood, some of them being 11 Paris feet broad, and conveniently carrying four or five hundred quintals. Both forts have a cabin at the stern for the convenience of passengers, and a kind of a covered house in the middle continued through the whole length of the vessel; and over the whole, when the vessel is loaded, are laid hides, that the goods may not be damaged by the rains, which are frequently violent. Each of these requires, besides a pilot, at least 18 or 20 re-built negroes, for without such a number, they would not be able, in going up, to make any way against the current. All the forests and woods near this river are full of wild beasts, and especially different kinds of monkeys, the flesh of which is highly valued by the negroes. They are also eaten by the Creoles and the Europeans.

CHALEIGNE, or CHABRIN, in Commerce. See ST. ALBRECHT.

CHAILAINS, in Geography, a town of France in the department of the Sarthe, and district of St. Clairs; 5 miles N.E. of Chateau du Loir.

CHAILIEN, a town of China in the province of Pechelbi; 7 miles S. of Chun-te.

CHAILO-TEI-KAN, a town of Chinese Tartary; 32 miles S.W. of Ning-yuen.

CHAILA, a river of Siberia, which runs into the Oby; 20 miles N.E. of Oboorokoi.

CHAILBAR, or KABIR, a large town of Araba, taken from the Jews by Mahomet, in the 7th year of the Hegira, A.H. 686; 152 miles N.E. of Medina.

CHAILLAIRE, Ie, a town of France, in the department of the Ardche, and chief place of a canton, in the district of Tournon; 4 leagues N.W. of Privas. The place contains 1,713, and the canton 9,053 inhabitants; the territory includes 16,252 kilometres, and 12 communes.

CHAILLANC, a town of France, in the department of the Indre, and district of Chatcauroux; 4 leagues S.W. of Argenton.

CHAILLAN, a town of France, in the department of the Mayenne, and chief place of a canton, in the district of Laval; 10 miles N. of it. The place contains 2,559, and the canton 15,106 inhabitants; the territory comprehends 2,773 kilometres and 9 communes.

CHAILLE-LES-MARais, a town of France in the department of the Vendee, and chief place of a canton in the district of Fontenay-le Comte; 3 leagues W.S.W. of it. The place contains 1,749, and the canton 7,547 inhabitants; the territory comprehends 235 kilometres and 7 communes.

CHAILLE-Sous-LES-OEMEAUX, a town of France, in the department of the Sarthe; 10 miles E. of Sable.

CHAILLEYVETTE, a town of France, in the department of the Lower Loire; 5 miles S. of Marennes.

CHAILLONE, a town of France in the department of the Orne, and district of Alencon, containing about 1,100 inhabitants; one league N. of Sées.

CHAIN, in French chaîne, an instrument composed, or consisting of links, and commonly made of iron, though it may be made of other metals. There are different chains for different purposes; as draft chains, bending chains, canting chains, mill-chains, measuring chains, neck chains, &c. &c.

A port-chain, or chaine de port, is a strong iron chain, reaching across the entrance of the port to prevent vessels from falling or getting into it. Of these there are sometimes several at the entrance of one and the same port; and when
when it is wide they are supported on piles from distance to
distance.

A foraging chain, or chaine du forrage, is the plowing, by
means of a chain of folders, or a military communication and
arrangement of troops, those who are charged with forag-
ing in a flat of security against any attack or incursion of the
enemy; those forming the chain being commanded to
keep a constant and careful look out on all sides.

The Romans, when they went to war, carried with them a
great number of chains, defined for those that might be-
come their prisoners. They had them made of different me-
tals; a great many of iron, others of silver, and some even of
gold. And they were distributed or made use of according to
the rank and quality of the prisoners. Before the battle at
the Granian lakes, between Hannibal and Flaminius
the latter, who, though altogether unfit for the manage-
ment of military affairs, was vain, arrogant, and presumptu-
ous; was singularly formed by nature for the gaining of pop-
ularity; was a plausible prater or deceiver, and to perpe-
tuate a public fracas, that he filled his people with such
confidence of victory and successes, that the multitude of
those, who followed his army for the sake of booty, as Poly-
lybüs informs us, exceeded even the number of his troop,
and carried with them chains, fetters, and other implements
of the same kind in great quantities and abundance.

The arms of the kingdom of Navarre are, chains, or, in a
field, gates. The occasion hereof is referred to the kings of
Spain leagued against the Moors; who having gained a ce-
lebrated victory against them in 1212, in the distribution of
the spoils, the magnificent tent of Miralammin fell to the
king of Navarre; as being the first that broke and forced the
chains thereof.

Chain, a gold, is one of the ornaments or badges of the
dignity of a lord mayor of London; and remains to the
person, after his being divested of that magistrature, as a
mark that he has held the chair.

Something like this, Chorier observes, obtained among
the ancient Gauls: the principal ornament of their people
in power and authority was a gold chain, which they wore
on all occasions; and even in battle, to distinguish them
from the common soldiery. Hist. de Dauph. lib. III. p. 130.

Chain also denotes a kind of string, or twisted wire;
serving to hang watches, twezer cases, and other valuable
toys upon. The invention of this piece of curious work
was owing to the English: whence, in foreign countries, it
is denominated the English chain. It was some time before
foreigners undertook to imitate them, and at last with no
extraordinary successes: those of Paris have come nearest.
These chains were at first usually either of silver or gold,
some of gilt copper; the thread or wire of each kind must
be very fine.

For the fabric, or making of these Chains: a part of the
wire is folded into little links of an oval form; the longest
diameter about three lines; the shornet, one. These, after
they have been exactly folded, are again folded into two;
and then bound together, or interwoven, by means of seve-
reral other little threads of the same thicknesses; some whereof,
which pass from one end to the other, resemble the warp of a
ruft; and the others which pass transversely, the woof. There
are at last 4000 little links in a chain of four pendants;
which are, by this means, bound so equably, and withal so
firmly together, that the eye is deceived, and takes the whole
to consist of one entire piece.

Plate Mechanics, fig. 1, represents the chain used for com-
mon purposes with oval links; the ends of which are welded
or foldered together.

Fig. 2, is the chain used for flight purposes, as scales, &c.
Vol. VII.
For small parcels, as gardens, &c. is sometimes used a small chain of one pole, or sixteen feet and a half in length; each link one inch long. In measuring towns, a chain of 50 feet in length, consisting of 50 links, is the most commodious, and with an off-set of 10 feet in length.

Some in lieu of chains use ropes; but these are liable to several irregularities; both from the different degrees of moisture, and of the force which stretches them. Schwenterus, in his Practical Geometry, tells us, he has observed a rope 16 feet long, reduced to 15 in an hour's time, by the mere falling of a heavy froth. To obviate these inconveniences, Wohlls directs, that the little hands whereof the rope consists be twilled contrary ways, and the rope damped in hot oil; and when dry, drawn through melted wax. A rope, therefore prepared, will not get or lose any thing in length, even though kept under water a day.

Sir George Bruelobatos observes (Phil. Trans. vol. xvii. p. 508), that the common Gunter's chain of the stap is always subject to spring and stretch confidually. That which he used in his measurement for ascertaining the height of mountains was made of hard red oak, on purpose to avoid this defect. It, however, still preserved some degree of elasticity, so, when pulled with a force of about 10 pounds, it shrank 0.12 inch longer than when laid gently on the floor without being stretched at all. He corrected its length by allowing for its expansion by heat at 13, 0.05 inch.

Use of the Chain in Surveying.—The manner of applying the chain in measuring lengths, is very obvious, Having provided a chain, with 10 small arrows (see Arrow), two persons take hold of the chain, one at each end of it, and, and all the 10 arrows are taken by one of them, who is to go foremost, and is called the leader; the other, for direction's sake, being called the follower. A picket, or flat-flain, being set up in the direction of the line to be measured, if there appear no natural marks in that direction; the follower stands at the beginning of the line, holding the ring at the end of the chain in his hand, while the leader drags forward the chain by the other end of it, till it is stretched, straight, and laid or held level, and the leader directed, by the follower's waving his hand, to the right or left, the follower fe off him exactly in a line with the mark or object of direction to which the measure is to be extended; the both of them stretching the chain straight, and so going as to hold it level, the leader having the hand of one of his arrows in the same hand by which he holds the end of the chain, let him then flick one of them down with it, while he holds the chain stretched. This being done, he leaves the arrow in the ground, as a mark for the follower to come to, and advances another chain forward, being directed in his position by the follower moving at the arrow, as before, as also by himself now, and at every measuring chain's length, by moving himself from side to side, till he brings the follower and the end of a mark into a line. Having then stretched the chain, and hung down an arrow, as before, the follower then takes hold of the arrows, and advances again in the same manner another chain's length. And thus the process is repeated till all the 10 arrows are employed, and are in the hands of the follower, and the leader, without as an arrow is arrived at the end of the 11th chain's length. The follower then sends one, or brings the 10 arrows to the leader, who puts one of them down at the end of the chain, and advances with the chain, as before. And thus the arrows are changed from the one to the other at every 10 chains' length, till the whole line is finished; when the number of the arrows shows the number of tens, to which the follower adds the arrows he holds in his hand, and the number of links of another chain over to the mark or end of the line. So that if there have been three changes of the arrows, and the follower holds six arrows, and the end of the line cut off 45 links more, the whole length of the line is 150 links, thus, 5045. In entering down the dimensions taken by the chain, the chains and links are separated by a dot; the former being integers, and the latter decimals; thus a line of 6 chains, 75 links long, is written 6, 75. If the links be short of 10, 5 cypher is prefixed; thus 10 chains, 8 links, are written 10.08. It is plain, however, to set down the length of lines, measured with a chain: it links as integers, every chain or length being 100 links; and not in chains and decimals.

To find the area of a field, &c. in square poles, or acres, given in Chains and links. An acre of land is equal to 40 square chains, i.e. 160 chains in length and one chain in breadth: or 40 x 40, or 4.032 square yards; or 40 x 40 = 160 square poles; or 160,000 = 100,000 square links. A parcel is divided into four parts, called roods, and a rood into 40 parts called perches, which are square poles, or the square of a pole, or 40 square links, or the square of 1/4 of a chain, or of 25 links, which is 6.25 square links. So that the divisions of land measure will be thus:

- 6.25 square links = 1 pole or perch.
- 40 perches = 1 rood.
- 4 roods = 1 acre.

Consequently, 1st. Multiply the links by one another, according to the rules for the area, and thus the content will be found in square links; and from the product cut off the figures towards the right, which is nothing more than dividing by 10,000 the number of square links in an acre; the fraction remaining on the left will be acres. 2dly, Multiply the five figures cut off, which are decimals, by four, the number of roods in an acre; and cutting off five figures from the product on the right, those remaining on the left will be roods. 3dly, Multiply the five thus cut off by 40, the fourth part of the square perches in an acre; and cutting off five figures, as before, on the right, those remaining on the left are square perches. E. G. Suppose the length of a rectangular piece of ground to be 792 links, and its breadth 55; to find the area in acres, roods, and perches:

<table>
<thead>
<tr>
<th>Links</th>
<th>Acres</th>
<th>Roods</th>
<th>Perches</th>
</tr>
</thead>
<tbody>
<tr>
<td>792</td>
<td>0.07</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>55</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Add the 3 acres, 0 rood, 7 perches.

To the area of: D A E (Plate 1. Surveying, fig. 1) in a: CHAIN. Measure a small distance from the vertex A along each leg, v. y, to, and e, then measure the distance de; to lay it down, draw A E at pleasure, and from your scale set off the distance measured on it. See Scale.

Then, taking in y or any compass the length measured on the other side, on the vertex A, as a center, describe an arc de; and on the point as a center, with the measured distance of cd, describe another at. Through the
the point where this intersects the former arc, draw a line \( A \) \( D \). So is the angle plotted; and its quantity, if required, may be measured on a line of chords. See CHORD.

To survey a triangular field, \( A \) \( B \) \( C \), (fig. 4.) Having set up marks at the corners, if no natural marks occur; measure with the chain from \( A \) to \( P \), where a perpendicular would fall from the angle \( C \), and set up a mark at \( P \), noting down the distance \( A \) \( P \). Then complete the distance \( A \) \( B \) by measuring from \( P \) to \( B \). Having set down this measure, return to \( P \), and measure the perpendicular \( P \) \( C \).

And thus, having the base and perpendicular, the area is easily found. Or, having the place \( P \) of the perpendicular, the triangle is easily constructed. Or, measure all the three sides with the chain, and note them down; hence the content is easily found, and the figure constructed. Or, again, if two sides \( A \) \( B \), \( A \) \( C \) may be measured, as well as the included angle \( A \); or, one side \( A \) \( B \), and the adjacent angles. \( A \) and \( B \), may be measured; and then the figures may be easily plotted. Then by measuring the perpendicular \( C \) \( P \) on the plan, and multiplying it by half \( A \) \( B \), we shall have the content.

For an example of the application of this problem, let \( A P \) be 791, \( A \) \( B \) 1321, and \( P \) \( C \) 826: Then,

\[
\begin{align*}
1321 \\
826 \\
7916 \\
21642 \\
10568 \\
21091146 \\
543573 \\
+ \\
182292 \\
40 \\
3291685
\end{align*}
\]

Answer. 5 acres, 1 rood, 33 perches nearly.

To measure a four-sided field, \( A \) \( B \) \( C \) \( D \) (fig. 5.) Measure along a diagonal, as \( A \) \( C \), and either of the two perpendiculars \( D \) \( E \), \( B \) \( F \), as in the last problem; or else the sides \( A \) \( B \), \( B \) \( C \), \( C \) \( D \), \( D \) \( A \). From either of which the figure may be plotted, and its contents computed. Otherwise, measure on the longest side the distances \( A \) \( P \), \( A \) \( Q \), \( A \) \( B \), and the perpendiculars \( P \) \( Q \), \( D \). (fig. 6.) Or, measure the diagonal in fig. 5; and the angles \( C \) \( A \) \( B \), \( C \) \( A \) \( D \), \( A \) \( B \), \( A \) \( C \), \( A \) \( D \). Or, measure the four sides, and any one of the angles, as \( B \) \( D \).

Ex. 1. Let \( A \) \( E \) be 214, \( A \) \( F \) 362, \( A \) \( C \) 592, \( D \) \( E \) 216, and \( B \) \( F \) 326. Then,

\[
\begin{align*}
\text{Sum of perpendiculars} & = 592 \\
\text{AC} & = 102.2 \\
\text{EF} & = 46.14 \\
\text{DF} & = 22.86 \\
\text{DE} & = 325472 \\
\text{AC} & = 4 \\
\text{EF} & = 21888 \\
\text{DF} & = 40 \\
\text{DE} & = 875523
\end{align*}
\]

Answer. 3 acres, 0 rood, 81 perches.

Or, in fig. 6. Let \( A \) \( P \) be 110, \( A \) \( Q \) 745, \( A \) \( B \) 1110, \( P \) \( C \) 352, and \( Q \) \( D \) 595. Then,

\[
\begin{align*}
PQ & = 47.45 \\
QP & = 94.7 \\
DQ & = 35.79 \\
\text{Sum of perpendiculars} & = 230.62 \\
\text{AP} & = 110 \\
\text{PQ} & = 69.5 \\
\text{DQ} & = 52.65 \\
\text{Area} & = 178.5
\end{align*}
\]

Answer. 4 acres, 1 rood, 55 perches.

To survey any field by the chain only. Having set up marks at the corners, where necessary, of the proposed field \( A \) \( B \) \( C \) \( D \) \( E \) \( F \) \( G \), (fig. 7.) Form a judgment, by walking over the ground, how it may be divided into triangles and trapeziums; and measure them separately as in the two last problems. In this way it will be proper to divide it into as few separate triangles, and as many trapeziums as may be, by drawing diagonals from corner to corner; and so that all the perpendiculars may fall within the figure. Thus, the figure is divided into the two trapeziums \( A \) \( B \) \( C \) \( G \), \( G \) \( D \) \( E \), and the triangle \( G \) \( C \) \( D \). Then, beginning with the first at \( A \), measure the diagonal \( A \) \( C \), and the two perpendiculars \( G \) \( M \), \( A \) \( N \); then the bafe \( G \) \( C \), and the perpendicular \( D \) \( P \); lastly, the diagonal \( D \) \( F \), and the two perpendiculars \( P \) \( Q \), \( D \) \( G \). All which measures write against the corresponding parts of a rough figure drawn to refer measure the figure to be surveyed, or let them down in any other form at pleasure.

\[
\begin{align*}
\text{Am} & = 135 \\
\text{An} & = 410 \\
\text{AC} & = 550 \\
\text{CG} & = 152 \\
\text{CG} & = 440 \\
\text{FP} & = 206 \\
\text{FP} & = 588 \\
\text{PD} & = 520
\end{align*}
\]

Or thus; measure all the sides \( A \) \( B \), \( B \) \( C \), \( C \) \( D \), \( D \) \( E \), \( E \) \( F \), \( F \) \( G \), and \( G \) \( A \); and the diagonals \( A \) \( C \), \( C \) \( G \), \( G \) \( D \), \( D \) \( F \).

Otherwise; many pieces of land may be very well surveyed, by measuring any base line, either within or without them, together with the perpendicular let fall upon it from every corner of them. For they are then divided into several triangles and trapezoids, all whose parallel sides are perpendicular to the base line; and the sum of these triangles and trapezoids will be equal to the figure proposed, if the base-line fall within it; if not, the sum of the parts which are without being taken from the sum of the whole which are both within and without, will leave the area of the figure proposed. In pieces that are not very large, it will be sufficiently exact to find the points, in the base-line, where the several perpendiculars will fall, by means of the cross.
By the Chain to find the distance between two objects inaccessible in respect of each other. From some place, as C (Fig. 1), whence the common distance to each object, A and B, is accessible in a right line; measure the distance CA, which suppose fifty chains; and continue the line to D, viz. fifty more; measure also BE, which suppose thirty chains; and produce the line to E, viz. thirty more. Thus will be formed the triangle CDE, equal and similar to the triangle ABE; consequently the distance DE, being measured, will give the inaccessible distance required.

By the Chain to find the breadth of a river. On one side, place a pole, tour or five feet high, perpendicularly, having a hit at top, with a bright piece of wire, or the like, two or three inches long, put through the same. This is to be flipped up or down, till, looking along it, you find it point full on the other side of the river; then turning the pole with the wire in the same direction, observe the point on the dry land to which it points when placed along as before; measure the distance from the pole to this last point; it is the breadth of that of the first required.

**Chains, Catenae, in Ecclesiastical History**

In a kind of punishment inflicted on murderers. By Act 25 Geo. II. c. 37, the judge shall direct such to be executed on the next day but one, unless the Sunday intervene; and their bodies to be delivered to the surgeons to be dissected and anatomized; and he may direct them afterwards to be hung in chairs. During the interval between sentence and execution, the prisoner shall be kept alone, and sustained only with bread and water. The judge, however, has power to reverse the execution, and relax the other restraints of the act. Blackft. Com. vol. iv. p. 232.

**Chains, in Ship building**, are those iron by which the shores of the masts are made fast to the chain-wales.

**Chair, Cathedra**, was anciently used for the pulpit, or lectern, whence the prebend spoke to the people. It is still applied to the place whence preachers and regents in universities deliver their lectures, and teach the licences to their pupils: thus, we say, the professor's chair, the doctor's chair, &c.

**Chair, Canoes**, was an ivory seat placed on a car, when in were lected the prime magnificats of Rome, and those to whom the honour of a triumph had been granted.

**Chair, Sedia**, a covered vehicle for carrying a single person supported by two poles, and borne by two men, hence denominated chairmen. They were first introduced in London in 1624, when Sir Sanders Duncombe obtained the sole privilege to use, let, and hire a number of the said covered chairs for 14 years. The first sedan chair, says Hume (Hist. vol. i. p. 163), was seen in England, in the reign of James I., and was used by the duke of Buckingham; to the great indignation of the people, who exclaimed, that he was employing his fellow-creatures to do the service of beasts. In 1694, they were first taxed by act of parliament (5 and 6 W. and M. c. 22): and by 9 Ann. c. 23, § 8. 220 hackney-chairs were licensed, at 10s. per annum; and no person was obliged to pay for a hackney-chair more than the rate allowed by the act for a hackney-coach driven two-thirds of the said distance. By the said act every chair shall have a distinct mark on each side, and altering such mark incurs forfeiture of 5l. half to the former and half to the king. Nor shall any person carry for hire in a hackney chair, without licence, on pain of 40s.

In the following year, by 10 Ann. c. 19. chairs were increased to 300; and by 12 Geo. I. c. 12 to 400, on account of the great increses of buildings to the westward. By 7 Geo. III. c. 44, § 13, a chairman may take for any distance not exceeding one mile, 12d.; for any distance above one mile and not exceeding four furlongs, 16d.; or for every further distance not exceeding four furlongs, 6d.; and by the hour 18d. for the first hour, and 6d. for every half hour after. By 9 Ann. c. 23, a chairman, guilty of obseverence, by demanding more than his fee, or giving abusive language, or otherwise behaving rudely, shall, on conviction on oath forfeit not exceeding 20s. to the poor, or be committed for 7 days to Bridewell or some other house of correction; and by 7 Geo. III. c. 44, the commissioners may revoke his licence, or inflict on him a penalty not exceeding 5l. to the poor; and on non-payment, he shall be committed to hard labour in some house of correction for 30 days. See Hackney-coaches.

**Chair is also applied by the Romanists to certain feasts, held anciently in commemoration of the translation of the see, or feast of the vicarage of Christ, by St. Peter**.
The perforated chair, wherein the new-elected pope is placed, F. Mabillon observes, is to be seen at Rome; but the origin thereof he does not attribute, as is commonly done, to the adventure of pope Joan; but says there is a mystery in it; and it is intended, forsooth, to explain the pious sense of the Scripture, that God draws the poor from out of the dust and mine. 

CHAIRMAN, the president, or speaker of an assembly, company, &c. We say, the chairman of a committee, &c.

CHAISE, a sort of light open chariot, or calesca. See Coaches.

Aurelius Victor relates, that Trajan first introduced the use of post-chaises; but the invention is generally ascribed to Augilius; and was probably only improved by Trajan, and succeeding emperors. Goth. in Cod. Theod. tom. ii. p.506, &c.

CHAISE, Francais de La, in Biography, a distinguished ecclesiastic of France, in the reign of Lewis XIV. was born in the chateau of Aix in 1624, and entered the society of Jefuits at their college of Roanne, where he had been educated. He was employed for several years in teaching the belles-lettres, philosophy, and theology in different colleges of his order, and at length became provincial of the province of Lyons. From hence he was drawn to court, in 1675, by Lewis XIV. to fill the important post of his confessor, for which he possessed many necessary qualifications. As his figure was commanding, his manners polite, and his disposition to luxury and splendour such as suited the taste of Lewis, he acquired a powerful and permanent influence. To him was committed the distribution of benefices; and he maintained an absolute independence of mad. de Maintenon. His jealousy and diffidence with which he regarded him were expressed in her letters; but her unfavourable representations of his temper and character were counteracted by those of the duke of St. Simon, who describes him as mild and moderate, humane and modest, possessed of honour and probity, and though much attached to his family, perfectly disinterested. This panegyrist adds, that he valued himself on his birth, and loved to favour nobility; and this circumstance served to induce a partiality on the part of this nobleman in his favour. Attached to his own order, he promoted its triumph over Jansenism; nevertheless, his treatment of the Jansenists may be reckoned very moderate compared with that of his successor Le Tellier. In his 80th year, sensible of the decline of his faculties, he wished to retire, and with these wishes the Jefuits concurred; but the king would not allow it. Even when he was broken down by infirmities, and had lost his memory, the king, as M. de St. Simon emphatically expresses it, had the care of his confessor brought to him for the purpose of transacting the usual business. He retained this office till his death, at the age of 85, in 1709. He was one of the first members of the Academy of Inscriptions, to which rank he was entitled by his knowledge of medals and of ancient history. Nouv. Dict. Hist. Gen. Diog.

CHAISE, La, or LACHEZ, in Geography, a town of France, in the departement of the North coast, and chief place of a canton in the district of Loudes; 5 miles S.E. of Loudes. The place contains 426 houses, and the canton 1,184 inhabitants; the territory comprehends 212½ kilometres and 7 communes.

CHAISE-DIEU, La, a town of France, in the department of the Upper Loire, and chief place of a canton in the district of Brioude, 13 miles from Brioude, and 18 N.N.W. of Le Puy. The place contains 1,322, and the canton 5,042 inhabitants; the territory comprehends 250 kilometres and 14 communes.

CHAIZE-LE-VICOMTE, La, a town of France, in the department of the Vendée, and district of Montaigu; 5 miles E. of La-Roche-sur-Yon.

CHAUK, a town of Asia, in the country of Chara'm, on the frontiers of the Greater Bucclna.

CHAKEN KAN, a town of Asiatic Turkey, in the province of Caramania; 20 miles N.N.E. of Tarfus.

CHAKENI KOUZLY, a town of Asia, in the kingdom of Candahar; 120 miles E.N.E. of Candahar.

CHALA, a small foot-port of South America, in the Pacific Ocean, near the river Arequipa.

CHALAL, in Ancient Geography, a town of Asia, in Assyria; placed by Isidore de Charus in the Chalonsis.

CHALAMA, a river of Asia, in Syria.

CHALABRE, in Geography, a town of France, in the department of the Aude, and chief place of a canton, in the district of Limoux; 10 miles S.W. of Limoux. The place contains 1,820, and the canton 8,913 inhabitants: the territory includes 205 kilometres, 16 and 16 communes.

CHALACH, in Ancient Geography, the capital of Chalce, near the springs of the river Lyceu. Strabo places the Chalcean in the vicinity of Abydene.

CHALADRA, CHADRA, or GALADRA, a town and marth of Macedonia.

CHALEON, a port of Greece, in the Locris; 7 miles from Delphi, according to Pliny, who ascribes it to the Lacreni-Ozouk.

CHALAIN, or LA FOTHERIE, in Geography, a town of France, in the department of the Mayna and Loire, and district of Segre; 7 leagues N.W. of Angers.

CHALANS, a town of France, in the department of the Charonte, and chief place of a canton, in the district of Bordeaux; 15 miles W. of Anglet. The place contains 38, and the canton 7,728 inhabitants: the territory comprehends 130 kilometres and 16 communes.

CHALAMONT, a town of France, in the department of the Ain, and chief place of a canton, in the district of Trevoux; 4 leagues N.N.E. of Montluçon.

CHALAK, a town of Pefia, in the province of Ge-droia.

CHALAN, a town of Pefia, in the province of Farsilten; 40 miles N.W. of Schiras.

CHALANCO, a town of France, in the department of the Ardèche; 3 leagues N. of Privas.

CHALAPA, in Botany, and the Materia Medica, is a name given to jalap.

CHALAPU, in Geography, a mountain of the Cordillers, in South America; which has, in its neighbourhood, the town of Hambato, and its skirts diversified with beds and farms; but its declivity is very steep. On this mountain the French mathematicians erected one of their signals, in measuring the length of an arc of the meridian.

CHALARONNE, a river of France, which runs into the Sàng, near Tollevy.

CHALASTIC Medicines, are such as have the faculty of relating the parts; when, on account of their extraordinary tenion, or swelling, they occasion pain.

The word comes from gpaun, ή ραυς, relax.

Of this kind are butter, and many oils, &c.

CHALASTICUM, a name of a Materia Medica, given by four writers to the gal phem.

CHALASTRA, in Ancient Geography, a town of Macedon, placed by Blyn, in the Therman Gulf. Herodotus and Strabo call it Chalystra.

CHALAU, or KALAU, in Geography, a town of Luflia; 40 miles S.W. of Frankfort on the Oder.

CHALAUTRE, a town of France, in the department of the Seine and Marne; 2½ leagues E. of Provins.

CHALAZA,
CHALAZA, among Naturalists, a white knotty kind of
flour at each end of an egg, formed of the placenta of the
fibres of the membranes, whereby the yolk and white are
connected together.

Its use, according to Harvey, is to be as it were the poles
of this microcosm, and the connection of all the membranes
twisted and knotted together; whereby the liquors are not only
conferved, each in its place, but also in its due position to
the soul.

Mr. Durham adds, that they also serve to keep one and
the same part of the yolk uppermost, let the egg be turned
which way it will; which is done by the following me-
chanism: the chalaza are specifically heavier than the whites
wherein they swim; and being braced to the membrane of
the yolk, a little out of the axis, they cause one side of the
yolk to be heavier than the other. The yolk being thus
by the chalaza made buoyant, and kept swimming in
the middle of the two whites, is, by its own heavy side,
kept with the same side always uppermost: which uppermost side he
imagines to be that whereon the chalaza lies.

CHALAZA, in Botan. a name given by Gartner to a par-
ticular part of the internal membrane which belongs to
moll seeds. It has the form either of a small deep-coloured spot,
or of a small, pungent, callous tubercle, proceeding from the
extratines of the internal umbilical vessels, or from the dry
remains of the chorion, and appearing on the outer surface of
the membrane. It is found in many, but not in all seeds; and
is situated either near the external umbilicus, or directly
opposite to it. The first situation is not very common, but
exhibits a variety of forms. The chalaza is a black phaeno-
lated spot in cucumis, a thick fleshy excrescence in cyren-
thus, and a small pungent scale in the seeds of bibulous,
lavatera, and other malicious plants. When it is situated,
as most frequently is, opposite to the umbilicus, its form is
always round, with a moderate convexity; as in cistus, me-
robalanus, bixa, protea, flaphilia, alecimilla, and many
other seeds; in all which the deep colour of the chalaza, and
the close connection with the internal membrane, are clearly
discriminable. See Gartner de Fructibus, vol. i. introd.
p. 135.

CHALAZIAS, or CHALAZITES, in Natural History,
the name of a small fly, described by Pliny and other an-
tic writers, and said to have been of the size and colour of
a common hair-fly, and of the hardness of the diamond. It
was probably no other than the small phallic crystallall of the
Indus, which are at this time frequent on the shores of rivers
there, from the bigness of a large pin's head to that of a p.s.
as they lie in great clusters together, without any other
flies among them, they make a sort of coarse food, which
much resembles a cluster of hair-flies.

CHALCA, in Ancient Geography, a town of Africa,
according to Strabo.

CHALCANTHUM, in Natural History. This term,
together with chalcis, chalybe, and fury, was applied by the
ancients, without much scientific determination, to signify
iron and copper pyrites in a date of greater or less decom-
position, and therefore approaching more or less to
native vitrification. See Iron sulphate.

CHALCA, in Friesbus, the name with vitrification.

Some have and old tradition, contrary to colonists,
or virile red-faces.

CHALCANTHUM, in the Native Metals, a name
given by some of the old Greeks to the selenite, a
yellowish vitrified earth, which turned black on being
wrought with common iron.

CHALCA, in Automatic Geography, an ancient town of
Africa, in Libya, according to Steph. Byz.—Also, a town
placed by this geographer in Phocis.—Also, a town
situate in the territory of Larissa.—Also, an island of the
Mediterranean, on the coast of Asia Minor, near Rhodes,
according to Pliny; called also Chalca.

CHALCEA, a town of Asia, in Caria.

CHALCEDON, or CHALCEDON, in Ancient Geography,
a famous city of Bithynia, situated on the Bosphorus,
and built, as it is laid, by the inhabitants of Megara, some
years before Byzantium. It was anciently known by the
names of Procerallis and Calciana. It was taken by the
Athens in 405 B.C.; and 74 years before the same
year, it was besieged by the Romans, king of Pontus, but
surrendered by the general Lucullus. The emperor
Julian repaired it, and gave it its own name. It afterwards
came to be very powerful. Pliny, Strabo, and Tacitus call it
the „City of the Blind„; alluding to the answer which
the Pythian Apollo gave to the founders of Byzantium,
who, consulting the oracle in relation to a place where
to build a city, were directed to choose that spot which lay
opposite to „the habitation of the blind,“ that is, as it
was then understood, to Chalcedon: the Chalcedonians
discovered that spirit for having built their city on a barren
and sandy soil, without perceiving that advantageous and
pleasant spot on the opposite shore, which the Byzantines
afterwards chose. The emperor Julian erected a tribunal in
this city, for trying and punishing the evil counsellors of his
second successor Constantine. In the suburb of this city, was
named the „Oak,“ of Rufus, the infamous minister of the
emperor Theodosius, built a magnificent villa to which he
added a fluted column, consecrated to the goddess St. Peter
and St. Paul, and continually sanctified by the prayers
and penance of a regular society of monks. A numerous
d and almost general sympathy of the bishops of the Eastern
empire was fomented to celebrate, at the same time, the
dedication of the church and the baptism of the founder; and
this double ceremony was performed with extraordinary pomp.
Chalcedon became famous in Christian times for the council
held there in 451 against Eutyches, which is reckoned the
fourth general or ecumenical council. At this council
Eutyches, who had been already banished, and d proved
by the emperor of his factotum duality, was convicted, though
absent; and the following doctrine was anathematized
among Christians as the object of faith, viz. „that in Christ
two distinct natures were united in one person, and that
without any change, mixture, or confusion. („The emperor
Valens carried the walls of this city to be levelled with the
ground, for hiding with Preospus, and the materials to be conveyed
to Constantinople, where they were employed in constructing
the famous Valentinian aqueduct. This city was taken
after a long siege, A.D. 615, by Chosroes II. king of
Peria. Chalcedon is at present a poor place, known to the
Greeks by its ancient name, and to the Turks by that of
Chalke, and Kadi-keri, or the Judges-town.

CHALCEDONIUS, the name of a medicine described
by Galen; and esteemed by him to be injected into the ears,
in intermittent disorders of that part.

CHALCE, in the Gipsy Trade. See Glass-
cracker.

CHALCE, in Natural History. Of this mineral there
are the two following sub-species:—
1. Chalcis a Chalce, its colour is blue-black, passing
into milky-white and faint blue; also green-grey, passing
into apple and olive-green; or yellowish grey, passing into
wax and umber-yellow, yellowish and black-brown, and
brownish-black. Two or more of these colours are often
found in the same specimen, of which one generally forms
the
the ground, while the others are distributed over its surface in dots, clouds, or stripes. When white and yellowish-brown stripes alternate with each other, the stone is called an *onyx*, and is highly esteemed by the lapidaries. The grey varieties, with thick prismatic distinct concretions, when tranverse cut, present iridescent colours when held to the light, and have hence been named *rainbow chalcedony*. The translucent milk-white variety is called *cacholong*. The green and small-blue varieties are the rarest: the dark coloured ones, when cut thin and held to a strong light, appear blood-red.

It is found massive, or forming veins, or in round balls of various sizes called *geodes*; also kidney-shaped, botryoidal, stalactitic, mamillated, and imbricated by various organized bodies, such as tuerntanits, &c. Certain crystal-line forms, especially those of quartz, have all been attributed to chalcedony; but those appear to be nothing more than crystals of quartz coated over with chalcedony. It puffs little or no lustre; its fracture is perfectly even, passing into fine-spintery and flat-conchoidal; it breaks into indeterminate sharp-edged fragments; it frequently exhibits concentric, lamellar, or angular distinct concretions; it is commonly semi-transparent, but the darker-coloured varieties are only translucent; it is somewhat harder than flint, and much less brittle. Sp. gr. 2.58 to 2.65. It is insubfible per os before the blow-pipe, but becomes milk-white and opaque. According to Bergman, the chalcedony from Ferroe consists of


84 Silex.
16 Alumine and a little iron.

105

It occurs in veins and geodes in amygadaloid; also in veins, accompanied by quartz, pyrites, &c. in porphyry.

It was anciently procured from Chalcedon, in Lesser Asia (where its name); but at present it is found principally in Saxony, Hungary, Iceland, Scotland, and the adjacent islands, Cornwall, and various parts of Asiatic Rhufl.

2. Cornelian. The usual colour of this mineral is blood-red, whence it puffs into flesh-red, reddish white, milk-white, orange and honey-yellow. Two or more colours often occur in the same specimen, disposed in zones, stripes, and arborizations. It occurs in veins and rounded pieces, has a conchoidal fracture, and a flight degree of lustre: in other respects it agrees with the common chalcedony. The variety with alternate red and white stripes is called *fai-donys*.

Cornelian is found in various parts of Europe; but the most beautiful and valuable pieces are brought from Arabia, and Swat, and Cambay in India. Cornelion, from its beauty and hardness, has always been much sought after by lapidaries. Some of the finest antique cameos are made of it.

The coloured chalcedonies pass into *agate*, which see.

CHALCEPolON, in Antiquity, a ship, the rostrum of which was of bras.

The word is compounded of *xalos*, *breis*, and *rothtron*.

CHALCEPOS, in Botany, Dalech. See ECHINOPS &ca.

CHALCEOII!ES, in Ancient Geography, a name given by Strabo to a place of Asia Minor, in Caria.

CHALCECTORIUM, a town of the island of Crete. Steph. Byz.

CHALCIDENE, an inland province of Syria, bounded by Antiochene or Sclerens, on the west; Cyrhlicia, on the north; Chalybontis, on the east; and by Apamene and Cilcica, on the south. It took its name from its metropolis *Chalei*.

This was reckoned one of the most fruitful provinces of Syria, and was taxed by Ptolemy, the son of Menareus, during the troubles of Syria, and by him made a separate kingdom. Ptolemy *Hypaethros* is flyed by Josephus and Hcgelippus only prince of Chaleis; but his son Lyosias is honoured both by Josephus and Dio with the title of king.

CHALCIDENSES, a people of Asia Minor, placed by Strabo in Ionia.—Alfo, a people situate, according to *Diadochos* Secules, about the river *Pialins*.—Alfo, a people of Threes, in the country where were situated the towns of Tinda and Milcorous. They are mentioned by Ammochus and Thucydides.

CHALCIDIC, CHALCIDICUM, or CHALCIDONIUM, in the Ancient Architecture, a large magnificent hall belonging to a tribunal or court of justice.

Celtus says, it took its name from the city Chaleis; but he does not give the reason. Philander will have it to be the court, or tribunal, where affairs of money and coinage were regulated; so called from *xalos*, *breis*, and *reis*, justice. Others say, the money was struck in it; and derive the word from *xalos*, *breis*, and *reis*, justice.

In Vitruvius, it is used for the auditorium of a basilica; in other of the ancient writers, for a hall, or apartment, where the heathens imagined their gods to eat.

CHALCIDICA LACERTA, in Zooloay, a reptile described as a sort of serpent, and so called from its resemblance in colour to the chalcedony. Its bite is succeeded, they tell us, by a pellucid tumour, which has a shining blackness at the margin; and drank in wine, it cures its own bite, according to Paulus *Egineta*. This animal is no other than the *Lacerta Chalicides* of Linnaeus, which see.

CHALCIDIC, or CHALCITIS, in Ancient Geography, a country of Macedonia, according to Ptolemy, who comprehended the mountains S. E. of Apollonia, and the two peninsulas which lay between the Toronic, Singite, and Byrnomne gulfs. In this country was the famous mount *Axios*, which see. Ptolemy reckoned in this country only five cities; but Scalts fays, that Philip took here 32 towns. Among these we may mention *Aguss*, *Singus*, *Chaleis*, and *Ecanthus*, now Ethio.

CHALCIDICUM, in Antiquity, sometimes denoted a chamber, see CHALCIDIC.

CHALCIDICUS MANI, in Ancient Geography, a mountain of S. Lily, according to P Plius and Steph. Byz.

CHALCIDIUS, in Biography, a Platonic philosopher, concerning whose whole life and character writers have entertained different opinions. Some have supposed that he was deacon or arch-deacon in the church of Cartings; others thought he was an heathen. According to Hoby he was a Gentle, well acquainted with Carolian writings. BRondsbai calls him a Christian philosopher, and says, that he joined Christianity with Platonism. Cave is doubtful whether he was a Gentle or a Christian. Fabricius represents him as a Christian writer of the fourth century; but Molcheses supposes. Dr. Lardens urges some difficulties; such as his veneration to approve of the divinations of *Cau- tidium*, and allowing them to be of use for discovering future events. He quotes Moses as a wise man, but seems to express a doubt whether he professed divine inspiration, as well as human knowledge. Upon the whole, his manner of
writing does not clearly show whether his religion was Christianity or Gentilism. Lardner, with his usual modesty, inclines to the opinion that he was a polite Platonic philosopher, who wished to be upon good terms with Christians, whose religion prevailed at that time; and he supposes with Cave, that he flourished about the year 332. Chalcedon translated into Latin the former part of the Timaeus of Plato, and added a prolix commentary, in which he shows much learning and good skill in the sentiments of the ancient philo-sophers. This work is ascribed to Oribas, or Hlorus, supposed to be the bishop of Corduba in Spain, and a principal member of the council of Nice in 325. He refers to the history of St.Matthew (chap. n. 1) and whether he was a Christian or a heathen, this passage is a valuable testimony to St. Matthew's gospel, and to the history which he wrote. If the comments by he considered as the work of a Gentile philosopher, the several quotations of the Old Testaments and of the New that occur in it afford proof that the Scriptures were then well known in the world. Lardner thinks with Cave, that the style of the paragraph which he has cited, is that of a Gentile, not of a Christian writer. Lardner's Works, vol. viii. c. 45. Cave, Hist, vol. i. p. 192.

CHALCIS. Ancient Geography, a town of Greece, and reckoned the capital of Euboea, was built in the western part on a small peninsula, which seemed to join the mainland. The name of Chalcis, which was common to the island of Euboea, and its capital, Stephanus derives from the daughter of Aephus, king of Boreas; called Combe, and turns named Chalcis, from her having first invented brazen armour; whence Pliny deduces it from a Greek word Xacterial, signifying brazen or copper, which he supposes to have been first used here. The Chalcedians, in their better days, were renowned for their skill in navigation; but they were very generally reproached, on account of the ill-treatment of their masters; and their avarice was a topic of ridicule among the ancient Armenians. They sent colonies into Thrace, Macedonia, Sicily, the island of Coreia, Lemnos, Italy, &c. See EUBOE. Chalcis was one of the three cities which Philip, son of Demetrius, called the three cities of Greece. Strabo says, that it was joined to the continent of Boeotia, and Pliny thought that Euboea was united with the continent by this place, which is not improbable. The small strait which separates the island from the continent is called Euripus, and by the modern Greeks Euripos, whence by corruption is derived Eryipos, the name given to the island.

CHALCIS, a town of Macedonia in Chalcidice. It was situated between Olynthus, the Singitic gulf, and Apollonia. Thucydides and Steph. Byz. refer it to Thrace, because the boundaries of this country were sometimes changed.

CHALCIS, a mountain of Greece, in Aetolia, according to Strabo, who says, that it extended along the eastern bank of the Evus, from the mouth of this river to the northern extremity of Aetolia.

CHALCIS, a town of Greece, in Aetolia, situated on the fore-mentioned mountain. — Alfo, a town of Greece, in Boeotia, according to Hesychius. — Alfo, a river of Greece, in the Peloponnesus, which, according to Strabo, ran to the confines of Triphylia and the Epirite territory, near Samcus. — Alfo, a river of Acha Minor in Bithynia, which watered the city of Chaledon, and discharged itself into the Thracian Bosphorus. — Alfo, a mart the bough, with a port, in Acha Minor, upon the southern coast of Ionia, N. of the isle of Samos, and near Teos. — Alfo, one of the islands called Echinades, which were Grecian islands on the coast of Aetolia. — Alfo, a town of Acha, in Syria; seated on the northern bank of a lake, whence springs the river Chalees, and which gave its name Chalcedon to the country. The Notitia of Herodotus distinguishes it as an episcopal city of Syria Prima, and the Itinerary of Antwine places it W. of Bebus. — Alfo, a town of Arabia Felix, which Pliny says was founded by the Greeks, but destroyed by the war. — Alfo, a town of Scythia, mentioned by Steph. Byz.

CHALCIS, in Entomology, a genus of Hydrometopid insects established by Fabricius, and included by Gmelin in the Linnean arrangement between the Tiphia and Cheiris. The genus Chalcis contains, with the exception of one, or, at most, two species, of insects discovered since the time of Linnaeus, and which cannot, with propriety, be reduced to any of the Linnaean genera. It approaches both the Sphex and Velutus tribe; it is to the Velus Linnaeus refers Chalcis minutus of Fabr., and if the insect described in his Fauna Suecia, n. 1557, be the Chalcis Sipser, it is commonly believed, the latter being in his genus Sphex. The Fabrician character of the genus Chalcis is Palpif quatus quatuor: Antennae breves, cylindricae, fere solitariae; articulis primo subturbinatis. Fabr. Ent. Syrl. This following generic character after the Lacertian method is proposed for Chalcis, in the eleventh volume of the Natural History of British Insects. Mouth with a horny, compressed, and sometimes elongated jaw; feelers four, equal; antennae cylin- drical, uniform, frst joint rather thickened; thorax gibbous, lengthened behind, and obtuse; abdomen small, rounded, and subfusiform; posterior thighs thickish. Donov. v. 14. p. 57: t. 379.

Species.


Obf. The posterior thighs are elevated, and toothed, of a yellow colour, and marked with a large spot of black on both the female simple.


Size of the boll; colour black and glossy, except the posterior thighs. According to Hybner this insect inhabits Saxony; it has been taken rarely in England. Latreille, who describes it under the name of Chalcis elavipede, mentions it as a scarce insect in France.

Chalcis minuta. Black; posterior thighs thick, and yellow at the tip. Fabr. Vespa minuta, astra geniculata pedum lutea, femoribus posticis ovatis furibus multicristis,inct.

This species is small, and has the posterior thighs serrated, and thicks incurved, yellow, and tipped with black. Fabricius describes this as a German insect. Latreille informs us it is not uncommon in France, in the vicinity of Paris, and it may be considered, we believe, as a native of this country.


This kind inhabits the South American islands. The thorax is yellow, with black spots; the abdomen somewhat petiolate, yellow, tipped with black; posterior thighs with a black dot at the base and tip; wings white, and without spots.

Chalcis opiformis. Cineereous; abdomen black; posteri
tor's legs thick, telfacous, with a tooth at the base of the foot. Fabr.

Native country unknown. Derived from the collection of Land. The antennae are black, with ferruginous base; head villous and cinereous; lip rounded, yellow, with a black streak; thorax cinereous; abdomen black; wings white.

Chalcis pedegrica. Black; posterior thighs thick, ferrated, and ferruginous, with a white spot at the tip. Fabr.

Inhabits Tranquebar. Small; antennae short and thick; head and thorax black, with a callous dot before the wings; abdomen short, rather compressed, black and without spots; legs white; thighs black; posterior pair, with a large white spot above; the flanks incurred, white, and in the middle black.


This is a native of Italy. The size is small, and the colour entirely black, except the white wings; posterior thighs very thick.

Chalcis psylla. Glossy black; posterior thighs thick, with a white spot at the tip. Fabr. Refurns the habit, but is only half the size. Inhabits Saxony. Hylac natur.

Chalcis annulata. Black; posterior thighs thick and dowered, with a white spot at the tip; thanks white, fringed with black. Fabr.

Inhabits South America, and appears, from the account of Dr. Plag, to be of the parasitic kind like the Ichneumon, being found in the pupa of moths. It may be added, that as we are unacquainted with the Chalcis tribe in general, except in the winged state, the whole of them may be of the parasitic kind, depositing their eggs, and being nourished in the larve state in the bodies of other insects. The size of Chalcis annulata is the same as the preceding; the head and antennae are black; thorax somewhat villous, black, with a brownish white dot before the wings; abdomen conic, smooth, and without spots; wings white; thighs of the posterior legs thick; flank incurved.

Chalcis flavipes. Black; posterior thighs thick, ferrated, with a yellow spot at the tip; legs yellow. Fabr.

Described from the cabinet of Dr. Plag as a native of the South American islands. Refurns the habit in size and appearance. The head is black; thorax dotted, with a yellow callous dot before the wings; abdomen conic, black, and glossy; wings hyaline; legs yellow; thighs black at the base.

Chalcis maculata. Yellow, spotted with black; segments of the abdomen ferruginous at the base; posterior thighs elevated and immaculate. Fabr. Rohr.

Inhabits Ceylon. The body is small; antennae short, black, the fric joint telfacous; head yellow, with a central black line, and four vertical black dots; thorax yellow, anterior spot, dorsal line, and dot on each side black; legs yellow; thighs black at the base; posterior thighs ferrated.

Chalcis, in Ichthyology, a name by which some have called the pikehead; called by others celebiris, and Apa membros. See Ctenophorus piccas.

Chalcis was also the name given by Aristotle, Aelian, Appian, and other Greek authors, to the common herring. See Ctenophorus barbus.

Chalcitaceum, in the Materia Medica of the Ancients, a name given by the Greeks of the middle ages to the Calestuar, or Caleathum. Some have applied it to the Chalcites alone, but others make it express the vitrius in general. It is derived from the Arabian word caleathur.
CHALCOPITHONGUS, in Natural History, a word used by Pliny, and other writers, as the name of a peculiar species of marble, which was very hard, and of a deep black colour, and when broken, formed like braze.

CHALCORYCHIAN MOUNTAINS of Ptolemy, are mountains of Africa, in that part of Mauritania Cæsariensis, which belonged to the Tingitanians or Western Moors, between the rivers Dardus and the river Malva or Mollos. They were inhabited by the ancient Herpitiadani, and now by a tribe of Kabyles, called Beni-zenei Tel.

CHALCOS, in Coinage, a coin of braze, eight of which were contained in the silver obolus, and supposed to have been the first kind of Greek coin. At first it was regarded as of so little moment that it afforded occasion for a proverb; so that to lay a thing was not worth a chalcos, was the same with saying that it was worth nothing. As the Greeks became poorer, however, even this diminutive coin was subdivided into 2, 4, or even 8 lepta or small coins. Pollux, and Suidas after him, tell us, that there were seven lepta to one chalcos; but this kind of division, from the insufficiency of seven for proportional subdivision, is not likely to have occurred. But both these writers are too late as authorities: Pliny says that there were to chalces to the obolus, Diodorus that there were six, and Isidorus that there were four; and as these writers differ about the larger denomination, it may well be imagined that the smaller equally varied in different states. Most of the Greek copper coins which are now existing confound of chalcos; the lepta being small, and more liable to be lost. All the braze coins of Athens published by Dr. Coombe are reducible to four fives, which may be the lepton, dilepton, tetradrachm, or demichalcos, and chalcos. The first is not above the size of one of king James I.'s farthing tokens; the last about that of our common farthing. See Money.

CHALCOSMARAGDUS. Almost evergreen mineral of a saphire colour was called by the ancient Naturalists Chalcosmaragdus. The chalcosmaragdus or copper emerald was found in the copper mines of Cyprus, and therefore was probably some spar tinged green by carbonat of copper.

CHALCITOS, Los, in Geography, a town of New America, in the country of Mexico, and province of Zacatane.

CHALCUS, in Idulbyege; a name given by the ancient Greeks to the fish we call Doris, John Doriæ, or Doræ. It seems to have obtained both these names from its colour; the one from the word chalcos, braze; and the other from doræ, guided. See ZEUS fulcrum.

Chalces, among the Ancient Greek Physicians, a weight of about two grains, the same as scruta or arcalem.

CHALDAE, in Ancient Geography, an appellation at first and generally used as synonymous with Babylon, which feé. But in process of time, it was restricted to the country, that was situated to the S.W. of Babylonia towards the Persian gulf, and towards the S. of the Euphrates. In Chaldea, properly so called, Ptolemy places the cities Spunda, Batrahanta, Shatalia, Altha, and Teridona, all on the Tigris; in the inland country he enumerates Chudua, Chumana, Bethana, Orcbic, Biramba, and several others, equally unknown.

CHALDÆANS, a name never given by Xenophon in his Retreat of the Ten Thousand, nor in his Cyropædia, to the people of Babylonia; but it properly belonged to a family or tribe of people who from their infancy devoted themselves to the study of nature, to the observation of the stars, and to the worship of the gods, much after the same manner with the Magi of Persia and the Brahmins of India. The Chaldæans or Chaldaeans, properly so called, were the priests and learned men of Babylonia, whose whole science seems to have been subservient to the purposes of superstition. These Chaldæans were, perhaps, more distinguished from the people than the clergy are from the laity with us; and were as much revered in their country, as the Egyptian priests were in theirs; and they are said to have enjoyed the same privileges. See CHALDAEAN PHILOSOPHY.

Xenophon (ubi supra) gives also the same name of Chaldæans to the people who inhabited that branch of mount Caucasus, where the Tigris, the Euphrates, the Araxes, and the Cyrus had their source. These people are denominated Chalybes in the geography of Herodotus, and he places the Chaldæans in Babylon. Strabo says (ib. x. and xi.) that the people anciently called Chalybes were, in his time, named Chaldæans; and the emperor Constantine Porphyrogenitus, who calls the provinces by the name of the people who inhabited them, gives that of Chalda to the country, of which Trebizond was the capital, and which extended very far to the south and to the east of this city, comprehending a great part of the two Armenias. He adds that this name was derived from the Persians. Strabo describes the Chaldæans as a people almost savage, who dwelt in the mountains of Colchis.

The Chaldæans, says the learned Bayart, (Observ. and Inq. p. 253.) were the most ancient inhabitants of the country called by their name; nor are there any other principals, to whom we may refer their original. They seem to have been the most early constituted, and settled, of any people upon earth; and from their situation, and from every other circumstance, it appears, that Chus was the head of their family, and Nimrod their first king. They seem, he says, to have been the only people, that did not migrate at the general dispersion; and the centre of their province was at Ur, not far from the confluence of the Tigris and Euphrates. From hence they extended themselves under the names of Cufcans and Arabians, as far as Egypt, and as far as Ethiopia. Upon the Gambia is the king of Bushali, of African extraction, as are all the Phoebus natives; who retain their original language, and are of the religion of Mahomet.

CHALDAEAN PHILOSOPHY claims attention on account of its very high antiquity. The most ancient people, next to the Hebrews, among the Eastern nations, who appear to have been acquainted with philosophy, in its more general sense, were the Chaldæans; for though the Egyptians have pretended that the Chaldæans were an Egyptian colony, and that they derived their learning from Egypt, there is reason to believe, that the kingdom of Babylon, of which Chaldæa was a part, flourished before the Egyptian monarchy; and that the Egyptians were rather indebted to the Chaldæans than the Chaldæans to the Egyptians. Nevertheless, the accounts that have been transmitted to us,
CHALDÆAN PHILOSOPHY.

by the Chaldæans themselves, of the antiquity of their learning, are blended with fable and involved in considerable uncertainty. At the time when Callisthenes was requested by Ariosto to give information concerning the origin of science in Chaldaea, he was informed that the ancients of the Chaldæans had continued their astronomical observations through a period of 470,000 years; but upon examining the grounds of this report, he found that the Chaldæan observations reached no farther backward than 1603 years, or that of course (adding this number to 331 B.C., the year in which Babylon was taken by Alexander) they had commenced in the year 2234 B.C. Besides, Polonomy mentions no Chaldæan observations prior to the era of Nabonassar, which commenced 747 years B.C. Ariosto, however, on the credit of the most ancient records, speaks of the Chaldæan Magi as prior to the Egyptian philosophers, who, it is well known, cultivated learning before the time of Moses. There are other circumstances, independently of the antiquity of the Chaldæan philosophy, which render our knowledge of it imperfect and uncertain. We derive our acquaintance with it from other nations, and principally from the Greeks, whose vanity led them to fable and misrepresent the pretended learning of barbarous nations. The Chaldæans also adopted a symbolical mode of instruction, and transmitted their doctrines to posterity under a veil of obscurity, which it is easy to remove. To all which we may add, that about the commencement of the Christian era, a race of philosophers sprang up, who, with a view of gaining credit to their own wild and extravagant doctrines, passed them upon the world as the ancient wisdom of the Chaldæans and Periæans, in fabulous books, which they ascribed to Zoroaster, or some other eastern philosopher. Thus, the fictions of these impious authors were confounded with the genuine dogmas of the ancient oriental nations. Notwithstanding these causes of uncertainty, which perplex the researches of modern investigators into the distinguishing doctrines and character of the Chaldæan philosophy; it appears probable, that the philosophers of Chaldaea were the priests of the Babylonian nation, who instructed the people in the principles of religion, interpreted its laws, and conducted its ceremonies. Their character was similar to that of the Persian Magi, and they are often confounded with them by the Greek historians. Like the priests in most other nations, they employed religion in subservience to the ruling powers, and made use of imposture to serve the purposes of civil policy. Accordingly Diodorus Siculus relates, (ib. ii. p. 31, compared with Dan. ii. 1, &c. Eccles. xiv. 5.), that they pretended to predict future events by divination, to explain prodigies, and interpret dreams, and to avert evils, or confer benefits, by means of angury and incantations. For many ages, they retained a principal place among diviners. In the reign of Marcus Antoninus, when the emperor and his army, who were perishing with thirst, were suddenly relieved by a shower, the prodigy was ascribed to the power and skill of the Chaldæan footsowers. Thus accredited for their miraculous powers, they maintained their confluence in the courts of princes. The principal instrument, which they employed in support of their superstition, was astrology. The Chaldæans were probably the first people who made regular observations upon the heavenly bodies (Cic. de Divin. l. i. Strabo l. xvi.), and hence the appellation of Chaldæan became afterwards synonymous with that of Astronomer. Nevertheless all their observations were applied to the sole purpose of establishing the credit of judicial astrology; and they employed their pretended skill in this art, in calculating nativities, foretelling the weather, predicting good and bad fortune, and other practices usual with impostors of this class. (Sext. Emp. adv. Math. l. v. § 2. Aul. Gell. l. xiv. S. 1. Strabo, l. 5.) While they taught the vulgar that all human affairs are influenced by the stars, and professed to be acquainted with the nature and laws of their influence, and consequently to possess a power of prying into futurity, they encouraged such idle supposition, and many fraudulent practices. Hence other professors of these misleading arts were afterwards called Chaldæans, and the sects themselves were called Babylonian arts. Among the Romans these impostors were to troublesome, that, during the time of the republic, it became necessary to inflict an edict, requiring the Chaldæans, or mathematicians (by which latter appellation they were commonly known) to depart from Rome and Italy within 10 days, and, afterwards, under the emperors, these footsowers were put under the most severe interdiction. (Valer. Max. l. i. c. 3. Diod. Sic. l. xvii. p. 622. Sexton in Tiber.)

We may further add, that the Chaldæan philosophy confided, not in a free and diligent examination of the nature of things, but merely in the transmission of certain settled opinions from father to son. To this purpose Diodorus Siculus, (l. i. p. 31) deviating widely from the character of a true philosopher, commends the Chaldæans for having taken up their opinions upon the authority of their ancestors, and says, "that in this respect, they acted much more wisely than the Greeks, who, adding themselves to disputations, were ever ready to embrace new opinions; and thus obliged their disciples to wander through their whole lives in perpetual uncertainty." Accordingly, the mysteries of Chaldæan philosophy were revealed only to a select few, and judiciously concealed from the multitude; and thus a veil of sanctity was cast over their doctrine, so that it might more easily be employed in the support of civil and religious tyranny. Another circumstance which contributed to produce the same effect, was the care taken by the Chaldæan priests to prevent the spreading of religious and philosophical knowledge among the people; and with this view they confined the diffusion of it to a certain tribe and district. They also issued their dogmas under the disguise of symbols; thus referring to themselves the prerogative of varying the popular system according to the exigencies of the times, or the pleasure of the ruling powers, without danger of detection. The implicit credit which the Chaldæan priests obtained among the people by these devices is particularly noticed by Juvenal: (Sat. vi. 552.)

"Chaldæis ped major erit fiducia, &c.

"More credit, yet, is to Chaldæans given;
What they foretell, is deemed the voice of heaven.
Their answers as from Hammon’s altar come;
Since now the Delphian oracles are dumb.
And mankind ignorant of future fate,
Believe what fond astrologers relate.”

DREYDEN.

From the above account of the Chaldæans, it must appear, that they had but a very slight title to the appellation of wise men; and that, instead of ranking with philosophers, they belonged to the class of impostors. The knowledge they professed was applied to them by the purposes of superition; and little regard is due to the encomium passed upon this race of sages by some ancient writers, particularly Philo (De Nomin. Mutat. oper. p. 104/6.); and still less to the general admiration, which, at a very early period, they obtained in the east. Among the Chaldæans, however, there was some variety of opinions. We learn from the authority of Strabo (l. vi. p. 509.) and Pliny (Hist. Nat. l. vi. c. 16.) which is confirmed by the testimony of the Jewish prophets, that there were in Assyria and Chaldaea, different schools or sects, which probably differed from each other chiefly in the mode of
of practising the arts of divination and astrology; and whose knowledge of nature extended further than to the discovery of the supposed magical use of certain natural bodies, particularly minerals and herbs. (Plin. Hist. Nat. i. xxxvii. c. 10.) Moreover, the tenets or institutions of each sect, whatever they might be, were transmitted implicitly from father to son; and the followers of one sect very rarely revolted to another.

Among the ancients it is universally acknowledged, that Zoroaster was the founder of the Chaldaian philosophy. But much confusion and contradiction have occurred in the accounts that are given of this celebrated person. See Zoroaster. It is probable, that besides Zoroaster, who was a Peripato-Median, and who flourished in the time of Darius Hyblaphes, there was another of the same name who lived in a much more remote period among the Babylonians, probably towards the beginning of the Babylonian empire; who taught them astronomy, and who was the father of Chaldaian astrology and magic. (Plin. H. N. i. vi. c. 16; xi. 43.; xxx. i. Julii, l. i. c. 2. Recognitions Clementis, l. iv. c. 27.) The Chaldaian magic was, indeed, a very different thing from a knowledge of the real properties of bodies; and, though some acquaintance with the motions of the heavenly bodies was necessary for astrological calculations, it cannot be inferred, either from their magical or astrological arts, that the Chaldeans were eminent masters in any branch of natural science. All the writings, which have been ascribed to the Chaldaian Zoroaster, are unquestionably spurious.

Among the Chaldaian philosophers we may mention Belus, who professed the study of astronomy among the Assyrians, probably with a design of applying their faith in astrological predictions to political purposes, to whose memory Semiramis is said to have erected a lofty tower used afterwards by the Chaldeans as an astronomical observatory, and elevated after his death to the rank of divinities. (See Belus). See also Berossus.

The Chaldaian philosophy, notwithstanding the obscurity that has rendered it difficult of research, has been highly extolled, not only by the Orientalists and Greeks, but by Jewish and Christian writers: but upon recurring to authorities that are unquestionable, there seems to be little or nothing in this branch of the Barabian philosophy which deserves notice. The following brief detail will include the most interesting particulars: From the testimony of Dionysius, and also from other ancient authorities, collected by Eusebius (Prep. Evang. l. iv. c. 5.) it appears, that the Chaldeans believed in God, the lord and parent of all, by whose Providence the world is governed. From this principle sprung their religious rites, the immediate object of which was a supposed race of spiritual beings or demons, whose existence could not have been imagined, without first conceiving the idea of a Supreme Being, the source of all intelligence. The belief of a Supreme Deity, the fountain of all the divinities which were supposed to preclude over the several parts of the material world, was the true origin of all religious worship, however idolatrous, not excepting even that which consisted in paying divine honours to the memory of dead men. Besides the Supreme Being, the Chaldeans supposed spiritual beings to exist, of several orders: gods, demons, heroes: these they probably distributed into subordinae classes, agreeably to their practice of theology or magic. The Chaldeans, in common with the eastern nations in general, admitted the existence of certain evil spirits, clothed in a vehicle of greater matter; and in fulminating or counteracting these, they placed a great part of the efficacy of their religious incantations. (Plut. de Defectu Orac.)

These doctrines were the mysteries of the Chaldaian religion, imparted only to the initiated. Their popular religion consisted in the worship of the sun, moon, planets, and stars, as divinities, after the general practice of the calf. (Job, xxxii. 27.; Dio. Sic. v. 24.) Herod. i. c. 185.; Synes. de Dio. Syr. Pref. c. 3.) From the religious system of the Chaldeans were derived two arts, for which they have long been celebrated, viz. magic and astronomy. Their magic, which should not be confounded with witchcraft, or a supposed intercourse with evil spirits, consisted in the performance of certain religious ceremonies or incantations, which were supposed, by the interposition of good demons, to produce supernatural effects. This astrology was founded upon the chimerical principle, that the stars have an influence, either beneficial or malignant, upon the affairs of men, which may be discovered, and made the certain ground of prediction, in particular cases: and the whole art consisted in applying astronomical observations to this fanciful purpose, and thus imposing upon the credulity of the vulgar. (See Sext. Emp. adv. Math. i. v. p. 159. Dio. Sic. ii. p. 8.) Manilius, l. iv. v. 435. Janulb. de Myer. v. 8. c. 4. Fabr. Bib. Græc. v. v. p. 494. Velleius de Theolog. Gent. l. ii. c. 47.) Upon this supposition, Horace (lib. ii. od. xi. 1.) makes the following favorable reflection:

"Tu ne quaeris (faire nefas) quem mibi, quem tibi
Finem Dom deederint, Lenormand, ne Babylomnos
Tentaris numeros. At melius, quediquid ess, pati."

"All not—'tis impious to inquire—what date
The limit of your life is fixed by fate;
Nor vastly Babylonian numbers try;
But yield the true, to live or die."

The Chaldeans, whilst they were occupied in these and other arts of divination, contributed very little to the promotion of true science. We have scarcely any remains of their astronomical observations and opinions. The lore, related to the latter, is not much to be regretted, as far as we may judge by the following speciments.

According to Plutarch and Vitruvius, who quote Berossus, it was their opinion, that an eclipse of the moon happened, when that part of its body which is delusive of fire returned towards the earth. (Plut. de Pil. Phil. l. i. c. 28. Comp. Eueph. Prep. l. 35. c. 51. Vitruv. l. ix. c. 4.) From the same authority Seneque (Quadr. Nat. l. iii. c. 59.) gives it as a doctrine of the Chaldeans, that when all the planets shall meet in Cancer, the world will be consumed by fire; and that when they shall meet in Capricorn, it will be destroyed by an inundation. They thought the form of the earth to be that of a boat. (Dio. Sic. loc. cit.)


CHALDAISM, in Biblical History, denote certain expressions and modes of expression, derived from the Chaldean language, that occur in the scriptures of the Old Testament. Besides those parts of the Old Testament which are written in Chaldee, viz. the book of Daniel, from the 4th verse of the 2d chapter to the end of the 7th chapter; the book of Ezra, from the 5th verse of the 4th chapter to the 27th verse of
of the 7th chapter; and the 11th verse of the 10th chapter of the book of Jeremiah, there occur in the Hebrew text from single words that are merely Chaldee. Such is the Chaldee word פָּרָשֶׁת, for which is used instead of the Hebrew מָרֵשֶׁת. 12 as in Prov. xxxi. 2. Phil. ii. 12. Such are also בָּשָׂדֵנָם, for the Hebrew בָּשָׂדֵב, from בָּשָׂדֵב, gold, in Isaiah, xiv. 4, and בָּשָׂדֵנָם, in Ps. cxxxix. 17, translated by the vulgar "thy friends," in the Hebrew fruit of the term, but in Chaldee מַנִּית, signifies thought, and therefore most persons render it "thy thoughts." I dependently of these whole words, there are some Hebrew terms, which nevertheless are formed after the Chaldee manner, and on that account are found in the Hebrew. Thus, the plural maSSin nouns in Hebrew terminated in כ, but in Chaldee, and also in Syriac, in כ; as בָּשָׂדֵנָם (Job, xi. 11), for בָּשָׂדֵנָם (Job, xxiv. 22), in Ps. xxxix. 6, life, &c. &c.: nouns also which in Hebrew end in כ, cloe with כ in the Chaldee and Syriac; thus, מַנִּית (Exod. xxvii. 32, and xxxix. 22, for מַנִּית (Ruth, i. 2), for מַנִּית (Ps. cxvii. 7). &c. &c.: the Chaldee מַנִּית occurs (Ezek. xxxix. 30), for the Hebrew מַנִּית, &c. Chaldee affixes are also joined to Hebrew nouns, as בָּשָׂדֵנָם (Ps. cxvii. 8, for בָּשָׂדֵנָם, where the affix ר is used for ר: the characteristic of the conjugations בָּשָׂדֵנָם, and בָּשָׂדֵנָם, which in the Hebrew is כ, is in the Chaldee and Syriac כ: hence מַנִּית (Is. xlviii. 3), for מַנִּית, &c. and the characteristic of the future in Hebrew destroys the characteristic of the conjugation מַנִּית, which is not the case in Chaldee and in Syriac; thus we read מַנִּית (Hos. lii. 11), for מַנִּית, &c. the middle radical of the verbs מַנִּית and מַנִּית is very often changed into כ: thus מַנִּית (Hof. xix. 14), for מַנִּית, &c.; among the Hebrews the preteritic participle, or "Paul," has כ for כ: the penultimate; but among the Chaldeans and Syrians, it has כ, and is therefore called "Pehil," hence מַנִּית (Num. xvi. 5); for מַנִּית, the Chaldee and Syriac join כ to the כ of the gentilicium, thus מַנִּית (Amos, vi. 14), for מַנִּית: for מַנִּית, the Chaldeans and Syrians insert the letter כ in small words borrowed from the Hebrews, e.g. מַנִּית, thou, they make כ: and read כ (Job, xxvii. 2) for כ, &c. See Malelly's Gram. Heb. vol. i. cap. xxiii.

CHALDEE, or CHALDÆIC language, that spraekken by the Chaldeans or people of Chaldeea which was anciently used throughout all Assyria, Babylonia, Mesopotamia, Syria, and Palestine, and is still the language of the churches of the Nestorian and Maronite Christians in those eastern parts. In the same manner as the Latin is the language of the popish churches in the west, the Chaldee is a dialect of the Hebrew, and is nearly allied to it, that is, the forms, names, pronunciation, and divions of the letters are the same; and therefore, this language is easily acquired by those who are acquainted with the Hebrew. See Hebrew.

CHALDEE PARAPHRASE, in the Rabbinitic style is called Targum. There are three Chaldee paraphrases in Walton's Polyglot; viz. that of Onkelos, that of Jonathan son of Uzziah, and that of Jerusalem. See PARAPHRASE.

CHALDEASYGUES, in Geography, a town of France, in the department of the Cantal; 4 leagues S. of St. Flour.

CHALDONE, in Ancient Geography, a promontory of Arabia Felix, near the place where was the ancient mouth of the Euphrates, according to Pliny.

CHALDRON, CHALDOR, or CHALDOUN of coals, a dry English measure, consisting of thirty-six bushels heaped up, according to the sealed bushel kept at Guildhall, London. The chaldron should weigh about 28 cwt. or 3156 pounds. On ship-board, twenty-one chaldrens of coals are allowed to the crew. By act of parliament a Newe chaldren is to weigh 524 cwt. or 3 waggon's of 174 cwt. or 6 carts of 83 cwt. each, making 524 cwt. to the chaldren. The statute London chaldren is to consist of 36 bushels heaped up; each bushel to contain a Winchester bushel and one quart, and to be 15½ inches diameter externally. And as it has been found by repeated trials, that 15 London pool chaldrens are equal to 8 Newe chaldrens, if we reck in 524 cwt. to the latter, we shall have 38 cwt. to the former, or 3136 pounds to the London chaldren. Dr. Hutton found this estimation nearly confirmed by experiment.

For weighing one peck of coals, he found that it amounted to 21¾ lbs. and 4 × 2½ gives 87 lbs. for the weight of the bushel; and 36 × 87 gives 3122 for the weight of the chaldren; to which if the weight of the odd quart be added, or 3 lb. nearly, we shall have 3135 lbs. for the weight of the chaldren, or only one pound less than that which is given by statute. But the chaldren, or chaldren, ultimately delivered to the consumer, is still less than the chaldren in the pool, and hence it appears that the word chaldren conveys very different ideas, and that this confusion in the use of the term must open a door to deception and fraud. The monthly supply of coals for the metropolis is estimated at 300 cargoes, of 220 chaldrens each, or 66,330 chaldrens; and it has been alleged as no improbable supposition, that with some exceptions 50,000 chaldrens, on an average, remain exposed to depredations in open craft on the river all the year round. See Macnab's Letter to John Whitmore, Esq. on the Coal-Trade.

CHALETS, in the Botanical writings of the ancient Arabs, the name of a tree often occurring, and seldom explained. The best account we have of the chalés or chalés, is in the writings of Prosper Alpinus on the Egyptian plants, who tells us, that it is a kind of willow, growing in Egypt and in Mesopotamia. It is probably a species of Eucalyptus.

CHALENECY, in Geography, a town of France, in the department of the Upper Marne, and district of Langres; 13 miles S.S.W. of Langres.

CHALEOS, in Antiqu Geography, a town of Greece, situated in the Gulf of Corinth, in the country of the Locrian Ozoles, according to Ptolemy.

CHALES, CLAUDIUS FRANCIS MILLIET, de, in Biography, was born of an ancient and illustrious family at Chambury, in Savoy, in the year 1621, and belonged to the society of Jesuits.

In early life he applied to the study of the belles lettres, and acquired a considerable knowledge of the Latin and Greek languages; but his favourite studies, and those in which he eminently excelled, were mathematics, mechanics, and alchemy. He was appointed by Lewis XIV. royal professor of hydrography at Marieilles, and he gained great reputation as a teacher of mathematics at Trinity College in Lyons. It was probably on account of his distinguished reputation that the superior of his order appointed him teacher of theology in the same college, for which office he was first qualified than for any other. Charles Emanuel II., duke of Savoy, remarked on this appointment, that it was unwisely made, and that the attention of such a person as Chales should never have been divest d from the cause of study and employment to which he was attached. Accordingly, he was called off from this situation to Paris, where he was engaged for several years in teaching the mathematics. He died at Turin in 167, and the following eulogium was incribed on his monument: "Hic jacet Claudius Franciscus Milliet de Chales, genere, sapientia, virtute notus omnibus; ignotus fidei." His works are "Cursus Mun- dus Mathematicus," first printed in 1674, at Lyons, in 3 vols.
wals. fol. and afterwards in 4 vols. in 1683, by Amati Var- 
cin, who augmented and improved this edition by several 
valuable treatises found among his MSS. To this edition is 
 prefixed an historical account of the progress of mathema-
tical science from the age of Thales the Milesian to the 
author’s own time. De Chalès’s ‘Treatise of Navigation,’ 
and “Refereces on the Center of Gravity,” are much 
effected. See the funeral oration of father Hyacinth Fer-
rierus prefixed to Varinc’s edition.

CHALESTRA. See Chalastra.

CHALETTE, in Geography, a town of France, in the 
department of the Aube, and district of Arcis; 22 miles 
S.E. of Arcis.

CHALEURS, a deep and broad bay on the W. side of 
the gulf of St. Lawrence. From this bay to that of Verte, 
on the S. in the S.E. corner of the gulf is the N.E. fu-
line of the British province of New Brunswick; which 
see.

CHALI, in Ancient Geography, a people of Germany, 
placed by Ptolemy on the eastern coast of the Cimbic 
Cenfenssus.

CHALI, a town of Albania, Phocinia, placed, in the book 
of Joshua, in the tribe of Asher.

CHALIA, a town of Greece, in Boeotia, near Hyria.

CHALIAT, a town of Albania, in the Corduene, situated 
on the bank of the lake Arvissa, at the extremity of the N. 
and W. parts.

CHALICE, the cup or vessel used to administer the 
wine in, in the eucharist; and by the Romanists, in 
the mafs.

CHALIDRIS, Chalidris Nicola, in Ornithology, the 
name given by Aldrovandus and others to Tringa hirundo; 
which see.

CHALIGE, Canal of, in Geography. See Cairo.

CHALIGNY, a town of France in the department of 
the Meuse; 5 miles S.W. of Nancy.

CHALIM, a town of Portugal, in the province of Tras-
los-Montes; 20 miles S. of Braganza.

CHALIM-POU, a town of Chinefe Tarty. N. lat. 
41° 12’. E. long. 121° 54’.

CHALIN, a river of Russia, which runs into the Karfokin 
sea. N. lat. 73° 5’. E. long. 71° 14’.

CHALINAQUES, a town of France, in the department 
of the Cantal; 12 miles N. of St. Flour.

CHALINDREY, a town of France, in the department 
of the Upper Marne, and district of Langres; 5 miles S.E. 
of Langres.

CHALINOS, in Antiquity, the bit, or that part of a 
bride which is put into the mouth of a horse. But it was, 
among the ancient physicians, also used to express that part 
of the checks, which, on each side, is contiguous to the an-
gles of the mouth.

CHALISCUTELI HILLS, in Geography, hills of Hin-
dooflan, which lie between the western desert and the Set-
lege.

CHALISIA, in Ancient Geography, a maritime town of 
Africa, in Libya.

CHALIZA, in the Jewish Customs, the ceremony where-
by a woman who is left a widow, pulls off her brother-in-
law’s fovey, who should epousée her, and by this means is 
allowed to be at liberty to marry whom she please. The 
word signifies extraéel vel exerxe.

CHALK. The colour of this mineral is yellowish white, 
more rarely snow-white, or greyish white; when contami-
nated with iron it has more or less of an ochery tinge. It 
occludes generally in mafs, sometimes disintegrated, or inveting 
other minerals. It is without lustr, is opaque, has a fine 
earthly fracture, and breaks into blunt-edged angular frag-
ments. It stains the fingers, gives a white fileak, and, when 
pure, is very soft, and almost friable. It has a meagre feel, 
and adheres to the tongue. Sp. gr. 2.1. It effervescs vio-
lently with acids. When mixed with iron it is both harder 
and heavier.

In a state of purity, chalk appears to be composed only of 
water, lime, and carbonic acid; but Mr. Kirwan obtained 
from the analysis of a specimen,

<table>
<thead>
<tr>
<th>Substance</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime</td>
<td>53</td>
</tr>
<tr>
<td>Carbonic acid</td>
<td>42</td>
</tr>
<tr>
<td>Water</td>
<td>3</td>
</tr>
<tr>
<td>Alumine</td>
<td>2</td>
</tr>
</tbody>
</table>

Chalk, considered geologically, is among the most recent 
in formation of the several varieties of carbonat of lime. It 
occur in thick beds nearly horizontal, alternating with thin 
layers of frit nodules, and with the same irregularly dispersed 
through its sublunce. It contains in abundance the relics of 
marine organized bodies, such as echinates, glonopitar, pec-
tinites, &c.; and also, not unfruitfully, the hard parts of 
ampelobious and land animals, such as the heads and vertebrce 
of crocodiles, and teeth of elephants.

In beds of chalk are of frequent occurrence in the east and 
the south parts of England, also in the north east of France. 
Chalk is also met with in some of the Damih islands in the 
Baltic, and in Poland.

The uses of chalk are very great. The more compact 
varieties are employed as building-lime, and are burnt to 
quicklime: it is also largely used in polishing metals and 
glass; in converting moulds to cast metal in; by carpenters 
and others as a material to work with, and by harch-
makers and chemists to dry precipitates on.

Chalk, in Agriculture, is a calcareous sub stance, which, 
when pure, is of a white colour, moderate confluence, and 
duly surface; stains the fingers; adheres slightly to the 
tongue; does not harden when heated, but, on the con-
trary, in a strong heat burns to lime, and loses about four-
tenths of its weight. It effervescs with acids, and diffolves 
almo in entely in them. It may also be added, that this 
solution is not disturbed by caullc volatile alkals, as this is 
a circumstnace that distinguishes it from magnesia. It has 
the property of promoting putrefaction. In its native state 
it is useul as a manure, upon the fame principle as lime-
stone; but it is more easily pulverized, and lighter, or more 
porous in its nature. Nearly the whole of this material is 
calcareous earth, whereas none of the marks contain more 
than a fourth part of that subliance. It is in high esteem 
in the more southern counties of England, where it abounds 
very much. Its belt effects are produced upon deep soils 
which contain no calcareous earth. It is observed to have 
but very little effect upon lands where the sublustrum is 
chalk; and if the soil be thin, it does mischief in such cases. 
When used upon light thin soils, it is mostly made into 
composts with earth and dung, or some other similar material. 
When these are well mixed together, and duly proportioned, 
they produce valuable crops; and their influence is said to continue many years, in such in-

The common method of using this sort of compost is 
either by laying it upon fallows for wheat, and mixing it 
intimately with the fall by ploughing and harrowing, or 
upon grafts as a top-dressing: in both cases it has been found 
to answer well; and in the latter it is found capable of de-
stroying mois, rubes, and all coarse aquatic plants that grow
in heavy, four, or wet lands; while, in the former, it opens and pulverizes the soil, and never fails to produce good crops of that grain, or other kinds.

In making use of it, it has been recommended that it should be broken as small as possible. It should be dug from the pit near the end of autumn, and be laid on the land immediately; as at that season the air is generally moist, the moisture will of course be absorbed by the chalk. This will occasion it to swell, and break down into pieces; and if from should come on, it will much accelerate the benefits: but when it is dug in summer, it loses its moisture, and acquires a harder nave, which in a great measure prevents it from being of any use. It should in no cafe be ploughed in till its parts are properly broken down and separated, and then it should be completely harrowed in and mixed well with the foil, or mould of the land.

If the foil be thin and light, a certain proportion of dung will, if it is laid, be useful; but if it be heavy, the dung is affected to lessen the operation of the chalk. It is generally thought that lands which have been completely chalked will not bear a repetition of it for some time. A compost of it, however, may be used to great advantage. In the southern counties a field has been, it is observed, chalked, and divided with chalk and dung mixed, in portions alternately; and the former has been found to produce very bad crops, but the latter very good ones. It is affected, that laid on beyond a certain quantity, it will not only cease to operate as a manure, but even prove hurtful to the land. It ought, therefore, to be used with caution, and due pains be taken not only to ascertain the strength of the chalk, but the quality of the soil on which it is to be laid, before the application is made.

But there can be no doubt that chalk is a lasting manure, when applied on suitable soils; which are those of a cold, four nature, such asdiff untractable clays. Pufyie has remarked, that it was the custom of the ancient Britons to chalk their lands, by which they received a great and lasting improvement in the fertility of them.

In regard to the different kinds of chalk which should be distinguished by the farmer, the hard, dry, and firm foot is much the fittest for burning into lime; but that of the fat and uncouth kind by far the boil to be used in the crude state.

It has been flated that in some parts of Essex they lay from five to eight waggon loads of chalk on an acre, either upon a clover lay while feeding, or on a summer sallow; and that the effect of a very thin dressing of it is seen immediately to an inch, like that of rotten dung, and lasts twenty years, fifteen in good heart. The foil is a loam; they have also a little clay, and no sand, on gravel the effect is but slight. They bring the chalk from Malden, whither it is brought by sea from Kent, and a wagon load costs mostly ten shillings at the quay. It is rather hard, the sharpf root leaves many lumps unbroken; they break with pick-axes. The effervescence with vinegar is pretty consider- able, but in water it scarcely falls at all. It is also a general opinion in that county, that land which has been once chalked will not take it again; they acknowledge, however, that when mixed with earth and dung, it is then excellent. They observe, that laying a slight dressing of chalk and earth, or dung, on a field never chalked, will take so much effect, that the same field will not answer to chalk completely. They observe also, that the chalk pre- sently gives the land a red colour. And they are of opinion, that chalk is a great enemy to good grasses; and affirm, that a field which, before chalkling, will run of itself to a fine head of white clover, no longer does it after chalkling.

There is no saying anything against experience: we should not, however, draw general conclusions from partial experiments. Much of the effect of manures depends upon the soil on which they are laid. About Enfield, as observed in a paper in the Annals of Agriculture, the same chalk does wonders, which at North Mans has very little effect: the one is a rich brown, the other a poor gravel. And near Sandwich in Kent, chalk has been found in a very high degree to improve a sandy soil, giving it tenacity, and totally exterminating that pernicious weed the corn marigold, which is provincially called yellow bottle, tuddle, or golds, and so abundant in sandy soils. They lay on forty loads of forty bullocks each to an acre. Upon pasture land they think it does nothing. In Hertfordshire it is thought that chalk makes the land plough much better, and renders all manures much more effectual.

If a field be divided into parts, one chalked, a second chalked and manured with dung or foot, ashes, &c. and a third dragged or affed without chalk; although chalk alone has no effect, yet the other manure on the chalked part will have a much greater effect than on the part where no chalk is laid. Facts of this sort are highly interesting, but want to be more correctly made.

It has been remarked by the author of the Synopsis of Husbandry, who has had much experience in a district where it abounds, that this manure, though it falls infinitely short of marl in its fertilizing quality, is nevertheless prof- fessed of virtues which defrively entitle it to the ecleem of the farmer. By a proper application of this sublunance, the most tenacious clays are, he says, rendered friable and mellow; and thus their native rubbourness and adhesion being overcome, the several particles of the soil are enabled to im- bile the full benefit of the different changes of the atmosphere; and hence they are brought to work kindly under the several operations of the plough, harrow, &c. and to produce ample crops of grass or corn, which, before the application of this manure, they were incapable of bringing to perfection. So great are the benefits accruing from this manure, when laid on a stiff clayey soil, that the Esfex farmers find their account in freighting barges from the chalk cliffs in Kent, and afterwards carrying it with their teams several miles up the country; all which, though attended with a heavy expense, is found to answer the pur- pose extremely well. As it would, he think, be impossible to reduce these stubborn clays to a proper till without the previous application of this manure. Nor is it on clays only where chalk may be laid to advantage: gravels, especially those which lie near the springs, and all wet soils, may, he supposes, be dressed with this manure, which will never fail to improve the ground, and enable it to re- tain longer the virtues of the dung that may be applied, which, on these hungry soils, is liable to disappear in a short time: nor is so far are some farmers to the use of this manure, that he has known it carried on soils where the chalk lay within a few inches of the surface.

It has been flated, that the action of chalk on the soil is either chemical or mechanical. It acts chemically as an absorbent, contributing to preserve dry thin soils which are poachy and wet; and by its attraction for acids it may halen the putrefaction of vegetables. It acts mechanically, by entering into the composition, and totally altering the nature of clay, converting it by proper pulverization into a species of marl. By insinuating itself between the particles of clay, it destroys their adhesion; thus preventing it from becoming too hard in summer, and too wet in the winter season.

It is observed by Mr. Bamfier that there are two methods of obtaining chalk. The first is by uncalowing a piece of ground,
ground, and making it convenient for a pit, where the carts may be drawn into it, and filled: this is on a presumption that the chalk lies near the surface, and that the pit is within a small distance of the field on which the manure is to be laid. The other method is to sink pits in the field where the chalk is intended to be laid as a manure, and which, in his opinion, is far preferable to that of drawing it in carts as before mentioned. In this case, a number of pits are to be sunk according to the extent of the field. These pits are to be made in the form and circumstance of a well, with an apparatus at the top, and a bucket to draw up the chalk. The people who undertake this business, having been brought up to it from infancy, perform it, he says, with great facility, and without any trouble, though attended with much danger. A person is employed at the top to draw up the contents of the pit, shoot the chalk into the cart, and wheel the same on the land. When the labourer has arrived at the chalk, which takes up a longer or lesser time of interval according to the depth at which it lies, and has dug some little time therein in the perpendicualr form wherein he began the pit, he proceeds to form apertures in different horizontal directions; so that where the chalk is good, and the pit stands firm, large tracts of ground are undermined for this purpose. The price for digging chalk is, he says, 1s. per foot till the chalk be found, after which for the chalk is, per load, which is twelve bushels; and a penny per load for wheeling the chalk on the land, the farmer providing a horse and cart for that purpose. The quantity usually laid on an acre is from eighty to a hundred loads.

From this description of chalk-drawing, he says, "it is evident that much care and circumstancce are required to prevent any deceit being imposed on the farmer by the workmen, to whom their eagers for acquiring large wages, will be a powerful inducement."

He adds, that "the best chalk is that which is white and hard; and the deeper it lies beneath the surface, the more efficacious is the dressing supposed to be, as partaking of the nature of the soil wherein it is to be applied as a manure; indeed, on a clayey soil it is seldom to be met with, but at a considerable distance beneath the surface of the field. The most eligible season, he says, for the performance of this work is in the early part of the winter, as the chalk, which is laid out at that season will, by aid of the succeeding frosts, be, in great measure, meliorated and reduced to crumbs at the time of falling in April; whereas, should the bufnifs be deferred till the spring, no considerable portion of the chalk will remain in lumps till the next winter. From this neglect, a twelvemonth will be lost in point of time, as this manure will lie on the ground without affuring any good purpose till the lumps shall have been flaked by moisture and frosts; and that chalk is always most highly esteemed which yields foundling to the effect of the weather in falling into crumbs. This manure may be laid on the ground in the summer, without any other inconvenience than what has been before mentioned; contrary to the opinion of some people, who think that such chalk, having remained on the surface during the summer months without raining, will, on that account, be less susceptible of the frosts in the succeeding winter: but this idea is erroneous; and as it may often fuft the economy of the farmer to lay this chalk out in the summer, either from a neighbouring draw-pit, having at that time little other employment for two men and horses, or if he may be inclined to sink a pit in the field at that time; in either of these contingencies, the buftains may, he thinks, be safely ventured upon in that season; and it would be far better to furnish the ground, which is thus summer chalked, to be unploughed till the succeeding spring, than to crop it with wheat at the autumn after the manure is applied; for, having enjoyed the benefit of the frosts in the following winter, the ground will come in properly for a wheat sowing in the next year: and this may be generally effected, he says, where a person is inclined to lay on his chalk in the summer. For instance, suppose a lay ground be intended for a fallow the next year, this may be chalked in the summer time, with very little inconvenience or injury to the farmer, as the grofs which would have been produced from it between midsummer and the following spring could have turned to little account."

It is concluded by the same writer, "that when land is dressed with chalk, the surface ought to be pretty thickly covered over, otherwise it will fail to answer the end of pulverization, in which consists the chief virtue of this manure: and though the expense of chalking may appear considerable to those who are unacquainted with its effects, the good consequences according to the future crops will be found in the end amply to compensate the primary charges, and from whatever cause this improvement arises, whether an immediate fertility be conveyed to the soil by the chalk, or whether this dressing acts on the soil by destroying its adhesion, and thus impales it to work more kindly, and to part with its vegetative particles, which were before to clodily united as not to be drawn forth by any other means; in whichever of these ways the chalk acts upon the land it matters, he thinks, very little to the farmer, so that the intention be accomplished, namely, the acquisition of a more abundant crop. For his own part, he is inclined to think that the chief virtue of the chalk resides in its power of correcting the adhesion of stiff soils, and in its meliorating quality, and that it is much better to dung, in point of accelerating the growth of the crop; so that where a field has been well dressed with this manure, which is laid to be of foiling a nature as to fly its good effects at the distance of twenty years, it is by no means to be understood, that this field is not to be dunged, or to have any further addition of manure during this interval; on the contrary, such ground ought never to lose its turn of the dung-cart; and, indeed, on farms of a clayey soil, those fields only can be dunged to advantage which have been previously chalked; for experience hath demonstrated, that, without the application of this manure, dung will be of but small avail on these stiff soils."

It is remarked further by the same practical writer, "that on gravelly soils, where the springs lie within a small distance of the surface, it often happens that the water flows in before the chalk is found, and thus all further endeavours at that spot are rendered abortive, and another pit must be sunk in a different part of the field. Obstacles to this work sometimes, he says, fall out from the light contexture of the foil, which does not unfrequently give way to the deflection of the chalk-drawer. To the farmer, it may be of some consequence to consider the nature of his land, ere he embarks in this scheme of husbandry; as, if from circumstances above-mentioned, he may have reason to think that his pit will not stand firm, it would be a matter of prudence to delist from any further thoughts of sinking a perpendicular pit, and change the mode of operation, by bringing his chalk from an uncalled pit; but where it can be obtained at a moderate expense, and with a tolerable certainty of success, the preceding method is, he thinks, certainly the most eligible. See Calcareous Earth, and Manure."

In the chalking of land, the method pursued in Herefordshire, where the persons employed in it follow it as a trade, is the following: according to Mr. Walker: "a spot is fixed upon, nearly central to about 50 acres of land, to
CHALK.

To be chalked. Here a pit, about four feet in diameter, is sunk to the chalk, if found within twenty feet from the surface; if not, the chalkers consider that they are on an earth pillar, fill in the pit, and in fresh places, till their labour is attended with better success. The work from the surface of the chalk is kept from falling in by a fort of basket-work, made with hazel or willow rods and broomthrush, cut green and manufactured with the small boughs and leaves remaining thereon, to make the basket-work the clover. The earth and chalk are raised from the pit by a jack-rowl on a frame, generally of very simple and rude construction. To one end of the rowl is fixed a cart wheel, which answers the double purpose of a fly and a flop. An inch rope of sufficient length is wound round the rowl, to one end of which is fixed a weight, which nearly counterbalances the empty basket fastened to the other end. This apology for a *asis in perforation*, two wheelbarrows, a fpade, a shovel, and a pick-axe are all the necessary implements in the trade of a company of chalkers, generally three in number.

The pit-man digs the chalk and fills the basket, and his companions alternately wind it up and wheel its contents upon the land; when the basket is wound up to the top of the pit, to flop its deficient till emptied, the point of a wooden peg, of sufficient length and strength, is thrice by the perpendicular spoke in the wheel into a hole made in the adjoining upright standard of the frame to receive it. The pit is sunk from 20 to 30 feet deep, and then chambered at the bottom; that is, the pit-man digs or ruts out the chalk horizontally, in three separate directions; the horizontal apertures being of sufficient height and width to admit of the pit-man's working in them with ease and safety. One pit will chalk six acres, laying 60 loads on a acre. If more be laid on, and to the full extent of chalking, viz. 100 loads, then a proportionable lefs extent of land than six acres is chalked from one pit. Eighteen barrow-fulls make a load, and the usual price for chalking is 7d. per load, all expenses included; therefore the expense of chalking at 60 loads per acre is 1/2. 6d.; and at 100 ditto, 21. 18s. 4d. As the chalk is considered to be better the deeper it lies, and the top chalk, particularly if it be within three or four feet from the surface, very indifferent, and only fit for lime, or to be laid on roads, gateways, &c. the chalkers must be directed to lay by the chalk for the first three or four feet in depth, to be applied to the above purposes; or, if not wanted, to be again thrown into the pit when filled up; and also to pick out the flints from the chalk before it is carried on the land, for, if they are not narrowly watched, they will chalk with both.

It is added, that "Mr. John Hill of Coddicott farms upwards of 1200 acres in the adjoining parishes of Coddicott and Kimpton, a con siderable part of which is his own estate. He has chalked many acres of land, and approves much of the practice. He chalked a field of strong clay land in the autumn of 1792, laid on sixty loads to an acre, and the chalk where the pits were sunk lay about ten feet from the surface. Mr. Walker viewed the field the 7th of August 1794; it had borne a crop of peas since it was chalked, and was then under the plough, preparatory for a crop of wheat. The chalk was good, and the land appeared to work well, though the chalk was not then thoroughly incorporated with the soil. Mr. Hill never lays more than 60 loads of chalk on an acre; this he finds will not only make the land work much better, with lefs strength of cattle, but also, with a light coat of dung, or spring dressings occasionally laid on to quicken the vegetation, produce abundant crops for ten years; he then chalks again with equal success."

"This fort of work should proceed with dispatch during the summer months in all cafes, and in the autumnal ones in many situations where there is no danger of poaching the ground. Mr. Young suggests, that much advantage may be derived, in performing this fort of labours, from the use of small three-wheeled carts, as the third wheel affords a support for the cart and load while filling, without the full horse, and of course one horse may be sufficient for two carts, one being discharged upon the land while the other is loading. See MANURE."

CHALK, black. See Slate.

CHALK, brown. See Tripoli.

CHALK, French. See Steatite.

CHALK, fungous. See Agaric mineral.

CHALK, red. See Ores of Iron.

CHALK, flint. See Agaric mineral and Argentaria creta.

CHALK, Spanifh. See Steatite.

CHALK, yellow. See Tripoli.

CHALK-drawings. See Drawing and Engraving.

"Chalk stone, in Medicine," a white chalky substance which is secreted in the inflamed joints and fragments in inveterate pain. It is one of the peculiarities of gouty inflammation to terminate by the production of this substance (where it does not end in resolution), and not in suppuration, or the production of pur, like the common species of inflammation.

The chalk-flone (as its name imports) was formerly considered as compos'd of some calcareous matter, and in particular of phosphat of lime; but accurate chemical analysis has now proved that it does not contain lime in any form, but is a neutral insoluble galt, consisting of the lithic or uric acid satured with soda. Dr. Wollaston has proved this point by the following experiments. If a small quantity of dilute fulphric acid be added to gouty chalk-flone, part of the alkali is separated from its combination, and crysyls of fulphat of soda are produced. Muratic acid in a similar way produces common salt. A greater quantity of either acid totally separates the alkali, and leaves an insoluble matter, which is found to be lithic acid by the following characters; viz. when distilled for & it yields a little ammonia, some prufic acid, and an acid insuble similar to the sublimed lithic acid; when distilled in dilute nitric acid, it tinges the skin of a fofe colour, and leaves, on evaporation, a fofe coloured refiduum; when thrown into caufic pot-af it difcolves therein, but is separable thence by an acid. The chalk-flone, when calcined, gives the usual products of animal matter, and leaves a white falt, which is carbonat of soda. Caufic pot-af dissolves the chalk-flone entirely. Boiling water dissolves a small portion of the flone, and the folution is lithat of soda. When a little muratic acid is added to this folution, as it cools it deposits lithic acid in minute crysyls.

The analysis of this concretion by Fourcroy, agrees very closely with that of Dr. Wollaston. M. F. remarks, that a hundred parts of water difcolve nine-tenths of the chalk-flone by boiling, forming a faponaneous liquor, of a faint animal fmall, from which fulphuric acid precipitates brilliant needled crysyls of lithic or uric acid.

To the solubility of these arthritic concretions in the alkalies, chemifts have attributed the great relief often experienced by gouty persons from a course of alkaline remedies long continued; and it certainly remains an interesting question to determine whether this disease is attended with any defect or excess in the natural quantity of uric acid in the urinary secretions. (For a fuller account of the properties of the lithic or Urac acid, see this article) See Phil. Transf. for 1797, pt. 2. Fourcroy Syteme des Connofi. Chim. &c.

CHALKI, in Geography, an island of the Grecian Archipalago, visited by Spallanzani, where he made known the F Turks
Chalking, in the Arts. See Drawing.

Chalking, in our Old Law, seems to be some duty laid on merchandise; what it was particularly we do not find: but in the rolls of parliament it is said the merchants of the staple require to be eaid of divers new impositions, as chalk, carageen, wharfage, &c.

CHALKY LAND, in Agriculture, denotes such sorts of land as are much impregnated with the chalky material, and which from their white appearance are sometimes denominated white lands.

It has been remarked, by the author of the Synopsia of Husbandry, that "chalky lands or soils differ from each other very essentially in point of fertility; for as there are some of them which, by good husbandry, may be brought to produce large crops, and do with great reason take the lead in point of fertility of every other light soil; to there are others which, from the superficial depth of mould over the chalk, are of the most barren species, and scarcely worth the expense of tillage. A chalky soil (says he) with a due covering of mould, so as to admit the plough to enter a reasonable depth, is perhaps the most kindly one to work upon, except a loam, and capable of the greatest improvement from the feudal operations of husbandry; having neither the tenaciousness of the clay, the burning quality of the gravel, nor the extreme porous texture of the sand; as it possesses a much greater share of humidity than the latter soil, free from the inconvenience of springs, so will it be less injured by a dry summer, whilst a moist and dripping season will be most favourable to the crops growing on it, when those on a clayey soil are in that case too frequently destitute or rendered of little worth." And Lord Dundonald, in his Treatise on the connection of Agriculture with Chemistry, remarks, that a pure unmixed chalky soil, like a pure or lean clayey one, is unfertile; and that the fertility of this sort of land, like all others, depends on its containing a due admixture of other earths, with the requisite quantity of vegetable or animal matter. A chalky loam, or mixture of chalk with clay, is frequently a very fertile soil, and well adapted to the culture of beans and wheat.

So, says the writer we have just quoted, "are the advantages attending these soils, where the chalk is not mixed in an undue proportion with the mould: but it rarely happens that a farmer is possessed of any great quantity of land of this description; for, in countries where chalky land abounds, there is on every farm a large proportion of poor land than of that which he has described; and the management of these chalky soils will demand the highest exertion of industry and skill in the husbandman; for although the crops raised on these soils are less subject to be injured by the scourching heat of the sun than those on gravels, yet where there is but a small proportion of mould, so that the chalk forms the greatest part of the cultivated soil, with a bed of the same hard substance for its under stratum, intermixed with large flints and chalk stones, scarce less solid, on such grounds, the crops (he says) will grow greatly in a dry summer, and for this reason, an early Lent leaft or leaf is always to be preferred on these soils, in order that the surface of the ground may be covered before the dry weather sets in." And he adds that "these chalky soils possess another very material advantage over gravels, namely, the power of retaining longer the heat of the summer; and therefore the crops on this soil often recover after a kindly rain, when those on the gravels, unable to withstand the preceding drought, are burnt up; indeed, on a chalky soil, the crops, when injured by the parching heat of the weather, cannot so properly be laid to burn, as to die away. To the evil propensities incident to chalks of every kind, may (he says) be joined their disposition to blight, a misfortune not easily to be guarded against; and in this respect they differ materially from gravels, where the corn generally yields well, if not injured by the dry weather during its growth. To this may be added (he says) another defect attached to chalky soils, which in their billy situation, since a tract of land of 200 acres, it is odds but many of the fields are mountainous and uneven." The ingenuous nobleman just mentioned further remarks, that chalky lands produce a short sweet herbage, and for the most part are more proper for a sheep pasture than for tillage. There are no fields that receive more benefit from artificial watering, as they are apt at certain seasons to be parched by drought. Chalky soils that produce short sweet herbage, should not (he thinks) in general be broken up, or converted into arable lands; a practice which will be attended with injury to the soil, and loss to the farmer, unless they are cropped with moderation, well-manured, and afterwards properly laid down with pasture-grass.

And Mr. Dammler further well observes that "there is one species of grass which may be raised to great advantage on a chalk, and this is fescue, cinquefoil, or holy-grass." The same writer observed that the effect of this grass in the culture of this grass is not natural relation to a chalky soil, the constant demand for the hay at market, and the small charges required in making it, (fays he) all combine to enforce its cultivation on the most barren chalks: which, by any other course of husbandry, could not have been brought to pay the expense of tillage: by these means the farmer will (he thinks) have it in his power to bestow a greater attention on the more fertile part of his land, will require a less number of horses and servants, and will generally infuse to himself plentiful crops of grain from that part of the farm which is kept in constant tillage; whilst the most barren spots will produce a yearly increase from the fescue at a trifling expense in the culture." Chalks are (he thinks) of all other land's least subject to be molested with couch-grass; and hence a person who hath not been accustomed to this kind of land is often deceived on a cursory view of the surface, which being totally free from couch-grass, and not greatly infested with weeds of any denomination, he is led to conceive that the ground is in good heart, and disposed for the reception of any kind of grain; whereas the contrary is often the fact; for a soil of this description, especially the more barren species, which, with a very flight proportion of earth, is made up of a crumby kind of chalk, and when wet wears the appearance of morass, will not naturally produce couch; and perhaps on this sort of ground it would be no easy task to make this grass thrive in it though the experiment were attempted; and even on the best and most kindly chalks, couch-grass is an enemy not to be dreaded. The weeds which form indigenous to this sort of land are poppy, bare-bend, crow-foot, charlock, caddock, or kik, cammock, and thistles. Where the late-mentioned weed prevails it is a manifest indication that the ground is not of itself unfriendly to the growth of corn; and that when the crops turn defective, this proceeds less from any defect in the land, than an imprudent management in the cultivation of it.

In what regards the tillage on this sort of land, (though chalk may, he says, be numbered among the lighter kinds of soil, a much greater strength of horses, he says, is required in the tilling of them, than either on gravels or lands; not only on account of their hilly situation, the superior depth of mould, and of the large hills which are generally to be met with beneath the surface, but from the impenetrable quality of the under stratum, which deadens the depth of the plough, and causes it to work much heavier; to which may be added, the resistance from the roots of the cammock, which
which is so powerful as frequently to obstruct the course of the plough. For these reasons, a six-horse team, on a chalky soil, is of great utility, nor, indeed, can the buffets be advantageously prosecuted with four horses to a plough. Another reason why a more powerful strength of cattle is requisite on this than on any other light foil, is its disposition to hang to the gears; so that in wet weather the plough is increased to nearly double its own weight, by the additional load of mould adhering to it. These are circumstances which do not immediately strike the attention of a farmer, whose knowledge in husbandry has been acquired by working on a kindly loam. On the first view of a chalky foil, he concludes that little strength of cattle is required; for, having been accustomed to land where the surface is much deeper, he rather imagines, that more work may be done, in a given distance of time, with a less number of horses on a chalk than on a loam; of this truth, he is, in his own mind, so thoroughly convinced, that nothing less than ocular demonstration can drive him from his opinion.

Having enforced the necessity of maintaining a sufficient strength of cattle for the tillage of this sort of land, he advises the ploughing it to a good depth, where the surface of the land will admit of the practice; "for on the very light chalky grounds which abound in many places, and of which some parts of every chalky farm consist, this caution is unnecessary;" such land being ploughed with little strength, the plough must necessarily be let to go shallow. But on his other grounds, where there is a thick covering of mould, the farmer, he thinks, will always find his account in ploughing it to its utmost depth, so that the ploughman may feel the point of the share grate on the chalk beneath, without bringing up any part of it to mix with the mould. On this foil the blacksmith is, he observes, a perpetual retainer to the farm. The vicinity of the chalk, together with the number of large flints usually met with on this kind of ground, operating very forcibly in his favour, the eye of the farmer is, therefore, on no occasion more necessary, he thinks, than in a strict and daily examination of the plough-irons, since he may be materially injured either by a too frequent application to the smith, or too great a neglect of him. The point of the share for ploughing chalks to advantage, especially when infested with thistles or cammocks, ought to be hammered to the breadth of four inches, which will tear the roots up at a considerable depth. As these grounds are seldom injured by wet, there is scarcely any part of the year but the plough may be kept at work, save only when the land is locked up by frost, or the surface covered with snow. The breaking up of clover lays in the summer, in order to sow with wheat in the autumn, is often attended with great inconveniences on chalky soils, as the drought of the seafon frequently causes the ground to be extremely hard, so as to render the operation of the plough a matter of great difficulty, and, in some instances, the foil is totally impervious at this season, and must remain to be softened by the autumnal rains. But, in this case, the farmer, he observes, has generally other work to attend, and, therefore, need not suffer his hirsners and horses to be unemployed. But although, for these reasons, there is generally more perseverance required in breaking up a clover lay at Midsummer than at Michaelmas with wheat, than usually falls to the share of a common ploughman; yet the matter ought not to be discouraged, since he will most assuredly reap the good effects of corn sown on a stately furrow, where the land is chalky, and, indeed, on any other land of a light texture."

Where folding is practiced, it is added, that "a very judicious method at the breaking up of a clover lay, is to plough one day's work, which will employ a fold of 300 sheep eight nights; and when that is finished, to plough another day's work, and fold on the same, which course is to be pursued till towards autumn: by this mode the farmer reserves great part of the feed on the lay, which, though not very considerable, is, nevertheless, of some consequence, where a large flock is maintained; and, in truth, without a flock of sheep, little profit can be expected to accrue from the cultivation of these foils: besides which, he avoids the ill effects of ploughing up the whole field at autumn, and fowing it immediately with wheat; as he fupposes, in this case, the greatest part of the field will have been folded on before feed-time, and the remainder may be finished after the corn is sown, or trodden with sheep, both of them influences of a most excellent husbandry. But though there be no folding kept on the farm, this method of ploughing up the clover-lays at Midsummer ought to be pursued for the reason above mentioned: and at this time the farmer is generally at leisure to prosecute this work, having completed his fain-foin harrell and turnip seafon, and not meeting with any hindrance from the flirring of summer fallows, a piece of husbandry which is rarely practiced on these sorts of land."

And "the like method of ploughing should, (he says,) be pursued, in order to obtain a crop of turnips, on a chalky foil, as is recommended on a gravel; and though the land be of a very light texture, and not much infested with weeds, the several operations of the plough, harrow, and roll, ought by no means to be dispensed with, for the reason which is offered in treating of the tilage required on a gravelly foil. On a chalky foil, properly managed for turnips, and where a good crop of this root has been fed off, there need be no fear of a plentiful return of barley or oats, provided such corn be sown at an early period, which is particularly to be attended to at the spring seafon, as the crop of Lent corn on these foils generally fails, if the feed-time be pro-\vthered to late as is usual on loams." And "on this kind of land, (as on gravels, (fays he) the farmer poftfises the advantage of varying his manure as often as he chooses; having, besides yard dung, which may be layered a general dressing for every foil, the whole tribe of manures, except chalk, to select from. For wheat, there is no application so efficacious as the foil, which, when properly conducted, rarely fails of increasing the crop. For turnip ground, dung, mould, rabbit dung, woollen rags, &c. may be laid on to advantage; and to further the growth of clover, laintoifin, and meadow grafts, coal ashes, foot, and malt duit, are very proper applications: of these the two last, if sown over the green wheat in the spring, or harrowed in with the barley at the time of sowing that grain, are excellent substitutes for the more laiting kind of manures, where these cannot be procured in a sufficient abundance."

It has been remarked by lord Dundonald, that clay is the fittest sub stance to be applied with a view to alter the arrangement of the parts of a chalky foil. Peat is a good application to lands of this nature, which are frequently termed hungry foils, and very deficient in vegetable matter. And as a sufficiency of dung is not to be procured to manure fully every part of a farm, peat may be applied in one or other of the ways of preparation mentioned under that head. See Peat. Unfortunately for the improvement on chalky foils, fays he, neither clay nor peat is to be found but at the extremities or outskirts of the extensive tracts of chalky countries; but wherever they are to be had, the application of them should not be neglected. Calcareous chalky lands, which have long been under the plough, contain a large proportion of phosphat or oxalate of lime. These insoluble saline matters may, he fays, be rendered serviceable to vegetation by alkalies, vitriolic acid, vitriolic neutral.
chals, (especially if supercatted), and by pyritos and aluminous suffusions. Even green vitriol, which has hitherto been considered as unfriendly to vegetation, will, when applied in a proper manner to lands like this, considerably improve and promote the growth of paturage-gras. More experiments are, however, wanting fully to ascertain the utility of these chemical suffusions on grounds of this as well as other kinds. The principal disadvantage, says he, attending chalky lands, is, that of their being too dry and parched at certain feasons: but possibly this defect, when they are under paturage, may be counter-balanced by the more early gras they produce in the spring, as well as the luxuriant herbage that succeeds the autumnal rains.

It has been remarked, that the bell produce of the grain kind, in chalky lands, is harby and wheat; but oats will likewise do well on them. Their natural produce in weeds is poppies, May-weed, &c. For gras-feeds, fain-tom, trefoil, and, if rich, clover. The bell manure for these lands is rags, dung, folding of sheep, &c. as has been seen above. In these lands, if rain happen to fall on them just after flowing, before the corn gets up, it will frequently cause the earth to bind so hard, that it cannot get through it; but may be much helped by a light harrow, or other means of a similar nature. In breaking uplands of this nature from gras, too great a depth of furrow should, in moist cafes, be avoided.

Under the clas of chalky lands, a very large proportion of the grounds of this country may, it is observed, be comprehended.

The Hertfordshire farmers manage these lands for grain in the same manner as they do their clay-lands; but in Oxfordshire they commonly manure them with half-rotten dung, which, they say, prevents the binding of it; and some mix it with land which causes it to work short, especially if in any degree dry. They commonly further them with wheats, millet, and harby; and, after wheat, peas, or vetches: in doing of which they are obliged particularly to take care to have fine weather, because of the lands binding so greatly. See Soil.

Chalky Soil, that sort of land which is principally constituted of chalky materials. Soils of this nature abound very much in different parts of the kingdom. See Soil.

Challans, in Geography, a town of France, in the department of the Vendee, and chief place of a canton, in the district of Los Sables-d'Olonne; 7 leagues N. of it. The place contains 33,000, and the canton 10,902 inhabitants; the territory includes 2025 kilometres and 9 communes.

Challant, a town of Piedmont, in the duchy of Astia; 11 miles E.S.E. of Astia.

Challenge, a cartel, or invitation to a duel, or other combat. The word challenge was anciently translated commanx. It may very properly be called a provocation or summons to fight, when an affront in derogation of honour has been offered.

Challenges to fight either by word or letter, or bearing such challenges, are punishable by fine and imprisonment, according to the circumstances of the offence: and barely endeavouring to provoke another to send a challenge, or to fight, as by differiting letters full of reficktions, and inflaming a desire to fight, &c. is a high offence. (1 Hawk. P. C. 125. 138.) and if challenges arise from gaming, the offender shall forfeit all his goods to the crown, and be imprisoned two years. 9 Ann. cap. 14.

It is now the customary and frequent practice of the court of King's Bench to grant informations against perons leading challenges to justices of the peace, and in other leinous cafes.

Challenge, in Law, is an exception taken either against perons or things: in the former milance, against jurors, any one or more of them; and in the latter, as in the case of felony, by the prisoner against things, as a declaration, &c. Terms de la ley, 169. The former is the most frequent signification of the term.

Challenge to the jurors, is either made to the array, or to the poll to the array, as when the whole number is excepted against, as partially impanelled, or arrayed in the panel, or little square pane of parchment, on which the jurors' names are written. If the tithiff be of affinity to either of the parties; or if any one or more of the jurors are returned at the nomination, or under the direction of either party, or for any other partiality, the array shall be quashed. To the polls, or in capite, as when particulars are excepted against, as not indifferent. These may be challenged. 1. Proper honora reoletum, as when a lord of parliament is impanelled. 2. Proper delictum, as in the case of an alien born, which is defect of birth; or of a slave or bondman, which is defect of liberty; or in case of insufficient eleft. This latter exception has undergone several alterations by different statutes: but by 4 and 5 W. and M. cap. 24. the qualification is 10l. per annum, in England, and 6l. in Wales, either of freehold or copyhold lands: and by 3 Geo. II. cap. 25. the holder of a lease on life or lives, or for the term of five hundred years absolute, of the clear yearly value of 2ch. per annum, over and above the rent reserved, is qualified to serve on juries. 3. Proper affiction, or on infiction of partiality: and this kind of challenge is principal or to the favour; in the former case the cause of infiction is obvious, as, that a juror is of kin to either party within the ninth degree (Finch, 1. 401.) that he has been arbitrator on either side; that he has an interest in the cause; that an action is depending between him and the party; that he has taken money for his verdict; that he has formerly been a juror in the cause court; that he is the party's master, servant, counsellor, steward, or attorney, or of the same society or corporation with him: and in the latter case, when only some probable circumstances of infiction are pleaded, which are to be determined by triors. 4. Proper delictum, or on account of some crime, which disqualifies the juror, by affecting his credit, as conviction of treason, felony, perjury, or conspiracy; judgment of the pillory; branding or whipping, outlawry or excommunication; attaint of false verdict, or forgery, &c.

Challenger to the jurors, is also divided into challenge principal, and challenge per caufe: i. e. upon cause or reason alleged.

Challenge principal, otherwise called challenge peremptory, is what the law allows without cause alleged; or farther examination: thus, a prisoner at the bar, arraigned on felony, may peremptorily challenge twenty, one after another, alleging no cause but his own dislike; and they will be set aside, and new ones chosen in their room. 22 Hen. VIII. cap. 14. and 1 and 2 Ph. and Mar. cap. 10. This privilege of peremptory challenges, distinguishing the tenderness and humanity of the English laws, though granted to the prisoner, is denied to the king by Stat. 33 Edw. I. fl. 4. which enacts, that the king shall challenge no jurors without alleging a cause certain, to be tried and approved by the court. However it is held that the king need not aflign his cause of challenge, till all the panel is gone through, and unless there cannot be a full jury, without the persons so challenged. And then, and not sooner, the king's counsellor shall move the cause: otherwise the juror shall be sworn.
2 Hawk. P. C. 413. 2 Hal. P. C. 271. In case of high-
treason, no challenge peremptory was formerly allowed; but
by flat. 7 W. III. liberty is given peremptorily to challenge
thirty-five.

Yet there seems to be a difference between challenge prin-
cipal and challenge peremptory; the latter being only in mat-
ters criminal, and without any cause alleged; the former
mootly in civil cases, and with affixing some such cause, as
being found true, the law allows: v.g. if either party al-
lege, that one of the jurors is the son, brother, confin, or ten-
ant of the other, the exception is good. Also in the plea
of the death of a man, or in any action real or personal,
where the debt or damages amount to forty shillings, it is
a good challenge to a juror, that he cannot dispense forty shil-
lings per annum of freethold.

Challenge is also a term given or applied to an objection
made to a member of a court martial on the score of either
real or presumed partiality. The prisoner, however, must
in this case aijign his reason for or cause of challenge, of the
relevancy, propriety, and validity of which the members are
themselves the judges. Peremptory challenges, then, though
pracfished and admitted in civil cases, are not acknowledged
by military law, or allowed at courts martial. The privi-
lege of challenging is enjoyed equally by the prisoner and
the prosecutor.

Challenge upon reason or cause, is when the party does
allege some such exception as is insufficient upon acknowled-
gement of the truth of it; v.g. if the son of the juror have
married the daughter of the other party, or the like.

Challenges to the polls, or exceptions to particular jurors,
seem to answer the "recusatio judicis," in the civil and ca-
non laws; by the constitution of which a judge might be
refused upon any suspicion of partiality. By the laws of
England, also, in the times of Eacot and Flet, a judge
might be refused for good cause; but now the law is other-
wise, and it is held that judges and justices cannot be chal-
lenged. (Co. Litt. 204.) For the law will not suspend a
possibility of bias or favour in a judge, who is already sworn
to administer impartial justice, and whose authority greatly
depends upon that presumption and idea. And though the
fact at any time prove flagrantly such as the delicacy of the law
will not procure before-hand, there is no doubt but that
such misbehaviour would draw down a heavy censure from
those to whom the judge is accountable for his conduct.

CHALLENGE, in Hunting. When hounds, at first finding
the scent of their game, presently open and cry, the hunt-
men say, "they challenge."

CHALLIN, in Geography, a town of France, in the de-
partment of the Maye and Loire; 5 leagues W. of Ang-
ers.

CHALONNOIS, the name of a small country of
France before the revolution, in the environs of Chalon-sur-
Saone.

CHAL'O, a river of Asia, which rises near Lasa or Bara-
tols, in Tartary, passes through the province of Yunnan in
China, the country of Laos and Touquin, and discharges
itself into the gulf of Cochlin-China, in the Eastern sea, op-
posing the island of Hainan.

CHALONER, Sir Thomas, in Biography, a learned
writer and foreign minister in the reign of queen Elizabeth,
was born in London about the year 1545, and educated at
Cambridge, where he distinguished himself by his talent for
Latin poetry. Having been sent by Henry VIII. in the train
of the ambassador to Charles V. emperor of Germany, he
accompanied that prince in his unfortunate expedition
against Algiers, where he was shipwrecked and narrowly ef-
caped drowning, by keeping hold of a cable with his teeth,
many of which he lost on the occasion. On his return, he
became a favourite of the regent, duke of Suffolk, and
in consequence of his distinguished valour at the battle of
Muirburgh, he received the honour of knighthood. When
his patron was disfaced, and during the reign of queen
Mary, he lived in retirement; but on the accession of Eliza-
beth, he was appointed by the interest of Cecil, ambassador
to Flanders, emperor of Germany; and having acquired
great reputation in this office, he was sent in 1561 in a simi-
lar capacity to Philip, king of Spain. In this mission he
encountered several difficulties, which, notwithstanding the
relief derived from literary occupations, occasioned a lot of
ficknss that obliged him to request his recall; and this he
is said to have obtained by addressing the susceptible heart
of Elizabeth with an elegy written in the fyle of Ovid. Upon
his return towards the close of the year 1564, he publisht
the first part of his principal work "On the right ordering
of the English commonwealth." But his constitution was so
much impaired, that he died in October, 1565, at his house
in Clerkenwell Clofe; and as he was equally great in arms,
science, and arts, he was much lamented, and his funeral
was honoured by an interesting and affectionate attendance
at St. Paul's cathedral; Sir William Cecil officiating as chief
mournier. He was no less distinguished for his talents and
soundness of judgement, than for his literary endowments.
Of his writings the principal are, that already mentioned,
which, in its complete form, was printed at London in 1579,
40, under the title of "De Republica Anglorum inflau-
randa, lib. x.;" and a collection of his poletical pieces en-
titled "De Illiusqne quodam Encomium Miscellanea

CHALONER, Sir Thomas, a philosopher and technical
chemist, was the son of the preceding by his wife Ethel-
reda, born in 1559, and educated under the care of lord
treasurer Burleigh, first at St. Paul's school, and afterwards
at Magdalen college, in the university of Oxford. At college,
though he took no degree, he established his character for
abilities and learning. About the year 1580 he visited sev-
eral parts of Europe, and particularly Italy, where he pro-
longed his stay, and professed many curious inquirys in
natural philosophy and chemistry, together with a variety of
experiments. On his return home some time before the year
1584, he was much noticed at court for his polite behaviour
and accomplishments; and about this time married the
daughter of Sir William Fleetwood, recorder of London, by
whom he had severall children. In 1591 he was knighted;
and some years afterwards discovered the first alum mines
•which were ever known to be in this kingdom, on his estate
near Gilborough in Yorkshire. As during his foreign travel-
•es he had paid particular attention to the alum works at
Putchol or Pozzol, he found means to introduce that pro-
ductive manufacture into England, much to the advantage of
his country. The discovery of a mine in England was made
about the year 1600, and for rendering it practically useful,
workmen were brought from foreign parts; and at this period
it was adjudged to be a mine-royal, and was taken possi-
fion of by the crown. It was then granted to Sir Paul Findar,
at a rent of no less than 1,740 pounds sterling; nevertheless
the undertaking proved extremely lucrative. By the long
parliament it was voted to be a monopoly, and the alum
works were restored to their original proprietors. In the
latter end of queen Elizabeth's reign, sir Thomas Chaloner
visited Scotland, and was favourably received by king James;
so that in 1603, he was entrusted with the education of
prince Henry. He was likewise confidentially employed by
queen Anne. By a second wife he had children, to whom
he is said to have left a considerable estate in Buckingham-
shire. He died on the 17th of November, 1615, and was bu-

CHALONITIS, in Ancient Geography, a country of Asia; the most southerly province of Assyria. It extended along the left bank of the Tigris, S.W. of mount Tagros, which separated it from Media. It is said to have derived its name from the town of Chala; and the inhabitants were called Chalonites. This province, from its situation, was at all times the seat of war between potent empires and nations; and it is now become a desert, excepting some few small spots that may be cultivated about the inconsiderable towns which stand within its borders.

CHALONNE, in Geography, a town of France, in the department of the Mayne and Loire, and chief place of a canton in the district of Angers, situated near coal-mines; 4 leagues S.W. of Angers. The place contains 4922, and the canton 15,885 inhabitants; the territory includes 115 kilometres and 13 communes.

CHALONNE, an island in the Loire, a little below the town of the same name, about 3 miles in length, with a village.

CHALONS-sur-Marne, or CHALONS, a city of France, and capital of the department of the Marne; before the revolution, the see of a bishop, suffragan of Rheims, and chief place of the marsh of Champagne; situated between two fine meadows on the river Marne, containing 13 parishes, and partlysubject to its manufactures of flannels and coarse woollen cloth. The place contains 11,120, and the canton 15,503, inhabitants; the territory comprehends 260 kilometres and 16 communes. Chalons, or Duro-Catalaunum, afterwards Catalauni, formerly made a part of the territory of Rheims, from which it is distant only 27 miles. It is famous for a battle between the Romans and Attila, king of the Huns, in which the former, after an obstinate and furious combat, in which the number of the slain amounted, as some say, to 162,000, or, according to other accounts, to 300,000 persons, proved victorious, and Attila was obliged to retreat. At Chalons there is an academy of sciences, arts, and belles-lettres. It is 40 miles S.W. of Verdun, and 95 E. of Paris. N. lat. 48° 57', E. long. 4° 52'.

CHALONS-sur-Saone, a city of France, in the department of the Saone and Loire, and principal place of a district, seated on the river Saone, and, before the revolution, the see of a bishop, suffragan of Lyons. It is surrounded by walls, and defended by a citadel. It is the staple of iron for Lyons and St. Etienne, and of wines for exportation, which, as well as corn and wood, form its principal commerce. The city contains the Old Town, the New Town, and the suburbs of St. Lawrence. In the first is the court of justice, a modern structure, the cathedral, and the hotel-de-ville. The great Roman way from Lyons to Boulogne passed by Chalons; and it exhibits various traces of Roman magnificence, particularly the ruins of an amphitheatre. N. lat. 46° 47', E. long. 4° 57'.

CHALOSSE, a small country of France before the revolution, in the environs of St. Sever.

CHALTAPITES, or CHALPETES, in Ancient Geography, a division of Sufiana, according to Ptolemy.

CHALTARON, in Geography, a town of Aisa, in the country of Thibet; 10 miles W.N.W. of Coucha.

CHALVANCA, or CHUMBIQUELAS, a town of South America, and principal place of the jurisdiction of Chumbi-Vilecas, in Peru.

CHALUS, a town of France, in the department of the Upper Vienne, and chief place of a canton in the district of

St. Yrieux; 15 miles S.S.W. of Limoges. The place contains 1204, and the canton 274 inhabitants; the territory includes 227 3/4 kilometres and 7 communes. At this place Richard I. of England received a mortal wound, which he was reconnoitring there, previously to an assault for the purpose of recovering a treasure withheld from him by the vicount of Limoges.

CHALUS, in Ancient Geography, Kous, a river of Aisa, in Syria. Xenophon reports, that this river was full of large fishes, which the Syrians regarded as gods, and carefully preserved. It had its springs in the mountains W. of the town of Zefzina, ran S.W. to Chalybon, and from thence S. till it discharged itself into a lake, on the banks of which was built the town of Chalae. Xenophon places it at the distance of 25 leagues from the defile which lay between Syria and Cilicia.

CHALYBEATES, in Medicine. A chalybeate medicine is one in which iron or steel (chalybs) is a principal ingredient. See Iron (in Medicine).

Chalybeate waters form a very large and important class of mineral waters, which will be more fully described under the article Waters, mineral. It will be sufficient here to observe, that there are two principal classes of chalybeate waters; the first, those in which the iron is held dissolved by the carbonic acid; and, the second, those in which the sulphuric acid is the solvent. The former class is by far the most frequent. Of these, some waters contain little other foreign, and no other medicinal ingredient than the carbonic of iron, of which kind is the Tunbridge water; but others contain several neutral purging salts, of which the Cheltenham spring is an example. In all, the iron is totally precipitated in the form of a yellow light ochre, by boiling for a few minutes. The chalybeate waters holding the fufphat of iron generally can be traced to some pyritic source, and very often also contain fufphat of alumine. They are more alluring to the taste than the former, and the oxyl of iron is only partially separable by boiling, which therefore forms a ready test to distinguish the two species.

The chalybeate waters are found to be highly valuable medicines, though the actual quantity of iron taken in the usual doses is much smaller than in any other form in which this metal is given.

CHALYBIANS, in Ancient Geography, a people of Scythia, who are said to have derived their name from Chalybs, the son of Mars. Others say, that they were so called from their iron manufactures. Strabo is of opinion, that they were the same with the Alyzonians, mentioned by Homer, and that the poet either wrote Chalybes, or that the inhabitants were originally called Alybians. If so, Homer leads us to imagine, that they were as famous for their silvers, as they were, at that time, for their iron mines. They occupied that part which lay between the Taucitans and Scythimans. Diodorus Siculus calls them Chalybes; and they were the most valiant people the 16,000 Greeks in Xenophon's retreat had to encounter with. They were fierce and warlike; equally able to engage on the plains as on the mountains; they followed the Greeks all the way through their country, and terrified annoyed them on their march. This powerful nation extended itself to other parts, and occupied part of Fontus, which lay between Armenia Minor, the Macedons, the Mosynaeans and Tiberians. Their country was mountainous and barren; but furnished abundance of iron, which the inhabitants manufactured, and which, besides supplying their own wants, afforded a considerable article of commerce. In the time of Xenophon, this country was much reduced, and the Chalybiians were subject to the Mosynaeans. But in more ancient times it extended...
extended beyond the boundaries above-mentioned, between Amillus and Sinope, and comprehended a considerable territory on this side of the Halys. The Chalybes were the last people subject to Cretus. See Herodotus, l. i. c. 28.

CHALYBIANS, an ancient people placed by Pliny in Africa, in the Trogodite territory.

CHALYBYON, a considerable town of Afia, in Syria, situated in the midst of a large plain, on the bank of the river Chalbus, N. of Chalicia. See Aleppo.

CHALYBYONITIS, a country of Afia, in Syria, which extended from Cælesteria to the Euphrates, and which was so called from Chalbyon, the only city contained in it worthy of notice. Some supposing Chalep to be an abbreviation of Chalybyon, conclude Aleppo, Chalpe, and Chalbyon to be the same city; but Chalbyon is placed by Ptolemy at the 3d degree of latitude and 715 of longitude, and consequently far south of the present Aleppo.

CHALYS, now Cabe, a river of Spain, the banks of which were occupied by a people called Chalches, according to Justin. The waters of this river were reputed to give an excellent temper to cattle.

CHAM, or KHAN, the title given to the sovereign princes of Tartary.

The word, in the Persian, signifies mighty lord; in the Scholastic, emperor. Sperlingius, in his Dissertation on the Danish term of majesty, koning, king, thinks the Tartar term cham may be well derived from it; adding, that in the north they say kom, kommen, konge, konning, &c.

The term cham is also applied, among the Persians, to the great lords of the court, and the governors of provinces.

M. de Peyflellet, in his Strictures on Baron de Tott's Memoirs (i.e. vol. ii. p. 187.) observes, that no such word as cham exists; the true orthography being Khan. It is not, he says, a title exclusively assumed by the sovereign of the Tartars, since the Turkish emperors take it likewise. Of this the Ottoman money is a sufficient proof, the legend of which is "Soultan ibn el Soultaan Abdulhamid, Khan damel mukhows," i.e. Sultan, son of Sultan Abdulhamid, Khan, whose reign be everlasting. The title of Khan is certainly equivalent in figurisation to that of Shah, which means king; and yet the most absolute Persian monarchs, who have never assumed any other title than that of Shah, have permitted the governors of provinces in their empire to take that of Khan. Even in our time the governors of the provinces of Guendja, Guilan, Mazanderan, &c. who have no more authority in Persia than the Pachas in Turkey, take the title of Khan.

CHAM, in Geography, one of the provinces of Cochinchina.

CHAM, a town or parochial village of Swifferland, in the Canton of Zug, on the S. side of the Lake of Zug.

CHAM, or Chamb, a town of Germany, in the circle of Bavaria, seated on the Regen, at its confluence with a river called Ampl or Kamp; 84 miles N. of Saltzburg.

CHAM de Couca, a town of Portugal, in the province of Estremadura; 6 leagues N. of Thomar.

CHAMA, in Conchology, a genus of shells. The Chama are of the bivalve order, and are distinguished by having the shells rather rude or coarse; the hinge with a callous gibbosity, obliquely inflected in an oblique hollow: anterior slope of the shell clefted.

Vulva clavia abhyne nymphis. Linn.

The animal inhabitant of these shells is of the Tethys genus, having the body furnished with two small apertures on the left side of the neck: the body rather oblong, flabby, without peduncles; and the mouth with a terminal cylindrical proboscis under an expanded membrane or lip.

CHAMA cory. Shell roundish and smooth; beaks recurved; anterior slope with a gaping fissure.—Tegula sulcatus, latiusculus; rima bians, Linn.

This shell when full grown is about the size of a large orange. It inhabits most of the seas in the S. of Europe, and is rarely discovered as far northwards as the British isles, one or two instances only of its having been found in our seas are on record. Donovan. Brit. Shells. The French call it Coeur de beuf, in allusion to its general figure, which bears some resemblance to that of a bullock's heart. The English collectors distinguished it by the name of heart Cockle.

When in high perfection, this shell is of a delicate cream-coloured white, tinged and varied with pale reddish, and tawny; and is covered with an epidermis of a dusky brown colour.

CHAMA gigas. Shell plaited, with arched scales; posterior slope gaping.—Tegula plicata fornicata; fymonosia; ano bians, Linn. Chama fymonosia, Rumpl., Indrīciata, Argyn.

There is much propriety in the specific name gigas assigned by Linæus and other naturalists to this shell, for it is very much larger than the rest of the Chame, and indeed of a size very far superior to any other of the tawny-coloured productions heretofore discovered. Shells of this species weighing from one hundred to one hundred and thirty or forty pounds the pair are not very unusual; such occur in most public museums of Natural History in Europe. One individual of the Chama gigas is recorded by Conchological writers that weighed five hundred and thirty two pounds, including both the shells and the animal; and the latter was so large as to furnish one hundred and twenty men with food for a meal, and strong enough by the sudden collapsing or snapping its valves close, to cut asunder a cable rope, and lop men's hands off. This enormous species inhabits the Indian seas. Those of the largest size we are acquainted with, are whence they are occasionally brought as objects of curiosity into Europe, and kept as ornaments in gardens. During the early part of the last century they were in much request for the decorations of fountains, grottoes, and reservoirs of water, especially in Italy, the more modern Italians emulating in some manner the classic style of the ancients. This gigantic shell was perfectly familiar to the poets, and sculptors of antiquity; Venus is said to have ridden in one of them from the bottom of the sea, an allegory in itself extremely beautiful, and which has afforded matter for several of the most exquisite compositions of ancient, as well as modern artists; the former is obvious in a variety of remains of ancient sculpture, and of the latter we need only instance one, Barry's insuperable picture of "Venus rising from the sea," the impromptu and sublime effect of which is recent in the mind of every admirer of the modern arts. On gems and cameos of antiquity, Venus under various characters, Amphitrite, Doris, and other goddesses and nymphs in the train of Oceanus, frequently appear upborne upon the waves, or driving through the foaming billows in a chariot formed of the chama shell.

CHAMA antiquata. Shell somewhat heart-shaped, grooved longitudinally and ribbed transversely. Linn. &c.

A native of the American, Atlantic, and Indian seas. This shell is inequilateral, and is marked with brown or ferruginous spots; the ribs are from nineteen to twenty-two in number; the margin of the shell toothed; beaks inflected; back; anterior margin with a deep closed fissure.

CHAMA hippus. Shell plaited, muriuated; posterior slope
flopa rectue, closed, and toothed.— *Chama hippopus*, Linn. *Chama japonica* obliqua, Rumph. *Folium japonica*, Argent. This is a broad, and towards the beak gibbus hend, of a white or whitish colour variegated with spots of red, or sometimes purple, and very rarely yellow, and at the hinge are yellow calibrishes. The size is varies, but seldom exceed six inches from the beak to the margin, and nine inches in breadth; commonly one fourth less in size inhabits the Indian Ocean.

*Chama trapezia*. Shell trapeziform, gibbus, with longitudinal crenated grooves. Müll. *Zool. Dan*. A native of the Norway seas. This is of a gibbus form, about the size of a pea, of a white colour mixed with brown towards the margins, which last are crenated; the hinge nearly twenty in number ragged with unequal obtuse knots; beaks rather recurved; posterior slope ovate, heart-shaped, the anterior slope oblong, flat, and crenated on the outside. Schroth. Gmel. &c.

*Chama seminoricula*. Shell somewhat orbicular, compressed, coarse, with slight crenation each other. Linn. &c. This shell is longitudinally crenated and imbricated with scales; posterior slope with a whitish lobe; hinge margin crenated. Country unknown.

*Chama calicava*. Shell oblong, with imbricated grooves; anterior part recte. Gmel. &c. *Fefon*, Adamson. Found in the Atlantic, American and Indian seas. The colour is white, or when young, inclining to brownish; hinge with two teeth; exterior margin serrated, interior smooth.

*Chama graphiensis*. Shell orbicular, imbricated; one valve rather flattened, the other with a somewhat spiral produced beak. Linn. &c. *Concha rugata*, Rondel. *Jataon*, Adamson. Inhabits the Mediterranean, American, and Indian seas, where it occurs affixed to rocks. Authors enumerate six or more varieties of this shell, the colours of which are variable, as yellow varied with reddish or white, red varied with yellow and white, or white varied with red and yellow. The scales also in some specimens are more foliaceous, and sometimes are arched and imbricated.

*Chama couda*. Shell heart-shaped, and tranversely fricated; one side elongated and compressed. Linn. Inhabits the Red and Indian seas. Colour ferruginous, or chestnut. Ohé, Chama reineformis of Kowr is considered as a variety of this shell.

*Chama folia*. Shell subround, with toothed grooves intermixed with dots; posterior slope recte. Gmel. Native place unknown. Shell white, reddish on the outside; grooves elevated, longitudinally toothed, and alternately shorter; margin crenulated; posterior slope heart-shaped.

*Chama oblonga*. Shell oblong, the anterior part angular, with acute teeth in front. Linn. Inhabits the shores of Guinea, where it is scarce; it resembles mytilus modius; the shell is somewhat daphnous, white, with very fine irice crenating each other; the colour within citron; margin very entire; hinge with three middle teeth and an oblong acute lateral one bucking into a hollow between two teeth on the opposite valve. Figures by Chemnitz, T. 7: 50.

*Chama latavus*. Shell imbricated, with jagged lamellae; beak a little spiral obliquely. Linn. — *Placenta foliacea*, Argenville. Adheres to rocks. This shell is yellow, or white, with red beaks, and glabrous within; the upper valve is rather less and flatter than the lower, and in the hinge of the latter is an obtuse, thick, broad callosity crenated on each side, with an oblique contiguous hollow. A native of India.

*Chama bicornis*. Shell with conic valves, and horn-shaped oblique tubular beaks longer than the valve. Gmel. This bears a great affinity to *Chama gr. japonica*; colour in general yellow, and red or white on each side, with imbricated lamellae. Inhabits the Indian and American Oceans, and also the Mediterranean sea.

*Chama arcuata*. Shell grooved, muricated, with excava-

d dotted; hinge with a feble callosity. Gmel. Breadth two inches and nearly the same in length; colour white with some yellow, almost yellowish; margin crenated; posterior excava large, heart-shaped. Watery, wrinkled, with an appendage commonly on one side. A native of the American Ocean, but is rare.

*Chama mollissima*. Shell obtusely triangular, equilateral, plaited; anterior slope elevated, with oblique plains and friz. Chemnitz, &c.

This species, which is about the size of a hazel nut, resembles *Chama Cor*. It is milk-white and opaque; the beaks rather dilatant; hinge with a rounded narrow tooth under the beaks, and an adjoining hollow for the insertion of the tooth in the opposite valve; anterior to this is another long deep hollow between two teeth, and a little further back another round dilated tooth. Country unknown.

*Chama concamerata*. Shell with transverse wrinkles crossing the broad longitudinal sike: in the middle of each valve within an additional chamber. Walch. Gmel. &c.

This is a shell of small size, whitish, and very rare. Inhabits the American Ocean.

*Chama foliacea*. Shell white, with foliaceous ferrated transverse friz, the interfaces crenated; beak recurved. Gmel. Inhabits the Mediterranean, American and Indian seas; it is said to be found in fulli flate in Campania & France, but the latter is probably distinct although nearly allied to Chama foliacea.

*Chama arenicula*. Shell rounded, white undulated with brown; ribs triangular, perpendicular, and wrinkled; margin unequal. Bonn. Found on the shores of Syria.

Chemnitz supposes it may be of the Cordium instead of *Chama genu*.


*Chama circa*. Shell roundish, ventricose, inequivalve, and muricated with scattered unequal feble spines. Regenf. Conch. This is of a citron colour, and inhabits America.

*Chama thaca*. Shell roundish, longitudinally fricated; posterior slope recte. Gmel. &c.

Described in Molina’s Natural History of Chili as a native of the Chillee shores, where it buries itself in the sands. The shell is white violet and yellow on the outside, within elegant purple; diameter about four inches. The animal rich and agreeable food.

*Chama rugosa*. Shell somewhat orbicular, and very deeply sulcate; the wrinkles slightly imbricated; margin doubly folded. Linn. Mant.

This is about the size of a man’s finger, gibbos, and thick, with thirty grooves; the outer margin with concave prominent projections from the wrinkles, the inner margin obtuse plaited; hinge with two or three oblique grooves declining towards the anterior side. Native country unknown.

*Chama graphica*. Shell oblong, with a lateral oblique depression or hollow: callosity of the hinge dentated. Linn. Mant.

Reminisces Anomia gryphi. This species inhabits Barbary; the shell is ponderous and thick, about the size of a frit; beaks obliquely curved backwards; anterior slope longitudi-


**Chama alpitopha.** Shell cylindrical, white, diaphanous, with decurrent frize, the transverse frize arched and imbricated. Chama. Country unknown.

**Chamaedeas, in Military Language, a conference or parade.** Bittert la chamaede, is to beat a parade, or to make a signal by beat of drum, for a conference when any thing is to be proposed. This signal is sometimes made by found of trumpet, as well as by beat of drum. When the besieged are hard pressed or reduced to extremity, they beat the chamaede; and when either the besieged or besiegers will for a truce or short cessation of arms, for the purpose of withdrawing their wounded, or burying their dead, or of any reconciliation, whatsoever, they beat the chamaede: the besieged on the part of the rampart retire to the attack, and the besiegers at the most advanced part of their approaches.

**Chamaealanus, in Botany, Rumpl. See Arachis.**

**Chamaebuxus, Bauhin, pin. See Polygala chamaebuxus.**

**Chamaecherasus, Bauhin, pin. See Lonicera.**

**Chamaecissus, Fuchs. Bauhin. litt. See Glechoma.**

**Chamaecistus fereispseudofolia, floribus carinis, Bauhin. pin. See Azalea procumbens.**

**Chamaecistus latius, Pet. — untica folia, Sloan. See Turnera pimular.**

**Chamaecistus caule bifusto, Sloan. See Turnera fruticos.**

**Chamaecistus bifolius, Bauhin. pin. — 8, Cluf. See Rhododenron Chamalier.**

**Chamaecistus erite folia bulliiier, Bauhin. pin. — 6, Cluf. See Cistus fusiforme.**

**Chamaecistus foliis niiitrii, Bauhin. pin. — 5, Cluf. See Cistus canus.**

**Chamaecistus repens, Bauhin. pin. See Cistus fereispseudofoliis.**

**Chamaecistus incanus, Bauhin. pin. See Cistus glutinosus.**

**Chamaecistus latius thymi folio, Bauhin. See Cistus thymifolius.**

**Chamaecistus folia thymi incana, Bauhin. pin. — 4, Cluf. See Cistus pilosus.**

**Chamaecistus montanus, Rai. Syn. See Cistus piliolofoliis.**

**Chamaelema, Hal. See Glachoma.**

**Chamaerista, Comen. See Cassia chamapristis.**

**Chamaerista, Brey. See Cassia falcifera.**

**Chamaechrysole, Brey. See Stellaria dubia.**

**Chamaecyparissus, See Santolina.**

**Chamaedaphne, Mitch. See Mitchellia.**

**Chamaedaphne, Castel. See Kaldea.**

**Chamaedaphne, Euxb. See Andromeda calyculate.**

**Chamaedaphne vera Dioforidis, See Ruscus aculeatus.**

**Chamaedrifolia, Pluck. See Forskellia tama-olifana.**

**Chamaedrys alpina miniina, Bauhin. pin. See Veronica apyyrtoida.**

**Chamaedrys alpina saxatilis, Bauhin. pin. See Pae- loya bonarota.**

**Chamaedrys fulina, Bauhin. pin. See Veronica Teu- riun, fylacte, Chamadermy sphyricris, lufa, folia, kildea.**

**Chamaedrys 3. Clufi. See Dryas asenptala.**

**Chamaedrys major & minor repent, Bauhin. pin. See Teucrium Chamalier.**

**Chamaedrys spinus, Bauhin. pin. See Teucrium spn- nifolium.**

**Chamaedrys, n. So, Hall. — latiniata folia, Lob.**

**Chamaedrys annua, Monif. See Teucrium nififolium.**

**Chamaedrys marina, Tourn. See Teucrium maritum.**

**Chamaedrys multijlor, Tourn. See Teucrium multi- folium.**

**Chamaedrys canadensis, Tourn. See Teucrium canadensis.**

**Chamaedrys fruticosa infum. Stonech. Tours. See Teu- criaum multiflorum.**

**Chamaedrys vulgari folia affine, Bauhin. lfr. See Bartsia alpina.**

**Chamaedrys muculoid ptycata, Bauhin. pin. See Rhamnus trifoliis.**

**Chamaedulis, Monif. See Asplenium marinum.**

**Chamae-Genista, Bauhin. Cluf. Dalch. Cam. See Genista.**

**Chamaelasme, Amm. See Stellara chamame.**

**Chamaelris, Bauhin. Cluf. See Iris bifora & pumila.**

**Chamaelarix, Brey. See Aspalathus cher- nops.**

**Chamaelea, Cam. — tricoccos, Bauhin. pin. Gart. See Crorum tricoccos.**

**Chamaelea folia angustifolia, & folio subtruncata, Burr. See Phyllica flabularis.**

**Chamaelea folia linearis, Burr. See Tragia cha- mamed.**

**Chamaelea folia oblongis, Burr. See Clutia alterni- noids & polygonoides.**

**Chamaeleagnus, Dod. See Myrica gale.**

**Chamaeleon, in Afromony. See Cameleon.**

**Chamaeleon exiguis, in Botany, J. Bauhin. See Car- dus acutis.**

**Chamaeleon salmanticrises, Cluf. See Carthamus ca- nescens.**

**Chamaeleon albus, Cluf. See Carlina aculealis.**

**Chamaeleon albus Diofortidis, Colum. See Atracty- lis gunnerifera.**

**Chamaeleon nigra, Dalch. Dod. Bauhin. pin. See Carthamus corymbos.**

**Chamaeleon non aculeatus, Lob. See Centaurea co- nifer.**

**Chamaeleon, or Cameleon, in Zoology, a small and curious animal of the lizard tribe, celebrated from the remote days of classical antiquity, for the facility it was imagined to possess of changing its colours at pleasure, and affording to that of any situation, or object near it. In the Linnean system of animals it stands in that particular tribe of the Lacerta (see article Lacerta), which have the feet furnished with five toes, some only of which are connected, and the tail short, rounded, and incurved; the Chamaeleontes of Gimlin. The French naturalists, as Bronnart and Lapecepe, separate the chamaeleontes from the lacertae, and constitute a new genus of this natural tribe of animals, under the name of camele, cameleon, in which they include fix different varieties or species, as will appear in the sequel. The only kind of Chameleon with which the ancients seem to have been acquainted, is the common sort found in India, 3 G Africa,
Africa, and the hotter parts of Europe; as for instance, Portugal and Spain. This is specifically distinguished by the cinereous colour of the body, and the head being flat. Of this species there are two, or more, tuppotted varieties, or, as the French writers believe them, distinct, though very analogous species. One of these varieties has the body white, which is the Chameleon candidus of Laurenti; and another, Chameleon capitée preprens, has the head of a remarkably large size: this last is described by Dr. Parsons in the Philosophical Transactions for 1765. Besides these, the Chameleon mexicanus of Laurenti is considered only as a variety. Linnaeus was induced to admit all the different races of the chameleon tribe as varieties of this individual species; in the Gimelian edition of the Systema Naturae, the two kinds, Africans and Pumida, are very properly removed from the former, and described as distinct.

The general length of the common chameleon is about ten or twelve inches, measuring from the tip of the nose to the beginning of the tail; and the tail is nearly of a similar length. Its figure and proportions are uncouthlyingular. The head is large, flat above, and of a subtrigonal form: the posterior part of its body seems crumpled, and the legs ill-flapen and long. Its motions are flow, except when in the act of climbing trees in search of its prey, which consists of insects, when it ascends and descends with some facility, by means of its legs, which are well adapted for climbing, while at the same time it never fails to secure its hold more firmly by coiling its tail round the smaller branches. When it walks on the ground, it moves with a ludicrous air of gravity and circumvolution, in a regular and even pace, which it will not haleen, even at the approach of danger. The fecundity of this animal is supposed to be very great, being, from the flow of its motions and mode of life, incessantly exposed to the attacks of voracious birds, serpents, and various other animals, without any means of defence, and being yet found in vast numbers in the countries they naturally inhabit. The term of this animal's life is unknown; it breeds well in hot countries. Even in Lower Egypt, and on the coast of Barbary, when the weather is not very hot, the chameleon seems to lose its ordinary share of activity, and oftentimes, in the winter season, they are found in those parts concealed under heaps of stones, where they are overpowered by the cold in a perfectly motionless state, without being asleep. The Africans and Indians regard the chameleon as a most useful animal; they see them enter their habitation with pleasure, and endeavour as much as possible to domesticate them, the chameleon devouring mosquitoes, ants, and a host of other winged insects, with which they are tormented.

The chameleon by the power of poiffles, like mistress of the amphibia, of inflating its lungs, and retaining the air for a considerable time, can alter the appearance of its body at pleasure; sometimes appearing of a plump or fleshy aspect, while at other times, upon expelling the air from the lungs, and keeping them in a collapsed state, the whole animal assumes the mottlark and incredible aspect imaginable. At such times the skeleton seems scarcely more than covered with a thin skin, the back bone and ribs becoming distinctly visible on each side under the contracted skin. This inflation affects not only the body, but also the legs and tail, the tendons of which may be clearly traced in its extended flaithe through the skin. When thus put out, the animal can remain to for the space of an hour or two, or even so long as six hours, the parts being vividly inflamed, but the compression being exerted gradually, and thus by an almost insensible feeling of the parts, the dilated animal assumes the meagre condition before related. The skin in every part of the animal is of a granulated structure, the granules differing in size on various parts, from that of a small pin's head to the diameter of the tenth of an inch, or more, especially about the projecting parts of the head and jaws, and on each side of the belly. Down the back is a series of obsolete dentations, forming a furcate ridge from the head to the base of the tail, and decreasing in size towards the latter. The foot consists of five toes each, the anterior pair have the two outward toes united together by a common skin, and the three inner ones connected in a similar manner; the reverse of which is observed in the foot of the posterior legs, those having the three outer toes, and the two inner ones, connected.

The mouth is wide, and the bones of the jaws denticulated, so as to represent small teeth. Elliott mentions these effuse dentations, and lumping they could be of no service to the creature in eating, since it inhbits on flies, which it swallows whole, flies which must be interred by nature for its defence, and gravi already, that by means of these the chameleon holds a flock of flies in its month to prevent its being swalloved by serpents! The tongue is of a very extraordinary form, being composed of a white fold, flecked about ten inches long and three broad, round little flattened towards the end, hollow, and open, somewhat like the end of an elephant's probosces. This tongue is fastened to the os hyoideum by means of a sort of trunk, shaped like an intine, six inches long, and a line broad, having a membrane without, and a nervous sublimane within, which is solid and compact, though folt, and not easily divisible into fibres. This trunk serves to call out the tongue, which is fastened to it, by extending it, and to draw it back by contracting it, which motion it is enabled to perform by a kind of cartilaginous flucus, to which its innervating membrane is attached, and over which it is plated like a flat flack floting on the leg: this flaplus is an inch long, and takes its origin from the middle of the base of the os hyoideum, as in the tongues of several birds, and a number of blood vessels are distributed over it. This tongue is finel adapted for the purpose of seizing its prey, which consists of insects, forming a middle body with a diated and somewhat tubular tip, by means of which the animal seize them with the greatest effect, and partly covers the mouth in eating, as the tongue, neck, or the woodpecker, and retracting it inflammation with the prey secured at the tip. The structure, form, and motion of this creature's eyes are very peculiar: they are remarkably large, being nearly half an inch in diameter, of a spheric form, and projecting in the living animal half of their diameter: there are covered with only a single eye-lid or skin, pierced in the middle with a small hole, through which the bright and vivid pupil appears, surrounded by a golden yellow iris. The eyelid is granulated like the rest of the animal, and the fore part of the eye is attached to it in such a manner that the eyelid follows all the motions of the eye. The motions of the eye are not less singular than its structure, since it can turn them so as to see whatever passes either far backwards, on either side, or directly behind it, without at all moving the head. Sometimes one of these eyes will move while the other is at rest, or turn forwards while the other is directed backwards; or upwards, while the other is turned downwards. By extending the skin of the orbit crofs-ways, the chameleon can close its eyes, the holes then becoming a longitudinal sifure. The brain is extremely small; the heart is also small, truncated at the tip, and furnished with large ariucks, especially the left. The lungs are very large when inflated, and divided into several facetual subdivisions.

The Promethean-like faculty of the chameleon, to charge
its colour, has excited curiosity in all ages. That it depended in a very considerable degree on the will of the animal to exert this power was too apparent to be denied; but in what manner this effect was produced and operated on the frame of the chameleon was reserved for the investigations of later naturalists to determine with competent accuracy. Senecio stated it was effected by irritation; Salmons, by reflection; and others, as the Cartilagines, by the different disposition of the parts that compose the skin, which gave a different modification to the rays of light. Kircher ascribes the change of colour in the chameleon to the power of imagination in the animal, because it loses it when dead. Dr. Goddard attributes it to the grains in the skin, which, in the several postures, he thinks, may show several colours, and when the creature is in full vigour, may have, as he terms it, rationem speculati, or effect of mirrors, and reflect the colours of the bodies adjacent. That the colours are not by any means determined by surrounding objects, has been the aim of late observers to demonstrate; that they change with frequency and rapidity is admitted, but it is not true that they are influenced by the colour of any object in contact with it. The changes of colour which this animal exhibits vary according to the state of its health, the temperature of the weather, to age or sex, and a variety of other subordinate circumstances, all which tend to operate a change in the variable aspect of this singular creature. These transitions consist chiefly in the alternation of the chameleon's natural green, or bluish-grey of the skin into pale yellowish with irregular spots and variegations of dull red; or dusky inclining to black in. The epidermis of this animal is transparent, the skin beneath yellow, and the blood of a lively violet blue. The transitory combination of these colours therefore becomes apparent externally when the blood of the heart is impelled to the surface of the skin and the extremities, changing to violet, yellow, blue, and green, in a variety of hues as the blood circulates near the superficials. When the animal is sick it turns to a greyish dirty yellow, or brownish, like a decayed leaf, this being the true colour of the skin when the blood is withdrawn; but expose him to the rays of the sun, the genial heat revives and invigorates his whole system, and setting the blood, before torpid, in motion towards the skin, the violet and bluish prevail again, and by their intermixture with the yellowness of the skin the green will also re-appear. Return him again into the cold, the blood is withdrawn from the surface of the skin inwardly, and these colours, which depend on the immediate presence of the blood, will naturally fade away. Thus it happens also, that the colours of the chameleon are pale in the night time, or in the dark, as Opfonsville and Golbery have drawn. The same effect, and depending on the same causes as in the chameleon, is also observable in the lizard called Lacerta bullata by Gmelin and Linnaeus, with this difference only, that the transitions of colour are not so decidedly evinced as in the chameleon; but this latter animal which, exposed to the sun's shine is of a clear green, changes to a dusky blackish green, or yellowish, and in the cold to grey blending into brown; this animal, like the chameleon, possessesthe faculty of impelling its blood to the surface of the skin, or withdrawing it, and by that means of varying its tints at pleasure. The same circumstances are to be remarked in a still less degree in several other animals of the lizard tribe.

Chameleons have been sometimes brought alive into this country. In the year 1780 a specimen of this animal was kept in a living flate for some time in the company of apothecaries' physic garden at Chelsea, which, though, in a comparatively sickly state, exhibited those transitions of colour from bluish-ah to green, or yellowish spotted with brown before mentioned. Several chameleons have been preserved alive at different times in Paris. One of these afforded the French Academicians a favourable opportunity of investigating the manners and structure of this curious animal. The refits of their inquiries are interesting, and serve to throw considerable light upon the history of the chameleon. The following passages in particular seem to merit particular attention. "The colour of all the eminences (say those writers) of our chameleon, when it was at rest in the shade, and had continued a long time undisturbed, was a bluish grey, except under the feet, where it was white inclining to yellow, and the intervals of the granules of the skin were of a pale and yellowish red. This grey, which coloured all the parts exposed to the light, changed when in the sun; and all the places of its body which were illuminated, instead of their bluish colour, became of a brownish grey. The rest of the skin, which was not illuminated by the sun, changed its grey into several bluish and yellowish colours, forming spots about half a finger's breadth, reaching from the crest of the spine to the middle of the back; others appeared on the ribs, fore legs, and tail. All these spots were of an isabella colour, through the mixture of a pale yellow, with which the granules were tinged, and of a bright red, which is the colour of the bottom of the skin, visible between the granules: the rest of the skin not enlightened by the sun, and which was of a paler grey than ordinary, resembled a cloth made of mixed wool; some of the granules being greenish, others of a minute grey, and others of the usual bluish grey, the ground remaining as before. When the sun did not shine the first grey appeared again by little and little, and spread itself all over the body, except under the feet, which continued of the same colour, but a little browner; and when in this state the company handled it, there immediately appeared on its shoulders and fore legs several very blackish spots about the size of a finger nail, and which did not take place when it was handled by those who usually took care of it. Sometimes it was marked with brown spots, which inclined towards grey. We afterwards wrapped it up in a linen cloth, where having been two or three minutes, we took it out whitish; but not so white as that of which Aldrovandus speaks, which was not to be distinguished from the linen on which it lay. Our which had only changed its ordinary grey into a very pale one, after having kept this colour some time, lost it intenably. This experiment made us question the truth of the chameleon's taking all colours but white, as Theophrastus and Plutarch report; for ours seemed to have fuch a disposition to retain this colour, that it grew pale every night; and when dead it had more white than any other colour; nor did we find that it changed colour all over the body, as Aristotle reports; for when it takes other colours than grey, and dignifies itself to appear in disguise, as Ælian pleasantly says, it covers only certain parts of the body with them. Lastly, to conclude the experiments relative to the colours which the chameleon can take, it was laid on sublimes of various colours, and wrapped up therein; but did not take them as it had done the white, and it took that only the first time the experiment was made, though it was repeated several times on different days. In making these experiments, we observed, that there were a great many places of its skin which grew brown, but very little at a time; to be certain of which, we marked, with small specks of ink, those granules which to us appeared the whitest in its pale flate; and we always found that when it grew browned, and the skin spotted, those grains which we had marked were always less brown than the rest."

The popular error, of the chameleon living on air alone,
is thought to have arisen from the long abstinence which this animal can occasionally support; influences having, it is said, occurred in its palling several months without any apparent nourishment. This, though affected by respectable writers, is contradicted by the observations of the ingenious Somni, who, during his travels in Egypt, had an opportunity of ascertaining this circumstance, and actually did humble some pains, as appears from his writings, to determine this point to his satisfaction. It is now well known (says Sommi) that the changing of the colours in the chameleon is not to be attributed to the objects presented to them; that their different affections increase or diminish the intensity of the tints with which the very delicate skin which covers them, is, as it were, marbled; that they are not satisfied with nourishment to substantiate as; and that they require more light, aliments, and swallows like and other objects, and that, finally, the marvellous stories which have been told respecting this species of lizard, are merely a tissue of fictions which have disgraced the science of nature down to this day. I have preferred some chameleons, not that I was tempted to repeat the experiment of Cornebius le Brunn, who, after having gravely affurred us, that the chameleons which he kept in his apartment at Smyrna, lived on air, adds that they died one after another in a very short space of time, but I wished to satisfy myself to what a point they would sublimate without food. I had employed every precaution to prevent entirely their having any without ceasing to be exposed to the open air. They lived thus for 20 days; but what kind of life? From being plump as they were when I caught them, they soon became extremely thin. With this good plight they gradually lost their agility and their colures; the skin became livid and wrinkled; it adhered close to the bone, so that they had the appearance of being dried before they ceased to exist.

We shall now enumerate those species of the Linnean lacerta, which approach to near the common chameleon as to have been confounded with its varieties.

**African Chameleon. Lacerta africana.** Gmel. *Le caméléon d'Afrique,* of the French writers, is specifically distinguished by being of a blackish color, and having the crown of the head carinated. *Chamaeleo ex Africe coloris nigricantia, at pedine allo fayera dorson constans*, Sch. This, according to Sch., is from the coast of Barbary, and is the largest chameleon known; along the back to the end of the tail, runs a pure white stripe bounded by a blackish border or band; the rest of the animal is variegated with pale eumiceous undulations. In manners this resembles the last, and all the prominent parts are white.

**Little Chameleon. Lacerta panida.** Gmel. With the body bluish on the sides, and marked with two yellowish lines. *Le Caméléon panida* of Bosc and others. *Chamaeleo Promotorii Bone Spei, caralco alboucolo carumoris inflar cruciatus* of Sch. This kind inhabits the Cape of Good Hope, and has the head more flat than the former, though still elevated towards the middle part, and has the margin on each side denticulated. The body is of a bluish color, marbled or variegated with white.

Besides the common chameleon, *Le Caméléon commun,* and the two last-mentioned species, the French admit three others as species of their genus cameleon; *Le Caméléon du Sénégal*, *Le Caméléon du Cap de Bone-eferance,* and *Le Caméléon Fourchu.* The first, or Senegal chameleon, is smaller than the common chameleon; the helmet or head-piece is elliptical, and flat above; and the denticulations on the back and carina are less prominent. That from the Cape, the second species, has the head-piece almost flat above, with a line of large tubercles behind each eye; and the denticulations of the back and ridge of the collar are more dispersed and are not continued so far under the belly and the tail. *Le caméléon fourchu* is certainly a very distinct species from the rest. This has the muzzle advanced or projecting and terminated in two lengthened compressed processes. The top of the head is flat, and is denticulated in its outline. In size and general aspect it resembles the common chameleon. *T.* is was brought from Java, and was figured by Bronnian in the French *Bulletin des Sciences,* and is repeated in Latreille's recent *Hist. Nat. des Reptiles.*

In the year 1669, Claude Perrier published a work entitled "Descriptum Anatomiae du Caméléon." "Précéd., Differtatio de V. c. incre., seu martapus imed Chamaeleonis," &c. by Hopke appeared in 1681; and in 1707, "Differtatio de Chamaeleonis," by Brongniard. Besides the, and the works before mentioned, there are none of material interest on the chameleon. The paper by Dr. Paron in the 38th volume of the Philosophical Transactions entitled "An Account of a particular Species of Chameleon," appeared again in French as the "Relation d'une Espèce particulière de Chamaeleonis," (Journ. de Physique) but contained nothing new. "Nachricht von einer beolander gattung des Chamaeleons," and "Beschreibung eines Chameleons," are tracts upon the same subject.

**Chameleon, Mineral, in Chemistry,** a sublimate produced by subjecting one part of black oxyd of manganese to ignition in a crucible with three parts of pure nitrat of potash, until the mafa eakes fusing, and affumes a dry earthly appearance. If a portion of this powder be put in a glass containing clear pump-water, the fluid becomes fitt green, then violet, afterwards reddish, and at last again totally discoloured: the metallic oxyd falling then to the bottom with a black colour. But if it be preserved in a bottle quite filled with boiled, dibiled water, and well stopped, the green colour lasts longer, changes gradually to blue, and a yellow ochreous oxyd of iron precipitates. To explain these changes of colours, it may be observed, that the nitre is decomposed by the calcining heat, and alkaliized by the loss of its acid; that the black manganese oxyd is brought by ignition to the state of a mere imperfect oxyd, and that, therefore, its alkalic solution may appear blue. But as the black oxyd of manganese contains some admixed oxyd of iron, the blue colour of the solution is changed into a green by the yellow tint of the oxidised iron. The oxyd of iron sulfides by repole, and then the blue colour re-appears. The manganese oxyd absorbs again, by degrees, more oxygen from the atmospheric air; it affumes, therefore, a brown red tinge, becomes at last back, and precipitates at this period. *Gren's Principles of Modern Chemistry,* vol. ii. p. 420.

**CHAMELEONTES,** one of the families into which late writers separate the lizard or lacerta tribe. The Chameleonae are *Lacerta chameleon, Africana* & panida. See Lacerta.

**Chameleonum in Botany,** Barr. See Linum catharicum.

**Chameleum canariense,** Morif. in Botany. See Cheysanthemum fruticosum.

**Chameleum alpinum,** Bauh. Pin. — *paludum* & montanum, Barr. See C. alpinum.

**Chameleum alpinum abrotani folio,** Vail. See Anthemis montana.

**Chameleum inodorum**, Morif. Rai. See C. inodoreum.

**Chameleum inodorum**, Eauh. Pin. See Anthemis aurofia.  

**Chameleum**
CHAMÆNELUM maritimum, Rai. See Matricaria maritima.

CHAMÆNELUM maritimum, J. Bauh. See Anthenmis maritima.

CHAMÆNELUM maritimum v. maurus. Linn. See A. tenebrosa.

CHAMÆNELUM vulgare, Bauh. Pin. See Matricaria chamægelia.

CHAMÆNELUM internum. Tourn. See M. argentea.

CHAMÆNELUM aurum pergivum, J. Bauh. See Co- tula aurea.

CHAMÆNELUM ethopiaicum. Breyn. See C. turbinata.

CHAMÆNELUM leucanthemum Park. See C. capensis.

CHAMÆNELUM incanumum bupjanum, Bauh. Pin. See Anthemis alpina.

CHAMÆNELUM foliis pinnatiis, Tourn. See Anaclyclus orientalis.

CHAMÆNELUM lactum, Bauh. Pin. See A. aurea.

CHAMÆNELUM annuum ramifom, Moris. See Anthe- mis cota and mixta.

CHAMÆNELUM chium, Tourn. See Anthemis chia.

CHAMÆNELUM nobile, Bauh. Pin. —— odorum, Dod. —— 102. Hill. See A. nobilis.


CHAMÆNELUM fastidium maritimum, Vaill. See A. valen- tina.

CHAMÆNELUM speciosus flora, Shaw. See A. pyrev- thum.

CHAMÆNELUM tanaceti minoris folio, Vaill. See A. tinervia.

CHAMÆNELUM pumilum, Burm. See Actotis an- thermisides.


CHAMÆ-MOLY, Colum. See Allium chamæmoly.

CHAMÆ-MORUS, Cluf. See Rubus chamæmorus.


CHAMÆ-ORCHIS, Bauh. Pin. See Ophrys alpina.


See Cornus fascicul.

CHAMÆPEUCE, Alp. See Stæhelinia chamæ- peuce.

CHAMÆPITIS incana, Bauh. Pin. See Cressa eratica.

CHAMÆPITIS cerulea, Bauh. Pin. See Dracocopho- lum angustifolium.

CHAMÆPITIS lutæa virgulae, Bauh. Pin. See Teucrium chamæphythis.

CHAMÆPITIS spuria, Bauh. Pin. See Teucrium pseudo- chamæphythis.

CHAMÆPITIS mossbata, Bauh. Pin. See Teucrium iua.

CHAMÆPITIS ethiopica, Pink. See Erica plenucretii.

CHAMÆR-HODODENDRON exoticum, Breyn. See Azæela indica.

CHAMÆR-HODODENDROS pontica mespili folio, Tourn. See Azæela pontica.

CHAMÆR-HODODENDROS fupina, Bocc. See Azæela procumbens.

CHAMÆR-HODODENDROS pontica folio lauraceras, Tourn. See Rhododendron ponticum.

CHAMÆR-HODODENDROS folio glabra, Amm. See Rhododendron dauricum.

CHAMÆRITHA peregrina, in Zoology, the name given by Cladius to the gorgonia palmæ of Palmas.
CH Außerdem, in Botany, Bnt h. Pin. See Rubus faxatilis and Chromemorous.


CHARLES, Sloan. See Euphoria manulites.

CHA-MA-HI, in Geography, a town of Asia, in the island of Formosa. N. lat. 22° 10'. E. long. 12° 8'.

CHAMAILLER is to light against an enemy armed cap-a-pe.

CHAMAILLERE, in Geography, a town of France, in the department of the Puy-de-Dôme, and district of Clermont; 1 mile S.W. of Clermont.

CHAMANA, in Ancient Geography, a country of Asia, in Cappadocia, according to Ptolemy.

CHAMANIM, in the Jeviyh Antiquities, is the Hebrew name for that which the Greeks call pyreia, or pyrætis t & St. Jerom in Levit. (ch. xxv. 70.) has translated somalthebra, in Isaiah (ch. xxvii. 9.) delabra.

These chamanim were, according to rabbi Solomon, idols exposed to the sun upon the tops of houses. Aben Ezra says, they were portable chapels or temples, made in the form of chariots in honour of the sun.

What the Greeks call pyreia, were temples consecrated to the sun and fire, wherein a perpetual fire was kept up. They were built upon eminences, and were large enclosures, without covering, where the sun was worshipped. Herodotus (lib. i. p. 87.) and Strabo (lib. xvi.) speak of them; and the greeks, or worshippers of fire, in Persia and the Indies, have still these pyreia. Strabo says, that in his time there were many of these temples to be seen in Cappadocia, consecrated to the goddess Astart, and the god Hamman. Astart is, in all probability, the moon, and Homanus the sun.

The word chamanim is derived from chaman, which signifies to warm. Calmet.

CHAMARANDE, in Geography, a town of France, in the department of the Seme and Osie, and district of Étampes; 5 miles N.N.E. of it.

CHAMARIM, a word mentioned in several places of the Hebrew Bible, and generally translated the princes of the idoles, or prigs dressed in black, because chamar signifies black or blackfu.

Camar, in Arabic, signifies the moon; Isis is the same deity. Grotius thinks the Roman prigs called camilli, came.
CHAMA, in *Ancient Geography*, a people of Lower Germany, placed by Ptolemy to the south of the *Bruttii*. M. d'Anville places them N.E. of the *Tenterrii*. They occupied the parts adjacent to the Rhine.

CHAMAZI, in *Geography*, a town of France, in the department of the Mayenne, and district of Château-Gontier; 4 miles S.W. of it.

CHAMBE, a town of Armenia; 120 miles S.E. of Erivan.

CHAMBER, in *Architecture*, a member of a lodging, or piece of an apartment, ordinarily intended for sleeping in; and called by the Latin *cubiculum*.

The word comes from the Latin *camera*; and that, according to Nicoll, from the Greek *kampos*, vault or curse; the term *chamber* being originally confined to places arched over.

A complete apartment is to consist of a hall, antechamber, chamber, and cabinet.

As to the proportions of chambers, their length should be to the breadth as 15 to 1, or some small matter less; but ought never to exceed that proportion; and, as for the height, it should be three-fourths of the breadth. The height of the chambers of the second story, should be a twelfth part less than the height of those below: thus, if the height of the first story be fifteen feet, that of the second will be fourteen feet eight inches. As to the height of the third story, it should be only three-fourths of the second.

In building bed-chambers, regard should be had as well to the situation of the bed, as to that of the chimney. For which reason, the chimney ought to be placed just in the middle, but distant from it about two feet, or two and an half, in order to make room for the bed, which prevents this inequality from being discerned. See Bed-Chamber.

CHAMBER MUSIC, compositions for a small concert-room, a small band, and a small audience; opposed to music for the church, the theatre, or a public concert-room. See Music of Camera.

CHAMBER, privy.—Gentlemen of the Privy-Chamber are servants of the king, who are to wait and attend on him and the queen at court, and in their directions, groffes, &c.

Six of these are appointed by the lord-chamberlain, together with a peer, and the master of the ceremonies, to attend all ambassadors from crowned heads in their public entries. Their number is fifty.

Their institution is owing to king Henry VII. As a singular mark of favour, they are empowered to execute the king's verbal command, and without producing any written order; their person and character being deemed sufficient authority.

Mr. Pegge (in his *Curialia*, 4to. 1783) has a dissertation on the original nature, duty, &c. of the king's most honourable privy chamber. From this we learn, that the most ancient mention of "gentlemen" of the privy-chamber, is said to be in the *Liber Niger dominus Regis Anglie*, in the time of Edward IV. They are called "esquires of household," in number 40; of 20 of them to be continually at court, in riding and going, at all times, and to help to serve his table, &c. A salary was appointed of 7d. daily, while in waiting, and clothing winter and summer, or else 40s. The salary, afterwards enlarged, was taken off, early in the reign of James I., from which time the office appears to have been merely a post of honour. It is conjectured their title was changed from "esquires of the household" to that of gentlemen of the privy-chamber, in the reign of Henry VI., or early in that of Henry VIII. "From being anciently near, and almost," says Mr. Pegge, "companionable officers to the royal person, they are now become the most remote, and seldom visible in their proper sphere, and scarcely distinguishable as such, above thrice in a reign." As no salary or emolument whatsoever attends the post at present, it may be asked, why it is so much sought after? The answer, as Mr. Pegge, observes, is very easy, and almost in omnium aere. "It is an exemption from serving the office of sheriff, and also from an arrest, without leave first obtained, together with other like immunities belonging to the royal servants."

CHAMBER, in *policy*, is used for the place where certain assemblies are held; also for the assemblies themselves.

Of these there are various kinds; some established for the administration of justice; others for matters of commerce, &c. Of the first kind among us was the

**Star-Chamber.** See Court of Star-Chamber.

**Chamber, Imperial,** is a court or jurisdiction held anciently at Spires, but since transferred to Wetzlar; in which are determined the differences arising among the princes and cities of the empire.

It was at first amulatory: in 1473, it was fixed to Augsburg, then removed to Frankfort on the Maine, and thence to Worms, in 1495; where a diet was held by Maximilian I., in which period some have referred the institution of the Imperial Chamber; poffeiling supreme jurisdiction to judge without appeal in every question brought before it, and established with these powers, in order to terminate the right of private war: afterwards it was removed to Nuremberg, and Ratisbon; again to Worms and Nuremberg; and from this last to Ellingen; thence, in 1527, to Spires; where Charles V. rendered it dentary, in 1530; and here it continued above a century and a half. It is now fixed at Wetzlar.

At its first institution by Maximilian, it consisted of a president, who was always a nobleman of the first order, one of 16 afflors, or judges. The president was appointed by the emperor, and the judges partly by him, and partly by the states, according to forms which it is here unnecessary to describe. A sum was imposed, with their own content, on the states of the empire, for paying the salaries of the judges and officers in this court. In consequence of the reformation, the number of afflors was increased. By the treaties of Weilphalia, particularly that of Olmaburg, in 1648, it was decreed, that the Imperial Chamber should be composed of a Catholic judge, and four presidents, named by the emperor, two of each religion, and 50 counsellors, 26 of whom are Catholics, and the red Protestant. But this chamber has been since reduced to a much smaller number of officers, being composed of the Elector of Trier, who is judge as bishop of Spires, of one Catholic and one Protestant president, and eight Catholic and seven Protestant counsellors. This court takes cognisance of all questions concerning civil right between the states of the empire, and passes judgment in the last resort, and without appeal. To it belongs likewise the privilege of judging in criminal causes, which may be considered as connected with the preservation of the public peace. Although the sentences of this, and also of the Aulic council, are final, there are, nevertheless, some cases in which the parties may appeal to the emperor, and
and demand a revision of the process, particularly in those cases which regard to doctrines, principalities, counties, and other immediate rights of the empire. In both those tribunals the emperor presides as sovereign judge, and when he is present, pronounces sentence; and in his absence, he, who represents his person as judge, has a right to wear an imperial regalia as a badge of his dignity. Processe in the Imperial Chamber are almost endless, on account of the infinite number of ceremonials and formalities with which they are embarrased. This court is frequently absent from its person, for fear of exposing its awards to some disfigure: the princes sometime not permitting such to be executed as clipeate them.

Chamber of accounts, a sovereign court in France before the revolution, where accounts were rendered of all the king's revenues; inventories and accounts thereof registered; oaths of fidelity taken, and other things relating to the finances transacted. The French had also Chambres, es officiels, which judged, by appeal, of differences arising on the taking of tithes: of these ecclesiastical chambers there were nine: viz. at Paris, Bourdeaux, Rouen, Lyons, Toulouse, Bourges, Pan, and Aix: they mutually consified the archbishop of the place, as president; other archbishops and bishops, a deputy of each of the dioceses, and three counsellors of parliament. The chamber chose as many counsellors out of the clergy as it thought proper; as also a promoter.

Chamber, apostolic, at Rome, is that wherein affairs relating to the revenues and domains of the church and the pope are transacted.

Chamber of audience, or grand Chamber, a jurisdiction that subsisted in every parliament of France. At the first institution of their parliaments, there were two chambers, and two kinds of counsellors; the one the grand chamber for audiences, the counsellors whereof were called jugurs, who only judged; the other the chamber of inquiry, the counsellors whereof were called rapponteurs, who only reported the processe by writing.

Chamber, direction, is a court instituted in Old Spain, for the regulation of divers affairs relating to their commerce to the Spanish West Indies.

Chamber of the edict, or My-port, was a court established by virtue of the edicts of pacification, in favour of those of the reformed religion wherein the number of judges of either religion was the same; and to which recourse was had in all affairs wherein any of the protestants were concerned. This chamber is now suppressed.

Chamber of London. See Chamberlain.

Chamber of alliances, in France, denoted a society of merchants and others, established by a decree of the council of state in 1658, for conducting the business of fermenting; but in Holland, it regulates a court of justice, where causes relating to insurances are tried.

Chamber of bookellers, in Paris, denoted a society consisting of a syndic and assistants, elected by four delegates from the printers, and twelve from the bookellers, whose business it was to suppress and regulate the trade of printing and selling books, prints, &c. In the Visitation of books, performed by at least three persons of the society, all letters against the honour of God, and the welfare of the state, and all books printed in violation of their regulations and privileges, were suppressed.

Chambers of commerce, are assemblies of merchants and dealers, where they treat about matters relating to commerce. Of these there were several, established in most of the chief cities of France, by virtue of an act of the 30th of August, 1701. Indeed there were some before this general establishment, particularly one at Marseille, and another at Dunkirk.

Chambres of the king, regie camera, in our old records, are used for the havens or ports of the kingdom.

Chamber, in French, chamber, of a battery, in fortification, is a dry place sunk under ground, and secured against rain or mole, for holding and preserving powder, loaded shells, and fuses.

Chamber of a mine, is, strictly speaking, the place where the powder is lodged for springing it with. There one end of the fascines, by means of which the powder in the mine is fired, terminates. There are mines, that have only one chamber; and there are others that have several. The chamber of a mine has a platform (ceiling or top) of strong planks, supported on four upright timbers or poles, behind which planks are also fixed, for fmitting up the sides and preventing the earth from tumbling down. A mine is sometimes excavated into the form of a parallelepiped, but generally into a re sembling that of a cube; and it is not, perhaps, improper to observe, that there should not be any vacant or open space left in it, or any vent communicating with it, for would occasion a great diminution of the effect of the powder employed for springing the mine.

Chamber of a port, is that part of the basin of a port, which is the most retired, and of the least depth, and to which disarmed or dismantled vessels are carried in order to be repaired.

Chamber of a cannon, in Military Language. See Cannon.

Chamber of a mortar, is the place which contains the charge of powder. The chambers of mortars are of various and very different forms as well as dimensions, for an account of which see the article Cannon.

Chambers, iron, in a Fire-flop, are ten inches long, and 3½ in diameter. They are breeched against a piece of wood fixed across the ports, and 1st into another a little higher. When loaded, they are almost filled with horn powder, and have a wooden tompon well driven into their muzzles. They are primed with a quick match thrust through their vents into the powder, with a part of it hanging out. When the ship is fired, they blow open the ports; and the port-huds either fall downward, or are carried away, and thus give vent to the fire out of the sides of the ship.

Chamber of a lock, in Inland Navigation, is the space within the gates, through which a boat rises or sinks, from one level to another of a canal or river. See Plate of Canals, V. fig. 30 and 37.

Chambers of the eye, in Anatomy, are those spaces in front of the eyeball, which contain the aqueous humour.

The anterior chamber is the interval between the posterior surface of the cornea, and the iris.

The postfere chamber is the interval between the uvea and the front of the crystalline lens. For a further description of these, see Eye, anatomy of.

Chamberdekins, in our Old Statutes, a denomination for certain Irish beggars, which by statute 1 Hen. V. cap. 7 and 8. were to leave England within a certain time. They were called in the statute chamberdekyne, and said to be clerics mendicants. Blount says they are called chamberdekins in the parliament-roll.

Chamberet, in Geography, a town of France, in the department of the Corrèze, 15 miles N. of Tulle.

Chamberlain, an officer who has the management or direction of a chamber.

The word chamberlain, according to Ragueau, originally signified a gentleman who was to sleep in the king's bed-chamber, at his bed's feet, in the absence of the queen. There
There are almost as many kinds of chamberlains as chambers: the principal are as follow:

CHAMBERLAIN of England, Lord Great, an officer of great antiquity and honour; being ranked the sixth great officer of the crown: a considerable part of his function is at the coronation of a king; when he dries him, carries the coff, sword, and gloves, to be used on that occasion; the gold sword and feather to be offered by the king; and the robe royal and crown; he also underwashes, and waits on him at dinner; having for his &c the king's b.d., and all the furniture of his chamber, the night-apparel, and the silver banes wherein the king washes, with the towels.

To him likewise belongs the provision of every thing in the house of lords, in the time of parliament; to which end he has an apartment near the lords house. He has the government of the palace of Westminster, and issues out warrants for preparing, fitting out, and furnishing Westminster-hall, against corruptions, trials of peers, &c.

He dispenses of the sword of flate, to be carried by whom he places; and when he goes to parliament, is on the right hand of the sword, the lord marshal being on the left. On all solemn occasions, the keys of Westminster-hall, of the Court of Wardens, and Court of Requels, are delivered to him.

To him belong livery and lodging in the king's court; and he has certain fees from every bishop at his doing homage to the king, and from every peer at his creation. Under his command are, the gentleman-usher of the black rod, the yeoman-usher, and door-keepers.

The office of lord great chamberlain of England is hereditary; and where a perfon dies feised in fee of this office, leaving two falfe, the office belongs to both falles, and they may execute it by deputy; but such deputy must be approved by of the king, and must not be of a degree inferior to a knight. 4 Bro. P. C. 146, 8vo.

This honour was long held by the earls of Oxford;viz, from the time of Henry I. by an efsate-tail, or inheritance; but in later coronations by the marquis Linsey, afterward duke of Ancaster, by an eflate or inheritance from a daughter and her general: and settled in that family.

CHAMBERLAIN of the househol, Lord, an officer who has the oversight and direction of all officers belonging to the king's chamber, except the pretendent of the red-chamber, which is absolutely under the groom of the robe.

He has the oversight and direction of the officers of the wardrobe, of the removing wardrobes, beds, tents, levells, muffes, comedians, hunting, musicians, trumpeters, drummers, handi-crafts, and other tradifion retained in the king's service: as also of all bequests at arms, physicians, apothecaries, furgeons, barbers; the king's chaplains, &c. and administrators the oath to all officers above fairs. Under him is a vice-chamberlain; and both are alway privy-counsellers. There is also a Lord Chamberlain of her majesty's househol.

There were formerly CHAMBERLAINS of the king's courts, 7 Edw. vi. c. 11: and there are chamberlains of the exchequer, who keep a controll of the pells, of receipts and exitus: they also have in their custody the leagues and treaties with foreign princes, many ancient records, and the two famous books of antiquity, called Domeday Book, and the Black Book of the exchequer: and also the standards of money, and weights and measures are kept by them. There are also Under-chamberlains of the Exchequer, who make searches for all records in the treasury; and are concerned in making out the tallies, &c. The office of chamberlain of the Exchequer is mentioned in the flat. 32 and 37 Hen. VIII. c. 14. Besides thefe, we read of a chamberlain Vol. VII.

of North Wales, Stowe, p. 541. There is also a chamberlain of Chelfter, to whom it belongs to receive the rents and revenues of that city; and when there is no prince of Wales, and earl of Chelfter, he hath the receiving and returning of all writs coming thither out of any of the king's courts. See COUNTY-palatine.

CHAMBERLAIN of London. This officer keeps the city-money, which is laid up in the chamber of London, an apartment in Guildhall; he also manages over the affairs of malfers and apprentices; and makes free of the city, &c.

His office lasts but for a year, being chosen annually on Midsummer-day; but the custom usually obtains to re-chooe the fame perfon; unless he has been chargeable with any misdemeanor in his office.

CHAMBERLAIN, vic. See Vice-Chamberlain.

CHAMBERLAIN, Laude, in Biography, the descendant of a good family at Odington, in Gloucefhire, was born in 1610, and educated in St. Edmund's Hall, Oxford, where he was graduated M. A. in 1641. During the civil wars, he travelled through nof of the countries of Europe; and after the restoratiun was made one of the fellows of the Royal Society, then founded. In 1669 he was secretary to the earl of Carlile, and went to Stockholm with the order of the garter to the king of Sweden: in the following year he was graduated L. L. D. at Cambridges; and in 1679 he was appointed to instruct George prince of Denmark in the English language. He died at Chelsea in 1705. Dr. Chamberlaine was the author of several pieces, political and historical, relating to the circumstances and events of his time; but he has been principally known by his "Anglica Notitia, or the Present State of England, with divers reflections upon the ancient State thereof;" Lond. 1668, 8vo; of which a second part was published in 1671, 8vo. This was a popular work, and often reprinted during the author's life. It was enlarged by his son, and has been occasionally reprinted, so as to have arrived several years ago, at the 36th edition. A harnifls inftance of the author's vanity was recorded on his monument, viz. "That he caufed some of his own books wrapped in cerecloth to be buried with him, as they might fiibly be of use to a remote age." The son of the former, John Chamberlaine, was educated at Trinity-college, Oxford, and became an industrious translatror of works from foreign languages, of which he is said to have understood fifteen. His principal translations were "Officelaud's Argumentes of the Books and Chapters of the Old and New Testaments;" "Fontenelle's Lives of the French Philosophers;" "Nicewentty's Religious Philosopher;" "Brand't History of the Reformation;" "The Lord's Prayer in 100 Languages;" "Difputations, historical, critical, theological, and moral, on the most memorable events of the Old and New Testament." To the Royal Society, of which he was a member, he communicated those pieces, which are inserted in the Philosophical Transactions. After an useful and wellspent life he died in 1724.

CHAMBERLEN, Hugh, a celebrated accoucheer, was a native of London, and born about the middle of the 17th century. His father, Paul Chamberlen, and two of his brothers, were also practitioners in midwifery. They invented among them an instrument, the obstetric forceps, with which they were enabled to deliver women with safety, in cases where, before this discovery the life of the child was usually lost. Of this Hugh Chamberlen gives the following account; his father, brothers, and myself, (though none else in Europe that I know) have, by God's blessings, and our industry, attained to, and long practiced a way to deliver women,
the head, on account of some difficulty, or disprop-portion, cannot pass, without any prejudice to them or their infants; though all others (being obliged, for want of such an expedient, to use the common way) do and must endanger, if not destroy, one or both with books.

By this annual operation, a labour may be dispatched, on the least difficulty, with fewer pains, and sooner, to the great advantage, and without danger, both of woman and child.' Prof. to Chamberlen's Transl. of Mauritceau.

But though he attributes the merit of the discovery to his father and brothers conjointly with himself, yet as the father did not appear to have been acquainted with the instrument in the year 1665, when he published his "Midwives' Guide," a very indifferent performance; and the brothers have left no memorials of themselves; their names are little noticed. After establishing the reputation of the instrument here, Dr. Hugh went, in the year 1727, to Paris, expecting to gain equal credit there, and intending, it is supposed, to sell the invention; but undertaking to deliver a woman whose pelvis was too narrow to admit the head of the child, passed, without mauling it, and the woman dying, as Mauriceau, who had seen her before, had predicted, he found himself so degraded, that he thought it advisable to quit Paris, and go to Holland. Mauritceau was not a little pleased at his discomfiture, of which he gives an account in the 1st vol. of his "Obf. fur la Grolfelle," Obf. 26. Addressing himself to Dr. Chamberlen, he tells him, "he must not think the Parifan women to be delivered with the fame ease as the English." "Lui faut entende qu'il estoit bien trompe, en croyant trouver autant de facilite a accoucher les femmes a Paris, comme il avoit pu trouver a Londres." In Holland he is supposed to have been more successful, and to have imparted the secret to Rayth and Roochuyfen, then in high reputation at Amsterdam, and to have received for his invention a considerable reward. He now returned to London, where he soon acquired a considerable fortune. "Not so much, Mauritceau says, from the sale of his forcepts, as from the information he had obtained by reading, and translating his "Observations fur la Grolfelle."

We have no doubt, but Chamberlen obtained much information from Mauritceau's book, which was the best treatise then extant on the subject of midwifery; but his forcepts had its share in raising him to the high rank he attained in his profession, and which he continued to enjoy to the end of his days. In 1683, he published his translation of Mauritceau's observations, which was received with great avidity, and has since been frequently reprinted. We have not been able to learn at what time Dr. Chamberlen died. His forcepts, simplified, and improved by Smellic, and further varied and altered by other teachers, continues to be esteemed as one of the most valuable instruments used in the practice of midwifery, and defervingly gives the inventor a distinguished rank among the improvers of the art. Haller Bib. Chr. Sur Effais fur l'art des accouchements. CHAMBERRY, or CHAMbery, in Geography, formerly the chief city of Savoy, now the capital of the department of Mont Blanc, and principal place of a district, is situated in a pleasant valley on the river Laffé. It has a castle, seated on an eminence, and is surrounded with mountains, but not fortified. Under most of the houses are piazzas, where people may walk without being incommoded in the worst weather. Its suburbs are large and handsome, and in the center of the town is the ducal palace. It contains two parochial churches, and 10,000 inhabitants; the north canton contains 14,655; and the south 14,690; the former contains 146½ square miles and 12 communes, and the latter 195 square miles and 17 communes. This town was taken by the French in 1752. The height of the first floor at St. Jean Baptiste is 35 feet below the lake of Geneva, or 83 feet above the Mediterranean. It is 27 miles N.E. of Grenoble, and 85 N.W. of Turin. N. lat. 45° 55'. E. long. 7° 50'.

CHAMBERS, Ephraim, in Biography, a perfone whose name desvers to be particularly recorded in a work of this kind, as he was the first, who, in this country, formed the plan, and undertook the execution of a scientific dictionary, that might be said to comprehend the whole circle of the arts and sciences; and in this respect it differed from Harris's Lexicon Technicum which preceded it, and which furnished many of the mathematical articles. The few particulars that are known concern the form him are collected and arranged by Dr. Kippis, in the last edition of the Biographia Britannica. The place of his nativity was Kendal, in the county of Westmoreland, but the time of his birth and the duration of his life, cannot, from any documents that remain, be precisely ascertained. His parents were Quakers; but when he came into the world, he does not seem to have manifested any attachment to their profession. In his education he probably enjoyed no advantages besides those that were necessary to qualify him for trade. At a proper age he was bound apprentice to Mr. Senex, the globemaker; and during his residence with this skilful mechanic he acquired that taste for literature and science, which marked the progress and directed the occupation of his future years. At this early period he formed the design of his grand work, the "Cyclopædia;" and it is said, that some of the first articles of it were written behind the counter of Mr. Senex. Apprized that the execu- tion of the plan which he had conceived was incompatible with the avocations of trade, he quitted business; and having made such arrangements as were necessary to procure for him a subsistence in the prosecution of it, he took chambers at Gray's-inn, where he chiefly resided during the remainder of his life. The first edition of the Cyclopædia, which must have been the result of many years' intense application, appeared in 1728, in two volumes, folio. It was published by subscription, at the price of four guineas, and the list of subscribers was very respectable. The dedication to the king is dated Oct. 15th, 1727. The reputation which Mr. Chambers acquired by the execution of this undertaking, procured him the honour of being elected into the Royal Society, Nov. 6, 1729.

In less than 10 years, a second edition became necessary, which was accordingly printed, with corrections and additions, in 1738. Instead of a new edition, the proprietors had proposed to give a new work. Mr. Chambers had actually prepared a considerable part of the copy with that view; and more than 20 sheets were printed off. In pursuance of this plan, it was their intention to have published a volume in 1737, and to have proceeded annually in supplying an additional volume, till the whole was completed. But they were diverted from executing their purpose, by a bill which passed in the House of Commons, though it was rejected in the House of Lords, and which obliged the pub-lishers of all improved editions of books, to print the improvements separately. Whilfst this edition was in agitation, Mr. Bowyer, the learned printer, had formed some extensive ideas of improving the dictionary; but the plan, whatever it was, did not appear to have been reduced to practice. About this time Mr. Bowyer had a dispute with Mr. Chambers concerning the title of the work, propoing to substitute "Encyclopædia" for "Cyclopædia." Mr. Chambers vindicated the title he had adopted, and persevered in retaining it. See the article Cyclopædia. The second edition of Mr. Chambers's dictionary was so favourably received by the pub
lie, that a third was called for in the very next year, 1730; a fourth, in 1741; and a fifth, in 1746. This rapid sale of a work, so large and expensive, must be considered, not only as a striking testimony of the general estimation in which it was held, but likewise, as a strong proof of its real utility and merit.

Although the Cyclopaedia, denounced by Mr. Bowyer, "the pride of bookfellers, and the honour of the English nation," was the grand business of Mr. Chambers's life, and may be regarded as almost the sole foundation of his fame, his attention was not wholly confined to this undertaking.

He was concerned in a periodical publication, entitled "The Literary Magazine," which was begun in 1735; and he also engaged, in conjunction with Mr. John Martyn, F.R.S. and professor of botany at Cambridge, in preparing a translation and abridgment of the "Philosophical Repository and Memoirs of the Royal Academy of Sciences at Paris." This work, which was comprised in 5 volumes, 8vo., did not appear till the year 1742, some time after our author's decease.

Mr. Martyn, in a subsequent publication, has severely censured Mr. Chambers's part in this abridgment. The only other work ascribed to Mr. Chambers, is a translation of the "Jefuit's Perspective," from the French, in 40., which has been several times reprinted. The indefatigable industry which Mr. Chambers employed in his literary and scientific collections, may be inferred from the account given by Mr. Airey, his amanuensis, who asserts that, between the years 1728 and 1753, he copied nearly 20 folio volumes, so large as to comprehend materials, which, if they had been printed, would have formed 30 volumes of the same size. Mr. Chambers, however, acknowledged, that, if they had been printed, they would neither have been fold nor read. Mr. Chambers, by his incessant application, so far impaired his health, that he was obliged to retire, occasionally, to a lodging at Canonbury-house, near Islington; and to make an excursion to the south of France. At his return to England, he died at Canonbury-house, and was buried in Wellminder Abbey, where the following inscription, written by himself, is placed on the north side of the cloisters of the abbey:

"Multis pervigatus,
Pensa notus;
Quis quam, inter lucem & umbram,
Nec eruditus, nec idota.
Litteris deditus, tranferti; sed ut homo
Qui humani nihil a fe alculum putat.
Vita fimul, & laboribus functus,
Hinc requiescite voluits.
Ephraim Chambers, R.S.S.
Obit XV. Maii, M.DCC.XL."

"Heard of by many,
Known to few;
Who being neither very celebrated nor yet obscure,
Neither very learned nor yet ignorant,
Paffed a life devoted to study;
And paffed it as a man
Who was not inattentive
To any of the offices of humanity;
Having ended his days and his labours together,
Here wished to repose.
Ephraim Chambers, F.R.S.
He died on the XVth of May,
M.DCC.XL.

The above narrative supplies us with no facts by which we may fix the age of Mr. Chambers. Supposing him to have been apprenticed at the age of 14, and to have quitted his service at 21; and conjecturing that he might be 60 years old when he died, there will remain a chasm of 26 years, from the termination of his apprenticeship to the year 1728, of which we have no account; but we may infer, from the extent of his work, which occupied his attention during this period, that he was fully employed. The intellectual characters of Mr. Chambers seems to have been fertility and attention. Indefatigable as a man of business, he had no leisure to pursue discoveries with the ardour of a philosopher. The whole occupation of his life seems to have confided in collecting and communicating knowledge; and, he undoubtedly possessed distinguished talents for the arrangement and illustration of the materials which he collected. His temper was cheerful, but impetuous; his mode of life referred, solitary, economical, and regular. His literary labours unquestionably entitled him to more than he received; but the compensations which authors received from booksellers, were, at that period, far inferior to what, in certain instances, they have lately rifen.

It may not be improper, for gratifying the curiosity of the readers of this article, to terminate it with a brief account of the "Cyclopaedia," or the effects which it has produced in the literary world. Whilst a sixth edition was preparing, the proprietors thought that the work might admit of a supplement in two additional folio volumes. This business was committed to the late George Lewis Scott, e. g.; but he was prevented from proceeding far in it, by being appointed sub-preceptor to his present majesty, when Prince of Wales. The chief management was then committed to Dr. John Hill, so well known by his voluminous and daily publications. In his name, together with that of Mr. Scott, the supplement was published; and though it contained a number of valuable articles, it was far from being uniformly conducive for judgment and due selection. The proprietors afterwards determined to combine the whole into one work; and after several ineffectual efforts for accomplishing their plan, the business devolved on the editor of this Cyclopaedia, who derived from the favour of the public, and the singularly rapid and extensive sale of the work, a recompense, which, independently of every other consideration, he reckoned amply adequate to his labour. This edition began to be published in weekly numbers, in 1778, and the publication was continued without a single interruption, till it was completed in the year 1785. The work was dedicated and presented to his majesty. The popularity of the "Cyclopaedia," gave rise to a variety of similar publications; of many of which it may be truly said, that most of the articles which compose them, are extracted verbatim, or at least with very few alterations and additions, from this dictionary; and that they manifest very little labour of refence, or of compilation. One defect seems to have been common to them all, with hardly any exception; and that is, that they do not furnish the reader with references to the sources from which their materials are derived, and the authorities upon which they depend. This charge was alleged by the editors of the French Encyclopaedia, with some justice, but at the same time with unwarrantable acrimony against Mr. Chambers. The editors of that work (see Encyclopaedia) while they pass high encomiums on Mr. Chambers's Cyclopaedia, blend with them censures that are unfounded. They say, e. g. that the "merited honours it hath received would, perhaps, never have been produced at all, if, before it appeared in English, we had not had in our own tongue those works, from which Chambers has drawn without measure, and without selection, the greatest part of the articles of which his dictionary is composed. This being the case, what must Frenchmen think of a more trauable part of that work? It must excite the indignation of the learned, and give..."
gave just offence to the public, to whom, under a new and pompous title, nothing is presented but riches of which they have a long time been in possession?" They add, however, after appropriate and justly deferred commendation: "We agree with him, that the plan and the design of his dictionary are excellent, and that, if it were executed to a certain degree of perfection, it would alone contribute more to the progress of true science, than one half of the books that are known." However, what their vanity has led them to assert, viz. that the greatest part of Chambers's Cyclopædia is compiled from French authors, is not true. When Mr. Chambers engaged in his great undertaking, he extended his researches for materials to a variety of publications, foreign and domestic, and in the mathematical articles he was peculiarly indebted to Wolins: and it cannot be questioned, that he availed himself no less of the excellent writers of his native land than those of France. As to the imperfections of which they complain, they were, in a great measure removed, as science advanced, by subsequent improvements; nor could the work, in its half state, be considered as the production of a single person. Nevertheless it cannot be conceived, that any scientific dictionary, compiled in four volumes, should attain to the full standard of human wishes, and human imagination. The proprietors, duly wise of this circumstancel and branch of the rapid progress of literature and science in the period that has elapsed since the publication of Chambers's Cyclopædia, have undertaken a work on a much larger scale, which, with the encouragement already received and further reasonably expected, will, it is hoped, preclude most of the objections urged against the former dictionary. We shall here only add, that the compilers and editors of the French Encyclopædia, in their relative capacity, have produced a work, which, though entitled to the highest praise, is very far from being exempt from the imperfections of every human production. Of this the French themselves have not been unapprised: for notwithstanding the improvements successively made in the Paris Encyclopædia since its first appearance, it has been thought necessary to adopt a new plan, and to form upon it a work of immense bulk, which is gradually proceeding, and is not likely to be soon completed. See Encyclopædia and Cyclopædia. Diog. Brit.

CHAMBERSBURG, in Geography, a port-town of America, and the capital of Franklin county, in Pennsylvania. It is on the canal from Conococheague creek, through which might be opened an easy communication with the Potomac river; and principally consists of two large streets, intersecting each other at right angles, and leaving a public square in the center. It contains about 2,500 houses, handsomely constructed of brick or stone, two Presbyterian churches, a brick court-house, and a flume gurdl. There is a printing-office in the town, and a paper-mill in its vicinity. The situation is favourable to trade and manufactures, and it has a lively and thriving appearance. The adjacent land is rich and fertile, and is highly cultivated. It is 157 miles W. of Philadelphia. N. lat. 39° 57'. W. long. 77° 30'.

CHAMBLES, or Sorelle River, a river of Canada, issuing from lake Champlain, and running to the river St. Lawrence near the island of St. Peter; 300 yards wide when lowest, full of dry seashores, and yet of sufficient breadth for rafting timber, &c. at the spring and fall.

CHAMBLIS, or CHAMBLEY, a town of France, in the department of the Oise, and district of Senlis; 13 miles W.S.W. of Senlis.

CHAMBOIS, a town of France, in the department of the Orne, and district of Argentan; 2 leagues N.E. of Argentan.

CHAMBON, a town of France, in the department of the Creuse, chief place of a canton in the district of Bonfloc; 8 miles E. of Gueret. The place contains 1,823, and the canton 7,143 inhabitants; the territory includes 255 kilometres and 16 communes.

CHAMNON, Le, a town of France, in the department of the Loire, and chief place of a canton, in the district of St. Etienne; 1 league S.W. of St. Etienne. The place contains 1,875, and the canton 9,825 inhabitants; the territory comprehends 1375 kilometres, and 12 communes.

CHAMBONLIVE, a town of France, in the department of the Corrèze, and district of Tulles; 5 miles E. of Uzerche.

CHAMPOISE, a town of France, in the department of the Rhone and Loire; 7 miles W. of Villefranche-en-Ban-joins.

CHAMBRANLE, in Architecture and Joinery, the border, frame, or ornament of stone, or wood, surrounding the three sides of doors, windows, and chimneys. The chambranle is different in the different orders; when it is plain, and without moldings, it is called, simply and properly, band, cadre, or frame. The chambranle consists of three parts; the two sides, called ascendants; and the top, called the traverse, or supercilium. The chambranle of an ordinary door is frequently called door-case; of a window, window-frame.

CHAMBRE, La, in Geography, a town of Savoy, or of the department of Mont Blanc, and chief place of a canton, in the district of St. Jean-de-Maurienne, situated on the Ire; 23 miles N.E. of Chambery. The place contains 429, and the canton 4,098 inhabitants, who are very subject to the gout, or swelling of the neck; the territory includes 1,569 kilometres, and 46 communes.

CHAMBRE, in Military Language, a defective concavity sometimes found in the thickens of the metal in pieces of ordnance. Un canon chambré is a cannon badly bad, and liable to burst when fired.

CHAMBRES, ou faire chambrés, is to put or collect together several soldiers or military people in one and the same chamber, in the same tent, or in one and the same barrack, for the purpose of eating, sleeping, and reposing themselves there.

CHAMBROSIS, in Geography, a town of France, in the department of the Eure, and chief place of a canton, in the district of Bernay; 5 miles W. of Bernay. The place contains 1,000, and the canton 11,262 inhabitants; the territory includes 255 kilometres, and 46 communes.

CHAMBROIS, a town of France, in the department of the Netherland, in the county of Hamaut, on the Dendre; 8 miles S.E. of Ath.

CHAMCHOU-POU, a town of Chinese Tartary; 8 miles N.N.E. of Ning-yuen.

CHAMCHOZ, a town of Armenia; 145 miles E. of Erivan.

CHAMEAU, in Zoology. The Bactrian camel is described
ferbed under this name by Buffon. See Camelus Bar-
trinus.

CHAMEAU-Léopard, the French name of the camel-
leopard, Camelopardalis Giraffe, which feed; called also
by some late French writers Chameau moucheté.

CHAMEAU-Marin, in Ichthyology, the French name of
Ostacran Turritus, Linn. which feed.

CHAMEISME, in Botany, Pluck. See Houstonia curnela.

CHAMEIRAT, in Geography, a town of France, in
the department of the Corrèze, and district of Tulle; 3
miles S.W. of Tulle.

CHAMELET, a town of France, in the department of
the Rhône, and district of Villefranche; 3 leagues W. of
Villefranche.

CHAMELOT, in Commerce. See Cambelet.

CHAMFER, or Chamferet, in Architecture, an orna-
ment confining half of a scotia; being a kind of small
futto, or putton, on a column; called also frix, and fritia.

CHAMFERING, or Chamfering, is used for cut-
ing the edge, or end of any thing aloof, or bevel.

CHAMFRAN, in Military Language, a sort of ar-
mour, that served as a defence for a horse in combats. It
was made of metal or boiled leather. It covered the fore
part of the head, in the form of an adjusted mask. The
chamfrain had on the middle of it an adjusted piece of iron,
round, and sufficiently large, terminating in a point, for
piercing every thing opposed to it. The chamfrain of the
count de St. Pol, at the siege of Harfuir in 1449, under
Charles VII. was valued at fifty thousand crowns of the
money of that time; and that of the count de Foix, at the
taking of Bayonne, was valued at fifteen thousand crowns
of gold.

CHAMIER, Daniel, in Biography, a French pro-
testant divine, was a native of Dauphine, and, after having
been long minister of Montemart, went, in 1612, to oc-
cupy the post of professor of theology at Montauban. He
was much employed by his party in political negotiation with
the court, and on all occasions manifested inflexible resolu-
tion. He is said to have drawn up the famous edict of
Nantes, and he presided in several synods, having an ex-
cellent talent for the conduct of public business. Nor was he
left distinguished for learning. Among his works may
enumerate a treatise, "De Occursu Monte Piceti," com-
manded by Scaliger; and his "Jeuifs' Letters," or epistles
addressed to him by fathers Cotton and Armand, with his
observations. But his greatest work was entitled, "Catho-
lica Pamphlet, or the Wars of the Lord," in 4 vols. 4to,
left incomplete, and containing a detailed view of the con-
traversies between the Papists and Protestants, and a re-
putation of cardinal Bellarmine. It was printed at Geneva, with
a preface by Turretin; and an abridgment of it was pub-
lished by Spanheim in 1643, in 1 vol. fol. He also
wrote a "Corpus Theologicum," printed at Geneva in
1653. He united the functions of the divine and of the
folder, and was killed by a cannon ball at the siege of Mon-

CHAMIL, in Geography. See HAMI.

CHAMILLARD, Stephen, in Biography, an emi-
nent antiquarian, was born at Bourges in 1656, entered
among the Jesuits at Paris in 1679, and took the vows in
1690. He was for some years a teacher of the helles letters and
philosophy in the schools of the society, and a distin-
guished preacher for 20 years. His erudition in the science of
medals is certified by two judges of unquestionable author-
ity, viz. Vaillant and Ezechiel Spanheim. He wrote se-
veral dissertations on particular medals preferred in his own
and other cabinets, some of which were infected in the Me-
moires de Trévoux, and some collected in a volume, en-
titled "Dissertations für plusieurs Medailles, Pierres gravées,
& autres Monuments d'Antiquités," Paris, 140, 1711. He
is said, however, to have been imposed upon with respect to
two medals, a Pacatianus and an Anna Paulina, which,
after exercising his erudition and talent and conjecture in two
elaborate dissertations, were proved to be fictitious. Father
Chamillard published a learned edition of "Prudentius, in

CHAMIR, in Geography, a fortified town of Arabia,
in the country of Yemen; 50 miles N.E. of Lohtha. It is
situated in the middle of the territories of the confederates
of Hashish-u-Bakil, and it has coilt the Imam no small trouble
in retaining possession of it. N. lat. 15° 15'. E. long. 43° 5'.

CHAMIRA, in Botany, Thunb. See Heliospila
circinata.

CHAMITIS, Gœrt. from the MSS. of Solander, in the
possession of Sir Joseph Banks. Cçlfs and order, pen-
tandria digyna. Nat. ord. Umbellata, Linn. Umbelliferae,
Juff.

Gen. Char. Umbel none, or simple. Invol. none, or
about eight-leaved. Cal. superior, five-toothed, permanent.
Cor. petals five, ovate-oblong, obtuse, quite entire. Stam.
filaments five. Pist. alykes two, filiform; stigmata thickish;
Peric. none. Fruit inferior, crowned with the calyx, divi-
bile into two. Seeds two, egg-shaped, with three elevated lines
on one side, flat on the other.

Sp. 1. C. integrifolia, Gœrt. tab. 22. fig. 4. Herb. of
Sir Joseph Banks. "Leaves entire." Stems very short,
branched, forming dense tufts. Leaves crowded, sheathing,
linear-lanceolate; upper ones ovate-acuminate; sheaths egg-
shaped, open, two-awned. Flowers white, solitary, terminat-
ing the little branches; peduncles capillary. Fruit small.
Gaertner observes that this genuine umbelliferous plant is sin-
gular, not only on account of its solitary flowers, but also of
its fruit, which is frequently divisible into three, as if the
author of nature had compensated the defect of its umbel
by the unusual number of its seeds. 2. C. irsirfucata, Gœrt.
tab. 22. fig. 4. Bank's Herb. "Leaves three-forked." Leaves
crowded about the root, broad-linear, three-forked at the
summit; segments diversivac, mucronate; fiesbts
bread, embracing the base of the item. Stigmas quite simple,
about two inches high, naked, or furnished with one sensible
tricuspidate leaflet. Invol. shorter than the umbel; leaflets
five or eight, linear, acuminate, permanent. Umb. simple,
equal; rays from eight to ten. Fruit four times larger than
its preceding species, narrowed above, somewhat
comprised. Both species are natives of Terra del Fuego.

CHAMITIS, in Geography, a town of Russia, in the
government of Mogilev, on the borders of Poland; 42
miles S.S.W. of Mogilev.

CHAMKA, or Chomka, a town of Asia, in the coun-
try of Tibet; 229 miles S.E. of Laffa.

CHAMMANENA, or Chamarana, in Ancient Geo-
graphy, a district of Cappadocia Minor, which lay towards
the west, and was watered by the river Halys.

CHAMEISKOI, in Geography, a fortress of Russia,
on the confines of China; 168 miles S.W. of Verich-
Ninski.

CHAMOIS, in Zoology, a species of antelope, Antil. pru-
sipriscapra Pallas, Schrebers, Erxleben, and Gmelin; Capraipr-
iscapra of Linnaeus; Rupicapra of Pllny; Le Chamois of Buf-
fon; Gems of Gefner; Gemus Allegani et Humberti Bocart;
and Chamois Antelope, Pennant. This animal is specifically
known by having the horns erect, round, smooth, with the
hooks backwards.

The
The chamois is about the size of the common goat. The head is of a whitish fawn colour, with a black or brownish band, on each side. The hair of the body is short, like that of the flag, except in winter, when it becomes longer and thicker. It varies in colour according to the seasons of the year; in spring it is of a greyish ash-colour, in summer of a reddish fawn colour, in autumn of a fawn-brown mixed with black, and in winter of a blackish brown. The cheeks, chin, throat, outer parts of the ears, and the belly, whiten in general; and along the back is a narrow line of a blackish colour. The horns are about six inches long, or rather more, of a slender form, and placed nearly upright, with the tips uncinated, or bent backwards; these horns are slightly wrinkled towards the base, but have no appearance of annulations as in the rest of the antelope tribe. At the base of each horn, at the back part, is a longitudinal orifice in the skin, or lachrymal pit similar to that observed under the eyes of the common antelope. The tail is short, like that of the goat, and of a blackish colour.

Buffon’s opinion of the chamois is well known. He believed the chamois, the wild, and the domestic goat to be only constant varieties of a single species, but all the later writers concur in separating the chamois from the goat; they have not only separated them as species, but divided them into two distinct genera, and not without sufficient reason. The chamois differs from the goat in having the horns from March to month, the goat, and being that of the antelope in being dillinct of the longitudinal ridge, so conspicuous in the horns of the goat tribe. The horns of the female goat are sometimes smaller than those of the chamois, but still possess the same longitudinal ridge or angle as those of the male. The lachrymal openings in the skin behind the horns dilates it also from the goat. The goat, in a state of nature, inhabits the very summits of the highest mountains; the chamois is an inhabitant of alpine regions, but only those of the second stage, and is rarely found in the lower elevations. The chamois is also rather smaller, and less active than the goat; it is dillinct of the beard, which in the goat is very long; and the hair of the goat is always long and thick, or bushy, while the chamois is very bare of hair, like the antelope during the summer season.

The chamois is the only species of antelope, except the saiga, that is found in Europe. It inhabits the mountains of Dauphiny, Padmont, and Germany, the Alps of Savoy and Italy, and the Pyrenean mountains. Several parts of Greece, and the mountains of Caratia and Albania. It is an animal of a social nature, as four, five, or six are usually found in company together. Sometimes it appears in troops of fifteen or twenty together. There are certain times when they assemble in still greater numbers, and then again disperse in small parties over the mountains. The full-grown males have a strong and unpleasant odour, which is yet more powerful than that of the male goat during the coupling season, which is in September and October: the female brings forth her young in April and May. A young female chamois is in maturity at the age of eighteen months: they bring forth two or rarely three at a birth. The small ones follow the mother till September, or sometimes longer, if the hunters or the wolves do not disperse them. They are supposed to live 20 or 30 years.

During the summer the chamois prefers the sides of the more inaccessible mountains that are thickly clothed with forests, and that, by which means, are protected from the heat of the sun; it goes to pasture early in the morning, or in the evening only. It is as well to be an extremely timid animal, for when several of the chamois are at

MIS. with - I for virtues they
in fli...Lr..e theyv in fli... The town I tag, that
neral lied, more, them only but goat, framerate,
very in... of the troops (tag, aim, the
in chamois
The chamois is very penetrating, and its heat remarkably acute. When it feels a man, it fixes its eyes upon him for an instant, and then flies off immediately. If the situation will admit, the animal retreats to the rocks, or some elevated point from which it can observe the objects of its apprehension, and again pursues its course, pausing at intervals, again to look back and notice the route of its pursuers, till it effects its escape, or is either overthrown or slain. In the chase it evinces every mark of extreme agitation and timidity. It feeds on herbs, making choice of the most delicate and tender parts, such as the flowers and young buds, especially those of an aromatic nature.

The flesh of the chamois is tolerable as an article of food, when in season; but is bad, by its great heat, to engender fevers. The blood is extremely hot; they pretend that it possesses the same medicinal virtues as the blood of the ibex; the hunters sometimes mix the blood of the two animals together, and feed it for that of the ibex, which is in much request; or often all of that of the chamois alone for the blood of the latter. The skin of the chamois, when dressed, forms a kind of strong and supple leather of considerable utility for wearing apparel, as it takes a good die either of yellow, brown, or black, and is remarkably durable.

The chase of the chamois is yet more dangerous than that of the ibex: even the mountaineers, who are accustomed from their infancy to climb the Alps, pursue them over the most precipitous precipices at the peril of their lives, and accidents often happen to them, either in falling from the crags, or slipping on the ice in the pursuit. The hunters sometimes follow them with dogs; but the chamois often retreats to the rocky eminences sheltered with woods, where it would be impossible for the dogs, and difficult for the men, to approach them. The hunters occasionally assemble together, and dividing themselves into small parties, betake themselves to different stations; one party ascending the rocks by means of scaling ladders in the most convenient places near the steeper eminences, while another party is waiting in the route it is supposed the chamois will take, when they shoot at it from a distance, and the other parties are again stationed in different avenues to intercept the animals, should they attempt to deviate from their usual track. In this manner many of the chamois are taken. They likewise kill them in the night time, or early in the morning when they quit the shelter of the woods to go out to graze. Most commonly, however, in the Alps, when the hunters discover a troop of the chamois, they fall out armed with their carbines, which they handle with much more facility than the full of the common huntmen, and pursuing the most secret ways over the rocks in different directions towards one rallying point, they come upon the herd by surprise, and kill them with little difficulty.

CHAMONILLE, in Botany. See Matricaria and Anthemis.

CHAMONIL, in Germany. See Anthemis.

CHAMOND, St., in Geography, a town of France, in the department of the Loire, and chief place of a canton, in the district of St. Etienne. The place contains 496, and the canton 14,652 inhabitants. The territory includes 87,516 square kilometers, and 8 communes.
CHAMONIX, a town of the department of Levan, and chief place of a canton, in the district of Bonneville. The place contains 1511, and the canton 3416 inhabitants; the territory includes 3559 square miles, and 4 communes.

CHAMOS, or CHEMOS, the idol or god of the Moabites.

The name of Chemos comes from a root, which, in Arabic, signifies to make calf; for which reason many believe Chemos to be the sun, whose precipitate course might well procure it the name of swift or speedy.

Further particulars may be seen in Calmet's Differtation on Baal Peor and Chemos, prefixed to his comment on the Book of Numbers.

CHAMO-TAO, in Geography, a small island, near the coast of China, in the Eastern Sea. N. lat. 37° 59'. E. long. 120° 50'.

CHAMOUNY, or CHAMOINT, a valley, and also a town or village, that lie at the foot of Mont Blanc, which flee. The inhabitants of this valley still retain a considerable share of that peculiar nature in their manners, for which they have long been noted. The men are solely employed in hunting the wild-goat, in searching for churls, and in acting as guides to strangers, whose curiosity leads them to ascend and explore the eminences of Mont Blanc and its adjacent summits; while all other work, domestic and agricultural, is left to the women. Since this valley has attracted so many travellers, the inhabitants of "Champs," affect genteel expressions in conversation, which form a glaring contrast with their natural rudeness. They load the stranger with civilities; and it is surprising to hear these rough mountaineers make use of the polite language. Almost a century has elapsed since the famous Pocock first visited the valley of Chamouny. The inhabitants were then wild and rough as the mountains surrounding them; but purity of manners and innocence graced their unfrequented huts; now, it is said, gold and vice have found their way to them. The ground-floor of the inn at Chamouny, near the foot of Mont Blanc, is elevated 3357 feet above the Mediterranean. For an account of the glaciers of Chamouny, see Mont Blanc and Glaciers.

CHAMOUX, a town of Savoy, or department of Mont Blanc, in the county of Maurienne; 4½ miles N.W. of Argentina.

CHAMP DE BATAILLE, Field of Battle, in Military Language, is the ground on which an action is fought. The enemy, who obliges his adversary to quit this ground and abandon it to him, obtains the victory.

A good general must be fensible that the victory depends, in a great measure, on the nature of the field of battle; he is, therefore, always laborious to derive primary advantages from the ground. The army that enjoys a superiority of position can act with so much the greater impunity against the enemy, who has to contend both with it and the advantages of ground.

A general who reckons chiefly on his infantry, against troops superior in cavalry, should choose positions that are broken, uneven, mountainous, deep, above all, enclosed; but if, on the other hand, he wishes to oppose his cavalry with advantage to infantry, he should endeavour to find ground a little elevated, but smooth, open, and not embraaced or interrupted with woods, morasses, ditches, or enclosures.

CHAMP Close. This was, from the commencement of modern history, and long afterwards, a place authorised by the laws made by sovereigns for the purpose, and consecrated to particular combats between those who wished to determine, in that manner, either a law-suit or dispute of honour. This name was also given to the place defined or set apart for tournaments.

CHAMP de Mars, the Field of Mars, an open place or field, in the neighbourhood of Paris, where the kings of France used frequently to review their troops, and where the French held their festivals after the revolution.

CHAMPS de Mars et de Mai, Let. in Antiquity, denoted those annual assemblies, which were held in the early period of the French monarchy, and in which whatever related to the general welfare of the nation was submitted to public deliberation, and determined by the suffrage of the people. These assemblies were called "Champs," because, according to the custom of all the barbarous nations, they were held in the open air, in some plain capable of containing the vast number of persons who had a right to be present: and they were denominated "Champs de Mars and de Mai" from the months in which they were held. Every freeman seems to have had a right to be present in these assemblies. In them every thing that concerned the happiness of their country, every thing that could be of benefit to the Franks, was considered and enjoined. Clotharius II. describes the buffets and acknowledges the authority of these assemblies; "they are called," says he, "that whatever relates to the common safety may be considered and resolved by common deliberation; and whatever they determine, to that I will conform." The judicial clauses, or words of legislative authority in the decrees issued in these assemblies, run not in the name of the king alone, "We have treated," says Godbert, in a decree A.D. 513, "in the assembly of March, together with our nobles, concerning some affairs, and we now publish the conclusion, that it may come to the knowledge of all." "We have agreed," says he elsewhere, "together with our valets." Again, "it is agreed in the assembly in which we were all united." The Salic laws, the most venerable monument of French jurisprudence, were enacted in the same manner. In their charters, the kings of the first race are careful to specify that they were granted with the consent of their valets. The historians likewise describe the functions of the king in these national assemblies in such terms, as imply that his authority there was extremely small, and that every thing depended on the court itself. These general assemblies also exercised supreme jurisdiction over all persons, and with respect to all causes. Moreover when any extraordinary aid was granted by free men to their sovereign, it was purely voluntary. In the annual assembly of March or May, it was the custom to make the king a present of money, of horses or arms, or of some other thing of value. This custom was ancient, and derived from their ancestors the Germans. These gifts were considerable, and seem to have made no small part of the royal revenue. See on this subject the authorities cited by Dr. Robertson in his Hist. of Ch. V. vol. i. p. 431. &c.

CHAMPA, in Geography. See CIAMPA.

CHAMPACAM, in Botany, Rumph. See MICHELIA.

CHAMPADADA, in Natural History, the name of a tree common in the woods of Malaca, and bearing a fruit much valued by the natives. It is a large tree, very full of branches, and those are very knotty, and, when cut, throw forth a thick and acid juice like that of the tallow. The fruit grows on the trunk and thick branches of the tree: the first appearance toward this is a large button, or bud; this by degrees opens into a flower consisting of a great number of leaves, among which, when open, are seen the rudiments of the fruit; this appears very small at first, but it soon grows to a very considerable bigness, being, when ripe, twelve or fourteen inches long, and as much in circumference; it is shaped much like a melon. The rind is green, and is all over
over divided into small pentagons, in the center of each of which is a small black spot. The pedicle is thick and woody, and entering into the substance of the fruit, it divides itself into several branching fibres, which run through the whole substance of it, and meet in a point at the end. Within this large fruit there are contained a large number of kernels of the size of our common chestnuts, all hanging together in bunches, so as to resemble a cluster of grapes; these are confined in a narrow compass, being prefixed firmly upon one another while the fruit is whole, but as soon as this is cut or burst open, they fly farther asunder, and hang to the stalks like grapes that are placed at a distance on the bunch, as some of our oobling kinds are. The people of Malacca are very fond of this fruit; they suck the pulpy matter which surrounds the kernels, and which is like a milk and lucious taffy, but of a disagreeable raw smell. The Indians are very fond of this fruit, as well for its qualities as its taste, for it is very heating, and when taken in large quantities, will inebriate people in the same manner as strong liquors. The kernels are much of the nature of our chestnuts, but of a less agreeable taste; they are eaten by way of food rather than as a delicacy, and the common way of eating them is boiled in water. Mem. Acad. Sci. Par. 1699, p. 640.

CHAMPAGNAC-DE-BELAIR, in Geography, a town of France in the department of the Dordogne, and chief place of a canton in the district of Nontron; 12 miles N. of Perigueux. The place contains 784 and the canton 6117 inhabitants; the territory includes 107 1/2 square miles, and 12 communes.

CHAMPAGNE, Philippe de, in Biography, an eminent painter of history, portrait, and landscape, was born at Bruxelles in 1602, and received his earliest instructions from Bouillon and Michael Bourdeaux, two ordinary painters, and afterwards became a disciple of Poussin, under whose tuition he formed a taste for landscape painting. At the age of nineteen he visited Paris in his proposed journey to Rome, and by the practice of portrait painting with one L'Allemane, he made great progress in that branch of his art, as well as in history and landscape. During his residence at Paris, he formed an acquaintance and friendship with Nicolo Poullin, which were of great importance to him; and these artifices were conjointly employed in painting the ornaments of the Luxembourg palace. On the death of Duchenez, whose daughter he married, he was appointed director of the queen's paintings, with a pension of 1200 livres a year, and apartments in the palace. At and near Paris he painted several historical pieces for churches and palaces, and several times took the portraits of the royal family, and of cardinal Richelieu. At the establishment of the Academy of Painting in Paris in 1648, he was one of the original members, and afterwards became professor and president. His affability in the exercise of his profession was such, that he arose at 4 in the morning, and in the course of the day allowed himself very little time for recreation. He painted with great facility, and paid particular attention to the false textures and figures, and to the execution of his pieces. Upon the arrival of Le Brun from Italy, though he had previously entertained the expectation of being their painter to the king, he manifested no dissatisfaction; but retiring from public business, indulged himself in the practice of his favourite art for his own amusement. He died in 1674. Champagne was correct in his designs, agreeable in his colouring, though it wants brilliancy, and well acquainted with the principles of perspective and architecture; nevertheless he partook of the coldness of his country, which had not been animated with the fire of Italy. De Piles observes, that all his knowledge consisted in a fervid imitation, in the performance of which he neither followed his genius, nor obtained the rules of art. His morose and tender character prevented his painting naked figures, indulging freely in fable, and painting even the portraits of the first nobility in France on a Sunday, though at other times he was very fond of getting money. His works, several of which have been engraved by the best masters, are very numerous in France; but a most capital picture of Champagne is Lewis XIII. kneeling before the Virgin and offering his crown. Pilkington. D'Argenville.

The nephew of the former, John Baptist Champagne, was born at Bruxelles in 1645, or, as some say, in 1643, and died in 1688. Having received instruction from his uncle, he visited Italy for the advantage of studying the works of the great artists. He adopted the dyle and manner of his uncle without deviating from them; but was inferior to him in design and execution. While he possessed many of his excellencies, he had also many of his defects. Pilkington.

CHAMPAGNE, in Geography, a town of France, in the department of the Ain, and chief place of a canton, in the district of Belfort, 10 miles N. of Belfort. The place contains 375, and the canton 6629 inhabitants; the territory includes 155 kilometres and 19 communes.

CHAMPAGNE, a town of France in the department of the Dordogne, and district of Riberac; 10 miles N. of Riberac.

CHAMPAGNE, in Heraldry, a name given by Ferne, and some other writers, to the line differing from the common lines, and called also urde, and by Upton ware, from its resemblance to the ends of the figures of that sort of fur which is called war by heralds.

CHAMPAGNE-MOUTON, in Geography, a town of France, in the department of the Charente, and chief place of a canton, in the district of Confolens; 10 miles W. of Confolens. The place contains 1155, and the canton 654 inhabitants; the territory includes 150 kilometres and 8 communes.

CHAMPAGNEY, a town of France, in the department of the Upper Saone, and chief place of a canton, in the district of Loue. The place contains 7651 inhabitants; the territory comprehends 180 kilometres and 9 communes.

CHAMPAGNOLE, a town of France, in the department of the Jura, and chief place of a canton, in the district of Poligny; 3 leagues S. E. of Poligny. The place contains 1474, and the canton 1606 inhabitants; the territory includes 100 kilometres and 31 communes.

CHAMPS. See CAMPAIGN, and CHAMPION. A Post CHAMPAIN, in Heraldry, is a mark of distinction in the coat of arms of him who kills a prisoner at war after he has cried quarter.

CHAMPS, in Navigation, are small flat-bottom vessels, used by the Chinese and Japanese. They have one mast rigged in the same manner as the main-mast of a junk, with a single sail made of cane; they seldom exceed 80 tons burthen; are constructed without iron or nail, and are
unt for rough weather. See Sampans under the article Boat.

CHAMPART, in our Old Customs, a duty, or tenure by which the tenant was to pay part of the fruits of the ground to the lord. It is also written champart, and in the middle Latin is called camparis, camparicum.

CHAMPARTORS, or CHAMPERTORS, are those who move pleas, or suits, or cause them to be moved, either by their own procurement or others; and sue them at their proper costs, to have part of the land, or other matter in variance against whom he has a writ of champerty.

CHAMPARTY, or CHAMPERTY, camparitarium, in Law, a maintenance of any man in his suit, upon condition of having part of the thing in question, be it lands or goods; in case it be recovered.

The word comes from the French, champ, field, and parti, divided; the field, or thing contended for, being supposed to be divided between the champartor or maintainer, who carries on the party's suit at his own expense, and the person in whom right he fees. 1 Hawk. P. C. 25.

Thus, champart, in the French law, signifies a similar division of profits, being a part of the crop annually due to the landlord by bargain or custom. In our fene of the word, it signifies the purchasing of a suit, or right of suing; a practice so much abhorred by our law, that it is one main reason why a close in action, or thing of which one has the right but not the possession, is not assignable at common law; because no man should purchase any pretence to sue in another's right. These pleas of civil society, says judge Blackstone, that are perpetually endeavouring to disturb the repose of their neighbours, and officiously interfering in other men's quarrels, even at the hazard of their own fortunes, were severely animadverted on by the Roman law: "qui improbè coeunt in abatern litem, ut quiquequid ex condemnatione in rem iphius redactam fuerit interesse communicaret, lege Juliae de vi privata tenuatur?" (Pl. 48. 7. 6.) and they were punished by the forfeiture of a third part of their goods and perpetual infamy.

This seems to have been an ancient grievance; for notwithstanding several statutes against it, and a form of writ accommodated to them in the time of Edward I. yet in that of Edward III. and also of Hen. VIII. it was enacted, that when the redress on the former statute was only to be had in the King's Bench, which then followed the court; for the future it should likewise be cognizable by the justices of the Common Pleas, justices of assize, and justices of peace in their quarter-sessions; and this offence is punishable by common law and statute: the 33 Edw. 1. st. 3. makes the offenders liable to three years imprisonment, and a fine at the king's pleasure. By 34 Edw. 1. c. 11. it is ordained, that no officer, nor any other, shall take upon him any business in fee, to have part of the thing in plea; nor shall any upon covenant give up his right to another; and if any do, and be convicted thereof, the taker shall forfeit to the king so much of his lands and goods as amounts to the value of the part purchased. The giving part of the lands in suit, after the end of it, to a counsellor for his reward, is not champart, if there be no preceding bargain relating to such gift; but if it had been agreed between the counsellor and his client before the action brought, that he should have part for his reward, then it would be champart. Bro. Champert. 2. And it is dangerous to meddle with any such gift, since it carries with it a strong presumption of champerty. 2 Inl. 564.

To this head may be referred the provision of the statute 32 Hen. VIII. c. 9, that no one shall sell or purchase any pretended right or title to land, unless the vendor hath re-

ceived the profits thereof for one whole year before such grant, or hath been in actual possession of the land, or of the revenue or remainder; on pain that both purchaser and vendor shall each forfeit the value of such land to the king and the protector. 2 Bl. Com. vol. iv. See Maintenance.

CHAMPON, in Geography, a town of France, in the department of the Mayenne; 2 leagues N. of Mayenne.

CHAMPDENIERS, a town of France, in the department of the Two Sèvres, and chief place of a canton, in the district of Niort; 10 miles N. of Niort. The place contains 1393, and the canton 6241 habitants; and the territory includes 100 kilometres and 13 communes.

CHAMPIS, a town of France, in the department of the Rhone and Loire; one league N. of Montbeffon.

CHAMPEAUX, William de, Lat. Compelius, in Biography, a famous scholastick philosopher and divine, was born in the 17th century, at Champeaux, a village of Bril near Melun, and studied under Anselm of Lyon at Paris, in the church of which metropolis he was made archdeacon and scholastic. His reputation in teaching philosophy attracted many scholars, and particularly the celebrated Abeilard. For an account of the jealously excited by the merit of Abelard, see the article Abelard. When the contents occasioned by this jealousy terminated. De Champeaux retired, in 1113, to his bishopric of Châlons-sur-Marne. Soon after his removal to this see, he was called upon to give his benediction as abbot to St. Bernard, with whom he contracted an intimate friendship. He was present at many councils, and distinguished himself by his religion, zeal, and knowledge of the scriptures. He died in 1211. He wrote several treatises on logical and theological subjects, and left a book of sentences; but the only work which has been printed was a small tract on the "Origin of the Soul," published in the 5th volume of D. Martin's Treatise of Archeologists. Moret.

CHAMPEAUX, in Geography, a town of France, in the department of the Seine and Marne; 7 miles N.E. of Melun.

CHAMPIEU, a town of France, in the department of the Aune-Château, and chief place of a canton, in the district of Ijou; 24 leagues N.W. of Ijoue. The place contains 1924, and the canton 10,766 habitants; the territory comprehends 155 kilometres, and 17 communes.

CHAMPPIER, SYMPHORIES, called also Campeius, and Campegius, in Biography, was born, as he informs us in one of his numerous productions, at St. Saphorine, a castle in the Lyonnois, in the year 1472. Of the course of his studies we have no information, but that he early attached himself to books, and that he was versed in the works of Plato, Aristotle, and the most abstruse of the writers then in vogue, the titles of many of his works shew. Such as "Symphonia Platonis cum Aristotele, Galenicum cum Hippocratic," &c. "Cribriati, Lima, et Annotinenta in Galeni, Avicennae et conciliatoris Opera," and many similar tracts, which serve to give the bad taste of the writer, and that he fell in with the humour of the times in which he lived. Champier took his degree of doctor in medicine at Pavia in the year 1515, and in 1522, he was made confid at Lyons, an honour he again enjoyed in the year 1535, on returning from Italy, where he had been attending on Anthony duke of Lorraine. That he was in great credit at this time, is shewn by his having for his correspondents the principal physicians and philosophers of the age, and by his having sufficient interest to found a college of physicians at Lyons, which was existing at the time of the revolution.
France. He died in 1555. For the titles of his works, and little more than the titles are now known, see Haller Bib., and Eloy, Dict. Hist. His Son Claude was author of a work "Sur les Singularités des Gauls."

CHAMPIGNE, in Geography, a town of France, in the department of the Yonne, and district of Joigny; 9 miles N. of St. Fargeau.

CHAMPION, in Gardening. See Acalicus.

CHAMPION, properly signifies a person who undertakes a combat, in the place or quarrel of another: though the word is also sometimes used for him who fights in his own cause.

Hottoman defines champion, curtidor, pro allo dato in duello a campo dictus, qui circius certarum nullius est: hence the word camp-fight.

Du-Cange observes, that champions, in the strict and proper sense of the word, were persons who fought in lieu of those who, being obliged by custom to accept the duel, had yet a just excuse for declining with it, as being too old, or infirm, being ecclesiastics, or the like. He adds, that the champions were usually retained or hired for sums of money, and were held infamous. There were also some valets, who, by the faith and homage sworn to their lord, were obliged to fight for them in case of necessity.

Some authors maintain, that any person was allowed the benefit of a champion, excepting parricides, and those accused of very heinous offences.

This custom of deciding differences by combat, was derived from the northern parts of Europe; whence it passed into Germany, and, with the Saxons, into England, and infamously through the rest of Europe. See Duel.

When two champions were chosen, the one on the part of the accuser, and another on that of the accused, it was always required there should be a decree of the judge to authorize the combat. When the judge had pronounced sentence, the accused threw a gage, or pledge, ordinarily a glove, or gauntlet; which being taken up by the accuser, they were both taken into safe custody till the day of battle appointed by the judge. If either of them died after this, he was declared infamous, and deemed to have committed the crime in question. Nor were the accuser and accused now allowed to make up the matter; at least, not without the consent of the judge; which was never granted, without making the lord satisfaction for the right of inheritance to the effects of the vanquished.

Before the champions took the field, their heads were shaved, and they made oath, that they believed the person who retained them was in the right; and that they would defend his cause to the utmost of their power. Each of them also swore with his hand on the crucifix to his faith in baptism, on his life, on his soul, and on his honour, that he verily believed he had good and just cause of quarrel, and that he had not besides either on himself, or on his horse, or in his arms, any herbs, charms, paroles, supplications, conjurations, psalm, or incantations, of which he wished to avail himself. The weapons they generally used in a combat were a sword and buckler; some say, in England, only a club and buckler: when on horseback, they were armed at all points. In a civil combat, on a writ of right, the only weapons allowed them were lances, or raves, of an ell long, and a four-cornered leather target. Their weapons were bluffed in the field by the priests, with great ceremony.

On the morning of the day appointed for the combat, the two combatants set out on horseback with the visor taken off, and made their arms, both offensive and defensive, be carried before them. They proceeded softly and slowly, having each of them in his hand the image of the saint, to whom he addressed his devotion, and in whom he placed confidence. Philippe-le-Bel, in authorizing combats, ordered the hills to be eighty paces long and forty broad.

But in civil combats it was customary to make them only about sixty feet square. On one side of the hill, a court was erected for the judges of the court of common pleas, who attended in their scarlet robes. That court was to sit by fun-ruling; and proclamation being made, the champions were introduced by two knights, and were dressed in a suit of armour, with red bandals, bare-legged from the knee downwards, bare-headed, and with bare arms to the elbows.

The action then began; at the sound of a trumpet they were to go to blows; after the number of blows or encounters expressed in the cartel, the judges of the combat threw a red into the air, to advertise the champions that the combat was ended. If it lasted till night, or ended with equal advantage on either side, the accused was reputed victor.

The punishment of the vanquished was that which the crime merited, whereof he was accused: if it were a capital crime, the vanquished was disarmed, led out of the city, and immediately executed, together with the party whose cause he maintained. If the conquered champion fought in the cause of a woman, she was burnt.

In civil combat, the combatants were bound to fight till the flars appeared in the evening; and if the champion of the tenant was able to defend himself till the flars appeared, the tenant prevailed in his cause; or if victory declared itself for either party, by the death of the other, which seldom happened, or by his proving recroent, and pronouncing the word craves, judgment was finally given in his favour. Black. Com. book iii. p. 359. &c.

Combats, from the very commencement of the French monarchy, and for a number of centuries afterwards, were lawful acts, ordered by their kings, demanded and solicited by bishops, or preferred by the same bishops, who had courts ad locum within the interior of their clouches, ornamented and prepared for each combat at the expense of the champions, whilst the fame prelates excommunicated kings and whole families for marriages contracted in even the fourth degree of consanguinity. Pope Eugenius III. when consulted respecting these combats, answered by a bull, that ancient usage must be complied with and submitted to. It can therefore hardly be supposed, that such pontiffs, though the successors of St. Peter, were much guided or directed by the Holy Spirit.

Champion of the king, is an officer, whose business is, at the coronation of the king of England, to ride into Westminster-hall, armed cap-a-pié, when the king is at dinner, and throw down his gauntlet by way of challenge; pronouncing by a herald, "That if any man shall deny, or "gainlay the king's title to the crown, he is there ready "to defend it in single combat, &c." Which done, the king drinks to him, fending him a gift cup with a cover, full of wine; which the champion drinks, and has the cup for his fee.

This office, ever since the coronation of Richard II. has been continued in the family of Dymoke, who held the manor of Serreby in Lincolnshire, hereditary from the family of the Marmions, who had it before, by grand serjeancy; on condition that the lord thereof should be the king's champion. Accordingly, Sir Edward Dymoke performed
performed this office at the coronation of king Charles II. 
and a person of the name of Dymocke performed it at the
consecration of his present majesty George III.

CHAMPION de Fujis, a military order called Angeleques D'orés de Saint Georges. This order owed its institution to
Contantine the Great, converted to the Catholic faith after a
great victory, which he gained over the enemies of the
Christian religion near Misensce. Wishing to confide the
care of the labarum, which he had adopted for a banner, in
place of the eagle of the former Romans, to intrepid
defenders, he chose from amongst those of his officers, who
had distinguished themselves most in that celebrated battle,
50 gentlemen, who were to constitute the number of knights or chevaliers, that were by his regulation to be
charged with the care of the labarum, when he took the
field. The mark of the order was a golden cross with eight
points hemmed and enamelled with gules, marked with
flower-de-luces, and carrying on one side of it thefe four
letters, I. H. S. V. in hoc signo vinces, and on the reverse the
image of Saint George piercing the dragon. The knights
were subject to the fame rules and restrictions as those of the
Orden of Maltese, except in the article of celibacy. This
order rendered itself so celebrated by its exploits, and particu-
larly at the battle of Lepanto in 1571, that it had thirty
great matters of the imperial house of Commen. A
number of kings and sovereign princes requested to become
knight, among whom were John Sobiesky, king of Poland;
Ferdinand Marie, elector of Bavaria, the Emperor Leopold
Firth, and the Emperor Charles the Fifth, who declared
himself chief of that body, and chose that his son should
carry the banner at the battle of Lepanto, in which the
Mahometans loft thirty thousand men, and had 400 galleyes
sink.

CHAMPION, or rather CHAMPAIN-lands, are lands not
inclosed; or large fields, downs, or places without woods
or hedges.

CHAMPLIN, in Geography, a river of Germany, in the
circle of Bavaria, which runs into the Regen at Cham.

CHAMPLAIN, Samuel De, in Biography, the prin-
cipal founder of the province of Canada, was a native of
Saintonge, and made his first voyages in the reign of Henry
IV., as lieutenant to the Sieur de Monte. He visited all
the harbours of Acadia, ran up the river St. Lawrence,
gave a beginning to Quebec and Montreal, advanced to the
lake ill called by his name, and afflicted the neighbouring
coustic tribes against the Iroquois. In another voyage he
proceeded further up the rivers, and defeated the Iroquois
in their own country. After his return to France in 1611
for the purpose of obtaining succours, he was sent back with
the commission of king's lieutenant in 1613, and with pro-
per requisites for fortifying Quebec. Here he remained,
and was continued in his office under the associated company
of Canada formed in 1628. But, in 1631, he was expelled
with his other countrymen by the English; but, upon its
being restored at the peace, he returned thither as govern-
general in 1634, in which year he died. He maintained the
character of an upright, courageous, active, and zealous
officer in promoting the interest of his country, and of the
settlement. He wrote, "Voyages and Travels in New
France, called Canada," 4to. 1613, in which are many
curious observations intermixed with inferences of credulity.
Nov. Dict. Hist.

CHAMPLAIN, in Geography, a lake of North America, so
called from the name of the subject of the preceding article,
who first discovered it in 1628, whereas it was before his time
called Corser's lake. This lake is next in size to lake On-
tario, and lies nearly east from it, forming part of the line that
divides the states of New York and Vermont. The length
from N. to S., says Morfe, is 80 miles; its breadth, where it
is widest, 14; but according to Mr. Weld, (Travels
through North America, vol. i. p. 209.) it is about 120
miles long, and of various breadths: for the first 30 miles,
that is from South River to Crown Point, it is nowhere
more than two miles wide; beyond this, for the distance of 12
miles, it is five or six miles across; then again it narrows,
and at the termination of a few miles, again expands.
That part called the "Brook Lake," because it is broader than
any other, commences about 25 miles N. of Crown Point,
and is 18 miles across in the widest part. Here the lake,
which is said to occupy about 500,000 acres, is interper-
ded with a great number of islands, the largest of which,
formerly called "Grand Isle, now "South Hero," says
Weld, "North Hero," according to Morfe, is 15 miles
long, and at a mean about four in breadth. The soil of
this island is fertile, and it is said that 500 people are settled
upon it. The other principal islands are North Hero, and
Morte island. They reckon in the whole not less than 60.
The broad lake is nearly 50 miles in length, and gradually
contracts till it ends in a large river called Chamblay, Riche-
beau, or South Sea Chambley. The foundations of lake
Champlain, except at the narrow parts, which terminate its
extremities, are generally very deep; in many places 62,
and in some 100 fathoms. In proportion to its breadth
and depth, the water is more or less clear; in the broad
part it is as pure and transparent as possible. On the west
side as far as Cumberland Bay, the lake is, for the greatest
part, bounded by steep mountains, close to the edge of the
water; at Cumberland Bay the ridge of mountains runs
off to the N. W., and the shore becomes low and swampy.
The east, or Vermont shore, is not, in general, much elev-
ated: at the distance, however, of 12 miles from the lake,
is a considerable mountain; the shores on both sides are
very rocky; the islands are almost encompassed with rocks,
so that it is dangerous to approach them within one or two
miles in particular parts. In falling along the shore when a
breeze is blowing, a hollow murmuring noise is heard from
the waters splashing into the clefts of the rocks. There
are many streams which fall into the lake; the mouths of
these on the western side are obstructed by falls, so that
none of them are navigable; some of these on the eastern
or Vermont side, are navigable by small boats to a short
distance. The scenery along various parts of this lake is
extremely grand and picturesque, particularly
beyond Crown Point; the shores are there beautifully
ornamented with hanging woods and rocks; and the
mountains on the western side rise up in ranges one behind
the other in a very magnificent manner. This lake is well
flored with firs, particularly salmon, salmon-trout, durgon,
and pickerel; and the lake's its banks, and on the banks
of its rivers, is fertile and productive. At Ticonderago,
which lies near the southern part of the lake, it receives
the waters of lake George from the S.S.W., which is said to
be 100 feet higher than this lake. The waters in lake
Champlain generally rise from about the 20th of April
to the 20th of June, from four to six feet, the greatest
variation being not more than eight feet. It is seldom shut
up with ice, until the middle of January, and the ice
generally goes off very rapidly between the 6th and 15th
of April.

CHAMPLAIN, the most northerly township of Clinton-
county, in the state of New York, takes its name from the
lake to which it is adjacent. It was granted to some Can-
dian and Nova Scotia refugees, who were either in the
service of the United States during the war, or fled to them
for
for protection. The indigence or ill habits of these people occasioned the breaking up of the settlement; and it is now occupied by a better class of inhabitants. The lands are fertile; and through it run two rivers, well formed with fish. It has 577 inhabitants, and three slaves. By the rate census of 1796, 76 of the inhabitants are electors.

CHAMPLAYN, a town of France, in the department of Nièvre, and district of Charnay; four leagues S.S.W. of Charnay.

CHAMPLATTE, a town of France, in the department of the Upper Saône, and chief place of a canton in the district of Gray; 12 miles N. of Gray. The place contains 2,634, and the canton 9,776 inhabitants; the territory comprehends 137 kilometres, and five communes.

CHAMPIGNY, a town of France, in the department of the Oise and Loire, and district of Nogent-le-Rotrou; 15 miles W. of Chaumont.

CHAMPOMONT, a town of Savoy; nine miles N. of Chambery.

CHAMIS, a town of France, in the department of the Cantal, and chief place of a canton, in the district of Mauriac; the canton contains 5219 inhabitants; the territory comprehends 535 kilometres, and eight communes.

CHAMPEUTERCIER, a town of France, in the department of the Lower Alps, and district of Digne; three miles W. of it.

CHAMPOCQ, a town of France, in the department of the Mayne and Loire, and chief place of a canton in the district of Angers; four leagues W.S.W. of Angers.

CHAMPOLAC, a town of France, in the department of the Mayne and Loire, and chief place of a canton in the district of Beaupreau; the place contains 1113, and the canton 8975 inhabitants; the territory includes 220 kilometres and 8 communes.

CHAMPSAUVS, a town of France, in the department of the Jura, and chief place of a canton in the district of Dole; one league S.W. of it.

CHAMPSAV, a town of France, in the department of the Upper Saône, and chief place of a canton in the district of Gray; one league south of it.

CHAMTA, or CHANTA, a town of Aia, in the country of Fribourg; 107 miles E. of Laiff.

CHAMTOA, a town of Aia, in the country of Thibet; 75 miles N.N.W. of Chantilly.

CHAMUNY, a town, mountain, and valley of Savoy, in the lordship of Faucigny. See CHAMOUNY.

CHAMUSCA, a town of Portugal, in the province of Elvas; three leagues N.E. of Santarem.

CHAMUT, a river of Naples, which runs into the sea, six miles S.S.E. of Girace.—Aia, a town of Naples, in the province of Calabria Ultra; five miles S.S.W. of Girace.

CHANA, or CHANE, in Ancient Geography, a navigable river of Aia, which discharges itself into the Cyrtus, according to Strabo.

CHANAC, in Geography, a town of France, in the department of the Lozère, and chief place of a canton in the district of Mende; 24 leagues S.W. of Mende. The place contains 1902, and the canton 5224 inhabitants; the territory includes 1471 kilometres and five communes.

CHANAY, a small island of Scotland, near the S.W. extremity of the island of I.4.

CHANAS, a town of France, in the department of the Loire, and chief place of a canton in the district of Vieleneuve; four miles S.S.W. of Vieleneuve.

CHANCAHILLO, a sea-port of South America, in the Pacific Ocean, on the coast of Peru; N.W. of Lima. S. Lat. 12° 5'.

CHANCAY, a town of South America in Peru, and principal place of a jurisdiction belonging to that of Guayaquil, in the archbishopric of Lima; situated about 15 leagues S. of Lima, in S. lat. 11° 57' 47". The town contains of about 300 houses and Indian huts: is very populous, and among other inhabitants, can boast of many Spanish families, and some of distinguished rank. Besides a parish church, it has a convent of the order of St. Francis, and an hospital chiefly supported by the benevolence of the inhabitants. The cor-

regular usually resides at Chancay, and appoints a deputy for Guayaquil. The adjacent country is naturally very fertile, and every where well watered by canals, cut from the river Pilcomayo, which runs about a league and a half to the southward of the town. These parts are everywhere town with maize, for the pur-pose of fattening, in hogs, in which article is carried on a very considerable trade; the city of Lima being furnished from hence.

CHAN-Chan, a town of Aia, in the kingdom of Coera; 12 miles S.W. of Long-Chu.ang.

CHANCE, a term we apply to events, to denote that they happen without any necessary for known or intending cause; or it is used to denote the bare possibility of an event, when nothing is known either to prevent or hinder it.

Our aim is, to describe those things to chance, which are not necessarily produced as the natural effects of any proper cause, which we can discover; but our ignorance and preci-

sity lead us to attribute effects to chance, which have neces-

sary and determinate causes.

When we lay a thing happens by chance, we really mean no more, than that its cause is unknown to us: not, as some vainly imagine, that chance itself can be the cause of any thing. Although Aristotle in his Ethics (I. iii. c. 3.), enumerating the active, efficient causes of events, mentions chance as one of them; these several causes, he says, are nature, necessity, and chance; and besides these, mind or intellect, and whatever operates by or through man. However, from the consideration that chance itself cannot be the cause of any thing. Dr. Bentley takes occasion to expost the folly of that old tenet, "the world was made by chance."

The cafe of the painter, mentioned by Plutarch, (τετερο) who, unable to express the foam at the mouth of a horse he had painted, threw his sponge in despair at the piece, and, by chance, did that which he could not before do by design, is an eminent instance of the force of chance: yet, it is obvious, all we here mean by chance is, that the thing never was before, or at least was not aware of the by cause, that did not throw the sponge with such a view; so that with respect to him it was fortuitous, because he did not design or foresee such an effect; not but that he actually did every thing ne-

cessary to produce it; infomuch that, considering the direc-

tion wherein he threw his sponge, together with its form, spe-

cific gravity, the colours wherewith it was smeared, and the

distance of the hand from the piece, it was impossible, on

the present system of things, that the effect should not

follow.

Chance, says Dr. Bentley (see Boyle's Lecture Sermons, vol. i. p. 44.), is but a mere name, and really nothing in

itself; a conception of our own minds, and only a compend-

iuous of speaking, by which we would express, that such

effects as are commonly attributed to chance, were really

produced by their true and proper causes, but without their

designing to produce them. And in any event called casual, if you take away the real and physical causes, there remains nothing but a simple negation of the agent's intending such an event, which negative being no real entity, but a con-

ception only of man's intellect wholly extrinsical to the ac-

tion, can have no title to a share in the production. The

adequate
DOCTRINE OF CHANCES.

Adequate meaning of chance, as this ingenious writer observes, is a bare negation, signifying no more than this, that any effect among inanimate bodies, ascribed to chance, is really produced by physical agents, according to the established laws of motion. But without their concurrence or concurrence to the production, and without their intention of such an effect. So that chance, in its true sense, is the same with nature, and both words are used promiscuously by some ancient writers (see Plato, X. De Legibus) to express the same thing.

Chance is frequently perverted, and erected into a chimical being, whom we conceive as acting arbitrarily, and producing all the effects, whose real causes do not appear to us; in which sense the word coincides with the Tægns, and Fortuna, of the ancients. See Fortune.

Chance is confounded with Fate and Destiny; and the word is also used for the manner of deciding things, the conduct or direction of which is left to chance, and not reducible to any determinate rules or measures; or where there is no ground for preference; as at cards, dice, lotteries, &c.

The ancient fars, or chance, M. Placette observed, was instituted by God himself; and in the Old Testament, we find several standing laws, and express commands, which preferred its use on certain occasions: hence the Scripture says, the lot, or chance, fell on St. Matthias, when it was in question who should fill Judas's place in the apostolate.

Hence also arose the fortes multitum, or method of determining things among the ancient Christians, by opening some of the sacred books, and pitching on the first verse they call their eye on, as a sure prognostic of what was to befall them. The fortes Hieromnes, Virgilianæ, PraxæÆneæ, &c. used by the heathens, were with the same view, and in the same manner. See Sortes.

St. Augustine seems to approve of this method of determining things future, and owns that he had praefidum itself; grounded upon this supposition, that God predisposes chance, and on Proverbs xvi. ver. 33.

Many among the modern divines hold chance to be conducted in a particular manner by Providence, and else it is an extraordinary way which God uses to declare his will, and a kind of immediate revelation.

CHANCES, doctrine of. This subject, no less useful than it is curious, does not appear to have engaged the attention of mathematicians in former times so much as its importance required. Until the beginning of the last, or at least, the middle of the preceding century, little is to be found in any of their writings concerning it. Of the few problems which they had been accustomcd to investigate, they withheld the solutions both from the public and from each other, and they seem to have considered the doctrine of chances rather as an exercise for their ingenuity, than as capable of being applied to any useful purpose. Before Mr. Huygens published his book “De Ratiocinis in Ludo Aæace,” no person had treated the subject methodically, and, with the exception of Mellers, Pafcall and Fermat, who had solved a few problems of no great importance or difficulty, he appears to have been the first who attempted either to give rules for the solution of any question, or to lay down the principles from which those solutions might be deduced. To him, therefore, we are indebted for the first regular treatise on this subject; although even his work, from the comparatively few problems which it contains, and the want of demonstrations to some of them, can hardly be regarded as an elementary treatise. To this work succeeded a small anonymous tract “on the Laws of Chance,” which was published in London in 1692, and a French publication of not much larger size, entitled “L’Analyse des Jeux de Hazard,” which was written by M. M. Mort, and published in the year 1788. In this latter work, the author having chiefly indulged in the same mode of reasoning with Mr. Huygens, in the solution of his problems, Mr. de Moivre, (who considered him reasoning as neither genuine nor natural,) was induced, in his celebrated work on the Doctrine of Chances, (which was first published in 1717,) to adopt a plan and less exceptionable mode, in which he has proceeded from the most simple to the most complicated cases; so that, by the variety of his problems and set as well as by the improvements and additions which he has made in two subsequent editions, he has rendered his work one of the most and most copious that has ever been written on the subject. In the year 1740, Mr. Thomas Simpson, in consequence, as he observes, of the high price of the preceding, and the imperfections of other books on the subject, was led to publish a small treatise on “the Nature and Laws of Chance,” which, like his other publications, is not only clear and concise, but contains some problems, whose solutions had either never been attempted, or, at least, never before communicated to the public. Prior, however, to the two last-mentioned publications, a paltrious work of Mr. James Bernardi was published in the year 1715, entitled “De Arte Conjeptandi,” containing an explanation of Mr. Huygens’s tract, and the solution of a great variety of other problems deduced from the general principles of combination. The second part of this valuable work has lately been translated into English by Mr. Baron Mifcre, with copious notes and commentaries, and it is to be regretted that the other parts had not been given to the public in the same manner.

In the first volume of his Mathematical Repository, published in the year 1748, Mr. Dodson has introduced the solution of several questions in the doctrine of chances; but chiefly with the view of applying them to the doctrine of annuities and insurance, which constitutes the principal part of his work. In the year 1765, and at other times, M. D’Alembert in his Opuscules, &c. wrote different essays; and about 15 years ago M. Cordewect published a small treatise on the same subject. But as these works are almost wholly confined to the investigation of events, whose probability or improbability can be ascertained by no computation, they serve more to shew the ingenuity of the authors than to answer any useful purpose. In addition to these, which are the principal publications on this subject, may be noticed a small tract, “De Menfura Sortis,” given by Mr. de Moivre, in his “Miscellanea Analeticæ,” and some papers written by him, by Mellers, Bernoulli, Euler, and others, in the Acts of Leiphe, the Journal des Sevans, the Philosophical Transactians, &c. among which may be particularly mentioned an “Essay on the Method of calculating the exact probability of all Conclusions founded on Induction, and a “Supplement” to that essay—the one preferred from the papers of the late Rev. Mr. Bayes, and communicated, with an appendix, by Dr. Price to the Royal Society in the year 1762; the other chiefly written by Dr. Price, and communicated in the following year. These tracts contain the investigation of a problem, the converse of which had formerly exercised the ingenuity of Mr. Bernoulli, de Moivre, and Simpson. Indeed, both the problem and its converse may justly be considered not only as the most difficult, but as the most important that can be proposed on the subject; having (as Dr. Price well observes) "no less an object in view than to shew what reason we have for believing that there are in the constitution of things fixed laws, according to which events happen; and that, therefore,
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fore, the frame of the world must be the effect of the wis-

DOM and power of an intelligent cause; and thus to con-

firm the argument taken from final causes for the existence of the Deity. While the solution of these problems re-

quire and display the highest mathematical skill, their ap-

plication proves how much those are mistaken who have in-

sulted that the "doctrine of chances is of trivial con-

sequence and unworthy of any serious inquiry." In truth, there is no part of the mathematics of more consequence, at

least in this country, where the valuation of an immense pro-

perty, and the future provision of many thousands entirely depend on a right knowledge of the subject. In addition to the treatises and papers already mentioned, it may be ob-

served, that the last communication of Dr. Waring to the Royal Society, in the year 1791, contains the solutions of

two theorems on this subject; but as the chief design of the pre-

sent article is to explain the general principles on which all solutions in the doctrines of chances are founded, rather than to give a minute history of what has already been done, or an analysis of every particular case, it will be im-

proper to proceed further with this account.

In order the more rightly to understand the subject it will be necessary to begin with the following defini-

tions:

DEFINITION I. The probability of an event is the ratio of the chance for its happening to all the chances for its happen-

ings or failings: thus, if out of six chances for its happen-

ing or failing, there were only two chances for its happen-

ing, the probability in favour of such an event would be in the ratio of 2:6; that is, it would be a fourth proportional to

6, 2, and 1, or 1/3. For the same reason, as there are four chances for its failing, the probability that the event will not happen, will be in the ratio of 4 to 6, or, in other words, it will be a fourth proportional to 6, 4, and 1, or 1/3. Hence, if the fractions expressing the probabilities of an event's both happenings or failing be added together, they will always be found equal to unity. For let a be the number of chances for the event's happening, and b the number of chances for its failing, the probability in the first case being \( \frac{a}{a+b} \), and in the second case \( \frac{b}{a+b} \), their sum will be \( \frac{a}{a+b} + \frac{b}{a+b} = 1 \).

Having therefore determined the probability of any event's either happening or failing, the probability of the contrary will always be obtained by subtracting the fraction expressing such probability from unity.

DEFINITION II. The expectation of an event is the present value of any sum or thing which depends either on the happen-

ning or on the failing of such event. Thus, if the receipt of one guinea were to depend on the throwing of any particu-

lar face on a die, the expectation of the person entitled to receive it would be worth \( \frac{1}{6} \) of a guinea; for since there are six faces on a die, and only one of them can be thrown to entitle the person to receive his money, the probability that such a face will be thrown being \( \frac{1}{6} \) (according to Definition I.), it follows that the value of his interest before the trial is made, or which is the same thing, that his expectation is equal to one-sixth of a guinea, or \( \frac{1}{6} \) of a guinea. Were his receiving the money to depend on his throwing either of two faces, his expectation would be equal to two-sixths of a guinea, or \( \frac{2}{6} \). And, in general, supposing the present value of the money or thing to be received to be \( A \), the probability of the event's happening to be denoted by \( a \), and of its failing by \( b \), the expectation will be either expressed by \( \frac{Aa}{a+b} \) or by \( \frac{Ab}{a+b} \) according as it depends either on the event's happen-

ning, or on its failing.

DEFINITION III. Several events are inconsistent, when, if one of them happens, none of the rest can; thus, if the sum \( S \) were to be received on throwing either an ace or a deuce with a single die, it is evident that the expectation in this case would depend on either of two events which are incon-

sistent with each other; for if one particular face is thrown it is impossible that the other should be turned up at the same time. And since the value on the ace's being thrown is \( \frac{S}{6} \), and its value on the deuce's being thrown is also \( \frac{S}{6} \), it fol-

ows that the whole expectation will be equal to \( S \) multiplied into the sum of the probabilities of the two events, or \( \frac{S}{6} + \frac{S}{6} = \frac{S}{3} \); and this is universally true, whatever be the number of such events.

DEFINITION IV. Two events are contrary, when one or other of them must, and both together cannot happen.

DEFINITION V. An event is said to be determined, when it has either happened or failed.

DEFINITION VI. Events are independent, when the happen-

ping of any one of them does neither increase nor lessen the probability of the rest. Thus, if a person undertook with a single die to throw an ace at two successive trials, it is ob-

vious (however his expectation may be affected) that the probability of his throwing an ace in the one is neither increased nor lessened by the result of the other trial.

THEOREM.

"The probability that two subsequeint events will both happen, is equal to the product of the probabilities of the happen-

nings of those events considered separately."

Suppose the chances for the happening and failing of the first event to be denoted by \( b \), and those for its happening only to be denoted by \( a \). Suppose, in like manner, the chances for the second event's happening and failing to be denoted by \( d \), and those for its happening only by \( c \); then will the probability of the happening of each of these events, separately considered, be, according to Definition I. \( \frac{a}{b} \) and \( \frac{c}{d} \) respectively. Since it is necessary that the first event should happen before any thing can be determined in regard to the second, it is evident that the expectation on the latter must be lessened in proportion to the improbability of the former. Were it certain that the first event would happen, in other words, were \( a = b \) or \( a \frac{c}{d} = 1 \), the expectation on the second event would be \( \frac{c}{d} \). But if \( a \) is lefs than \( b \), and the expectation on the second event is restrained to the con-

tingency of its having happened the first time, that expectation will be so much lefs than it was on the former fappa-

sition as \( \frac{a}{b} \) is less than unity. Hence we have \( 1 : \frac{a}{b} = \frac{a}{b} : \frac{c}{d} \) for the true expectation in this case.

Corollary. By the same method of reasoning it will ap-

pear, that the probability of the happening of any number of subsequeint events is equal to the "product of the proba-

bilities of those events separately considered," and therefore if \( a \) always denote the probability of its happening, and \( b \) the probability of its happening and failing, the fraction A b

a + b
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$\frac{a^b}{b^c}$ will express the probability of its happening $n$ times successively, and (by Definition 1.) the fraction \( \frac{b-a}{b} \) will express the probability of its failing $n$ times successively.

Remark. It should be observed that, in some instances, the probability of each subsequent event necessarily differs from that which preceded it, while in others it continues invariably the same through any number of trials. In the one case the probabilities are expressed, as in the theorem, by fractions, whose numerators and denominators continually vary; in the other they are expressed, as in the corollary, by one and the same invariable fraction. But this perhaps will be better understood by the following examples.

1. Suppose, that out of a heap of counters, of which one part of them are white and the other red, a person were twice successively to take out one of them, and that it were required to determine the probability that these should be red counters. If the number of the white be $6$, and the number of the red be $4$, it is evident, from what has already been shown, that the probability of taking out a red one the first time will be $\frac{4}{10}$; but the probability of taking it out the second time will be different; for since one counter has been taken out, there are now only nine remaining; and hence, in order to get a second trial, it is necessary that the counter taken out should have been a red one, the number of these red ones must have been reduced to 3. Consequently, the chance of drawing out a red counter the second time will be $\frac{3}{9}$, and the probability of drawing it out the first and second time will (by this theorem) be $\frac{4 \times 3}{10 \times 9} = \frac{2}{15}$.

2. Suppose next, that with a single die, a person undertook to throw an ace twice successively: in this case the probability of throwing it the first, does not in the least alter his chance of throwing it the second time, as the number of faces on the die is the same in both trials. The probability, therefore, in each will be expressed by the same fraction, so that the probability, before any trial is made, will, by the preceding corollary, be $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$. On these conclusions depend all the computations, however complicated and laborious, in the doctrine of chances. But this perhaps will be more clearly exemplified in the following problems, which, containing the solution of some of the most difficult and important cases, will serve to explain the principles on which every other investigation is founded in this intricate and exhausitive subject.

PROBLEM I.

To determine the probability that an event happens a given number of times and no more, in a given number of trials.

Solution. 1. Let the probability be required of its happening only once in two trials, and let the ratio of its happening to that of its failing be as $a$ to $b$. Then since the event can take place only by its happening the first, and failing the second time, the probability of which is $\frac{a}{a+b}$, or by its failing the first and happening the second time, the probability of which is $\frac{b}{a+b} \times \frac{b}{a+b}$, the sum of these two fractions, or $\frac{2ab}{a+b}$, will be the probability required.

2. Let the probability be required of its happening only twice in three trials. In this case the event, if it happens,

must take place in either of three different ways. 1st. By its happening the first two, and failing the third time, the probability of which is $\frac{a^2b}{a+b}$; 2dly. By its failing the first and happening the other two times, the probability of which is $\frac{b^2a}{a+b}$; or, 3dly. By its happening the first and third, and failing the second time, the probability of which is $\frac{a^2b}{a+b}$.

The sum of these fractions, therefore, or $\frac{2ab}{a+b}$, will be the required probability. By the same method of reasoning, the probability of its happening only once in three trials; or, which is the same thing, of its failing twice in three trials, may be found equal to $\frac{ab}{a+b}$.

3. Let the probability of the event's happening only once in four trials be required. In this case it must either happen the first and fail in the three succeeding trials—or happen the 2d and fail in the 1st, 3d, and 4th trials—or happen the 3d and fail in the 1st, 2d, and 4th trials—or happen the 4th and fail in the 1st, 2d, and 3d trials. The probability of each of these being $\frac{ab}{a+b}$, the required probability will be $\frac{4ab}{a+b}$, and for the same reason the probability of its happening three times and failing only once in four trials will be $\frac{4ab^3}{a+b}$.

4. Let the probability be required of its happening twice and failing twice in four trials: here the event may be determined in either of five different ways. 1st. By its happening the 1st and 2d, and failing in the 3d and 4th trials—2dly, by its happening the 1st and 3d, and failing the 2d and 4th trials—3dly, by its happening the 1st and 4th, and failing the 2d and 3d trials—4thly, by its happening the 2d and 3d and failing the 1st and 4th trials—5thly, by its happening the 2d and 4th, and failing the 1st and 3d trials—or, 6thly, by its happening the 3d and 4th and failing the 1st and 2d trials. Each of these probabilities being expressed by $\frac{a^p}{a+b}$, it follows that the sum of them, or $\frac{6a^p}{a+b}$, will express the probability required.

By proceeding in the same manner, the probability in any other case may be determined. But if the number of trials be very great, these operations will become exceedingly complicated, and therefore recourse must be had to a more general method of solution.

Supposing $n$ to be the whole number of trials, and $d$ the number of times in which the event is to take place, the probability of the event’s happening $d$ times successively, and failing the remaining $n-d$ times, will be $\frac{a^d}{a+b} \times \frac{a^{n-d}}{a+b} = \frac{a^d \times a^{n-d}}{a+b^{n-d}}$. But as there is the same probability of its happening any other $d$ assigned trials and failing in the rest, it is evident that this probability ought to be repeated as often as $d$ things can be combined in $n$ things, which, by the known rules of combination, are $\frac{n!}{d!(n-d)!}$.
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continued to $d$ terms; the general rule therefore will be

$$\frac{a^1 \times b^{n-2}}{a + b^2}$$

multiplied into $n \times \frac{n-1}{2} \times \frac{n-2}{3} \times \frac{n-3}{4}$ conti-

tued to $d$ terms.

Example. Supposing a person with fix dice undertakes to throw two aces and no more; or, which is the same thing, that he undertakes with one die to throw an ace twice, and no more, in six trials, it is required to determine the probability of his succeeding, $a$ being in this case $1$, $b$ $= 5$, $n = 6$, and $d = 2$; the above expression will become

$$\frac{a^1 \times b^{n-2}}{a + b^2}$$

multiplied into $6 \times \frac{5}{2} \times \frac{4}{3} \times \frac{3}{2} \times \frac{2}{1} = \frac{15 \times 10 \times 2}{10}$ nearly.

Hence, since there are only two chances for his succeeding, while there are eight for his failing, the odds against him will be as four to one.

Problem II.

To determine the probability of an event that happens a given number of times in a given number of trials; supposing, as in the former problem, the probability of its happening each time to that of its failing to be in the ratio of $a$ to $b$.

Solution. It will be observed that this problem materially differs from the preceding, in as much as the event in that problem was refrained so that it should happen either more nor less often than a given number of times, while in this problem the event is determined equally favourable by its happening either as often or oftener than a given number of times, so that in the present case there is no further restriction than that it should not fail short of that number.

1. Let the probability be required of an event happening once at least in two trials. If it happens the first, and fails the second, or fails the first and happens the second time, or happens both times, the event will have equally suc-
ceeded. The probability in the first case is $\frac{a \times b}{a + b^2}$; the probability in the second is $\frac{b \times a}{a + b^2}$; hence the probability required will be

$$\frac{2a \times b + a \times a}{a + b^2}$$

2. Let the probability be required of its happening once in three trials. Provided it has happened once at least in the first two trials, the event will have equally succeeded, whether it happens or fails in the third trial, and therefore $\frac{a^2 + 2a \times b}{a + b^2}$ will represent the probability in this case. But it may have failed in the first two and happened in the third trial, the probability of which is $\frac{b \times b}{a + b^2}$; adding this to the preceding fraction, we have

$$\frac{a^3 + 3a \times b^2 + 3a \times b}{a + b^2}$$

for the probability required. In like manner the probability of its happening once at least in four trials will be

$$\frac{a^4 + 7a \times b^3 + 3a \times b^2}{a + b^2}$$

and the probability of its happening once at least in $n$ times will be

$$\frac{a^n + n \times a \times b \times n}{a + b^2}.$$ In other words, since the event must happen once at least, unless it fails every time, the probability re-
quired (by Def. I.) will always be expressed by the difference
between unity and $\frac{b^n}{a + b^n}$.

3. Let the probability be required of an event's happen-
ing twice at least in three trials. In this case it will succeed
if it happens the 1st and 2d, and fails the 3d time, if it
happens the 1d and 3d, and fails the 2d time, if it happens the 2d and 3d, and fails the 1st time, or if it happens each
time successively. The 1st three probabilities are $\frac{a^2 \times b}{a + b^2}$ and

the 4th is $\frac{a^4}{a + b^2}$; therefore the probability required will be

$$\frac{a^2 \times b + a \times b^2}{a + b^2}.$$ If the event is to happen twice at least in four times, the probability of its happening during the first three times has already been found. Let it be supposed to have happened only once in these times, the probability of which, by the preceding problem, is $\frac{a \times b}{a + b^2}$; then will the probability of its happening the 4th, after having happened once in the three preceding, be $\frac{a^2 \times b^2}{a + b^2}$, and therefore the whole probability will be

$$\frac{a^2 + 3a \times b + 3a \times b^2}{a + b^2}.$$ By proceeding in the same manner, it may be found that the probability of an event's happening twice at least in five trials, will be

$$\frac{a^4 + 4a \times b \times 6a^2}{a + b^2}.$$ And if the probability of the event's happening three in 4, 5, 6, &c. trials be required, they may, by pursuing the same

teps, be found

$$\frac{a^5 + 6a \times b^2 + 15a \times b^3 + 20a \times b^4}{a + b^2}$$

that is, the series in the numerator must be continued till the index of $a$ becomes equal to $d$.

Corollary. From this solution it appears that the series

$$\frac{\sum a^1 + n \times b^{n-1} a + n \times 2 \times b^{n-2} a + \cdots}{a + b^n}$$

will express the probability of the event's not happening so often as $d$ times in $n$ trials.

Example. Supposing a person with six dice undertakes to throw two aces or more in the 1st trial, what is the probability of his succeeding? In this case $a = 5$, $b = 1$, and $d = 2$ being respectively equal to 1, 5, 6, and 2, the above expression will become

$$\frac{1 + 5 \times 1 \times 2 + 20 \times 1 \times 3 + 125 \times 1 \times 4}{a + b^n}$$

$= \frac{122,814}{46,056}$. Hence the odds against his succeeding will be as

34,375 to 122,814, or very nearly as 2. 5 to one.

Problem
PROBLEM III.

To determine the number of trials in which it shall become an equal chance, that an event happens $d$ times; supposing still the ratio of the event's happening to that of its failing in any single trial to be as $a$ to $b$.

Solution. Let $n$ be the number sought: then since it appears, from the preceding corollary, that the probability of the event's not happening $d$ times in $n$ trials is equal to

$$\frac{a^n}{a+b}$$

and since this expression, from the nature of the problem, must be $\frac{1}{2}$, it follows that the series

$$1 + \frac{n a}{b} + \frac{n(n-1) a^2}{2 b^2} + \ldots (d)$$

will converge to $rac{1}{2}$, and therefore in order to obtain a solution of this problem, it will be necessary to find the unknown quantity $n$.

If $a = b$ or, in other words, if the chances of the event's happening or failing are equal, the series will become simply

$$1 + n + \frac{n(n-1) a^2}{2 b^2} + \ldots (d)$$

But the first half of the terms of the binomial $(1 + x)$ are equal to the root of the terms, or half the whole power, and the whole number of terms, in any binomial, raised to the nth power, is $n + 1$. Hence it follows that the exponent, $n$, in this case will always be $2d - 1$; so that supposing a counter to have a black and a white side, and that it was required to determine the number of throws which would be necessary to make it an equal chance, that either face should be turned up, 3, 4, 5, &c. times, the number thus required will be 5, 7, 9, &c.

If, on the contrary, instead of being equal, the ratio of $b$ to $a$ is indefinitely great, or, which is the same thing, if the fraction $\frac{a}{b}$ is indefinitely small; let this fraction be made $\frac{1}{d^2}$. Then we have

$$1 + \frac{n p}{1} + \frac{n^2 p^2}{2} + \ldots (d)$$

and the hyp. log. of this equation will become

$$1 + \frac{1 + p}{d^2}$$

Let $d = 1$, then will the above equation become

$$n + \log_{a} \left( \frac{1 + p}{d^2} \right) = \log_{a} 2$$

and $c.$ is equal the hyp. log. of $\frac{1 + p}{d^2}$ and, consequently, in as much as $p$ is indefinitely small, $n p = \log_{a} 2$. \&c. or $\frac{1}{d^2}$ very nearly.

2dly. Let $d = 2$, and $x$ is the logarithm of $2 + \log_{a} \left( \frac{1 + p}{d^2} \right)$. But the hyp. log. of $2 + \log_{a} \left( \frac{1 + p}{d^2} \right)$ is

$$\frac{x^2}{a} - \frac{a}{d^2} + \frac{a^2}{d^4} - \&c.$$

whence the result of the hyp. log. of $a + x$ is

$$\frac{x^2}{a} - \frac{a}{d^2} + \frac{a^2}{d^4} - \&c.$$

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Example 2. In how many throws with four dice may it be undertaken to turn up 15 points twice?

Ans. The number of chances for throwing 15 points with 4 dice being 130 (see Prob. VII.), and the number of chances for missing being 67 - 140 = 1156, \( \frac{b}{a} \) will be equal to \( \frac{1156}{140} \), and therefore the number required will be

\[
\frac{1156 \times 2 - 3 + 2 - 3 = 15 \text{ nearly.}}{140}
\]

Example 3. Supposing a lottery, like that for the present year (1805), consisting of 2,500 tickets, of which 20 are to be prizes of 1000, and upwards; how many tickets will be bought in order to make it an equal chance that the purchaser has one of those prizes?

Ans. In this case \( \frac{b}{a} = \frac{24900}{20} \), and, therefore, the number required will be \( 1249 \times 1 - .3 + 1 - .7 = 375 \) nearly.

It may be observed, that in this lottery the whole number of prizes of every description being 5210, it may be found by the preceding rule that it will be necessary to buy about 3 tickets, in order to make it an equal chance that the purchaser has a prize.

PROBLEM IV.

Suppose a given number \( n \) of counters of the same shape and size, but marked with different letters, (of which \( a \) are white, \( b \) are red, \( c \) are blue, &c.) to be mixed promiscuously, and that a given number \( m \) of them were to be taken out at random; it is required to determine the probability that there shall be precisely \( p \) white, \( q \) red, \( r \) blue, &c.

Solution. By the well-known rules of combination, the number of ways in which \( a \) things may be combined, so that there shall be \( p \) things in each parcel, is

\[
a, a - 1, a - 2, a - 3, \ldots (p) = \frac{a!}{a - p!}
\]

and the number of ways in which \( b \) things may be combined, so that there shall be \( q \) things in each parcel, is

\[
b, b - 1, b - 2, \ldots (q) = \frac{b!}{b - q!}
\]

The number of ways, therefore, in which, \( a, b, c, \ldots \) things may be combined, so that there shall be \( r \) things in each parcel is

\[
c, c - 1, c - 2, \ldots (r) = \frac{c!}{c - r!}
\]

and so on. The number of ways, therefore, in which, \( a, b, c, \ldots \) things may be combined, so that there shall be \( p \) of the 1st, \( q \) of the 2d, \( r \) of the 3d, \( \ldots \), will be

\[
a, a - 1, a - 2, \ldots (p) \times c, c - 1, c - 2, \ldots (q) \times 1, 2, 3, \ldots (r) = \frac{a!}{a - p!} \times \frac{c!}{c - q!} \times \frac{r!}{r - p!}
\]

But the number of ways in which \( n \) things may be combined, so that there shall be \( m \) things in each parcel, without any restriction as to their being composited of any particular fort, is

\[
\frac{n!}{m! (m - n)!}
\]

It follows, therefore, that in taking out \( m \) (or \( p + q + r + \ldots \)) counters, the probability that there shall be precisely \( p \) of white, \( q \) of red, \( r \) of blue, &c. will be expressed by the fraction

\[
\frac{a, a - 1, a - 2, \ldots (p) \times b, b - 1, b - 2, \ldots (q) \times c, c - 1, c - 2, \ldots (r) \times 1, 2, 3, \ldots (m)}{n! (n - m)!}
\]

Hence, the odds are as 155 to 48, or rather more than three to one against the contingency above-mentioned. If nine were taken out, of which four were to be diamonds, three spades, and two clubs, the odds against their being taken in that order would be very nearly 22,250 to one.

Corollary. If only counters of one colour are to be taken out, the fraction will be simply

\[
a, a - 1, a - 2, \ldots (p) \times 1, 2, 3, \ldots (m) = \frac{n!}{m! (m - n)!}
\]

If counters of two colours, \( m \) will become \( \frac{p + q}{p + q - m} \), and the fraction expressing the probability will be

\[
a, a - 1, a - 2, \ldots (p) \times b, b - 1, b - 2, \ldots (q) \times 1, 2, 3, \ldots (m)
\]

Since the denominator \( n, n - 1, n - 2, \ldots (m) \) is

\[
\frac{(m + 1) m (m - 1) \ldots 1}{(m - n)!}
\]

and the fraction \( \frac{a, a - 1, a - 2, \ldots (p) \times b, b - 1, b - 2, \ldots (q) \times 1, 2, 3, \ldots (m)}{(m + 1) m (m - 1) \ldots 1} \) will be

\[
\frac{n!}{m! (m - n)!}
\]

And the last factor

\[
\frac{a, a - 1, a - 2, \ldots (p) \times 1, 2, 3, \ldots (m)}{n! (n - m)!}
\]
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If counters of three colours are taken out, the fraction expressing the probability that there shall be $p$ of a fort, $q$ of $b$ fort, and $r$ of $c$ fort, will, by pursuing the same steps, and making $d = a + b + c - m$ be reduced to

$$\frac{d}{n - 1, n - 2, \&c. (p)} \times \frac{d - 1, d - 2, \&c. (a + q - m)}{n - 3, n - 4, \&c. (a + b)}$$

where $a, b, p$, and $q$ are not very large, and that $r$ be always put to denote the highest number. In short, if only one set of counters or things be very numerous, and the others inconsiderable, an expression will always be obtained by proceeding in this manner which shall give the probability required with very little trouble.

Example. Suppose a lottery like that of the present year (1866) to consist of 25,000 tickets, of which three are to be prizes of 20,000l. each, and three of 10,000l. each; and that a person has purchased 3000 of those tickets. What is the probability of his having among them one prize of 20,000l. and one prize of 10,000l.? In this case $n$ is equal to 25,000l., $a = 3$, $b = 3$, $d = 1$, $r = 2998$, and $d = 22,000$; hence the above expression becomes

$$\frac{25,000 \times 24,999 \times 24,998 \times 24,997 \times 24,996 \times 3000 \times 2999 \times 2998 \times 2997 \times 2996}{24,995} = 0.0777.$$
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When \( \frac{3}{n-3} \) must be equal to \( \frac{1}{n} \), we shall have \( 1 - \frac{4}{n} \). 

\[
\frac{n}{n-1} \cdot \frac{n}{n-2} \cdot \frac{1}{n-n-2} = \frac{1}{n-1} \cdot \frac{1}{n-2} \cdot \frac{1}{n-n-2}
\]

for the probability that neither of the four counters marked \( a, b, c, d \), shall be taken out in their right order. Hence it is manifest, if the number of counters to be taken out be \( m \), and \( A, B, C, D \), \&c. be the several coefficients of the binomial whose exponent is \( m \), that the probability that neither of the counters come out in their right order will be expressed by \( 1 - \frac{A}{n} + \frac{B}{n-k} \), \&c. that the required probability in this case will be \( \frac{1}{n} \) multiplied into \( \frac{n}{n-k} \) in \( n \) to \( n-1 \) and \( n-2 \), \&c. 

\[
\frac{n}{n-1} \cdot \frac{n}{n-2} \cdot \frac{1}{n-n-2} \cdot \frac{1}{n-n-1} \cdot \frac{1}{n-n-2} + \&c. \quad (m+1).
\]

Corollary 1. If out of a given number of counters taken out, it were required to determine the probability that the first \( k \) of them should be in their right order, and the remaining \( m \) ones in the contrary, it will follow, since the fraction expressing the first of these contingencies is \( \frac{1}{n} \), and the fraction expressing the second or the contingency that none of the \( m \) counters shall come out in their proper order, that \( I - \frac{A}{n} + \frac{B}{n-k} + \&c. \quad (m+1) \).

Corollary 2. If it be proposed to take out the whole of the \( n \) counters, or, in other words, if \( n-k \) be \( m \), then will the probability that the first \( k \) counters come out in their proper order, and all the remaining ones in the contrary be expressed by \( \frac{1}{n} \) multiplied into \( \frac{n}{n-k} \), \&c. 

\[
1 - \frac{1}{n} - \frac{1}{n-1} - \frac{1}{n-2} \cdots \frac{1}{k} \quad (n+1).
\]

If \( m+1 \) be a large number, this fall series may be considered as infinite; and hence, thus continued, it is known to be the number whole hyp. log. is \( -1 \), the reciprocal of which is the number whole hyp. log. is \( +1 \). Deducting 1 therefore from \( 2.3025851 \) (the hyp. log. of \( 10 \) the remainder \( 1.3025851 \) will be the hyp. log. of the number \( 3.678738 \). Hence the above probability in this case will be nearly \( \frac{3.678738}{n} \). 

Corollary 3. Supposing \( n-k \) to be still \( m \), and it were required to determine the probability of taking \( k \) things in their proper order, without any restriction as to the rest, it is evident that the above expression ought to be repeated as many times as \( k \) things can be taken in \( n \) things, or \( \frac{n}{n-1} \cdot \frac{n}{n-2} \cdots \frac{1}{k} \) times, and consequently that the probability required will be very nearly \( \frac{3.678738}{n} \). 

Hence, if \( 3.678738 \&c. \quad \text{be put} = \frac{1}{n} \cdot \frac{2}{n} \cdot \frac{3}{n} \cdots \frac{4}{n} \quad (k) \quad \text{we shall have} \quad \pi, \pi, \pi, \pi, \&c. \quad \text{for the several probabilities of taking out \( 1, 2, 3 \&c. \) counters in their proper order; and} \quad 1 - \pi, 1 - 2\pi, 1 - 2\pi + \pi, \&c. \quad \text{for the several probabilities of} \quad 1, 2, 3 \&c. \text{ or a greater number, will not be taken out in their proper order.}

Corollary 4. If instead of \( n \) there be \( n \) counters marked with each of the letters \( a, b, c, d \), \&c. and it were required to determine the probability that \( k \) forts shall be taken out in the order of the alphabet, and \( m \) forts in the contrary order, the solution in this case will be easily obtained from that of the preceding problem. For since the permutations are \( \frac{n!}{n-1!} \cdot \frac{n!}{n-2!} \); and by pursuing the same steps as in the solution of the preceding problem, the probability that the \( a \)'s do not come out first nor the \( b \)'s next will be \( 1 - \frac{A}{n} - \frac{B}{n-k} + \&c. \quad (m+1) \), \( \frac{n}{n-1} \cdot \frac{n}{n-2} \cdot \frac{1}{n-n-2} \cdot \frac{1}{n-n-3} \cdots \frac{1}{n-k} \). 

Hence the probability that all the counters of any particular class shall not be taken in succession will be \( \frac{1}{b} + \frac{b}{n-n-1} \cdot \frac{n}{n-2} \cdots \frac{1}{n-k} \); and the probability of the \( a \), \( b \), \( c \), \( d \), \&c. of the \( a \) or \( c \) will be \( \frac{1}{b} + \frac{b}{n-n-1} \cdot \frac{n}{n-2} \cdot \frac{1}{n-n-2} \cdot \frac{1}{n-n-3} \cdots \frac{1}{n-k} \). 

As in Corollary 1, we shall have \( \frac{n}{n-1} \cdot \frac{n}{n-2} \cdot \frac{1}{n-k} \cdot \frac{1}{n-k-p} \cdot \frac{1}{n-k-p+1} \cdots \frac{1}{k} \cdot \frac{1}{k-p+1} \cdot \frac{1}{k-p+2} \cdots \frac{1}{k} \). 

Problem VI.

Supposing a fold with \( n \) regular faces to be thrown in continued succession by \( A, B, C \), and it be paid to the person who shall first throw any assigned face, to determine the value of the several expectations, or the probability of their obtaining this sum.

Solution. By the condition of the problem, \( A \) is to have the \( 1 \), \( 4 \), \( 5 \), \&c. throws; \( B \) the \( 2 \), \( 5 \), \&c. and \( C \) the \( 3 \), \( 6 \), \&c. The probability of \( A \)'s throwing it the \( 1 \)st time is \( \frac{1}{n} \); the probability of his throwing it the \( 4 \)th time depending on the contingency of his having missed it the first, and of \( B \)'s and \( C \)'s having missed it the
DOCTRINE OF CHANCES.

2d and 3d times, may be found by reasoning as in the solution of the preceding problem, \( \frac{n}{n-1} \times \frac{1}{n} \); the probability of throwing it the 7th time, depending on the contingency of his having missed it the 1st and 4th, or B's having missed it the 2d and 5th, and of C's having missed it the 3d and 6th times, may be found as \( \frac{n-1}{n} \times \frac{1}{n} \), and so on. In like manner the probability of B's throwing it the 2d, 5th, &c. times, will be \( \frac{n-1}{n} \), &c. and the probability of C's throwing it the 3d, 6th, &c. times will be \( \frac{n-1}{n} \), &c. Hence the whole expectation of A will be \( \frac{n}{n-1} \times \frac{1}{n} + \frac{n-1}{n} + \frac{n-1}{n} + \cdots \), &c., the whole expectation of B is \( \frac{n}{n-1} \times \frac{1}{n} + \frac{n-1}{n} + \frac{n-1}{n} + \cdots \), &c., the whole expectation of C is \( \frac{n}{n-1} \times \frac{1}{n} + \frac{n-1}{n} + \frac{n-1}{n} + \cdots \), &c., &c., or \( \frac{n}{n-1} \).

Corollary 1. If the solid be a cube, the odds in favour of A against B will be as 56 to 36, and the odds in his favour against C will be as 36 to 25. And supposing the sum S to be 101, the values of their respective expectations will be 56.138, 26.684, and 21.158.

Corollary 2. If, instead of a cube, the solid be a counter with two faces, \( n \) in this case will be 2, and the odds in favour of A against B will be as 2 to 1, and the odds in his favour against C will be as 4 to 1; that is, their respective expectations in the sum S (supposing it to be 101) will be 51.149, 21.758, and 21.543. Nearly. If, on the contrary, the solid have a great number of faces, the chances will be nearly equal. Hence the advantage of having the priority in the throws will be greater or less, in proportion as the faces are few or many in number.

Corollary 3. If instead of three there be \( d \) persons to throw the solid successively, the expectation of the 1st will be \( S \), the \( d \)th \( \frac{n}{n-1} \times \frac{1}{n} \); of the 2d \( \frac{n}{n-1} \times \frac{n-1}{n} \); of the 3d \( \frac{n}{n-1} \times \frac{n-1}{n} \); of the 4th \( \frac{n}{n-1} \times \frac{n-1}{n} \); of the \( d \)th \( \frac{n}{n-1} \times \frac{n}{n-1} \). Hence the chance of throwing any given number \( (p) \) of points with any number \( (m) \) of solids, having a given number \( (n) \) of regular faces.

Problem VII.

To determine the chances of throwing any given number \( (p) \) of points with any number \( (m) \) of solids, having a given number \( (n) \) of regular faces.

Solution 1. Let the chances be required of throwing on two common dice any given number from 12 to 2. In order to throw 12, the two fives must turn up together, and therefore there can only be one chance for this number. In order to throw 11, the fixes and fives may be changed alternately, and therefore there will be two chances for this number. The next number may be thrown by the two fives, or by a fix and four, and as these last may be alternately turned up, it follows that there are three chances for succeeding in this case. In the same manner nine points may be thrown by the turning up of the four and five, or of the fix and three; and since each of these admit of being alternately changed, the chances for throwing this number will be four. Again, eight points may be thrown by the two fours, the three and five, or the two and fix coming up; and since the two last pairs admit of being changed alternately, the number of chances in this case will be five. For throwing seven points, the chances will be fix; for either the three and four, the two and five, or the ace and fix may be turned up, each pair of which admit of being alternately changed. The chances for fix points are only five; consisting of the two alternate throws of an ace and five, or a four and four, or of the single throw of two fives. The chances for throwing five points consist of the two alternate throws of an ace and four, or of a four and a fix, and therefore are full four. The chances for throwing four points consist of the alternate throws of an ace and two, and of the single throw of two fives, and are therefore only 3. The chances for throwing three points consisting of the alternate throw of an ace and fix, and of the single throw of two fours, are therefore only 2. Hence the chance for throwing 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, if either of these be divided by 36, or the number of all the changes upon two dice, the quotient will give the probability for any number of points required.

By proceeding in the same manner, the chances may be determined when there are any greater number of dice, or when the solid has a greater number of faces than the common die. But the following computations, when three and four dice are thrown, will explain the process better than a more minute detail of it.
DOCTRINE OF CHANCES.

With Three Dice.

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With Four Dice.

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The chance for turning up 13, 12, 11, &c. points being the same as those for turning up 15, 16, 17, &c. points respectively, it will be unnecessary to proceed with the operation. The whole number of changes on 3 dice being $6 \times 6 \times 6 = 216$, and on 4 dice $6 \times 6 \times 6 \times 6 = 1,296$, the probability of throwing any given number of points will be the fraction, whose numerator is given above, and whose denominator is either 216 or 1296, according as 3 or 4 dice are used; thus the probability of throwing 9 points with three dice is $\frac{25}{216}$, and the probability of throwing 15 points with 4 dice is $\frac{110}{1296}$; that is, the odds in the 1st case against throwing them are as $7\frac{3}{2}$ to 1, and in the second case as 8 to 1.

If the fodies have more faces than a cube, or if their number be much greater than is rated above, these operations will be rendered too complicated and laborious, and therefore it becomes necessary to have a more general solution of the problem. Suppose a single folid to have $n$ faces of faces, of which one is marked $A$, $r$ marked $B$, $r^2$ marked $C$, $r^3$ marked $D$, and so on to $n$ terms, then will $1 + r + r^2 + r^3 + \ldots + r^{n-1}$, represent the whole number of chances on such a folid, and each term of the series, divided by the whole, will represent the chance that any particular face will be turned up. If there be $m$ such fodies, (since the sum of the series is $\frac{1 - r^n}{1 - r}$) the whole number of chances on all those fodies will be $\frac{1 - r^n}{1 - r} m = 1 + m r + \frac{m + 1}{2} r^2 + \frac{m + 1 + m + 1}{2} r^3 + \ldots + \frac{m + 1 + m + 1 + \ldots + m + 1}{2} r^n + \cdots$, multiplied into $1 - m r^n + \frac{m + m + 1}{2} r^{n-1} - \frac{m - 1 + m - 2}{2} r^n + \cdots + \frac{m - 1 + m - 2 + \ldots + m - 1}{2} r^n + \cdots$.
DOCTRINE OF CHANCES.

Now since the smallest number of points that can be thrown with those solids is m, the next \( m + 1 \), the third \( m + 2 \), and so on, it follows that the first term of the product of these two series, or unity, will represent the number of chances for throwing \( m \) points. The second term the number of chances for throwing \( m + 1 \) points, the third term the number of chances for throwing \( m + 2 \) points, &c. and that the term of the series, in which the exponent of \( r \) is \( p - m \), will represent the number of chances for throwing \( p \) points.

But since this term arises from such terms of the first series, in which the exponents of \( r \) being \( p - m \), \( p - m - n \), \( p - m - 2n \), &c. are respectively multiplied into the first, second, third, &c. terms of the second series, and since the last factor of the co-efficient of the term, whose exponent is \( p - m \), is both in the numerator and denominator, \( = p - m \); it is evident that the whole co-efficient may be divided into \[ \frac{1}{1 \cdot 2 \cdot 3 \cdot \ldots \cdot (m - 1)} \cdot \frac{p - 1 \cdot p - 2 \cdot \ldots \cdot (p - m)}{p - 3 \cdot \ldots \cdot (p - m - 1)} \cdot \frac{p - m - 1 \cdot p - m - 2 \cdot \ldots \cdot p - m - 3}{3 \cdot (m - 1)} \cdot \ldots \cdot \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{0}{0} \] and therefore that the term itself will be \[ \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{p - 1 \cdot p - 2 \cdot \ldots \cdot (p - m)}{p - 3 \cdot \ldots \cdot (p - m - 1)} \cdot \frac{p - m - 1 \cdot p - m - 2 \cdot \ldots \cdot p - m - 3}{3 \cdot (m - 1)} \cdot \ldots \cdot \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{0}{0} \] in the same manner the co-efficient of the term in which the exponent of \( r \) is \( p - m - n \) will be \[ \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{p - 1 \cdot p - 2 \cdot \ldots \cdot (p - m)}{p - 3 \cdot \ldots \cdot (p - m - 1)} \cdot \frac{p - m - 1 \cdot p - m - 2 \cdot \ldots \cdot p - m - 3}{3 \cdot (m - 1)} \cdot \ldots \cdot \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{0}{0} \] \&c. Hence, if the first of the terms just mentioned be multiplied into the second into \(- m \times r^m \); the third into \( \frac{m \cdot m - 1 \cdot m - 2 \cdot \ldots \cdot m - r^m}{r \cdot r^m} \) and \( n \) be made \( d \); \( p - 2 \cdot n \) is \( e \); \( p - 3 \cdot n \) is \( f \); &c. the number of chances for throwing exactly \( p \) points will be equal to \[ \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{p - 1 \cdot p - 2 \cdot \ldots \cdot (p - m)}{p - 3 \cdot \ldots \cdot (p - m - 1)} \cdot \frac{p - m - 1 \cdot p - m - 2 \cdot \ldots \cdot p - m - 3}{3 \cdot (m - 1)} \cdot \ldots \cdot \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{0}{0} \] or \[ \frac{(m - 1) \cdot (m - 2) \cdot \ldots \cdot (m - r)}{m - r^m} \] + \&c. which series are to be continued till they either vanish or become negative. But if \( r \) be \( 1 \), or, which is the same thing, if there be only one face of a fort on each die, the chances will be expressed simply by \[ \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{p - 1 \cdot p - 2 \cdot \ldots \cdot (p - m)}{p - 3 \cdot \ldots \cdot (p - m - 1)} \cdot \frac{p - m - 1 \cdot p - m - 2 \cdot \ldots \cdot p - m - 3}{3 \cdot (m - 1)} \cdot \ldots \cdot \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{0}{0} \] \[ \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{p - 1 \cdot p - 2 \cdot \ldots \cdot (p - m)}{p - 3 \cdot \ldots \cdot (p - m - 1)} \cdot \frac{p - m - 1 \cdot p - m - 2 \cdot \ldots \cdot p - m - 3}{3 \cdot (m - 1)} \cdot \ldots \cdot \frac{1}{1 \cdot 2 \cdot 3 \cdot (m - 1)} \cdot \frac{0}{0} \] \&c.

Remark. Since it appears from the preceding computations, that the chances continually increase till the number of points required becomes a mean between the greatest and least possible number that can be thrown on the solids, and that they then as regularly decrease till the number of points required be the least than can be thrown on those solids; it will be best, if the number required be nearer the greater than the greater extreme, to use, instead of the former, a number equally distant from that greater extreme. Thus, the greatest number that can be thrown on three common dice is 18, and the least is 3. If therefore the required number be 6, it will lessen the labour to find the number of chances for throwing 15; the latter being as much less than 6 as the former is greater than 3; if the chances for throwing 11 points on 4 dice be required, it will be most convenient to find the chances for throwing 17 points, the latter being as far distant from 24, the greatest, as the former is from 4, the least number that can be thrown on 4 dice.

Example. Let it be required to determine the chances for throwing precisely 24 points on 6 dice. In this case \( n \) is \( = 6 \), \( p = 24 \), \( r = 1 \), \( m = 6 \), \( d (\equiv p - n) = 18 \), \( e (\equiv p - 2n) = 12 \), \( f (\equiv p - 3n) = 6 \), \( g = o \). The above expression therefore becomes \[ \frac{17 \times 16 \times 15 \times 14 \times 13 \times 6 + 11 \times 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4}{2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8} = 343 \] and hence \( G \) (or the number of all the chances on 6 dice) is \( 46,675; \) the odds against throwing exactly 24 points will be as \( 12:1 \) to one; which also are the odds against throwing 18 points; these two numbers being equally distant, the one from the greater, the other from the lefer extreme.

Problem VIII.

To determine the probability that an event shall happen \( p \) times successively in \( n \) trials, when the ratio of its happening to that of its failing is as \( a \\ b \\ b \\ a \).

Solution. The probability that it happens the first \( p \) times after having failed the first time is \( \frac{b}{a + b} \times \frac{b}{a + b} \times \frac{b}{a + b} \times \frac{b}{a + b} \times \frac{b}{a + b} \) \&c. and since the probability of its failing any assigned time, without any re-}

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DOCTRINE OF CHANCES.

the odds when each of them wants a given number to win
the game.

Solution. If only one can be reckoned at each party, the probability that either of them is the winner at the end of
it will be \( \frac{1}{2} \). Hence if A wants 2, and B only one
of being up; the former, in order to be the winner, must
gain twice successively, and therefore his chance will be
\[ \frac{1}{2} \times \frac{1}{2} = \frac{1}{4}, \]
and the chance of the latter = \( 1 - \frac{1}{4} = \frac{3}{4} \).

Consequently the odds against A, or in favour of
B are as 3 to 1.

If A wants 3, 4, 5 6, or any other number of being
up, while B wants only one, his chance of winning in those
cases must always depend on his succeeding in every party
without intermission, and therefore the probability when he
wants 3 will be \( \frac{1}{2^3} = \frac{1}{8} \), when he wants 4 it will be \( \frac{1}{2^4} = \frac{1}{16} \)
when he wants 5 it will be \( \frac{1}{2^5} = \frac{1}{32} \), and so on; so that
the odds against him in those cases respectively will be 7 to
1, 15 to 1, 31 to 1, 63 to 1, &c.

If A wants 3, and B wants 2 of being up; the former
may win in either of 4 different ways. - 1st. By gaining the
1st, 2d, and 3d games. 2ndly. By gaining the 1st, 2d, and 4th,
and losing the 3d game. 3dly. By gaining the 1st, 3d, and
4th games, and losing the 2d; and 4thly. By losing the
1st, and gaining the 2d, 3d, and 4th games. The proba-

ability of the 1st is \( \frac{1}{8} \), and the probability of each of the
rest is \( \frac{1}{2} \times \frac{1}{8} = \frac{1}{16} \). Hence the sum of the 4 probabilities
will be \( \frac{1}{8} + \frac{3}{16} = \frac{5}{16} \). Consequently the odds against
him will be as 11 to 5, or rather more than 2 to one.

When A wants 4, B still wants 2 of being up, if he gains
the first game (the probability of which is \( \frac{1}{2} \)) he will be in
the same situation as in the preceding case, and his expecta-
tion in such an event will be \( \frac{1}{2} \times \frac{1}{2} = \frac{1}{4} \). - If he loses
the first game (the probability of which is also \( \frac{1}{2} \) he will
then want 4 while B wants only one of being up, and his expec-
tation in this case will be \( \frac{1}{2} \times \frac{1}{2} = \frac{1}{4} \); therefore
the sum of these probabilities being \( \frac{6}{32} \), it follows that the
odds against him are as 25 to 6. In the same manner the
odds may be found when he wants 5 of being up, to be as 57
to 7; when he wants 6 of being up, to be as 120 to 8, and so
on when he wants any other number, B being always sup-
posed to want only 2 of being up.

When A wants 4 and B wants 3 of being up, the former
may win in either of the 15 following different ways:

1st. By gaining the 1st, 2nd, 3rd, 4th game, the probability
of which is \( \frac{1}{16} \). } 2. The probability of each of which is \( \frac{1}{16} \times \frac{1}{2} = \frac{1}{32} \).
3. The probability of each of which is \( \frac{1}{16} \times \frac{1}{4} = \frac{1}{64} \).

Adding all these probabilities together, we have \( \frac{1}{16} + \frac{4}{32} \):
for the probability required, and hence the odds
against A's winning will be as 42 to 22.

By proceeding in the same manner when A wants 5 of being
up, the odds against him will be found to be as 219 to 37.
But these operations become more and more laborious in
proportion as the number wanted by each party becomes
more considerable, and therefore it will be better to have recourse to the rules of combination, which will greatly
reduce the labour in those cases. Thus; let B want 4 and A
want 5 of being up. The probability here of A's winning
will be expressed by \( \frac{1}{2^5} + \frac{1}{2^5} \), multiplied into the number of
ways in which 6 things may be combined by 5 of a fort
+ \( \frac{1}{2^5} \), multiplied into the number of ways in which 7 things
may be combined by 5 of a fort + \( \frac{1}{2^5} \), multiplied into the number of ways in which 8 things
may be combined by 5 of a fort + \( \frac{1}{2^5} \), multiplied into the number of ways in which 9 things
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gaining two, in two trials, may be considered as the same with that of taking two out of four things of two sorts, so that both may be of the same fort. The chance of taking the proper fort the first time is $\frac{2}{4}$; the chance of missing it the second time is $1 - \frac{1}{4} = \frac{3}{4}$; the probability therefore of the event first mentioned is $\frac{2}{4} \times \frac{3}{4} = \frac{6}{16} = \frac{3}{8}$. The chance of taking out the same fort twice in succession is $\left(\frac{2}{4}\right)^2 = \frac{4}{16} \times \frac{2}{4} = \frac{1}{8}$. Hence, if A wants 2 and B only 1 of being up, the latter may win at the end of the first party, either by reckoning one or two (the probability of which is $\frac{1}{6} + \frac{1}{3} = \frac{1}{2}$), or he may also win by having lost only one at the end of the first party, and gaining one at the end of the second. Now if A has gained one at the end of the first party, the expectation of each at the beginning of the second will be equal, and therefore B's chance of winning in the second, after having lost in the first party will be $\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$. Hence the whole probability of his winning will be $\frac{1}{2} + \frac{1}{6} = \frac{2}{3}$, and A's chance will be the remaining $\frac{1}{3}$; that is, the odds against A will be as 2 to 1.

Let A want 3, B still wanting only 1 of being up. If A gains one in the first set, he will be in the same situation as in the preceding case. If he gains 2 he will be on an equality with B. His expectation on the first event is $\frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$, and his expectation on the second $= \frac{1}{3} \times \frac{2}{3} = \frac{2}{9}$. His whole expectation, therefore, is $\frac{1}{9} + \frac{1}{9} = \frac{2}{9}$. That is, the odds against him are as 2 to 7.

In like manner, when A wants 4, B still wanting only 1 of being up. If he gains one he will be in the same situation as in the foregoing case; if he gains two he will be in the same situation as in the first case; hence, his expectation will be $\frac{1}{4} \times \frac{2}{5} + \frac{1}{4} \times \frac{1}{5} = \frac{13}{108}$, and the odds against him will be as 95 to 13. By proceeding in this manner, the odds may be found when A wants any greater number, B being always supposed to want only one of being up; nor will the reasoning, indeed, be different when B wants more than one; or when the game is of such a nature as that either A or B may reckon 3, 4, or any greater number at each party.

It would be as tedious as it is unnecessary to proceed further with these operations, and, therefore, it will be sufficient to observe, that the following table has been deduced from a similar method of reasoning with that which has been used in the preceding cases, and that it is inferred principally with the view of shewing the manner in which the odds are constantly leavened in proportion as the number to be reckoned at each party is increased.

<table>
<thead>
<tr>
<th>When One may be reckoned at each Party.</th>
<th>When Two may be reckoned at each Party.</th>
<th>When Three may be reckoned at each Party.</th>
<th>When Eleven may be reckoned at each Party.</th>
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<td>16</td>
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<td>3^3/289 to 1</td>
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</table>

Were the game of such a nature as to admit of an indefinite number to be reckoned at each party, the expectations would be nearly equal, or, in other words, the odds would be indefinitely small, whatever number were wanted on either side of being up. This, indeed, appears from the preceding table, where the odds are continually lessening as the number to be gained at each party increases. It is also to be observed, that, except in one instance, the odds in those tables are never inverely as the numbers wanted of being up; and that particularly in the last column, where 11 may be gained at each party, those odds vary from that ratio more than in any other.

Hence it follows, that in the game of whist, which admits of 11 being gained in a single deal, it would be very wrong to proceed on such principles in determining the odds; for, although whist may not be strictly of the same nature in every respect with the game supposed in the table, yet it is to be remarked, that the circumstances in which it differs, especially when less than three are wanted of being up, only serve to increase the errors of such a mode of computation.

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DOCTRINE OF CHANCES.

This, however, if any doubt can remain on the subject, will be more clearly explained in the following problems.

**Problem X.**

To determine in the game of whist, the chance of any particular player (A) having one or more honours.

Solution. Let A be the dealer, and let the chance be required of his having 4 honours. Supposing it certain that an honour is turned up, it then becomes necessary to find the chance of his taking 3 particular cards in 12 out of a pack containing 51. By the corollary to the 4th problem this probability is expressed by

$$P = \frac{(a + q - m)\cdot m - 1 \cdot m - 2 (\rho)\cdot v \cdot v - 2}\{(a + q - m)\cdot m - 1\cdot v - 2\}$$

where \(\rho\) represents the number of cards, \(a\) the number of honours, \(\rho\) the number to be taken, \(m\) the whole number to be taken out of \(n\); \(v = a + b - m = n - m\), and \(\rho\) is the number of honours, and the fraction expressing the required probability is

$$\frac{51\times 50\times 49}{12\times 11\times 10\times 9}$$

which, being multiplied into \(\frac{1}{13}\), or the probability that the honour turns up, will become

$$\frac{44\times 14}{13\times 4165}$$

Supposing it certain, on the contrary, that the honour is not turned up, the chance of having four (making \(a = \rho = 4\)) will be

$$\frac{12\times 11\times 10\times 9}{51\times 50\times 49\times 48} \times \frac{9}{13}$$

which, being multiplied into \(\frac{9}{13}\), (or the probability that an honour is not turned up) will become

$$\frac{9 \times 33}{52 \times 4165}$$

Hence the whole chance of A's having the four honours will be

$$\frac{16 \times 44 \times 9 \times 33}{52 \times 4165} = \frac{11}{2380} = .00462.$$

If A is not the dealer, the chance of his having the four honours will be found by proceeding in the same manner,

$$\frac{13\times 12\times 11\times 10 \times 9}{51\times 50\times 49\times 48} \times \frac{9}{13} = \frac{33}{1660} = .00198.$$

The chance of his having three honours and no more may also be found either:

$$\frac{792 + 492}{20813} = .0618, \frac{443}{4165} = .03433$$

according as he is or is not the dealer.

The chance of his having two honours and no more may in like manner be found:

$$\frac{(11\times 11\times 14)}{4165} = .26684,$$

or

$$\frac{(151)}{4165} = .1957,$$

and the chance of his having one honour and no more:

$$\frac{913}{20825} = .43884$$

whether he is or is not the dealer. The chance also that he has no honour may in the first case be found:

$$\frac{37\times 62}{10660} = .22785; \text{and in the second case:} \frac{712842}{52\times 4165} = .3291.$$

Nor is the method of proceeding different when it is required to determine the chance of any two partners at whist having either four or three or two honours between them; the computation in this case being made on 25 or 26 instead of 12 or 13 cards, according as the honour is or is not supposed to be turned up. The chance of the dealer and his partner having four honours between them appears to be

$$\frac{115}{1660} = .06323; \text{the chance of their having three honours, or reckoning two, } \frac{468}{1660} = .28092; \text{and the chance of their having two, or not reckoning any thing by honours } = \frac{650}{1660}. \text{ The chance of the eldest hand and his partner's having four honours between them appears also to be } = \frac{60}{1660} = .03442; \text{the chance of their having three honours, or reckoning two, } = \frac{364}{1660} = .21849, \text{and the chance of their having two, or not reckoning any thing by honours } = \frac{652}{1660}, \text{or the same as in the case of the dealer and his partner.}$$

**Corollary.** Since the chance of the dealer's having three honours or more is .0618 + .0046 = .0664, and the chance of his having two honours or more is .064 + .2668 = .3332, if it follows that the odds against his having three or more honours are as 14 to 1, and that the odds against his having two or more honours are as 2 to 1. On the other hand, the chance of his having one honour or more being .3293 + .3332 = .672, the odds for his having one or more honours will be 3.5 to 1. Thee chances in the case of the eldest or any other single hand being .3293 + .21849 = .5478 respectively, the odds against each hand's having three or more honours will be as 26.8 to 1; the odds against his having two or more honours will be as 3.8 to 1; and the odds for his having one or more honours will be as 2 to 1. The chance of the dealer and his partner having three or more honours between them being .0664 + .28092 = .35 nearly, and the chance of the eldest hand and his partner having the like number between them being .03442 + .21849 = .26 nearly; the odds against the former partners reckoning any thing by honours will be nearly as 2 to 1, and the odds against the latter will be nearly as 3 to 1.

**Problem XI.**

To determine, in the game of whist, the chance of getting the odd or any number of tricks.

Solution. Let the chances of getting and losing a single trick be to each other in the ratio of \(a\) to \(b\), then will the probability of getting \(n\) tricks be represented by \(\frac{a^n}{a + b^n}\), the probability of getting \(n - 1\) tricks by \(\frac{n \cdot a^{n-1} \cdot b}{a + b^n}\), the probability of getting \(n - 2\) tricks by \(\frac{2 \cdot a^{n-2} \cdot b^2}{a + b^n}\), and so on. In the present case the chances of losing or winning a trick being equal, \(a\) will be equal to \(b\), and the chance of winning 13 tricks, or reckoning 5, will be \(\frac{1}{2} = \frac{1}{2^{192}}, \text{the chance of winning 12 or reckoning 6 tricks will be } = \frac{13}{8192}, \text{and the chance of reckoning 5, 4, 3, 2, and 1 trick will be } \frac{78}{8192} \frac{286}{8192} \frac{715}{8192} \frac{187}{8192} \frac{1716}{8192}, \text{respectively.}$$

**Corollary.** Hence the chance of reckoning 6 or more tricks.

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DOCTRINE OF CHANCES.

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Problem XII.

To determine the respective chances at whist, when two of the partners have eight and the other two have nine of the game.

Solution. The party who reckon eight may win the game in the first deal either by having three or more honours between them, or by getting two or more tricks without reckoning any honours. Or, if they do not win the game in that deal, they may, however, reckon one by getting the odd trick, in which case they will be on an equality with their opponents. Supposing them therefore to be the dealers, the probability of their having three or more honours, by Cor. Prob. X. is .34; the probability of their getting two or more tricks, by Prob. XI. is .2953, and the probability of not having three or more honours is 1 - .35 = .65. Hence the chance of their getting the game in the first deal is

Again, the probability of their getting one trick and no more by Prob. XI. is

.3517 for their chance of reckoning only one in the first deal; and as their expectation in this case will be equal to that of their adversaries, it will of course be expressed by

.3517 x .65 = .22885, and their whole chance of winning will be

.3517 + .22885 = .58062. If they be not the dealers, their chance of winning may be found, by reckoning in the same manner:

.13517 + .2953 x .10 = .25 + .2953 x 1 = .26 + .20947 x 1 = .5428. Hence the chance of their winning in the first case is as 3 to 2, and in the second case as 6 to 5 nearly. But if it be not considered whether they are, or are not the dealers, their chances of winning will be one with another, very nearly as 7 to 5.

Corollary. Were these two partners only seven, their chance of winning the game might be found by the help of the two preceding problems and their corollaries, equal either to .3869 or .3869 according as they were, or were not the dealers, and their chance of winning if they were only fix might in like manner be found equal either to .3583 or .3583. That is, the odds against the two partners who reckon only seven, while the other partners reckon nine, are as 8 to 5, and the odds again 8 them when their reckoning only fix are as 21 to 10 or a little more than two to one.

By purifying the same steps the odds may be determined in every circumstance of the game; but the labour of such a computation would be very great, as the operations become more and more complicated in proportion as the game is further from being terminated.

Problem XIII.

A undertakes to play a match with B of three or five games, in winning the greater number of which he becomes of course the winner of the match. A has an advantage in all the games but one equivalent to the odds of b to a—in that one game B has the same advantage against A. It is required to determine the respective chances of A and B; and whether it is material that the games should be played in any particular order.

Solution 1. Let the number of games be three, and let A be supposed to play the two games, on which he has the advantage of b to a, first, and the game on which he has the chance only of a to b, last. Either A or B may become the winner by obtaining the superiority over his adversary in the following order: 1, 2, 3. 3, 1, 2, 3. A’s chance in winning this order is expressed by the fractions

and consequently B’s chance will be

If A be supposed to play the game first, on which he has only the advantage of a to b, and the other two games last, the fractions expressing the probability of his winning will be


Hence it follows that in this case it makes no difference in what order the games are played.

2. Let the number of games be five, and let A be supposed to play the five games on which he has the advantage of b to a, first, and the game on which the odds are against him, as b to a, last. Either party may become the winner, by succeeding in the following order: 1, 2, 3, 4, 5, 1, 2, 4, 3, 5, 1, 3, 4, 2, 3, 5, 1, 3, 5, 2, 4, 5, or 3, 1, 4, 5. A’s chance for winning in this order is expressed by the fractions


in consequence, b = a + 5.a b + 4 4 a b + 6 a b.

If A be supposed to play the game first, in which the odds are against him, the several fractions expressing his chance of winning may be found as follows:


It is evident therefore that in this, as well as in the former case, it is not in the least material in what order the games are played.

Example. Supposing A and B to play a match at piquet of five games, on the particular condition that B is to be the dealer in all the games except one, which gives an advantage to A in four of the games equivalent to the odds of 5 to 2. It is required to determine their respective chances of winning the match.—In this case a is .4, and b = .5; and hence the above expression denoting A’s chance becomes

and the expression denoting B’s chance becomes

.35824 and .59852. The odds therefore in favour of A are as 14 to 11 nearly. If they had played a match of only three games, and B was to have been the dealer in two of them, the odds against him would have been as 455 to 344. or nearly as 19 to 17.

Problem XIV.

To determine the chances in the game of Meaco.

Solution. In this game two packs of cards are shuffled together, from which three cards are dealt to each of the players,
players, who are generally five in number. The tens being always deducted from the aggregate number on the faces of the three cards, the remaining numbers will of course be either 9, 8, 7, 6, 5, 4, 3, 2, 1, or 0. If the first of these numbers is turned up, the person having it is entitled to 3 flake; if the second, he is entitled to 2 flake; if either a 7, or any of the lower numbers, he is entitled to 1 flake; but if a 0 is turned up, he is entitled to no flake. The question, therefore, to be solved is, the chance of having either 9, 8, 7, 6, 5, 4, 3, 2, 1, or 0.

The number of chances on n things when taken 3 and 3, being \( n \), it follows that all the chances of this kind on two packs, or 104 cards, will be \( \frac{104 \times 103 \times 102}{1 \times 2 \times 3} = 182,104 \), and, consequently, that the sum of all the chances for having either 9, 8, 7, 6, 5, 4, 3, 2, 1, or 0, is 182,104.

The number of chances on n things when taken 3 and 3, being \( n \), it follows that all the chances of this kind on two packs, or 104 cards, will be \( \frac{104 \times 103 \times 102}{1 \times 2 \times 3} = 182,104 \), and, consequently, that the sum of all the chances for having either 9, 8, 7, 6, 5, 4, 3, 2, 1, or 0, is 182,104.

DOCTRINE OF CHANCES.

with those for having 8: but the chances for having 0 will be found to be = 19,036. In other words, the sum of all the chances for having each of the odd numbers is 18,104; the sum of all the chances for having each of the even numbers is 17,922; and the sum of all the chances for having a blank is 19,036; which, being added together, make up the number 18,104 and, therefore, prove the truth of the solution.

**Corollary.** It appears from this problem that the odds against the number 9 being turned up are nearly as 9 to 1; against the number 8, as 9 to 1; against a blank, as 8 to 1; and for either of the other numbers, as 28 to 1. If, therefore, each flake (as is generally the practice in this game), be five guineas, the expectation of the player on the number 9 will be worth 11,105.2d; his expectation on the number 8 will be worth 10,922.5d, and his expectation on all the remaining numbers together will be worth 31,228.5d, making in the whole the sum of 44,657.

Innumerable other problems might be added for determining the laws of chance, as well in the preceding games, as in those of Hazard, Pharamon, Pigst, &c. &c.; but the solution of them (were the subject of much more importance than it appears to be), would dwell beyond all due limits, and for the whole chief design has been to give a clear idea of the principles on which the doctrine of chances is founded, together with the solution of such general problems as may admit of the most extensive application. Tho' however, who wish for further information respecting the games of chance, may have recourse to the writings of De Moivre, James Bernoulli, Thomas Simpson, &c., but particularly to those of the former, which are not surpassed, and perhaps, not equalled by any other work on this subject.

In addition to the problems given in this article, two others should be noticed, which are not only the most abstruse, but the most important in the whole doctrine of chances; the first of them solved by James Bernoulli, and afterwards, to greater exactness, by Dr. Moivre, the second, communicated by Dr. Price to the Royal Society, from the papers of the late Mr. Bayes, as hath been already observed in the beginning of this article. In regard to the former of these problems, Mr. James Bernoulli introduces his solution of it with observing, "Hoc est illud problema, quod evagudandum hoc loco propofui, potius quam per vicinum premio, & cujus tum nominis, tum fama utilitas, cum pari adjuncta difficilatatem omnium reliquis huic doctrinæ capitibus pondus & pretium superabundere possit." Such, therefore, being the opinion of that eminent mathematician concerning this problem, perhaps the present article ought not to be concluded without giving the solution of it, more particularly as Dr. Moivre, though he pursued the investigation to a greater degree of accuracy, has contented himself with stating the rules, without giving any demonstration of them.

**Proposition I.**

Supposing a very great number of trials to be made concerning any event, it is required to determine the probability there is that the proportion of the number of times it will happen to the number of times it will fail in these trials will differ less than by very small assigned limits from the probability of its happening to the probability of its failing in a single trial.

**Solution.** Let the probabilities of happening and failing be equal, and the number of trials be n. Let L and L also be the terms equally diffuse by the interval h, from the middle term of the binomial 1 + 1 &c, and the sum of the terms included between L and L, together with the extremes; then if n be a very great number, the probability that the event happens neither more frequently than \( \frac{1}{2} \) or less than \( \frac{1}{2} + h \),
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following, \( \frac{s \cdot r - 1 \cdot s - 2 \cdot \beta \cdot y}{l + l + 2 + 3 + \cdots + l + 1} \) the third term, and so on, it follows that the term whose distance from the greatest is \( p \), will be \( \frac{s \cdot r - 1 \cdot s - 2 \cdot \beta \cdot y}{l + l + 2 + 3 \cdots + l + 1} \times a^l \), and

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But since \( a \) is \( b \), \( \log b - \log a \cdot l \) will vanish out of the equation; and since the numerators of the remaining terms are series of powers whose roots are in arithmetical progression, the sum may be easily obtained by the 1st Proposition in Stirling, De Summationi Stirriem; and hence the foregoing expression will be found = \( \log y = \frac{1}{l + 1} \cdot \frac{1}{l + 2} \cdot \frac{1}{l + 3} \cdots \frac{1}{l + p} \times a^l \), and

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\left\{ \frac{1}{l + 1} \right\} + \frac{1}{l + 2} + \frac{1}{l + 3} (l + p) = \log y + p \cdot \log b - p \cdot \log a \cdot l + \text{ &c.}
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furn bears to all the terms, will be \( \frac{y}{a + b} \) into \( 3 \cdot \sqrt{n} - \frac{d^1 \cdot \sqrt{n} + d^2 \cdot \sqrt{n} + \cdots n}{2 \cdot 5} \). But \( \frac{y}{a + b} \) (being the ratio which the greatest term has to all the terms) has been proved in the corollary to the preceding lemma to be \( \frac{a + b}{a + b} \); the above ratio therefore will be \( \frac{a + b}{a + b} \) \( \text{ &c.}
\]

Corollary 2. If the probabilities of happening and failing are equal, \( a + b \) will be \( 2 \), and \( d \left( \frac{a + b}{a + b} \right) \) will also be \( 2 \), hence the series in the preceding corollary will become = \( \frac{2}{\sqrt{n}} \) into \( 3 \cdot \sqrt{n} - \frac{d^1 \cdot \sqrt{n} + d^2 \cdot \sqrt{n} + \cdots n}{2 \cdot 5} \)

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\text{ &c., which is given by M. De Moivre for determining the ratio between the sum of as many terms immediately preceding the greatest as there are units in } \sqrt{n}, \text{ to the whole power of the binomial } 1 + \sqrt{n}.
\]

Corollary 3. Since the log of the \( p \)th term from the greatest, or log. \( T \), is \( \log. y = \frac{dp \beta}{n} + \frac{dp \beta}{n} \), this equation, when \( a \) and \( b \) are equal, will be \( T = \log. y = \frac{2}{n} \). But the greatest term of the binomial \( 1 + \sqrt{n} \) is the middle term, the log. of \( y \), therefore, in this case, will be the log. of the middle term; hence will be the log. of the ratio which \( T \) has to the middle term be expressed, as M. De Moivre has observed, by \( \frac{2}{n} \).

Corollary 4. In this lemma it is to be observed, that the ratio only of the \( p \) terms next succeeding the greatest term is given. But the ratio of the \( p \) terms preceding the greatest term may be determined in the same manner. For since the \( p \)th term which precedes \( y \) is \( \frac{1}{l + 1} \cdot \frac{1}{l + 2} \cdot \frac{1}{l + 3} \cdots \frac{1}{l + p} \), it may be found by pursuing the same steps as have been taken in this lemma, that the expression denoting the ratio, in this case, is \( \log. y = \frac{1}{l + 1} \cdot \frac{1}{l + 2} \cdot \frac{1}{l + 3} \cdot \frac{1}{l + 4} \cdot \frac{1}{l + 5} \cdot \cdots \frac{1}{l + p - 1} \), &c.
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If \( \sqrt{n} \) times, will be to the probability that the contrary happens very nearly as \( \frac{1}{2} + \frac{1}{2} \) to 1. If \( l \) were interpreted by a higher number, or, in other words, if the limits were extended, the probability might be increased, till it amounted almost to a certainty, yet the extension of those limits would bear but an inconsiderable proportion to the whole when \( n \) is very great, and none at all when it is infinite. Whence it follows, as M. De Moivre properly observes, that, "although chance produces irregularities, still the odds will be infinitely great, that in process of time those irregularities will bear no proportion to the recurrence of that order, which naturally results from original design." The truth of this observation, though undeniable, will, perhaps, be more fully confirmed by the following proposition, which is the converse of the preceding one, but rather more difficult in its solution, and more direct in its application to the arguments above-mentioned.

**Proposition II.**

The number of times an unknown event has happened or failed being given, to find the chance that the probability of its happening should lie somewhere between any two named degrees of probability.

**Solution.** The solution of this proposition being not only very long and laborious, but given at full length in the Philos. Transactions (vols. 53 and 54), it will be unnecessary to enter further into it at present, than to give a general idea of the manner in which it has been investigated, and of the principles on which the demonstration is founded.

If the probability of an event's happening in each single trial be \( a \), and that of its failing be \( b \), the probability of its happening \( p \) times, and failing \( q \) times in \( p + q \) (\( = n \)) trials, will be \( a^p b^q \) multiplied into the co-efficient of the term in which \( a^p b^q \) occurs when the binomial \( a + b \) is expanded. Or, denoting this co-efficient by \( E \), the probability will be \( E a^p b^q \).

If the ball \( O \) be then thrown \( p + q \left(= n \right) \) times, and if its rolling between \( A D \) and \( O \), after a single throw, be called the happening of the event \( M \) in a single trial, then the probability that the point \( e \) falls between any two points in the line \( BA \) will be the ratio of the distance between these two points to the whole line \( BA \); and if the ball \( W \) has been thrown, and the line \( OS \) be drawn, the probability of the event \( M \) in a single trial will be the ratio of \( A E \) to \( BA \). Hence, if on the base \( BA \), a figure \( B g e n a \) be described, whose property is this; that the base being divided into two parts, as \( A b \) and \( B b \), and at the point of division \( b \), a perpendicular being erected and terminated by the figure in \( n, y, x, r \), respectively represent the ratio of \( b m, A b, \) and \( B b \), to \( B A \) and \( y = E a^p b^q \) (being the co-efficient of the term in which \( a^p b^q \) occurs); then, before the ball \( W \) is thrown, the probability that the point \( e \) shall fall between \( f \) and \( b \), and also that the event \( M \) shall happen \( p \) times, and fail \( q \) times in \( p + q \) trials, will be the ratio of \( g + b \) to \( C A \), or the square upon \( B A \). Supposing now, before any thing is discovered concerning the place of the point \( e \), that it should appear that the event \( M \) had happened \( p \) times, and failed \( q \) times in \( p + q \) trials, and from hence, that it was guessed that the point \( e \), to any two points \( f \) and \( B \), in the line \( B A \), and consequently that the probability of the event \( M \), in a single trial, was somewhere between the ratio of \( A \) to \( B \), and that of \( A f \) to \( B A \), then would the probability that this guess was right be the ratio of \( g + b \) to \( B A \).

Having demonstrated the truth of these propositions, nothing further remained to complete the solution than to determine the area of the figure described above, and of the several parts of it separated by the ordinates perpendicular to \( B A \). For this purpose \( B A \) being made \( = 1 \), the equation of the curve \( y = x^r \), the area of the figure \( A b m \), and consequently its ratio to \( C A = 1 \), is found to be

\[
\text{figure } B d m, \text{ and its ratio to } C A = \frac{x^{r+1}}{r+1} - \frac{p \cdot r^{p+1}}{q + q^2} + \frac{p \cdot \frac{r-1}{r} \cdot r^{p+1}}{2 \times q + 3} + \ldots \text{&c. and the area of the whole figure } A m B \text{, and its ratio to } C A = \frac{1}{n+1} \times \frac{1}{E}. \text{ Hence the ratio of } A b m \text{ to the whole figure is } = n + 1 \cdot E \times \frac{x^{r+1}}{r+1} - \frac{q \cdot x^{r+1}}{p + q} + \frac{q \cdot q - 1 \cdot x^{r+1}}{2 \cdot p + 3} - \ldots \text{&c., and consequently the ratio of } g + b \text{ to } A m B \text{ will be } = n + 1 \cdot E \times \frac{x^{r+1}}{r+1} - \frac{q \cdot x^{r+1}}{p + q} + \frac{q \cdot q - 1 \cdot x^{r+1}}{2 \cdot p + 3} - \ldots \text{&c.}
\]

Suppose \( B C D A \) to be a plane perfectly level; the line \( A B \) to be divided into equal parts \( A b, b c, c d, \&c. \) and the perpendiculars \( b E, c F, d G, \&c. \) to be erected. If a ball \( W \) be thrown upon this plane, the probability that it rolls between, any two of the parallel lines will be equal. Supposing it, therefore, to be thrown for the first time, and a line \( O S \) to be drawn through the point on which it has settled.

**Vol. VII.**
DOCTRINE OF CHANCES.

Sec and the series
\[
\frac{a_{x+1}}{\rho + 1} - \frac{q}{\rho + 2} + \frac{q - 1}{2 \cdot \rho + 3} - \ldots
\]

When \( \rho \) and \( q \) are very large numbers, it will be possible to apply this rule to practice on account of the multitude of terms contained in the two series. Mr. Bayes, in his admirable attempt with great labour and ingenuity, to remedy the defect; but although he considerably improved the rule, he did not succeed in so far as to give the required result within limits sufficiently narrow. His friend and editor, Dr. Price, has therefore pursued the inquiry with equal labour, and the result of an investigation, which occupies too many pages to admit of its being inferred here, has been the following rule.

If nothing is known concerning an event, but that it has happened \( \rho \) times and failed \( q \) times in \( \rho + q \) or \( n \) trials, and from hence be guessed, that the probability of its happening in a single trial lies between \( \frac{\rho}{n} + z \), and \( \frac{\rho - 1}{n} - z \), the chance to be in the right, if either \( \rho \) or \( q \) exceed 1, is left
\[
I - 2 E \cdot a^{q} - \frac{2 E \cdot a^{q}}{n} + E \cdot a^{q} - \frac{E \cdot a^{q}}{n} + \frac{a^{q}}{n}
\]

than \( 2z \), and greater than \( \Sigma + \frac{\Sigma}{n} \), or \( \frac{\Sigma}{n} \), and
\[
\frac{1}{1 + 2 E \cdot a^{q} - \frac{E \cdot a^{q}}{n} + \frac{a^{q}}{n} + \frac{a^{q}}{n}}
\]

If either \( \rho \) or \( q \) exceed 10, this chance is less than \( 2 \Sigma \), and
\[
\frac{1}{1 + \frac{1}{2} E \cdot a^{q} - \frac{E \cdot a^{q}}{n} + \frac{a^{q}}{n} + \frac{a^{q}}{n}}
\]

all cases, where \( z \) is small, and also where the disparity between \( \rho \) and \( q \) is not great, the chance is very nearly \( 2 \Sigma \). In this rule, it is to be observed, that the ratio of the quadrantal arc of a circle to its radius, and \( H = \frac{E}{n} \), whose hyp. log. is \( \frac{2}{n^2} \), is
\[
\frac{1}{1 - 2 E \cdot a^{q} - \frac{E \cdot a^{q}}{n} + \frac{a^{q}}{n} + \frac{a^{q}}{n}}
\]

\( K \) = the ratio of the quadrant to the whole quadrant.

The hyp. log. is
\[
\frac{1}{12} \times \frac{1}{n} - \frac{1}{q} - \frac{1}{q} = \frac{1}{3} \times \frac{1}{n} - \frac{1}{q} = \frac{1}{9} \times \frac{1}{n} = \frac{1}{q} - \frac{1}{q}
\]

\( 1 \). Supposing an event to have happened about the probability of which nothing further is known than that it has happened once, and that it be inquired what conclusion should be drawn from hence with respect to the probability of its happening on a second trial. In this case \( q \) in the first rule becomes \( 1 + q \), and \( q = 1 \), and if the limits \( z \) and \( x \) be put respetively \( 1 \), and \( \frac{1}{2} \), the expression for the rule, or
\[
\frac{1}{12} \times \frac{1}{n} - \frac{1}{q} - \frac{1}{q} \left[ \frac{1}{1 - \frac{1}{2}} \right] \text{ will give } \frac{3}{8}
\]

for the answer; which shows that it is \( 3 \) to \( 1 \) that the chance lies somewhere between \( 1 \) and \( \frac{3}{2} \), or that the odds are \( 3 \) to \( 1 \), that it is somewhat more than an even chance that it would happen on a second trial. In the same manner, if the event has happened twice, the expression will be
\[
1 - \frac{1}{2} \left[ \frac{1}{2} \right] \text{, if}
\]

\( \frac{3}{8} \) if thrice, \( \frac{1}{2} \text{, if it has happened twice, and } \frac{1}{16} \text{ if it has happened thrice, for more than } \frac{1}{2} \text{ equal chance that it will happen on further trials. Again, if the event has happened ten times without failing, and inquiry be made what reason we have to think we are right if we guess that the probability lies somewhere between } \frac{3}{2} \text{ and } \frac{1}{2} \text{, or between } 3 \text{ to } 1 \text{ and } 2 \text{ to } 1 \text{, the answer in this case will be } \frac{2}{3} \text{, or } \frac{5}{6} \text{, which is } 360 \frac{1}{4} \text{, that is, the odds are greater than } 2 \text{ to } 1 \text{ against our being right. If we had guessed that the probability lay between } \frac{1}{16} \text{ and } \frac{1}{2} \text{, or between } 16 \text{ to } 1 \text{ and } 2 \text{ to } 1 \text{, the chance would have been nearly equal that we had guessed right.}
\]

2. Supposing nothing further to have been known of an event than that it happened ten times and failed once, and that a peron guessed from thence that the ratio of the probability of the event's happening in a single trial to that of its failing, lay somewhere between the ratio of \( q \) to \( 1 \) and
11 to 1; then would the chance of his being right in his
gues be expressed by \(\frac{n + 1}{n + 1} \cdot E\) multiplied into the dif-
cence between \(\frac{x_1 + 1}{\phi + 1} = \frac{q + 1}{\phi + 1}
and \(\frac{x_2 + 1}{\phi + 2} = \frac{q + 1}{\phi + 2}\). Now
\[\frac{x_1}{\phi + 1} = \frac{q}{\phi + 1} = \frac{10}{10}, \frac{q}{\phi + 1} = \frac{10}{10}, \frac{n}{\phi + 1} = \frac{11}{10}, \text{and } E\]
\[\frac{11}{10} \times \frac{10}{10} = \frac{110}{110} \text{ &c. \; so that there would be the odds of 923 to 77, or 12
1 to nearly again against his being right. If the event had hap-
pened 20 times and failed twice, the required chance would be
\[\frac{23}{10} \times \frac{23}{10} \times \frac{11}{12} \times \frac{11}{12} - 2 \times \frac{11}{12} \times \frac{11}{12} - \frac{23}{10} \times \frac{23}{10} \text{ &c. \; The odds, therefore, against his being right are less than in the former case, being here only 89.2 to 108.9 to 1 nearly.}
3. Lastly, supposing an event to have failed 1000 times, and
to have happened 100 times in 1100 trials; or, in other
words, supposing a person to have known nothing more
of a lottery than that he had just seen 1100 tickets drawn
of which 1000 were blanks, and 100 were prizes; and that in
consequence he guessed that the proportion of the blanks
to the prizes in the lottery lay somewhere between
\[\frac{11}{10}, \frac{10}{11} + \frac{1}{10}\]
\[\frac{23}{23} \times \frac{23}{10} \times \frac{11}{12} = \frac{110}{110} \text{ &c. \; In this case the first rule would re-
quire so many terms as to render it impracticable, and there-
fore recourse must be had to the second rule, by which the
question may be determined in the following manner:}
\[\text{Since } \phi = 1000, q = 100, n = 1100, \frac{x}{n} = \frac{1}{110}, \text{ and } m
\left(\frac{\sqrt{q}}{\phi \sqrt{q}}\right) = \frac{81.578, E a^b b^c}{\phi \sqrt{q}} \text{ may be found } = \frac{0.418145}{0.418145}
\text{and } \frac{n}{m} = \frac{3.1311}{1}; \text{ hence } e \times \frac{2}{1} = \frac{7.062}{1} \times \frac{1}{1} - 2 E a^b b^c - 2 E a^b b^c
\frac{1}{n} \times \frac{n}{m} = \frac{675.3}{675.3}, \text{ so that the chance of
his being right in his conjecture lies somewhere between}
\frac{7.062}{1} \times \frac{675.3}{675.3}, \text{ or between the odds of 220 to 105, and 205 to 103, or nearly between 120 to 5 and 10 to 5.}
\text{CHANCE, in Law. \; Where a man commits an unlawful act,
by mistake or chance, and not by design, it is an in-
consil of deficiency of will. In this case the will ob-
verses a total neutrality, and does not co-operate with the
act; and it therefore wants one main ingredient of a crime. It
may here be observed, that if any accidental mischief happens to
follow from the performance of a lawful act, the party
stands excused from all guilt: but if a man doing any
thing unlawful, and a consequence ensues which he did not
foresee or intend, as the death of a man or the like, his want
of foresight shall be no excuse; for, being guilty of one
offence, in doing antecedently what is in itself unlawful, he
is criminally guilty of whatever consequence may follow
the first misbehaviour. 1 Hal. P. C. 39. See the next
article.}
\text{CHANCE-Medley, formed of Fr. chance, and milier, misfor-
care, the accidental killing of a man in self-defence. This self-
defence is that by which a man may protect himself from an
affault, or the like, in the course of a sudden brawl or quarrel,
by killing him who affaulfs him.}
\text{This kind of killing (ms. defendore) is that which the law
expresses by the word chance-medley, or (as some write it) chau-
bledy; the former of which, according to its etymology,
signifies a casual affinity, the latter, an affinity in the heat
of blood or passion; both of these being much of the same
import: but the former is in common speech too often erro-
neously applied to any manner of homicide by inadvert-
tence; whereas it appears by the statute 24 Hen. VII.
c. 5. and our ancient books (Staunf. P. C. 16.), that it is
properly applied to such killing as happens in self-defence,
upon a sudden encounter. (3 Iust. 55. 57. Pott. 275, 276.)
This right of natural defence does not imply a right of
attacking; for, instead of attacking another one another for inju-
ries past or impending, men need only have recourse to the
ordinary tribunals of justice. They cannot, therefore, legally
exercise this right of preventive defence, but in sudden or
violent cases; when certain and immediate suffering would
be the consequence of waiting for the assislance of law.
Therefore, to excuse homicide by the plea of self-defence,
it must appear, that the slayer had no other possible (or,
at least, probable) means of escaping from his affiant. It is
frequently difficult to distinguish this species of homicide
(upon chance-medley in self-defence) from that of manslaugh-
ter, in the proper legal sense of the word. (3 Iust. 55.) But
the true criterion between them seems to be this: when both
parties are actually combating at the time when the
mortal stroke is given, the slayer is then guilty of manslaughter;
and if the slayer hath not begun to fight, or (having begun)
does not in good faith, to defend himself against his
offender, he discovers this, homicide excuseable by self-
defence. (Pott. 277.) See Homicide. In chance medley
the offender forfeits his goods, but hath a pardon of court.
See ibid. 6 Edw. I. c. 9.}
\text{CHANCEFORD, in Geography, a township of Amer-
ica, in York county, Pennsylvania.}
\text{CHANCEL, is properly that part of the choir of a
church, between the altar or communion-table, and the ba-
lustrade, or rail that encloses it; where the minister is placed
at the celebration of the communion.}
\text{The word comes from the Latin cancellus, which in the
lower Latin is used in the same sense, from cancelli, latties, or
croft-bars; whereas the chancels were anciently encom-
passed, as they now are with rails.}
\text{The right of a feat and a seipulchre in the chancel, is one of
the privileges of the founders of a church. The repairs
of the chancel belong by usage, in most parishes, to the
rector or vicar, or both.}
\text{CHANCELADE, in Geography, a town of France, is
the department of the Dordogne; one league N.W. of Per-
igueux.}
\text{CHANCELLOR, an officer, supplied originally to
have been a notary, or scribe, under the emperors, and
named cancellarius, because he sat behind a lattice, called
in Latin cancellus, to avoid being crowded by the people.
Naude says, it was the emperor himself who fat and ren-
dered justice within the lattice; the chancellor attending at
the door thereof, whence he took his title.}
\text{Others say, he had it from this, that all letters, addresses,
petitions, &c. to the king, being first examined by him, were
cancelled, where amifs: others, as Sir Edward Coke (4 Iust.
83.) because all patents, confirmations, and warrants, coming
from the king, were examined and cancelled by him, when
granted contrary to law, which is the highest point of
3 M 2}
his jurisdiction. Others, because he cancelled and annulled the sentences of other courts.

Du-Cange, from Joannes de Janus, fetched the original of the word chancellor from Palestina, where the honours were flat, and made in form of a terrace, with parapets or pall-fodors, called cancelli; those who mounted these honours to rehearse any harangue, were called cancellarii; whence the name passed to those who pleaded at the bar, which he calls cancelli forenses, and at length to the judge who presided; and lastly to the king’s secretaries.

The office, and also the name of chancellor (however derived), was undoubtedly known to the courts of the Roman emperors; where it originally seems to have signified a chief scribe or secretary, who was afterwards invested with several judicial powers, and a general superintendency over the rest of the officers of the prince. Under the emperor Carinus, one of his door-keepers, with whom he entrusted the government of the city, was denominated cancellarius and from this humble original, says Mr. Gibbon, (Hist. Rom. Emp. vol. ii. p. 91) the appellation has, by a singular fortune, rifen into the title of the first great office of state in the monarchies of Europe. From the Roman empire it passed to the Roman church ever emulous of imperial state; and hence every bishop has, to this day, his chancellor, the principal judge of his court.

And King Henry the Second, of the house, of the sainted Romans of the first age, did, according to the contemporary historians, of the monarchies of Europe, establish upon the ruins of the empire, almost every state preferred its chancellor, with different jurisdictions and dignities, according to their different constitutions. But in all of them he seems to have had the superintendence of all charters, letters, and other public instruments of the crown, as were authenticated in the most solemn manner; and therefore, when seals came into use, he had always the custody of the king’s great seal.

This officer is now in great authority in all countries: the person who bears it with us, or the

Lord High Chancellor of England, is the first lay person of the realm, next after the king and princes of the blood, in all civil affairs. He is the chief administrator of justice next the sovereign, being the judge of the court of chancery; and to him belongs the appointment of all the justices of peace in the kingdom.

All other justices are tied to the strict rules of the law; but the chancellor has the king’s absolute power to moderate the rigour of the written law, to govern his judgment by the law of nature and common sense, and to order things jejunum aquam & horam. Accordingly, Stamford says, the chancellor has two powers, the one absolute, the other ordinary; meaning, that though by his ordinary power he must observe the same form of procedure as other justices, yet in his absolute power he is not limited by any written law, but by conscience and equity.

Although Polydore Virgil, in his History of England, makes William I. called the Conqueror, the founder of our chancellors; yet Dugdale has shown, that there were many chancellors of England long before that time, who are mentioned in his “Origines Juridicarum,” and catalogues of chancellors; and Sir Edward Coke (4 Inst. 4) says, it is certain, that both the British and Saxon kings had their chancellors, whose great authority under their kings was probably derived from the reasonable customs of neighbouring nations, and the civil law. The offices of lord-chancellor and lord keeper, by the statute 5 Eliz. cap. 18, were invested with the same power; till that time they were different, and frequently JV filled at the same time in different persons; sometimes the lord-chancellor had a vic-chancellor, who was keeper of the seal.

Since that statute, there cannot be a lord-chancellor and a lord-keeper at the same time; but before, there might, and had been. King Henry V. had a great deal of gold, which he delivered to the bishop of Durham, and made him lord-chancellor; and also another of silver, which he committed to the bishop of London to keep. Lord Bridgman was lord keeper, and lord chief justice of the common pleas, at the same time; which offices were held not to be inconsistent. (4 Inst. 78.) By Stat. 1 W. and M. cap. 21, commissiorners appointed to execute the office of lord-chancellor, may exercise all the authority, jurisdiction, and execution of laws which the lord-chancellor, or lord-keeper, of right might do and execute, &c.; since which statute this high office hath been several times in commissiorn. The keeper was created per traditionem magni jussi, but the lord-chancellor by patent, though now that he has the keeper’s office, he is created in like manner by the mere delivery of the king’s great seal into his custody; whereby he becomes, without writ or patent, an officer of the greatest might and power of any now subsisting in the kingdom, and in point of precedence superior to every temporal lord. And the act of taking away this seal by the king, or of its being assigned or given up by the chancellor, determines his office. (1 Sid. 38.) The chancellor is a privy-counsellor by his office, and according to lord-chancellor Ellesmere, procures the great lordship of lords by praemunire. See Parliament.

Though he be sole judge of the court of chancery, yet in matters of much difficulty, he sometimes consults the other judges, though they have no share whatever of the judicial authority; so that this office may be discharged by one who is no professed lawyer, as anciently it commonly was by an ecclesiastic, who professed over the royal chapel, and became keeper of the king’s confiquence; visitor, in the king’s right, of all hospitals and colleges of royal foundation; patron of all the king’s livings, under the value of 20 marks per annum, in the king’s books, (38 Ed. III. 3. F. N. B. 35) though Hobart (214) extends this value to 20 pounds; guardian of all infants, idiots, and lunatics; and general superintendent of all charitable institutions; and all this, over and above the vall and extensive jurisdiction which he exercises in his judicial capacity in the court of chancery, wherein, as in the exchequer, there are two distinct tribunals; the one ordinary, being a court of common law; the other extraordinary, being a court of equity. See Court of Chancery.

The lord chancellor, as there is now no lord high steward, is accounted the first officer of the kingdom; and he not only keeps the great seal, but all patents, commissions, warrants, &c. from the king, are perused and examined by him, before they are signed; and he annuls the king’s letters patent when contrary to law. See this article Seals. By his oath he sweareth well and truly to serve the king, and to do right to all manner of people, &c. The Stat. 25 Ed. III. c. 2 declares it to be treason to slay the chancellor (and certain other judges), being in their places doing their offices; and it seems, that the lord-keeper and commissiorners of the great seal are within this statute, by virtue of Stat. 5 Eliz. c. 18. and 1 W. and M. c. 21. See Treason.

The lord-chancellor, in his judicial capacity, has twelve assistants or coadjuitors, anciently called clerks, as then being in holy orders, now Masters in Chancery, and the Master of the Rolls. See Master of the Rolls, Masters in Chancery, &c.

Defends these superior officers, he has other assistants. The six clerks in chancery transact and file all proceedings by bill and answer; and also refuse some patents that pass the great seal; which business is done by their under clerks, each
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each of whom has a seat there; of whom every one of the six clerks has a certain number in his office, usually about ten; the whole body being called the sixty clerks.

The curators of the court, 24 in number, make out all original writs in chancery, which are returnable in C. B., &c., and among thee the business of the several counties is severally distributed. The regifter is an office of great importance in this court, under whom are several deputies, who take cognizance of all orders and decrees, and enter and draw them up, &c. The master of the full-pen office signs all writs of fullpena. The examiners are officers who take the depositions of witnesses and examine them, and make out copies of the depositions. The clerk of the affidavits files all affidavits used in court, without which they will not be admitted. The clerk of the rolls sits constantly in the Rolls, to make searches for deeds, offices, &c., and to make out copies of the depositions. The clerks of the petty bag office, three in number, have a great variety of business belonging to their respective departments, in making out writs of summons to parliament, siege d'ecleris for bishops, patents for collets, liberates upon extent of statute-duple, and recovery of recognizances forfeited, &c.; and also relating to suits for and against privileged persons, &c. These clerks have several subordinate clerks. The officer of the chancery had formerly the receiving and custody of all money entered to be deposited in court, and paid it back again by order; but this business was afterwards assumed by the bailiffs in chancery, till by Stat. 18 Geo. I. c. 32. a new officer was appointed, called the accountant general, &c. There is also a serjeant at arms, to whom pernies standing in contempt are brought up by his subordinates as prisoners. A quareld of the fleet receives such prisoners as are committed by the court, &c. Besides these officers there are several others; such as a clerk of the crown in chancery; clerk and controller of the hanaper; clerk for inrolling letters patent, &c., not employed in proceedings of equity, but concerned in making out commissions, patents, powers, &c., under the great seal, and collecting the fees thereof; a clerk of the faculties, for dispensations, licences, &c.; clerk of the presentations for benefices of the crown in the chancellor's gift; clerk of appeals, in appeals from the courts of the archbishop to the court of chancery; and various other officers, who are constituted by the chancellor's commission.

Chancellor of a cathedral. His office is thus described in the Monasticon; viz. to hear the lefions and lectures read in the church, either by himself, or his vicar; to correct and set right the reader when he read amiss; to inspect schools, to hear causes, apply the seal, write and dispatch the letters of the chapter, keep the books, take care there be frequent preachings, both in the church, and out of it, and align the office of preaching to whom he lists.

Chancellor of a diocese, or of a bishop, is a person appointed to hold the bishop's courts, held in the respective cathedral of each diocese, and to affit the bishop in matters of ecclesiastical law. This officer, as well as all other ecclesiastical ones, if lay or married, must be a doctor of the civil law so created in some university. Stat. 37 Hen. VIII. c. 17. He was anciently called ecclesiasticus, and ecclesiasticus aulicis, the church-lawyer. See Bishop's Court.

Chancellor of the duchy of Lancaster, is an officer before whom, or his deputy, the court of the duchy chamber of Lancaster is held. It is his business to judge and determine all controversies between the king and his tenants of the duchy-land; and otherwise to direct all the king's affairs relating to that court. See Duchy Court.

Chancellor of the exchequer, is an officer, supposed by some to have been created for moderating extremities in the exchequer. He sometimes sits in that court and the exchequer-chamber, and, with the rest of the court, orders things to the king's betterment. He is always in communion with the lord-treasurer for letting lands accruing to the crown by dissolution of abbeys, and otherwise, has power (by Stat. 33 Hen. VIII. c. 39), with others, to compound for forfeitures on penal statutes, bonds, and recognizances entered into to the king. He has a great authority in managing the royal revenue, &c. and this seems of late to be his chief business; accordingly he is commonly the first lord commissioner of the treasury. The court of equity in the exchequer-chamber, which was intended to be held before the lord-treasurer, chancellor, and barons, is usually held before the barons only. When there is a lord-treasurer, the chancellor of the exchequer is under-treasurer. See Court of Exchequer.

Chancellor of the order of the garter, and other military orders, is an officer who sees the commissions and mandates of the chapter, and assembly of the knights, keeps the register of their deliberations, and delivers acts thereof under the seal of the order. This office is annexed to the see of Salisbury. See Garter.

Chancellor of an university, is he who sees the diplomas or letters of degrees, provision, &c., given in the university. See St. 15 Hen. VIII. c. 26.

The chancellor of Oxford is their chief magistrate, elected by the students themselves; his office is during vita, to govern the university, preserve and defend its rights and privileges, convolve assemblies, and do justice among the members under his jurisdiction.

Under the chancellor is the vice-chancellor, who is chosen annually, being nominated by the chancellor, and elected by the university in convocation. His business is to supply the chancellor's absence.

At his entrance upon his office, he chooses four pro vice-chancellors out of the heads of colleges, to one of whom he deputes his power in his absence. See Oxford.

The chancellor of Cambridge is, in most respects, the same with that of Oxford; only he does not hold his office during vita, but may be elected every two years.

He has under him a commissary, who holds a court of record of civil causes, for all persons of the university under the degree of master of arts.

The vice-chancellor of Cambridge is chosen annually by the Senate, out of two persons nominated by the heads of the several colleges and halls. See Cambridge. See also University Courts.

CHANCERY. See Court of Chancery.

CHANCHA, in Geography, a town of Egypt; 2 leagues E. of Cairo, at the entrance of a defile which leads to Mount Sinai.

CHANCHE, in Surgery, is a term originally derived from the Greek word κανέτα, Cancer, Cancer, or (agreeably to the French orthography) Chancre. This word, among the Romans, signified an eroding ulcer of any kind, ulcus cancreum seu fungus, for example, as may be often seen in the inside of the cheeks or lips, where the cuticle is extremely thin, as it is upon the gums and lips, and inferior part of the prepuce. "Si quando autem ulceris ursis cancer invadit, primo considerandum est, num malus corporis habitus fit, circu occurringum;" Celsus, de Med. lib. vi. cap. 15. The translators of Celsus, in this passage, and in lib. vi. cap. 26. § 31. 35. have not improperly rendered the term cancer by the word gangrene; and so, conversely, the Greek term γαγγραγία has been translated cancer in the Latin vulgate bible, and cancer in the authorized English version, 2 Tim.
Tim it. 17— because a gangrene is of an eroding off
scabbed nature. In this sense, the word may be used
metaphorically:

"Yet writers say, as in the sweetest bud
The eating canker dwells; so eating love
Inhabits the finest wits of all." Shakespeare.

French writers do not confine the term chancre, as most
of the modern English authors have done, to forest arising
from a venereal cause; although they, too, are getting more
into that habit: but the French use this word to denote
the little eating ulcer of the mouth, before noticed; and
they even apply the same term to vegetables, e. g. "Cet
abre la une chancre."

The older medical authors, especially those of the middle
age, employed the words caerola and carolus, likewise, to
signify that kind of eroding malignant fore which arises from
impure sexual intercourse; and it is this local disorder, al-
most exclusively, to which modern surgeons are accustomed
to apply the epithet chancre. Indeed, we seldom hear the
word without, &c., and in this connexion the idea of its originating in a
venereal cause; and from this association, we are very apt
to forget the true etymology of the term, and that it was in
use even before the existence of lues venerea.

The old Italian words carolo, a canker-worm, and caro-
lofo, worm-eaten, were, perhaps, derived from caries, which
signifies rottenness.

Hence, the Italians write, in their an-
p. 38. Hence again, Fracallorius and others say, "caries
pens," where we should say, "chancre pens."

Marcellus Cumanus, who wrote in the year 1195, during
the invasion of Italy by Charles VIII. tells us, he cured
many persons afflicted with venereal chancre: "Vidi quen-
dam paucitatem carolis in virgo, in parte praeputii interna;" and
in another place, he says, "Ego infinutos carolos caufatos ex puflulis vircis, & ex nana ratigationes & labore
curavi." That he means the same disease in both cafes is
evident, from the following observations: "Ut refolubitur bubo in principi et augmenti amaritatem, vel a
carie evanuit, &c."

And again, "Aliquando incipiebat purulenta una in modum veseulcis parese line dolore, &c; cum
pruritus, fricabant, et inde ulcerabatur tambanque forma
coarida; et poel aliiqunt dies incurrarent in angulatis
propriet doloribus in brachis, eruibus, pedibus, cum puflulis
magnum." This is the very first description on record of
what we now denominate venereal chancre: (See Luvs Veneria and Syphilis.) The next authors who
noticed this symptom of lues, were Torella, Alimenus, and
John De Vigo.

The most common characters of a chancre, in its incipi-
ent state, are a red, painful, and itching pimple, containing
a small quantity of subfuscent serum, which readily
burts into a little ulcer, having hard, thickeared, and slightly
elevated edgs. But this very kind of sore may arise in
other parts of the body, thinly covered with cuticle; and
it appears to be, in a great measure, owing to the structure
of the affected part, what characters the ulcer shall assume,
rather than to the peculiar nature of the efficient cause.
We do not, at present, enter into the subject of the cure of the
chance. Where this belongs to the article Syphilis or Luvs
Veneria: but we may here observe, that medical men
have variously figured this subject in their writings, and
too generally have imposed all chances to be venereal;
from which erroneous aet, they have further concluded,
that all chances require recourse for their cure! See Mr.
Blair's "Essays on the Venereal Disease," Part II, sub
numm; where this question is considered, in reference to the
medical use of nitric acid. Mr. Abernethy has also, of
late, thrown out some useful hints on the same subject, in

CHANDA, in Geography, a considerable city of Hind-
dorin, in the country of Berar, belonging to Nagpur,
and about 50 geographical miles to the south of it. N. lat.
19° 48'. E. long. 80° 2'.

CHANDACE, in Ancient Geography, a fortified town
of the island of Crete.

CHANDAIL, a circur or district of Hindooistan in
the territory of Allahabad, S.W. of the country of
Benares.

CHANDANA, in Ancient Geography, an ancient town
placed by Steph. Byz. in Japania.

CHANDANACI, a town of Asia, in Persia. Steph.
Byz.

CHANDELEUR islands, a cluster of islands in the
gulf of Mexico, near the coast of West Florida. N. lat.
29° 30'. to 29° 41'. W. long. 88° 45'. to 88° 58'.

CHANDELIER signifies a candlestick, lamp, &c., which
is illuminated. Chandelleurs fore: an important addition
to a collection of works in pyrotechny, and are much admired
by the Italians. They have the advantages of being easily
made; and in a grand exhibition illuminated pieces of this
kind should be fired after every two or three wheels, or
fixed pieces of common and brilliant fires. For the confection
of an illuminated chandelier, let it be made of thin wood,
confiding of a stem and arched branches, and surmounted
with a crown. In the front of the branches, in the body,
and in the crown at the top, bore as many holes for illumina-
tions as they will contain, at the distance of three inches
from one another: and in these holes illuminations formed
with white, blue, or brilliant charges. Having fixed the
port fires, clothe them with gheers, so that the chandeler
and crown may be illuminated together. See Pyro-
techny.

Chandelleurs, or Chandeleers, in Fortification, are
upright flakes railed on one or more pieces of wood to
support planks, bushes, fascines, and, in general, all that
can help to cover the besiegers, and prevent the enemy from
seeing what is doing behind them. When the besiegers are
under the necessity of opening any trenches that are en-
filaded, they must take such precautions and raise a parapet
every now and then to cover part of such a trench.
Chandelleurs sometimes serve as a moveable parapet.

CHANDEGHERE. See Kandegheri.

CHANDEREE, in Geography, a very ancient city of
Hindooistan, capital of a circur or district in the province
of Malwa, near the river Bcewah. It once contained,
according to the Ayin Abarace, 14,000 stone houses; and, al-
though, like most of the ancient cities of Hindooistan, it
is fallen into decay, it is still the residence of a principal raja:
244 miles N.E. of Ougtin, and 302 N.W. from Nagpore.
N. lat. 24° 38'. E. long. 78° 45'.

CHANDERNAGORE, a town of Hindooistan, in the
country of Bengal, formerly a French settlement, but now
possessed by the English, situated on the western bank of the
Ganges, about an hour's walk below Chinspur, and
s når more than 10 miles from Calcutta. It is built,
about a mile in length, along the Ganges, in a drayght line,
with two parallel and several crofs streets behind it, which
have some good buildings. The ruins of the fort, demoli-
hed by the English, are at the north end of the place, and
sailantly flew its former strength. The French governor
built a handsome house, and laid out an elegant garden
about four miles below the town, affording a charming
prospect along the Ganges. This place was taken by the
English,
English, under the conduct of colonel Clive and admirals Watson, in March 1757; returned to the French at the peace of 1763; taken again during the American war, and restored in 1783; and once taken in 1793, and retained. N. lat. 23° 51' 26". E. long. 89° 29' 15".

CHANDIEU, a town of France, in the department of the Rhône and Loire; 1 league N. of Montbrillon.

CHANDIGA, a river of Siberia, which runs into the Adlan. N. lat. 62° 10'. E. long. 135° 14'.


CHANDLER, Samuel, in Biography, an eminently learned and confirmed divine, was born in 1693 at Hungerford, in Berkshire, where his father was pastor of a congregation of protestant dissenters. His academical education was commenced under Mr. Moore of Bridgewater, and completed under the learned Mr. Samuel Jones of Twicklbury, where his fellow students were Butler and Secker, afterwards distinguished prelates in the church of England. Having acquired in this excellent seminary a very considerable share of critical, biblical, and oriental learning, he first began to preach in 1714; and in 1716 he settled with a dissenting congregation at Pekham, near London. But being married, and having an increasing family, and losing his whole fortune in the South Sea Scheme in 1720, the income derived from his office was inadequate to his support; so that he was under the necessity of opening a bookbinder's shop in the Poultry, which he kept two or three years, whilst he continued to discharge his duty as a minister. At this time he was appointed to preach weekly evening-lectures at the meeting-house in the Old Jewry, where he delivered a course of sermons on the miracles of Christ and the truth of the Christian religion. These sermons, which were published in 1725, in the form of a treatise, in 8vo, and entitled “A Vindication of the Christian Religion, in Two Parts,” the first containing a discourse on miracles and the second an answer to Collin's "Grounds and Reasons of the Christian Religion," were very favourably received by the public, and occasioned his being chosen, about the year 176, minister of the congregation in the Old Jewry, to which he officiated with a high degree of reputation, first as assistant and afterwards as pastor, for 40 years. As a preacher, he was eminently instructive and animated; and he was solicitous in the exercise of his pastoral office. In 1727, he published "Reflections on the Conduct of the modern Deists, in their late Writings against Christianity," with a preface in favour of the rights of private judgment, in answer to some remarks of Dr. Rogers; and, in the following year, he published "A Vindication of the Antiquity and Authority of Daniel's Prophecies, and their Application to Jesus Christ." Whilist he thus ably and strenuously defended the truth of revealed religion, he displayed his abhorrence of the perpetuating spirit which has been too often manifested by its erroneous advocates, in a translation of "The History of the Inquisition, by Philip à Litt. born," in 2 vols. 4to. 1733; and to this translation he prefixed "A Large Introduction, concerning the Rise and Progress of Persecution," which involved him in a controversy with Dr. Berriman, and occasioned the publication of two or three pamphlets on each side. In the prosecution of the subject of religious liberty, he published, in 1732, a letter to Dr. Gibson, bishop of London, concerning the repeal of the test act, entitled "The Dispute better adjusted about the proper Time of applying for a Repeal of the Corporation and Test Acts, by shewing that some Time is proper." Having formed a design of writing a commentary on the Hebrew prophets, he began by publishing, in 1735, "A Paraphrase and critical Commentary on Joel," 4to.; but whilst he was proceeding with the book of Isaiah, he was convinced, by the M.S. lexicon and lectures of Schultens, which fell into his hands, that he did not possess a sufficient acquaintance with the Oriental tongues for the execution of his plan; and he, therefore, abandoned his design. In 1736 he republished his introduction to the history of the Inquisition, in an enlarged form, under the title of "The History of Persecution, in 4 parts: 1. Amongst the Heathens; 2. Under the Christian Emperors; 3. Under the Papacy and Inquisition; 4. Amongst Protestants;" with a Preface, containing Remarks on Dr. Rogers's Vindication of the civil Establishment of Religion," 8vo. In the course of this publication he endeavoured to prove, that the things for which Christians have persecuted one another generally been of small importance; that pride, ambition, and covetousness, have been the grand forces of persecution; that the decrees of councils and synods are of no authority in matters of faith; that the imposition of subductions to human creeds is unreasonable and pernicious; and that the Christian religion absolutely condemns persecution for conscience sake. In 1734, he renewed his controversial warfare with deflin, by a "Vindication of the History of the Old Testament," which was followed, in 1742, by his "Defence of the Prime Ministry and Character of Joseph," both written in answer to Dr. Thomas Morgan, whom, according to Dr. Land, he clearly convicted of falsehood and misrepresentation. In 1744, he published "The Witnesses of the Resurrection of Jesus Christ re-examined, and their Testimony proved entirely convincing;" which, in the judgment of Dr. Leland, was "a valuable treatise," containing, particularly in the last chapter, a very clear and judicious summary of the evidence for the resurrection of Jesus. His next publication, in 1748, was "The Case of Subscription to explanatory Articles of Faith, as a Qualification for Admission into the Christian Ministry, calmly and impartially reviewed; in answer to, 1. A late Pamphlet, entitled, the Church of England vindicated in requiring Subscription from the Clergy to the 39 Articles; 2. The Rev. Mr. John White's Appendix to his third Letter to a dissenting Gentleman; to which is added, the Speech of the Rev. John Alphonso Turretine, previous to the Abolition of all Subscription, at Geneva, translated from a MS. in the French," 8vo. About this time he accompanied his friend, the earl of Fincastle, into Scotland, and accepted, what he had before declined, the honour of a doctor's degree in divinity, which was conferred upon him without solicitation, and with every token of respect, by the two universities of Edinburgh and Glasgow. He had likewise the honour of being afterwards elected a fellow of the Royal Society and of the Society of Antiquaries. Upon the death of king George II in 1760, Dr. Chandler published a funeral sermon, containing an eulogy of that prince, and comparing him to king David. This occasioned a pamphlet, entitled "The History of the Man after God's own Heart," in which the author eulogized the character of David, and censured the parallel which the preacher had delineated between him and the British monarch, as an insult to the latter. This wanton and illiberal attack was repelled, on the part of Dr. Chandler, by a publication, entitled "A Review of the History of the Man after God's own Heart, in which the Falsehoods and Misrepresentations of the Historian are exposed and corrected," Without attempting to vindicate the Jewish prince from all the accusations of his adversary, the author, by means of his skill in the Hebrew language, and his extensive acquaintance with biblical learning, detected and exposed the misrepresentations of his pious antagonist, who had chiefly availed himself
himself of Bayle's article of "David" in his dictionary, by thieving that he had paid no regard to scripture criticisms, to the various readings of particular passages, and the opinions of expositors and commentators. This gave occasion to a very learned and elaborate publication, in 2 vols. 8vo. entitled "A Critical History of the Life of David; in which the principal Events are ranged in order of time, the chief Objections of Mr. Bayle and others against the Character of this Prince, and the Scripture Account of him, and the Occurrences of His Reign are examined and refuted; and the Psalms which refer to him explained." This work, trivial as was the occasion which gave rise to it, did great honour to the judgment and sagacity, as well as the erudition, of Dr. Chandler; and contained explications of several psalms, and commentaries upon them, particularly that on the 86th psalm, which have been much admired. This was the last of Dr. Chandler's productions; and the greatest part of it was printed off at the time of his death, which happened on the 8th of May 1766, in his 73d year. In early life he had been subject to frequent and dangerous fevers, which induced him to restrict himself for 12 years to a vegetable diet; and this had so good an effect on his constitution, that although he afterwards returned to the natural mode of living, he enjoyed an unbroken share of spirits and vigour till the age of 70 years. During the last year of his life he was afflicted with frequent returns of a very painful disorder, which he endured with a great degree of Christian fortitude and resignation. Under repeated paroxysms of his complaint he often declared, "that to secure the divine felicity promised by Christ was the principal, and almost the only thing that made life defirable: that to attain this he would gladly die, submitting himself entirely to God, as to the time and manner of his death, whose will was most righteous and good; and being persuaded that all was well which ended well for eternity." He had several children, two sons and a daughter who died before him, and three daughters who survived him; one of whom was married to the Rev. Dr. Harwood. The eminent abilities and extensive learning of Dr. Chandler commanded respect and esteem not only from the dissenters, with whom he was immediately connected, and among whom he had a very considerable degree of influence, but from several dignitaries and other persons of rank belonging to the established church. He is said to have had liberal offers of preferment in the church; nor is this at all unlikely, considering his early acquaintance with the prelates Butler and Secker, and his connection with several persons of high rank in the state; but he declined every proposal of this kind, because he did not choose to conform: preferring a steady adherence to the dictates of conscience to any secular advantage which he might thus have obtained. Amongst the dissenters his talents and character gave him that influence, which must have been gratifying to his mind; and he exerted himself on a variety of occasions, by his acquaintance with persons in power, and by the respect with which he was held among persons of his own profession, in affecting individuals, and in promoting the general interest of his brethren. Accordingly he was principally instrumental in establishing the fund for the relief of the widows and orphans of poor dissenting ministers, which has been eminently useful, and has been long honoured with distinguished liberality. Besides the works which we have already noticed, Dr. Chandler printed a number of short sermons and pamphlets, on occasional subjects. After his death, 4 volumes of his sermons were published by Dr. Amory, in 1768, according to the directions of his will; and, in 1773, Mr. White, his immediate successor as pastor of the congregation in the Old Jewry, published in 4to. "A Paraphrase and Notes on the Epistles of St. Paul to the Galatians and Ephesians, with devotional and practical Observations; together with a critical and practical Commentary on the two Epistles of St. Paul to the Thessalonians." He also left an interlaced body, containing a large number of critical notes, which formed a publication; but by some accident or other, though they were intended for the press by gentlemen who purchased them, the design was never executed.

Mrs. Mary Chandler, the sister of Dr. Chandler, was celebrated for her literary acquirements and poetical productions. As she was somewhat deformed in her person, in consequence of an accident in her childhood, she used to say, "that as her person would not recommend her, she must endeavour to cultivate her mind, in order to render herself agreeable." She was born at Malmesbury in Wiltshire, in 1677; and, after an excellent education, settled in bufinefs at Bath, where he was highly esteemed by all who knew her, among whom were several persons of rank and eminence in the literary world. She published several poems; but that which she wrote on Bath was the most popular, and passed through several editions. Having long flirted with the beauties of a vulgusmary constitution, she died in 1743. Dr. Chandler drew up an account of her, which is inserted in "The Lives of the Poets," published under the name of Theophilus Cibber. Our author had also a brother, Mr. John Chandler, who was for many years eminent in his profession as an apothecary in the city of London, and much respected among his acquaintance. He published a pamphlet on colds and catarrhs, which was well received. Amory's Preface to Dr. Chandler's Sermons, Biog. Brit.

CHANDOR, in Geography, a town of Hindoosfan, in the country of Baglana; 52 miles N.E. of Nassiuk, and 80 N.W. of Aurungabad.

CHANDOL, a town of Persia, in the province of Ardirbeitzan; 130 miles N.E. of Tauns.

CHANE, in Ichthyology, a name given by Aristotle, Athenaeus, and the other Greek writers, to the fish called by other authors haiaula, chaunc, and chaumas. This fish appears to be the labrus herpes of modern writers, a species common in the Mediterranean, and which has the lower jaw long, and the sides transversely marked with black. See Labrus Hepatus.

CHANFRO, in the Manges, is the fore part of a horse's head, extending from under the ears, along the interval between the eye-brows, down to the nose.

CHANG, in Geography, a town of China, of the second rank, in the province of Chen-zi; 495 miles S.W. of Peking. N. lat. 31° 50'. E. long. 109° 31'.

CHANGA, or XANGA, a small island, in the Indian Sea, near the coast of Africa, at the mouth of the river of the same name. S. lat. 10° 45'. E. long. 29° 50'.

CHANGAMALI, a fortified place of Hindoosfan, in the country of Myloer, situated in the valley of Vaniun Laddy or Birna-maul, directly distant from Trinomaly about 123 miles.

CHANGAPRANG, a town of Aisa, in the country of Thitib, 242 miles W. of Laffa, and 195 N.N.E. of Catmand. N. lat. 8° 6'. E. long. 86° 22'.

CHANGASARI, a town of Ruffa, in the government of Vborg; 80 miles W.N.W. of Vborg.

CHANGAY, a moutain of Aisa; being a branch of the Aisan chain. See Alai.

CHANG-CHA, a city of China, of the first rank, in the southern part of the province of Ho-qiang.

CHANG-CHE, a city of China, of the second rank, in the
the province of Quang-fu; 403 leagues S.S.W. of Peking.
N. lat. 23° 6'. E. long. 106° 17'.

CHANG-CHEW, a city of China, of the third rank,
in the southern part of the province of Pei-kuen; situated on
a river which ebbs and flows; over which is a flatly bridge,
confining of 30 very high arches, broad enough to admit
ships on both sides, which are adorned with all sorts of rich
merchandise, both of China and the Indies. Its vicinity to
Ambon (which see), a place of vall commerce, occasions a con-
stant traffic to be continually carried on between them. The
neighbouring mountains yield the finest crystal, of which they
make bottling, fials, bottles of animals, &c. Also, a district
of the province of Kiang-nan or Nanking.

CHANG-CHOU, a town of China, of the third rank,
in the province of Honan; 15 leagues S.E. of Hsii.

CHANG, in Commerce. See Exchange.

CHANG, in Geography, a town of France, in the depart-
ment of the Mayenne; one league N. of Laval.—Also, a
town of France, in the department of the Sarthe; one league
S. of Le Mans.

CHANG, in the Hsomeone. To change a horse, or change
hand, is to turn or bent the horse's head from one hand to
the other, from the right to the left, or from the left to
the right. You should never change your horse without putting
him forward upon the turn; and after the turn, pull him on
straight, in order to a fleet.

Change of crops, in Agriculture, is that part of husbandry
which relates to the mode of changing, distributing, and
cultivating different sorts of crops, on any kind of soil, in
order to prevent its being exhausted in the least possible
degree. This is an improvement of considerable importance;
and which modern cultivators have attended to in a par-
ticular manner. It has been observed that experience
from taught men, that even the most fruitful soil cannot con-
stantly yield the same grain; and that of course laid them
under a necessity of seeking some means to remedy the
defect. They found that the plough was then the most
ready, and perhaps the most effectual: and hence all the
ancient writers so highly recommend a thorough ploughing.
At the same time the apparent loss of the produce of the
ground, during the year of fallow, put them upon inquiring
how this inconvenience might be prevented, conveniently with
keeping the land in good heart. Repeated observations con-
vinced the Romans, the most attentive of all nations to every
thing relative to husbandry, that, besides the alternate resting
of the land, what might, as is observed by Piny, be found
after lupins, vetches, beans, or any other plant which has
the quality of fertilizing and enriching the soil.

A judicious change of crops must therefore, without doubt,
be of great importance in the common tillage husbandry, as
it enables the farmer to save the expense and loss of a crop in
the fallow year; and to get quit of weeds, by attacking them
at different seasons of the year, and in different periods of their
growth; both from the nature of the crops cultivated, and
where the intermediate crops are hoed, as those of beans,
pulse, and many other similar seeds. It has been well re-
marked by cultivators, that in the change of crops that are
cultivated for the purpose of preventing the exhaustion of
land, by the repeated sowing of the same kind of grain,
attention should always be had, both to the nature of the
fallow, and the intentions of the farmer; as it is only in this
way that the most advantageous changes can be adopted and
introduced in the different situations and conditions of land.

But this method of operating, though a practice of infinite
consequence in agriculture, and which was much examined
and attended to at an early period of the art, seems to have
been much overlooked and neglected, until lately, when the
culture of turnips probably furnished the useful hint, and led
the farmer to perceive that his land, instead of being im-
poverished by that valuable root, was greatly enriched, and
prepared to yield a better crop of barley in the spring, than
would otherwise have been the case. This might, likewise
fugget to him, that other succulent plants, which frate and
cover the earth much with their leaves, might have the same
effect; and the fucellas which has followed has answered his
utmost expectation, as it is now found that a fallow does not
become necessary in several years; the ground being kept
clean from weeds and in heart by a variety of green and other
crops, when rightly timed and properly managed in respect
to their introduction and culture afterwards.

It has been discovered by modern cultivators that some
sorts of crops, such as peas, beans, clover, and all plants of
the pulse kind, are enrichers and cleaners of the earth; while
wheat, oats, barley, and the whole tribe of vegetables, whose
roots are fibrous and spread far, impoverish and rob the
ground. The latter also let it become foul, by giving way
to weeds and grass, which, being the natural products of
every soil, are more readily nourished by it than such plants
as it does not spontaneously produce. It is therefore evident,
that by judiciously interposing such green or other enriching
crops as are adapted to the soil between the grain-crops, the
farmer may not only, in a great measure, avoid the necessity
and expense of fallowing, but frequently be enabled to reap
better crops. Besides, under this system of management, he
may be enabled to keep a much larger flock of cattle, and
consequently produce a much larger quantity of manure, the
advantages of which are very great. See Green Crops and
Course of Crops.

Change of feed, denotes the practice of sowing feed taken
from a different soil, in order to prevent the land from becom-
ing tired with the same kind of grain.

This is a custom pretty common among farmers, though
experience has not yet shown how far it is well founded.
Great importance has been attached to this practice by some
cultivators, probably from adopting imperfect notions of the
nature of vegetation itself, or from pursuing false analogies
in respect to the breeding of animals; but it is evident, a
cultivator of much experience observes, from the trials that
have been made in the cultivation of grain, and from what
happens in particular cases of gardening, that it will be of
no utility to have recourse to the change of feed, provided
it is properly adapted to the soil, except it be for an impro-
ved kind. The only thing necessary, is that of collecting
and preferring the best of the different kinds, and by that means
preventing a degeneracy. "It is hardly, he observes, to be sup-
posed that the soil can become tired of, or be improper for,
producing a sort of grain for which it is adapted, since it
may be observed that the same sorts of plants are frequently
propagated on the same spots of ground, for a vast length of
time, without any manifest injury in respect to their qual-
ity."

A great objection to the practice is also found by some
on the ground of the expense.

It is observed by Mr. Middleton, in the Agricultural
Report of Middlesex, that the changing of the feed of a
flock every two or three years, though extremely general, is done
at an extreme expense of from 5s. to 1s. a bushel on wheat,
and half these sums on other kinds of grain. This practice
it, he thinks, as little founded on propriety, as a change of
flock once in every two years would be, and never will be
the means of advancing even to a high pitch of excellence.
On the contrary, when corn farmers become wise enough to
apply Blackwell's method of improving cattle to the raising
of feed grain, the advance will be rapid indeed, and its in-
crease
I. J. A.

The method he wishes to recommend to those cultivators who desire to excel in the article of grain, is, he says, the following: namely, a few days before harvest, to walk through their fields of corn, to select and gather the prime samples of every species of feed, and ever afterwards to continue the same practice, by repeating the operation of collecting the most perfect grain from the crops produced from such selected feed. The same observations, he affirms, apply to every variety of cultivated crops.

However this may be, we are inclined to believe, from offering what takes place in respect to the curl, a disease in potatoe crops, that a change of feed may sometimes be useful, though, perhaps, much less frequently than is the practice of farmers in general.

But it is added by the first of these writers, on the authority of Mr. Downland, that "as some of the varieties of the same sort of grain or feed, when grown under similar circumstances of soil and climate, are, however, often found by the cultivators to bear only in such manner early growth than others, as well as of a more or less hardy and vigorous nature; it may be of utility to change them in these respects, the early kinds being always cultivated on the colder and more backward descriptions of land, while those of the later are sown upon the dry and more warm soils. In this way the crops may often be considerably improved, as, in so far as regards themselves, they will enjoy the advantages of more genial soils and climates. Another advantage may be gained in this method, as by employing such early kinds of feed, the farmer may, in some cases, delay the putting in of his seed for several days, without the danger of the crop being injured thereby, or of its not being reaped at the usual time. He may likewise, in the late soils, thus obviate the difficulties and inconveniences attending bad seed times, as by such a change the feed, though put in later, may be equally early at the harvest." And it has also, he says, been remarked, that "there is an advantage resulting from changing feed from soils of opposite natures, which cannot be depended upon when the change is made from similar soils, which variety is дальнest continued through many generations, even when the plants are removed to other soils and climates, it must be advantageous for the agriculturist to inspect other crops as well as his own; and thus, wherever he can find a new vegetation, to collect feeds from it; which, he thinks, more certain to improve his crops than an indiscriminate change of feed. And that where feed-corn is purchased without a previous observation of its superior excellence, perhaps it would be more advantageous to take it from better kinds of soil, and from somewhat better climates; as the good habits acquired by such feeds may be continued long after their removal to inferior situations. But on the contrary, care should be taken not to collect a change of worse feeds from worse climates or inferior soils, unless the agriculturist is previously certain that they are of a superior kind or quality." See Seed and Sowing.

CHANGEABLE. See HIBISCUS.

CHANGER, or CHANGER, an officer belonging to the king's service who changes money for gold or silver bullion. See Banker.

CHANGER, M.N.E.R., is a banker who deals in the exchange, receipt, and payment of monies.

CHANGES, in Arithmetic, &c. the permutations, variations, or alternations of any number of quantities; with regard to their position, order, &c.

To find all the possible changes of any number of quantities, or how oft their order may be varied.

Suppose two quantities $a$ and $b$. Since they may be either wrote $ab$ or $ba$, it is evident, their changes are $2 \times 1$.

Suppose three quantities $a$, $b$, $c$: their changes $c a b$ will be as in the margin; as is evident by combining $a c b$ first with $a b$, then with $b a$; and hence the number $a b c$ of changes is $3 \times 2 \times 1 = 6$. If the quantities be $4$, each may be combined four ways with $c b a$ each order of the other three; whence the number $b c a$ of changes is $4 \times 4 \times 4 = 12 = 23 = 24$. Wherefore, if the number of quantities be supposed $n$, the number of changes will be $n \times n - 1 \times n - 2 \times n - 3 \times n = n(n - 1)(n - 2)(n - 3)$.

If the same quantity occur twice, the changes will be found $b d$ of three $a b a$, $a b b$, $b b a$; of four $c a b$, $c b a$, $b a c$, $b c a$. And thus the number of changes in the first case will be $1 = (2 \times 1) + 2 \times 1$; in the second, $3 = (3 \times 2 \times 1) + 2 \times 1$; in the third, $12 = (4 \times 3 \times 2 \times 1) + 2 \times 1$.

If a fifth letter be added, in case of four quantities, it will beget five changes, whence the number of all the changes will be $60 = (5 \times 4 \times 3 \times 2 \times 1) + 2 \times 1$. Hence
if the number of quantities be \( n \), the number of changes will be \((n \times n - 1 \times n - 2 \times n - 3 \times n - 4, \ldots) = \frac{n(n+1)}{2} \times 1 \times n\).

From these formulae may be collected a general one, viz. if \( n \) be the number of quantities, and \( m \) the number which flows from the same quantity occurs, we shall have \((n \times n - 1 \times n - 2 \times n - 3 \times n - 4 \times n - 5 \times n - 6 \times n - 7, \ldots) = \frac{n(n+1)}{2} \times 1 \times 2 \times 3 \times \ldots \times 2 \times 1 \times n - m \times n - m - 2 \times m - 3, \ldots)\).

If the number that flows from any of them is repeated, we obtain an universal form \((n \times n - 1 \times n - 2 \times n - 3 \times n - 4 \times n - 5 \times n - 6 \times n - 7, \ldots) = \frac{n(n+1)}{2} \times 1 \times 2 \times 3 \times \ldots \times 2 \times 1 \times n - m \times n - m - 2 \times m - 3, \ldots)\).

Suppose, for instance, \( n = 6, \) \( r = 3. \) The number of changes will be \((6 \times 5 \times 4 \times 3 \times 2 \times 1) = 3 \times 3 \times 2 \times 3 \times 2 \times 1 = 62,702,800.

Hence, if it be proposed to assign how many different ways 6 persons might be placed at table, the answer would be \( 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 720. \) For 13 persons we shall find the number \(13 \times 12 \times 11 \times 10 \times 9 \times 8 \times 17 \times 3 \times 2 \times 1 = 12,270,208,000. \)

If it were required to find how many changes may be ranged on four bells, the answer would be \( 1 \times 2 \times 3 \times 4 \times 5 \times 6 (720 \times 7 = 5040. \) On 12 bells, it would be \(12 \times 11 \times 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 47,900,160,000. \)

Supporting 10 changes to be rung in one minute, that is, \(10 \times 12 \) or 120 strokes in a minute, or two strokes in each second of time, then, according to this mode of computation, it would take upwards of 91 years to ring all these changes on the 12 bells. If two more bells were added, so as to make the whole number 14 bells, it would require, at the same rate of ringing, about 16775 years to ring all the changes on 14 bells but once over. And if the number of bells were 24, it would require more than 117,000,000,000,000 years to ring all the different changes upon them. See Alternation.

In this manner may all the possible anagrams of any word be found in all languages, and that without any difficulty. Suppose, for instance, it were required to find the anagrams of the word Roma, the number of changes will be \( 4 \times 3 \times 2 \times 1 = 24. \) Thus,

\[
\text{Roma, arma, mara, aroma, mare, armo, \\
rama, mara, armo, arma, \\
rmoa, maro, armo, armo, \\
rama, maro, armo.}
\]

The anagrams therefore of the word Roma, furnishing any word of known significance in the Latin tongue, are seven; viz. Roma, ranro, maro, mero, moro, armoe, amero. Wallis's Algebra, p. 117. See Anagram and Combination.

Whether this new method of anagrammatizing be likely to prove of much service to that art, is left to the poets. Changes of inflex. See Aurelia, and transformation, &c. of inflex in article Entomology.

CHANGWATER, in Geography, a town of America, in the state of New Jersey; 25 miles W.S.W. of Morristown.

CHANG JHAI, a town of China, of the third rank, in the province of Kiang-nan, or Nan-king; 6 leagues S.E. of Son-kiang.

CHANG-CHANG, a town of China, of the third rank, in the province of Fo-kien; 50 miles S. of Tung-tcheou.

CHANG-HIA-TONG, a town of China, of the second rank, in the province of Quang-fu; 400 leagues S.S.W. of Peking. N. lat. 22° 27'. E. long. 160° 4'.

CHANG-HIO, a town of China, of the third rank, in the province of Chang-tung; 6 leagues S.W. of You-tung.

CHANGI, a gulf in the northern part of the Chinese sea, which is in the most advanced and narrow part of a great bay, which begins at the island of Pungme, and terminates at the frontiers of the province of Peking, about 30 leagues from the capital of the Chinese empire.

CHANG-IIN, a town of China, of the third rank, in the province of Quang-fu; 58 leagues S.W. of Peking. N. lat. 25° 3'. E. long. 160° 24'.

CHANG-KAO, a town of China, of the third rank, in the province of Kiang-fu; 10 leagues W.S.W. of Choutcheou.

CHANGLASSE, a town of Aiga, in the county of Thibet, near the river Sampo; 204 miles W. of Lassa, and 190 N.E. of Catmandu.

CHANG-LIN, a town of China, of the third rank, in the province of Quang-fu; 6 leagues N.W. of Ping.

CHANG-LING, a town of Aiga, in the kingdom of Corea; 5 miles S.S.W. of Hoang.

CHANG-NAN, a town of China, of the third rank, in the province of Chen-fu; 14 leagues S.E. of Chang.

CHANG-SE, a town of China, of the second rank, in the province of Quang-fu; 1180 miles S.S.W. of Peking. N. lat. 21° 18'. E. long. 107° 14'.

CHANG-TCHEOU, a town of Aiga, in the kingdom of Corea; 20 miles W. of Long-Konang.

CHANG-TCHING, a town of China, of the third rank, in the province of Honan; 8 leagues S.S.E. of Konang.

CHANG-THE, a city of China, of the first rank, in the southern part of the province of Hu-quant.

CHANG-TE, a city of China, of the first rank, in the province of Ho-nan.

CHANG-TI, or Tien, in Ancient Mythology, a deity of the ancient Chinese, whom, according to Du Halde, they worshipped as the supreme being: the name is said by some to denote the spirit which presides over the heavens; but, in the opinion of others it is only the visible emblem.

CHANG-TSAI, in Geography, a town of China, of the third rank; 6 leagues N. of Yun-hing.

CHANG-YEON, a town of China, of the third rank, in the province of Kiang-fu; 10 leagues N.N.E. of Nan-ghang.

CHANG-YU, a town of China, of the third rank, in the province of Tschu-kiang; 6 leagues E.S.E. of Chao-king.

CHANGY, a town of France, in the department of the Rhone and Loire; 31 leagues N.W. of Roanne.

CHANIERES, a town of France, in the department of the Gironde; 12 miles E. of Blaye.

CHANIEWIEZE, a town of Lithuaria, in the palatinate of Novogrodke; 56 miles S.W. of Novogrodke.

CHAN-LIN, a town of China, of the third rank, in the province of Quang-fu; 8 miles N.N.W. of Ko-hon.

CHANMANNING, a town of Aiga, in Thibet, where the grand Lama occasionally resides; 115 miles W. of Lassa, and 205 N. of Catmandu; about 167 geographical miles of horizontal distance from Paridrong, in the Lama's map.

CHANNA, in Ichthyology, the name of a fish, said to be caught in great plenty in the Mediterranean, and brought to market in Italy and elsewhere, among the sea perch, which it nearly resembles. It is not sufficiently clear that
the above species is the same with the Gmelinian *laurus chabanii*. as some imagine.

**CHANNADELLA.** A name given by Delionius and others to a species of *laurus*, apparently the *chama* of the elder writers. See *Laurus heptanis*.

**CHANNEL.** In Anatomy, Surgery, &c. See *Canal*.

**Channel,** in Architecture. See *Gutter*.

**Channel, or bed of a river.** See *River*.

**Channel of the rivers,** is the hollow both of a cornice, which makes the *pendant cornicula*. See *Lakyer*.

**Channel of the voice,** in the voice capital, is the face of its circumvolution, inclosed by a lip. See *Volute*.

**Channel, in Geography,** the English name of one of the French departments, called *La Manche*. This is one of the five departments formed of Normandy, and the north part of Perche. It is bounded on the north by the Channel; on the south by the Channel and the department of Calvados; on the east by those of Maine, and of Ille and Vilaine; and on the west by the ocean. Its superficies is about 1,123,92 square acres, or 67,513 hectares, and comprehends 68,668 kilometres; its population consists of about 538,113 persons. It is divided into five communal districts, 48 cantons, and 696 communes. The general total of its contributions amounts to 53,154,741 francs, and the expenses charged upon it are 57,575,410 francs. Its chief town is *Coutances*.

**Channel** is also applied to divers arms of the sea, where the waters run within the land; or to certain narrow seas confined between two adjacent continents, or between an island and a continent.

In this latter, sap. *George's* Channel, the British Channel, the Channel of the Black Sea, or Constantinople, &c.

**Channel, in the Mounge,** is used for that concavity in the middle of the lower-jaw of a horse, where the tongue lies. It is often being bounded on each side by the bars, terminates in the grinders or maxillary teeth. The barbels grow in this channel.

**CHANELLINGS.** See *Fluting*.

**CHANNEt Oudou, in Geography, a town of Chinefe Tartary, in the country of the Moguls. N. lat. 41° 51'. E. long. 14° 14'**.

**CHANON, in Conchology.** Adamon calls the Linean Metrus *Hyma* by this name.

**CHANONAT, in Geography, a town of France, in the department of the Plu de Dôme, celebrated for its mineral waters.**

**CHAN-san-shen,** a town of China, seated on the river *Chen-tang-chuang*, which at this place ceases to be navigable. See *Chen-tang-chuang*.

**CHANDEN-pou, in Beating, Rhised. See *Bauh-**

**CHAN-si, XAN-si, SHAN-si, or SHAN-sce, a province of China, bound on the north by Pecheli; on the west by Shen-6; on the south by Hima; and on the north by the Chinefe wall, which separates it from Tartary. It extends from 9° to 6° 2', W. long. from Pecking, or 115° 27' 50' E. long. to 110° 24' 30' E. long.; but from north to south, from 34° 37' to 40° 50' of latitude. It is a tradition among the Chinefe, that this was the firft inhabited province of the whole empire. The climate, though the country is mountains, is mild and favourous; of the mountains, some are lofty and rugged, and others are well cultivated, by means of terraces, cut from the top to the bottom, which produce plenty of corn and other grain. The plains are fertile, though not so well watered as the other provinces. The vines yield excellent grapes, which, instead of being applied to the purpose of making wine, are dried, and in this state sold in the other provinces. This province furnishes great quantities of musk, porphyry, marble, and Jasper; it has also mines of iron-ore, which affords iron that is fabricated into a variety of utensils. The mountains supply an abundance of coal, which is pounded and mixed with water, and formed into small cakes; these, though not very inflammable, afford a strong and lasting fire. The people are out of their ovens with their bread, and engaged in its circulation; but creditors are much admired for their slender shape and beauty. The number of inhabitants is estimated at 27,763,200; occupying an extent of territory of 55,256 square miles, or 35,711,130 acres. The revenue received into the royal treasury at Pecking from this province, and derived from the land, salt, and other taxes, amounts to 3,724,000 talers, or ounces of silver. Shan-fu contains five cities of the first rank, viz. T'ai-yuen; the metropolis of the province; Ping-yang; Lu-nghung; Peen chew, and T'ai-fung; and 85 of the second and third rank.

**CHANSON, French,** a long; a short lyric poem on familiar subjects, of love, wine, joy, sorrow, &c. put to an easy melody for local occasions: at table, to a milrefs, to friends, and even to yourself when alone, in order to drive away care, anxiety, low spirits in the rich, and to alleviate fatigue and indulgence in the poor.

A *jong* of this kind is totally diffent from what is called an *av*, or a lyrical drama, which, as a poem when taken out of its music, has neither beginning, middle, nor end. See *Sonnets*. See *Song*.

The French fongs, not dramatic, or chanrns à table, turn chiefly on love and wine, addressed by their votaries to *Venus et Bacchus*.

There are in France, likewise, numerous *fartitical fongs*, under the denomination of *Vaudrillards*, which see.

The ancient historians and poets of France mention their *military fongs* of very remote antiquity, in which were celebrated the heroic deeds of their favourite chiefs and most gallant commanders. These used to be sung in chorus by the whole army in advancing to attack an enemy; a custom probably derived from their German ancestors, as the privilege of leading off this kind of *var songes* usually appertained to the bard who had composed it. Charlemagne had a great passion for these heroic songs, and, like our Alfred, not only had them collected, but knew them by heart. However, the achievements of this victorious prince and his captains obliterated those of their predecessors, and gave birth to new fongs. One of these, in praise of Roland, the *Orlando innamorato* and *fanta*, of Boncourt, Berri, and Armel, was longer preferred than any other of the rest. Their French historians tell us, was begun at the battle of Hastings, where William became the conqueror of the English nation, by a knight called *Tallifer*, on whom this honour was conferred for his strong and powerful voice. Here he performed the office of *herold mylger* (*magnificus luctus*) at the head of the Norman army, and was among the first that was slain in the onset.

The song upon Roland continued in favour among the French soldiery as late as the battle of Poitiers, in the time of the king *John*; who, upon reproaching one of them with firing it at a time when there were 20 Rolands left, was answered, that Rolands would still be found if they had a Charlemagne at their head. But however popular this fong may have been in the fourteenth century, it is not come down entire to the present times.

Concerning the heroic song called *P'Homme armé*, on the melody of which all the first great contrapunctists composed masses of the most elaborate kind; nothing is more probable than
than that the tune of this song was the famous Cantilena Rolandi, or melody to the song which the French armed champion used to sing at the head of the army, in honor of their hero Roland, in advancing to attack an enemy.

CHANSONS de Geste. Songs on heroic, historical, and chevaleresque subjects. This kind of song was called in England during the Norman dynasty, chant royal; and Chaucer, in speaking of the musical talents of the poor scholar Nicholas, in the Miller's Tale, says:

And after that he song the Kinge's note;
Full often blessed was his merry throat.

The Chanson de Geste was distinguished from common fongs, according to Alberic, by the title of Hercia Cantilena. Their historical fongs or hybrid must have been sung to very short and simple tunes, such as our Chansons Chateaux, or such as is used by the Improvisatori of Italy in accompanying their inspirations, which frequently amount, in length, to many hundred stanzas.

Though the rest of Europe is not partial to the music of France, the words of their fongs, from the time of the Troubadours to the present, must be allowed to abound in wit, irony, badinage, and elegant, warm, and ingenious praises of love and wine, more than those of any other country.

CHANSONETTE, French. The diminutive of chanton, a little song.

CHANT, in our cathedral service, bears very little resemblance to the canto fermo, or plain chant of the Roman Catholics, which is chiefly pronounced, rather than sung by the priest alone, without base; whereas our chants are short phrases of melody, sung antiphonally from side to side, in four parts, accompanied by the choir, except in the first verse and Gloria Patri. Some of our chants are as ancient as the reformation; and perhaps still more ancient, as they resemble, in length, facility, and counterpoint, those used in Italy during the middle of the XVth century. Several composed by Palestrina and his contemporaries have been preferred in an ancient MS. procured in Italy, called Studi di Palestrina, and believed to be the autograph of that father of ecclesiastical harmony.

CHANT, Ambrosian. See Ambrosian Chant.

CHANT, Gregorian. See Gregorian Chant.

CHANT, French, is equivalent to melody, or the principal or treble part in a musical composition. See Canto, Cantilena, Ital.

CHANT, Cantus, is used for the vocal music of churches. In church history, we meet with divers kinds of chant or fongs: the first is the Ambrosian chant, established by St. Ambrose.

The second, the Gregorian chant, introduced by pope Gregory the Great, who established schools of chanters, and corrected the church fongs.

This is still retained in the church under the name of plain fong: at first it was called Roman fong.

The plain, or Gregorian chant, is where the choir and people sing in unison, or altogether in the same manner. See Choral Service.

CHANT sur le livre, French, is diatonic, or singing extem- pole in the plain fong in the cathedral service of the Romish Church; which is done by three or four fongs on the Gregorian notes, in the mass book on the desks in the middle of the choir, so that, except the canto fermo in the missal, which is generally sung by the tenors, the singers have nothing to guide them. However, there are choral fongs, io vered in counterpoint, that they even lead off and pursue subjects of fugue and canon on this foundation, without confusion, or violating the rules of harmony. See Discant, Contrapunto alla mente, or All'improviso.

CHANTABOUN, in Geography, a sea-port town of the kingdom of Savoy, on the frontiers of Camboja.

CHANTADA, a town of Spain, in the province of Galicia; 20 miles N. of Oranfe.

CHANTAGIR, a river of Siberia, which runs into the Enisei; N. lat. 51° 50'; E. long. 91° 34'.

CHANTELLE-le-chateau, a town of France, in the department of the Alber, and chief place of a canton in the district of Cannat, three leagues N. of Cannat; the place contains 1334, and the canton 11,910 inhabitants: the territory includes 222 square leagues and 20 communes.

CHANTAUDAY, a town of France, in the department of the Lower Loire, and chief place of a canton, in the district of Nantes; two miles west of it.—Also, a town of France, in the department of the Barthe, and chief place of a canton, in the district of Le Mans; 15 miles W.S.W. of it.

CHANTER, French, to sing. We shall not go to France for instructions in this art; though Messrs. Fra- mery and Ginguené have adopted and given in the Exocyl Meth. some very useful precepts from the Italian school, which we apprehend will not be generally received or put in practice by their countrymen for some time. We acknowledge, however, that Mr. Framery has discussed this subject with delicacy, discrimination, and good taste.

Rouet's definition of the verb chanter, is clear and precise: it is, in its general application, the forming with the voice such sounds as are appreciable. See MELODY. But it is more commonly understood to imply the producing, by vocal inflexions, a variety of such tuneful sounds as are agreeable to the ear, and by intervals admitted in harmony, and consonant to the rules of modulation. A finger placed in proportion as the voice is clear and well toned, the ear perfectly accurate, the organs flexible, the table well formed, and when instruction and practice have polished and improved the gifts of nature. To which, in imitative and theatrical music, should be added that degree of facility which impel us others with the sentiments which we affect to feel. From observations in hearing great vocal performers, many rules have been formed for facilitating and perfecting a vocal fluent; but many discoveries still remain to be made on the most lofty, short, and certain path to perfection in this difficult art.

CHANTEREAU-LE-FEVRÉ, Louis, in Biography, a learned antiquary of France, was born at Paris in 1538; and became eminent for his knowledge of his heart than for those of his understanding. He distinguished himself by his knowledge of jurisprudence, history, politics, and belles-lettres, and was advanced by Lewis XII. through successive polls to that of intendant of the finances of the duchies of Bar and Lorraine. He compiled from original records, "Historical Memoirs of the Houses of Lorraine and Bar," the first part of which only was published at Paris, 1642, fol. He also published other works on detached parts of French history; and after his death, his son published his "Treatise on Feuds," in 1652, fol. in which he maintains an opinion, which has been thought to be erroneous, viz. that hereditary feuds commenced only after the time of Hugh Capet. He died at Paris in 1658. Nouv. Dict. Hist.

CHANTERELLE, French, the first string of a violin, tenor, or violoncello.

CHANTIER, in Military Language, a square piece of wood, which is used for raising any thing upon, as, for instance, for ranging barrels of gun powder on, or for proving cannon without the assistance of gun carriages.

CHANTILLY, in Geography, a town of France, in the depart-
department of the Oise, and chief place of a canton, in the district of Soissons. The prince of Condé had, before the revolution, a magnificent palace in this place, with beautiful gardens, a manegery, extensive park, and curious waterworks. The flabe was reckoned superior to any in France, and the foreflew for the preservation of game extended many miles in circumference: 1½ league W. from Soissons, and 4 S.S.E. from Clermont.

CHANTILIE, in Buildings, a piece of wood fastened near the ends of the rafters, and projecting beyond the wall, to support two or three rows of tiles so placed to prevent the rain-water from trickling down the sides of the wall.

CH'ANT'ONG, CH'ANT'TONG. SHAH-TONG, or XANT'-TUN, in Geography, a province of China, bounded on the west by part of Pe-che-ni, Shan-chi, and T'orang; on the south, by Kiang-nan; on the east, by the Yellow Sea, and on the north, by the same sea and part of Pe-che-ni. It extends from 34° 35' to 33° N. lat. and from 116° to 117° E. long. It is reckoned one of the most fertile provinces and finest climates in China. One crop is laid to afford the inhabitants, who are not so numerous as those of some other provinces, several years' sufficiency. Besides the grand imperial canal, which traverses some part of this province, it has several large, rivers, and streams, which contribute to fertilize and enrich it; though it frequently suffers from drought, as it seldom rains here. It is much infested by locusts, wolves, and gangs of robbers, who beset travellers in the highways over the mountains, and often descend to the plains, plundering and ravaging the villages and open towns. The inhabitants are strong and healthy, and are employed in manufacturing great quantities of silk; besides the common food produced by the silk-worms, they find another food upon trees and bushes in great plenty, which is spun by a kind of worm not unlike our caterpillars. This last kind, though coarse, is stronger than the other; and with this they carry on a great trade, by means of their rivers and canals. The banks that come from the southern provinces pass along the northern canals; and the tribute of the merchandise thus conveyed has been computed to amount to a very large sum. Among other fruits produced in this province, they have one which is called Se-te, a kind of figs, which ripen about the beginning of autumn, and being dried, contract a crust of candied sugar, that gives them a delicious flavour. This province is rendered particularly venerable among the Chinese by a tradition, that their great philosopher Konfûtsse, commonly called by us Confucius, drew his first breath in it. Chantong is divided into six districts, which contain five cities of the first rank, that are very populous and flourishing. These again include no less than 114 towns of the second and third rank, besides a great number of towns and villages, fifteen forresses, some of them very large, and all of them built to guard the entrances of their ports and the mouths of their rivers. There are likewise several islands flatterted along the gulf, extremely well peopled, affording convenient harbours for Chinese transport, and a quick and easy passage to and from Corea and Loo-pong. The cities of the first rank are T'ih-pan or Ciennan, the metropolis of the province, Yung-chew, Tong-chang, Ting-chew, Ten-chew, and Loo-chew. The population of Chantong consists of twenty-four millions, occupying a territory in extent 65,414 square miles, or 41,604,750 acres. The revenue of this province, transmitted to the treasury at Peking from the land, salt, and taxes, amounts to 3,000,000 taels or ounces of silver, besides 360,000 measures of rice and other grain.

CHANTONICE, in Ancient Geography, a country of Asia, which made part of Carmania, according to Proclus.

CHANTONAY, in Geography, a town of France, in the department of the Vendée, and chief place of a canton, in the district of Fontenay-le-Comte; 43 leagues W. from La-Châtaiignoraye. The place contains 1,421, and the canton 8,283 inhabitants; the territory includes 26,794 square miles, and 15 communes.

CHANTOR, in the fourth Antiquities. In the temple of Jerusalem there was a great number of Levites, who were employed in singing in the temple of God, and in playing upon instruments before his altar. In the reign of David there were four thousand singing men, with their heads and president.

The chantors and Levites who were employed in singing, playing upon instruments, and other functions of the Temple, had no habits distinct from the rest of the people. Nevertheless, in the ceremony of removing the ark to the Temple of Jerusalem built by Solomon, the chantors appeared clothed in tunics of byssus, or fine linen. Josephus remarks, that in king Agrippa's time they obtained the favour from that prince of wearing a linen robe in the Temple, thus the priests. Agrippa believed it would be for the honour of his reign, to signalize it by so confiding a change as this. The other Levites, employed in different exercitings under the command of the priests in the Temple, preferred likewise commissiion to learn to sing, to the end that they might enjoy the same privileges with other brethren.

CHANTOR, or CHANTOR, a person who sings in the choir of a cathedral.

All great chapters have chantors and chaplains to sing and assist the canons, and officiate in their absence.

St. Gregory first instituted the office of chantors, erecting them into a body, called fihola cantorum: though Anaxibius seems to attribute their rise to Procopii Euphrasii, who lived an hundred years before Gregory. But the word grows accountable in this sense, and instead of it the word choir-man or singing-man is now used.

CHANTOR is used, by way of excellence, for the precentor or master of the choir; which is one of the dignities of the chapter.

The chantor bears the cope and the staff at solemn festivals; and gives tune to the rest at the beginning of plains and anthems. At St. David's in Wales, they have no dean, he is next in dignity to the bishop.

The ancients called the chantor, primicerius cantorum.

To him formerly belonged the direction of the deacons, and other inferior ministers.

CHANTRIGNE, in Geography, a town of France, in the department of the Mayenne, and chief place of a canton, in the district of Mayenne; 2½ leagues N. of it.

CHANTRY, or CHANTER. See CHANTER.

CHAN-YN, a town of China, of the third rank, in the province of Chah-fu; 25 miles E.N.E. of Shao.

CHAOU, one of the clifffs into which the late Mr. Muller arranged the islands between Karthikara and America, comprehending eight islands; viz. Immak, Kika, Thib-ghina, Ava, Chavia, Thengulak, Ungibea, and Anthigida, or the more distant Aleutans.

CHAUKAYSE, an order of horse in the service of the grand signor. These and the muskrellers were originally the guards of the sultans in Egypt, and their leaders were his two vizirs, that always accompanied him. They now constantly go out with the bafkaw.

The
The body of the chaosae seems originally to have been the guard out of which the Sultans used to send perons to execute his orders.

CHAO-HING, a city of China, of the first rank, in the province of Tche-kang; 6° 33' S. E. of Peking. N. lat. 30° 10'. E. long. 120° 14'.

CHAO-IM, a town of Chinee Tartary; 8 miles S. of Geo.

CHAO-KEOUING, a town of China, in the province of Chang-tung; 35 miles S. E. of Tai-nghin.

CHAOLOGY, the history or description of the chaos.

Orpheus, in his Chalology, sets forth the different alterations, evolutions, and divers forms, which matter went through till it became inhabitable; this amounts to the same with what we otherwise call cosmogony, or the creation of the world. See Cos mogony.

Dr. Burnet likewise gives us a chaology in his Theory of the Earth. He represents the chaos, as it was at first, a chaos, and uniformly rude and deformed; or the taba taba: then flew how it came divided into its respective regions; how the homogeneous matter gathered itself apart from all of a contrary principle; and lastly, how it hardened, and became a solid, habitable globe.

CHAO-MA-ING, in Geography, a town of Asia, in Thibet; 10 miles N. of CHAO-MA-ING HOTUN, is a town of Thibet, 285 miles E. of Hami.

CHAO-MANTIA, among the Ethosogtical Cehinfis, is the art of making prelages from observations on the air.

CHAO, in Ancient Geography, a mountain of the Peloponnecus, situated to the left of the route from Argos to Tegea, the lower part of which was planted with fruit trees. Hence proceeded the river Erinus, which supplied that of Styphalus in Arcadia. Baccus and Pan were honoured with sacrifices at the fall of the water which formed the Erinus, and a festival was celebrated in honour of Bacchus, which was denominated tyrs. Paufan. Corinth. i. ii. c. 24.

CHAONE, or CHAONIT, the name of a people who had the sovereignty of the whole of Epirus before the Molossi, according to Strabo. Virgil (Aen. i. 113) supposes that they were more ancient than the war of Troy; and in another place he says that Ceres and Baccus introduced the use of wheat instead of the acorn of Chaonia. It is more natural however to trace the descent of the Chaonians from the ancient Pelasgians than from the Trojans, as the greatest number of the people of Greece and its environs had originated from the Pelasgi; and Steph. Byz. reports that Chaonia in particular had been formerly called Pelasgide. Plutarch seems to have assigned the time of their establishment, and the chiefs of their colony, when he says, that the Histrians related, that after the deluge of Deucalion, Phoebus, one of those who accompanied Pelasgus into Epirus, was the first king of the Thebriots and Molossi, that is, of the Chaonians, the predecessors of these people. If the establishment of the Pelasgus in Chaonia soon followed the deluge of Deucalion, this last event serves to fix the origin of the Chaonians; for although we cannot precisely ascertain the period of this deluge, it is known that Deucalion lived 200 years before the siege of Troy, and that some of his descendants affixed at that siege. The deluge happened about the cloes of his reign, and therefore could not have preceded the Trojan war, more than about five generations, or 150 years; or, according to Sir Isaac Newton, four generations, or about 133 years, reckoning with the ancients three generations to 100 years. The establishment of the Chaonians, which immediately followed the deluge, must therefore have taken place about three or four generations, or from 100 to 133 years, before the Trojan war. Upon this supposition, we may determine who was the Pelasgus that conducted the Chaonians into Epirus. He could not have been the ancient Pelasgus, who lived before the flood of Deucalion, according to the history of his polity, traced out by Paufanias; but he had a grandson of the same name, who, according to the relation of Plutarch, conducted a colony to Epirus after the deluge of Deucalion. Steph. Byz. mentions a Pelasgus, the son of Lycaon, and father of Theophrus, and he also mentions his descendants, who inhabited Epirus. We have reason, therefore, to believe, that this is the Pelasgus to whom Plutarch refers, since a period near the deluge of Deucalion corresponded to the time of a son of Lycaon; and we learn from Apollodorus (iii. 8. 2.) that Deucalion's flood occurred in the reign of Nyctimus, the successor of Lycaon. Moreover, Paufanias (l. viii. c. 3.) informs us, that the sons of Lycaon, amounting in number to not less than 24, dispersed themselves in Greece. The oracle of Dodona in Epirus was of Pelasgian origin; and since the Pelasgi were not settled in Epirus till after the deluge of Deucalion, this oracle could not have been established at an earlier period, or till after the settlement of the Chaonians, and hence we may infer that it was probably of Chaonian origin. Herodotus (l. i.) affirms us, that the ancient Pelasgi invoked the divinity in general, without referring to him those appellations which afterwards disting- guished the gods and goddesses, whose worship was not yet introduced into Greece. This author adds, that the Pelasgi conflated the oracle of Dodona. The Pelasgus, according to Herodotus, were more ancient than the gods of Greece, and more ancient than the other Greeks, who, according to Strabo, cannot be traced to a higher antiquity than the Trojan war, since Pelasgus, their chief, was a descendant in the 8th degree of those who affixed in this war, according to Paufanias. The ichnolith of Ailurophanes says, that the Chaonians were descended from the Thracians; but Aristoftes traces them to the Orontes, one of the most ancient nations of Italy.

CHAO-NIA, a country of Greece, the most northern part of Epirus, so called from its ancient inhabitants the Chaonians. It was bounded on the north by the Odribe territory and part of the country of the Paeans; on the south-west, by the Mediterranean sea; on the south, by the Thetrapia; and on the call, by the country of the Antaeus. The Acro-erucian mountains bounded it to the north. The most noted cities in this part of Epirus were, according to Ptolemy, Oricum or Oricus, Cassiopea or Cassiope, Antigonia, founded by Antigonus. Phanes, Hecatompholium, Ophthalmion, Elueus, and the strong town, or, as Phoys calls it, castle of Chalcara, much frequented on account of its hot baths. See Epirus.

CHAO-NIA, a town of Asia, in Syria, situated at the confluence of two small rivers, S.W. of Zeugma. Ptolemy places it in Camagene, a country of Syria.

CHAO-NITES, a small country of A'ma, in Assyria. E. of the Tigis; more properly Chalaites, which fee.

CHA-OU-FOU, in Geography, a town of China, of the first rank, in the province of Toflan; 775 miles S. of Peking. N. lat. 22°. E. long. 117° 19'.

CHAO PAI, a town of Chinee Tartary. N. lat. 22°. E. long. 124° 42'.

CHAO-PING, a town of China, of the third rank, in the
The province of Quang-si; 5 leagues S.E. of Yang-nghoi.

CHAOA, one of the smaller Cape Verd islands.

CHAOOS, among the Ancient Philosophers, was described a dark, turbulent kind of atmosphere; or a disorderly system, or mixture, of all sorts of particles together, without any form or regularity; out of which the world was formed.

Of Chaos is everywhere represented as the first principle, even or seed of nature, and the world. All the ancient sages, fables, naturalists, philosophers, theocritus, and poets, hold that chaos was the eldest and first principle, 17

The Barbarians, Persians, Egyptians, Parthians, &c., all refer the origin of the world to a rude, mixed, confounded mass of matter. The Greeks, Orpheus, Hesiod, Mosander, Aristophanes, Euripides, and the writers of the Greek Poems, all speak of the first chaos: the Ionic and Pythagorean philosophers build the world out of it. The Stoics hold, that as the world was first made of a chaos, it shall at last be reduced to a chaos; and that its periods and revolutions in the mean time are only transitions from one chaos to another. Lastly, the Latins, as Ennius, Varro, Ovid, Lucius, Statius, &c., are all of the same opinion. Nor is there any fact or notion whatever, that does not derive their Cosmogony, the structure of the world, from a chaos.

The opinion first arose among the Barbarians, whence it spread to the Greeks, and thence to the Romans, and other nations.

Dr. Burnet observes, that besides Aristophanes, and a few other pseudo-Pythagoreans, nobody ever affected, that our world was always, from eternity, of the same nature, form, and structure, as at present: but that he had been the floundering opinion of the wise men of all ages, that what we now call the terrestrial globe, was originally an undifferentiated mass of heterogeneous matter, called chaos; and no more than the rudiments and materials of the present world.

It does not appear who first broached the notion of a chaos. Moses, the eldest of all writers, derives the origin of this world from a confusion of matter, dark, void, deep, without form, which he calls tohu bauh; which is precisely the chaos of the Greek and Barbarian philosophers. Moses goes no further than the chaos; nor tells us whence it took its origin, or whence its confused state; and where Moses stops, there precisely do all the rest.

Dr. Burnet endeavours to shew, that as the ancient philosophers, &c., who wrote of the cosmogony, acknowledged a chaos for the principle of their world; so the divines or writers of the theology, derive the origin or generation of their faired gods from the same principle.

Mr. Whiston supposes the ancient chaos, the origin of our earth, to have been the atmosphere of a comet: which though new, yet all things considered, is not the most improbable affection. He endeavours to make it out by many arguments, drawn from the agreement which appears to be between them.

So that, according to him, every planet is a comet, formed into a regular and lasting constitution, and placed at a proper distance from the sun, revolving in a nearly circular orbit; and a comet is a planet either beginning to be dissolved, or re-made: that is, a chaos, or planet, unformed, or in its primeval state, and placed as yet in an orbit very eccentric. See Cosmogony.

Chaos, in the phrase of Paracelsus, imports the air. It has also some other significations among the alchemists.

Chaos (cholos) &c., of Linn. in the 12th edit. of Syll. Nat. is the Vibia glutinata of Goeze and Gmelin.

CHAI SOURCE, in Geography, a town of France in the department of the Aube, and chief place of a canton in the district of Bar-sur-Seine; 5 leagues S. of Troyes. The place contains 1,650, and the canton 12,339 inhabitants: the territory comprehends 415 kilometres and 26 communes.

CHAI, in Ornithology, denotes either of the mandibles of a bird’s bill, which are distinguished by the epithets upper and lower. The term mandible is more commonly that adopted by modern zoologists.

CHAP., or CHAL., or AL., or CHAL., or CHAL.

CHAPALLA, in Geography, a lake of North America, in Mexico, and the province of Guadalaxara; 18 leagues long and 11 broad; 15 miles S. of Guadalaxara.

CHAPARANG, or DIAPGRAM, a town of Afn., in the country of the Hid. estate near the head of the Ganges; 140 miles N.N.W. of Sirinagar. N. lat. 35° 10′. E. long. 75° 20′.

CHAPARRAL, a town of Spain in the province of Guadalajara; 5 leagues from Antequera.

CHAP, the mettles part put on the end of a fashbard to prevent the point of the fward or bayonet from piercing through it.

CHAPEAU, in a general sense. See Hat.

CHAPEL is sometimes also used to denote the cap, or coronet, worn by some noble and distinguished persons. See Cap of Maintenance. The crest is borne on the chapel; and by the chapal the crest and coat are separated; it being a rule, that no crest must touch the field immediately.

CHAPeAU, Fr. literally means a hat; but in use it implies the.fm. circns over two or more notes which we call a flour, or ; and by which a figure underlines that ad the notes under or over this drum-circles, or flour are to be sung to one syllable; and in violin music to be played with one bow.

Chapleau de Minerve. See the article CHAsses de galerie.

CHAPEL, or CHAPEL, a kind of little church, served by an incumbent properly under the denomination of a chaplain. The word chapel, according to some, comes from part, little tents, or lodges, set up by traders in fairs, to shelter them from the weather. Paxia derives it both from the Greek and Latin, quasi capitis or populorum vel ludorum; others derive it from the chapal, or cope, which served to cover the body: others, a pelibus caparamus; because these places were anciently covered with great haims. Rebuff derives it from capa, St. Martin’s cope, which the kings of France carried to war with them as their standard, and preferred very carefully in particular tents, thence called chapels. There are two kinds of chapels, the one confrated, and bell as benefice; the other secular, being of the nature of ostentation. The first are built apart, and at a distance from the parish church; being neither parishes, cathedrals, nor priories, but labelling of themselves. These are called by the canons fab cha or fab. and by us chapels of. or, as being erected a distance from the mother-church, where the parish is large and wide, for the convenience of some of the parishioners who reside far off. They are served by some inferior parson, provided either by the rector or the parish, or by the vicar for whole. pace, and benefit they are intended, by prayers or preaching merely. Some of these are also parochial, having the parochial rights of chrismating and burying, and differing from a church only in the want of a rectory and endowment.

The second kind are frequently built in, or adjoining to a church, as a part of the same; living only a cell, &c., to read
read prayers in; and in the Roman churches, an altar, &c. to celebrate mass on; but without any hantidry or, font. Thee the canonists call fah. In the twenty-sixth canon of the council of Aquin, held in 582, allows private persons the use of a chapel; but wishes prohibition to all clerks to officiate in them without leave from the bishop.

Chapels, free, are those chapels of ease which have a settled revenue for perpetnal maintenance of a pastor. &c. by charitable donations of lands, or rents bestowed on them; so as not to be any charge either to the rector, or the parsonage; and they are thus called because they are free from all ordinary jurisdiction.

There are several collegiate churches in France, which they call sancta chaapler, holy chapel; as those of Paris, Dinjon, Bourges, Bourbon, &c. These are so designated, from being repositories of certain relics.

Hence, all those places where relics were preferred came to be called chapels; and the persons who had the care of them, chaplains.

Chapel is also a name given to a printer's workhouse; because, say some authors, printing was first actually performed in chapels, or churches; or, according to others, because Caxton, an early printer, exercised the art in one of the chapels in Westminster Abbey. In this sense they say, the orders, or laws of the chapel, the secrets of the chapel, &c.

Chapel, Knights of the, an order of knights instituted by King Henry VIII. in his testament, to the number of thirteen: though these have been increased to the number of twenty-fix: they are called poor knights.

These are not knights of the order of the Garter; but as it were, their attendants or deputies, serving to discharge all their offices in the funeral services of the kings of England.

They are subject to the office of the canons of Windfor, and live on pensions which the order affigns them.

They bear the blue or red cloak, with the arms of St. George on the left shouder; but the cloak is only cloth, and they wear no goat of garter: which distinguishes them sufficiently from the knights of the Garter.

Chapel Royal Establishment. We have an account of this establishment in the "Liber niger dominus Regis," in the time of King Edward IV. in which there is likewise a list of the several musicians retained in that monarch's service, as well for his private amusement as for the antics of his chapel.

As this seems the origin of those establishments, of the chapel royal and king's band, which still subsists, we shall give the account of them, and their several employments, at full length from this ancient book, as well as from N° 243 of the Harl. MSS. in the British Museum, and N° 11472, 3, 11. of the Ashm. Collec, Oxford, for Ordinances touching the King's household, made in the time of Edward II. as well as in that of Edward IV.

"Ministers thirteene, thereof one is Virgir, which dircet them all fettayd dayes in their stayones of bowinges and ryppynge to such offices as the officees might be warned to prepare for the King's meats and leuberis; to be more redere in all services and due tyymes; and all thse futting in the halles together, whereof some be trompotes, some with the shalmes and smale pypes, and some are strange men coming to this Court at lywe feastes of the year, and then take their wages of Houshol, after ij. ob. by daye, after as they have byte presentation in Courte, and then to avoyd altere the

next morrow after the feast, besides their other rewards yearly in the King's exchequer, and clothing with the Houfbol, winter and summer for eache of them xxx. And they take nightelye among themselves all ij. galones ale; and for winter taketh three candles waxe, ij. candles pitch, ij. tale fluides [fire-wood coal and cut into billets]; lodging xyfervante by the Harbengers for them and their horses houlday to the Courte. Anfso hauing into Courte if fervants to bear their trompotes, yeres, and other instruments, and torches for winter nights, whilst they blow to imprese of the chandulary; and at least two of thes perfones to continu newe fylle in Courte at wyne by the cheake rolle which they be pree-ente of every dayl. to warn the King's ridingh houfhold when he goeth to loudfucke as oft as it shal require, and that his houfhold men may follow the more redder aftere by the blowinge of their trompotes. Yf any of the two Minstrelles be late bloode in Courte, he taketh two loves, if mee of greater meetes, one galone ale. They part not at no time with the rewards given to the Houfhol. Alfo when the do the King to have if Minstrelles continuing at Courte, they will not in no wife that thes Minstrelles be fo familiarize to thee refraining from theire duties.

"Children of the Chappelle viij, founden by the King's proue Coifere for all that longeth to their apparell by the hands and overights of the Deane, or by the Malter of Songes assignerd to teache them, which Malter is appointed by the Deane, chosen one of the number of the fellowshipe of chappelle after rehearsed, and to drawe them to other Schooles after the form of Sacotte, as well in Songes in Orgaines and other. Thes Children eate in the Hall dayly at the Chappell bord, nexte the Yeomane of Ulfey; taking amongt Alle for lyverye daylye for brekefafte and all reight, two loves, one melle of greatte mete, ij. galones ale; and for winter fea- lone ij. candles piche, ij. tallheids, and lyttore for their pallees of the Sracante Ulfer, and carriage of the King's coste for the compelete beddeynge by the overights of the Controller. And amongt Alle to have one fervante into the court to truelle and bear their harnesse and lyverye in Court. And that day the King's Chappelle remoueth ever of theses Children then present receauyth mjd. at the Grene Clothe of the Comptinger-house for horfes dayly, as long as they be jurneyng. And when any of these Children come to xxij. years of age, and their wyseys change, ne canne not be preferred in this Chappelle, the nombre being full, then yt they will affente the King affyneth them to a College of Ox ford or Cambridge, or the foundations, there to be at lyvynge and studyng bothe inly and tyle the King may other- wise advance them."

In the Liber niger, there is likewise not only an account of the gentlemen and children of the chapel, but of the "Deane's peron and establishment, with that of the xxij Chappelen and Clerkes of the Chappelle by the Deane's electione or denominations," &c.

The establishment of cardinal Wolsey's chapel, and of Henry Ageron Percy, fifth earle of Northumberland, was full more numerous and fpended.

Chapel in the-Frith, in Geography, is a small town of Derbyshire, England. It stands on the side of a high conex hill, which rifes from a contracted vale, formed by some high mountains. The church was erected at the commencement of the fourteenth century. There are some small cotton manufacturies which furnish employment to part of the lower classes of inhabitants. This town is 160 miles N.W. from London, and has a small weekly market on Thursdays.

CHAPELAIN, JOHN, in Biographia, a poet and man of letters was born at Paris in 1525, and dying con...
his education under the boil masters, became tutor to the children of the marquis de la Tréfée, grand marshal of France, and afterwards reward to this nobleman. During an abode of 17 years in this family he translated "Guzman d'Alfarache," from the Spanish, and directed his particular attention to poetry. In this art he acquired reputation by a critique on the Adonis of the cavalier Marino, prefixed to a Paris edition of that poem, in 1652. By an ode addressed to cardinal Richelieu, a critique on the Cut, and other performances, he obtained the credit of an oracle in matters of taste. Concerning himself capable of producing an original work, he undertook the composition of an epic poem on the subject of John d'Arc, but when the first 12. books of his "Pucelles, ou la France délivrée," appeared in 1656, ushered into the world with all the advantages of typography and engraving, and pushed by court influence through its editions, in eight months, the expectations of the public were disappointed, and the author's fame sustained a deadly blow, so that the name of Chapeland as a poet was regarded in France much in the same manner with that of Blackmore in England. The hardships of the Hyle and verification of this poem became a subject of contemptuous satire; and Boujen, Racine, and la Fontaine are humorously said to have imitated upon themselves the penance, for committing any fault in language, of reading a certain number of pages of this poem. The learned Huet, in vain endeavored to vindicate and extol the Pucelles against the more effectual criticisms of Boujen and others; and thus the 12 additional books have ever since remained in MS. in the king's library. His interest at court, however, remained undiminished; and as his positions were more ample than those of any other literary man, Delcassé calls him "le mieux renté de tous les beaux-écrivins." The list of personages, recommended by Colbert to Lewis in 1662, was formed by Chapeland; and this distinction incited him to a degree of homage which counterbalanced the failure of respect which he had incurred as a poet. His private character was held in high estimation; and though he was not wholly exempt from the charge of arrogance, he was not ambitious of public eminence, and widely declined the office of preceptor to the first daughers, to which he had been nominated by Montausier. Delcaux himself is constrained to bear an honourable testimony to his moral qualities. He died in 1674, leaving property which few poets of a superior merit have acquired. His works, besides those already noticed, are the "Dissertation on the Reading of Old Romances," 18 books; miscellaneous pieces on literature; etc., Nov. Dict. Hist.

CHAPELIER, in the Maine, a couple of flannel-makers, mounted each of them with a flannel, and joining in a sort of flannel buckel, called the head of the chapeliets, by which they are made full at the puffed end of the buckle, after being adjusted to the right length and bore. They are used both to avoid the trouble of taking up and letting down the flannels every time that a gentleman mounts on a different horse and saddle, and to supply what is wanting in the academy saddles, which have no flannel to them.

CHAPELLET, armour of iron furring a circle with three branches of the same metal, by means of which the noyau of the mould of a piece of ordnance is fastened to the shape. They also give this name to a pump or chimney. It is likewise given to an hydraulic engine for drawing water out of a wet or inundated foundation, where people are going to carry on masonry or other work.

CHAPELLE, Claude Emmanuel L'Huillier, in Biography, a French wit and poet, was the natural son of Francis l'Huillier, master of the accounts, and received his name from the village of La Chapelle, between Paris and St. Denys, the piece of his nativity. His education was liberal, and he learned philosophy under the famous Gaffendi. His genius, however, inclined to poetry of the light and easy kind, and he excelled in double rhymes. His disposition was convivial, and his manners those of a man of pleasure. His "Journeys to Montenlier," written jointly with Dauchament, and consisting of a mixture of prose and verse, is a "model of that pleasurable literature which is more rare than correct tastes and elevation." Without availing himself of his connection and interest in order to obtain any sorts of honour or profit, he was content with a moderate annuity, and prolonged a life of ease and indigence to the age of 70 years. He died at Paris in 1676. A new edition of his "Journeys" was published by Le Perve de St. Marc in 1711, 2 vols. 1,100. To this edition are annexed some "Fugitive Pieces," in verse and Prose. Nov. Dict. Hist.

CHAPELLE. JOHN De LA, a member of the French academy, was born at Bruges in 1655, and obtained by his father's purchase the post of receiver-general of the finances at Rochelle. Abandoning the career of business, he became a dramatic writer, after the manner of Racine, whom he studied to imitate, but could not rival; and his performances owed their success in a great degree to the acting of Baron, and a due attention to stage effects. The subject of the most popular of his dramas, "Les Confidences," maintained its place at the theatre. In 1687 La Chapelle became secretary to the prince of Conti, and he was dispatched by his patron to Switzerland in business of importance to his house. He was also employed by the king on public affairs; and he gave evidence of his patriotic and political knowledge in a series of "Letters from a Swiss to a Frenchman, on the True Interest of the Powers at War," the object of which was to diffuse Europe from its league against the French monarchy. As a member of the French academy, into which he was admitted in 1683, and in the chair at its public settings, which he often occupied, he conducted himself so as to gain applause. Although he incurred the displeasure of Despreaux, who was a formidable adversary, he was not supported as to escape injury; and his private conduct was such as to conciliate general esteem. He died at Paris in 1752, at the age of 68 years. He wrote, besides the works above enumerated, "Memorial Memoirs of the Life and Bust of Bourbon, Prince de Conti," printed in 1689; and the "Lives of Cavile and ThoUills," forming 2 separate works, in which are the facts and features depicted by those poets, D'Alembert, Hul. des M. de l'Ane, 

CHAPELLE, A. Marin, La, in Guersacq, a town of France, in the department of Puy-de-Dôme; 5 miles N. of Ambert.

CHAPELLE, d'Abrécéon, La, a town of France, in the department of the Cier, and chief place of a canton in the district of Sancerre; 16 miles N. of Bourges. The place contains 531, and the canton 4,898 inhabitants; the territory includes 315 kilometres and 5 communes.

CHAPELLE, Aube, La, a town of France in the department of the Meuse and Loire, 8 miles S. of St. Fleric.

CHAPELLE, Buffe, La, a town of France in the department of Lower Lot; 9 miles N. E. of Nantes.

CHAPELLE, Eglise, La, a town of France, in the department of the Sois and Marne, and chief place of a canton in the district of Fontainebleau. The place contains 83, and the canton 6,920 inhabitants. The territory comprehends 255 kilometres and 25 communes.

CHAPELLE
CHAPELLE de Ernée, a town of France, in the department of the Ille and Vilaine, and district of Vitre; 1\(\frac{1}{2}\) league E. of Vitre.

CHAPELLE de Ernée, La, a town of France, in the department of the Lower Loire, and chief place of a canton in the district of Nantes; 5 miles N. of Nantes. The place contains 1,979 and the canton 8,176 inhabitants; the territory includes 92\(\frac{1}{2}\) square miles and 6 communies.

CHAPELLE de Guichenay, La, a town of France, in the department of the Sarthe and Loire, and chief place of a canton in the district of Mâcon; 2 leagues S. of Mâcon. The place contains 1,376 and the canton 8,176 inhabitants; the territory comprehends 77\(\frac{1}{2}\) square miles, and twelve communies.

CHAPELLE de la Mothe, La, a town of France, in the department of the Mayenne; 4\(\frac{1}{2}\) leagues N.W. of Vitré.

CHAPELLE d'Euvre, La, a town of France, in the department of the Yonne; 2 leagues S. of Sâmiz.

CHAPELLE St. Laurent, La, a town of France, in the department of the Two Sèvres; 11 miles N.W. of Parthenay.

CHAPELLE St. Mysmaï, La, a town of France, in the department of Loiret, and chief place of a canton, in the district of Orleans; 3 miles W. of Orleans.

CHAPELLE Taillfert, a town of France, in the department of the Creuse; 4\(\frac{1}{2}\) leagues S. of Guéret.

CHAPELLE La Trélon, a town of France, in the department of the Two Sèvres, and chief place of a canton, in the district of Parthenay; 4\(\frac{1}{2}\) leagues W.S.W. of Parthenay.

CHAPELLE en Tercerors, La, a town of France, in the department of the Drôme, and chief place of a canton in the district of Die; 13 miles N. of Die. The place contains 1,320 and the canton 8,176 inhabitants; the territory includes 149 square miles and five communies.

CHAPELLING, in Scanning, is bringing a ship to the fame tack she was previously on, when in a light breeze of wind, and close-hauled; she has been taken back, either through a sudden shift of wind, or want of attention or skill in the helm. This is usually done by instantly bracing sharp round the head, and keeping all the jib and lary fall férots.

CHAPELNESS, in Geography, a cape of Scotland, on the coast of the county of Fife, in the Firth of Forth; 1\(\frac{1}{4}\) mile W. of Elskev.

CHAPELRY, Capellanis, is used for a certain precinct belonging to a chapel, having the fame relation to it that a parish has to a church.

CHAPERON, Chaperonne, or Chaperon, properly signifies a bonnet garnished with a fort of hood, or covering of the head, having a tail hanging down in a point behind, incidently worn by both men and women, the nobles, and the populace, and afterwards appropriated to the doctors; and licentiates in colleges, &c. It was worn of different kinds, divided into two colours. During the time of the famous league, which terminated with the accession of Henry of Navarre to the crown of France, the different parties made themselves known and distinguished by the colours of their Chapersons. And the fame fort of diminution took place during the great disputes between the Dukes of Orleans, Bourgogne, and Armagnac.

Hence the name passed to certain little shields, and other funereal devices, placed on the foreheads of the horses that drew the hearse in pompous funerals, and which are still called Chapersons, or Chaperonne; because such devices were originally affixed on the Chapersons, or hoods, worn by those horses with their other coverings of state.

CHAPRON of a bit mouth, in the Monsi, is only used for search-months, and all others that are not cannon-months, signifying the end of the bit that pises to the branch just by the banquet. In search-months the chapron is round, but in others it is oval; and the same part that in featal and other months is called chapron, is in cannon-months called franceron. See Bitt.

CHAPETE, or Chapote, in Ancient Geography, a strong place of Aisa, in Meopotamia.

CHAPETONES, a denomination distinguishing the Spaniards who come from Europe to America, and who are the first performer in the country with respect to rank and power. As the Chapetones are named to SUCH POMMICE in America by the conquerors in the period of the court, they stood down with oldness on every other order of men. The interior traffic or every colony, as well as any trade which is permitted with the neighboring provinces, and with Spain itself, are carried on chiefly by the Chapetones who, as the recompense of their industry, wind immense wealth; while the Creoles look in them, and are satisfied with the revenues of their national chiefs.

CHAPITEAU d'anciennes tours de créchieris, is composed of two small pieces of boards or planks, joined together with such manner, as to form the base or top of a roof with a pitch, and serves to cover the vent or touch-hole of a piece of Ordonance.

CHAPITERS, in Architecture, the crowned or upper parts of a pillar. See Capital.

CHAPITERS with mouldings, are those which have no ornament, as the Tuscan and Doric.

CHAPITERS with sculptures, are those which are adorned with leaves and carved work, the skull of which is of the Corinthian order.

CHAPITERS, in Luca, were anciently a summary of such matters as were to be inquired of, or presented before justices in their courts of office, or of the peace, in their feillons.

Chapters are now taken for articles delivered by the mouth of the justices, in his charge to the inquest; though it appears from Bracton and Britton, they were formerly written exhortations given by the justices for the good observance of the laws, and the king's peace; first read in open court, then delivered in writing to the grand inquest: which the grand jury, or inquest, were likewise to answer upon their oaths, either affirmatively or negatively.

CHAPLAIN properly signifies a person provided with a chaplainy, or who discharges the duty thereof.

CHAPLAIN is also used for an ecclesiastical person, in the house of a prince, or a person of quality, who officiates in their chapels, &c.

With us there are forty-eight chaplains to the king, who wait four each month, preach in the chapel, read the service to the family, and to the king in his private oratory, and say grace in the absence of the clerk of the cloister. While in waiting they have a table, and attendance, but no salary.

An archbishop may retain eight chaplains; a duke or a bishop, six; a marquis or earl, five; a viscount, four; a baron, knight of the Garter, or lord chancellor, three; a duke, marchioness, countesses, baronets, the treasurer and comptroller of the king's house, the king's secretary, dean of the chapel, almoner, and master of the rolls, two each; the chief justice of the king's bench, one; all of whom may purchase a licence or dispensation, and take two benefices with cure of souls. Stat. 22 Hen. VIII. c. 13.

Every judge of the king's bench and common pleas, the

chancellor
chancellor and chief baron of the exchequer, the king's attorney and solicitor-general, may each of them have one, entitled to one benefice with cure, and non-residence. Stat. 27 Hen. VIII. c. 16.

And also the groom of the bedchamber, treasurer of the king's chamber, and chancellor of the duchy of Lancaster, may retain each one chaplain. Stat. 27 Hen. VIII. c. 27. A chaplain must be retained by letters testimonial under hand and seal, or he is not a chaplain who is retained, and a chaplain thus qualified may hold his livings, though disowned from attendance, once the name of a chapel has been fixed; though he may retain other chaplaines in his family, quality one of them to hold pluralities whilst the first is living. - Rep. 92.

The first chaplains are said to have been instituted by the ancient kings of France, for preserving the chapel, or capes, with the other relics of St. Martin, which the kings kept in their palace, and carried out with them to the war. The first chaplain is said to have been Guile de Melun, chaplain to St. Louis. Preachers to and at the last regent had its chaplain. Regent's chaplains were afterwards reduced and put on half pay during the war. There remained however of the chaplains, a chaplain general, who directed the performance of church service, throughout the year.

CHAPLAIN in the order of Maltes, is used for the second rank, or class, in that order; otherwise called deacon. The knights make the first class, and the chaplains the second.

Chaplains of the pope, are the auditors or judges of causes in the sacred palaces to be held, because the pope anciently gave an office in his chapel, for the decision of causes sent from the several parts of Christendom.

He likewise summoned as. indefatigably the most learned lawyers of his time, and they hence acquired the appellation of capellani capellani.

It is from the decrees formerly given by the deacon, that the body of decreta is composed: their number pope Sixtus IV. reduced to twelve.

Some day, the manner of relics were covered with a kind of tent, cape, or capella, i.e., the cape; and that hence the priests, who led the cars of them, were called capellani. In time, their relics were regulated in little churches, either contiguous to a chapel, or separate from it; and the same name, capella, which was given to the car, was also given to the place where it was lodged; and hence the priest who superintended it came to be called capellani.

CHAPLET, or Crown, a string of beads, used in the Roman church. A chaplet comprises the number of Patriarch and Apostles, to be recited in honour of God and the Holy Virgin.

Chaplets are sometimes called Prioles. A ROSEMARY is a chaplet of fifteen of Ave Maria's.

Menage derives the world from a word but, because of the resemblance the thing bears to the beads or rosary, chapelet de rosic. The modern Latins call it espaliers; the Italians more frequently rosiere.

Larrey and P. Viré alone fix the first invention of the chaplet by Peter the Hermit, well known in the history of the crusades.

There is a chaplet of our Saviour, consisting of 33 beads, in honour of his 33 years living on earth, instituted by Father Michael, the Camaldulian.

The Orientals have a kind of chaplets which they call chains, and which they use in their prayers, rehearsing one of the perfections of God on each link or bead. The
great monks is said to have 1/3 of these beads, all of precious stones, fine diamonds, others rubies, pearls, &c.

The Turks have like chaplets, which they bear in the hand, or hang at the girdle: but father Dusini observes that they differ from those used by the Romans, in that they are all of the same bigness, and have not that direction of beads; though they confess of fix degrees or colors. Besides, that the monofenes have presently run out the chaplet, the prayers being extremely short, as compared with those words, Pray for us, of the chaplet God, God, God, for each bead.

Besides the common chaplet, they have likewise a larger one, of 1200 beads, woven from fineinition, as being divided by little threads into three parts, or one of which we put our chaplet in, &c. It is called the 7th chaplet, or chaplet of the third, or 3rd order. The thing in having a thin silver wire to make, the number of beads, may add other parts on, the beginning of the chaplet.

He adds, that the Mediterrean chaplet appears to have had its rise from the East, and is said to be the best of all, which the Arabs are said to have acquired, and which we find them using in their prayers. He says that 17th century, having this in common, they took it, and so did others, without any knowledge of how it was made, or by what means.

CHAPLET, or CHAPELLE. In Arthut, a little moulding, cut or carved into round beads, pearls, diamonds, or the like.

A chaplet, in reality, is little else but a baseless enriched with sculpture. See BEAUTY.

CHAPMAN, George, in 24 folios, an early English dramatic writer, the first translator of all the works of Homer, was born in 1505, and partly educated at Trinity College, Oxford, where he was distinguished for classical education. From Oxford he returned to an early age to the Monastery, and cultivated an acquaintance with the wits of that period, Shakespeare, Benet, Marlowe, David, &c. In 1557, he published the first four parts of his works, called Homers Works, &c. In 1567, he published the seventh and eighth, in 1561. Those works were not printed in 1564, and the whole poem, though perhaps not quite as it appears, published by the dedication to queen Mary, and in 1563. Before this period, he was a writer of concordances for several years, he translated the public with dramatic poems, both tragic and comic, many of which were popular. He was a joint writer with Jorden, and rivalled him in fame. In 1614, he published his version of the Gileles, and in a year after completed his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his version of the Gileles, and in 1568, the translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens. He also translated the 4th book of the Odyssey, and from after completing his translation of all Homer's works by the Tintaciamazam and Hyens.
the Homeric compounded epithets, which have been happily employed by his successors. Waller, as Dryden says, could never read Chapman’s Homer without transport; and Pope has derived advantage from the attentive study of it. His critical additions furnish no favourable specimen of an accurate acquaintance with the Greek language. Diod. Brit.

CHAPMAN, EDMUND, an eminent surgeon, and accoucheur, had the merit of giving the first delineation and account of the obstetric forces, invented by the Chamberlens, more than 60 years after their being first used by that family. Of this intelligent and ingenious practitioner, we have only been able to learn, that he was born about the end of the seventeenth, or the beginning of the last century, and after being well instructed in his profession, in some neighbouring county, where he is said to have practised a few years, he came to London, and soon distinguished himself by his superior skill and adroitness, in conducting difficult labours.

The management he adopted consisted in turning the child and delivering the feet, when it presented any other part than the head to the uterine orifice, and in some cases, when the head was the presenting part; and in using the forces in many difficult births, in which it had been usual before to deliver with the crochet.

The Chamberlens, to whom, by general consent, the invention of the forces is attributed, guarded the secret with so much caution, that they avoided calling it infantum, lest it should lead to a discovery. “My father, brothers, and myself,” Dr. Hugh Chamberlen says, (preface to his translation of Mauriceau’s Midwifery) “we have attained to, and long practised a way of delivering women.” Since from Mauriceau we learn, that those fortunate deliverances were achieved by means of an instrument, but of what kind he was not able to inform us, and it remained concealed, or at least no account of it was given to the public, until Chapman published his “Treatise on the Improvement of Midwifery, chiefly with regard to the Operation, with Cashes,” Svo. 1732, that is, nearly twenty years from the time they were first used by the Chamberlens. Chapman’s Treatise is a work of considerable merit. It contains a delineation and description of the forces, in which he had made considerable improvements, with an ample account of the cases, in which they might be advantageously employed. Sometimes, he tells us, he made use of a fillet, but on the whole, he prefers the forces. He condemns the practice of pushing back the coccygis, in difficult births, which was recommended by Deveiler, as well as the opinion, so strongly insisted on by that writer, that labour is frequently rendered tedious and difficult, by the uterus being placed obliquely in the pelvis. Chapman was also author of a small work, “A Reply to Douglas’s first Account of the State of Midwifery in London,” Svo. 1717, in which he ably defends the cause of the men-midwives (or mid-men, as Douglas calls them) against the severe attacks of their adversary. Haldr Bib. Chir.

CHAPOTENSIS, in Writers of the Middle Age, a kind of coin. We do not find any certain account of its value. Du-Cange inclines to think it the same as the CHATUS.

CHAPPAR, a courier of the king of Peria, who carries dispatches from court to the provinces, and from the provinces to the count. The word, in the original Persian, signifies courier.

The poets, M. Tavernier tells us, are not established and regulated in Peria as among us: when the court sends out a chappar, the sultan’s master of the horse furnishes him with a single horse; how long his journey be, and a man to run after him, when his horse is weary, he takes that of the first horseman he meets with, who does not make the least refusal, and funds his own home by the man who follows him.

As for the matter of the new horse he has taken, he must run, or at least, send after the chappar, to retake him, when the chappar dismounts some other horsemans to change him.

CHAPPE, in Heraldry, the partition of an escutcheon, by two lines drawn from the middle point in chief to the two base angles of the field.

The figures or the fides are to be of a different colour from the rest. Mackenzie calls it, A chief part per bend devers, or sineris, or both.

CHAPPE D’AUVERGNE, JOHN, in Biography, a French astronomer, was born at Mauriac, in Upper Auvergne, in 1728. His parents, who were persons of rank and opulence, afforded him every advantage of education, and placed him first in the Jesuits’ College at Mauriac, and afterwards removed him to the College of Louis le Grand at Paris. In his earliest years he manifested a taste for mathematics and design; and employed his leisure hours in drawing plans and making calculations. In acquiring the elements of mathematics and astronomy, he was assisted by a Cartesian, named don Germain; and to the latter of these studies he was so ardently devoted, that he spent a considerable part of such nights as were favourable for his purpose in observing the heavenly bodies. Father de la Tour, who was then president of the college, conceived a high opinion of his talents and performances, and recommended him to M. Caffini, as a young person who deserved peculiar encouragement. Accordingly, this celebrated astronomer employed him in drawing a general map of France, and in the French translation of Halley’s tables, which were published, with considerable additions, in 1752. In the following year, he was engaged by the French government in surveying the county of Biche in Lorraine, and in afterwards marking the true position of that town, in order to complete the local geography of the district to which it belonged. Having accomplished this undertaking to the satisfaction of his employers, he was elected a member of the Royal Academy at Paris, and in 1756, he was appointed assistant astronomer in the room of M. Lalande, who had been promoted to the rank of associate. In 1760, he was occupied in making observations on the two comets, which then appeared, and in forming, by means of his observations, a theory of their orbits. He communicated to the academy at the same time, an account of the zodiacal light, and of the aurora borealis, which he had a favourable opportunity for observing. At this period he prepared for an expedition to Tobolik in Siberia, in order to observe the transit of Venus over the sun, which was to happen on the 6th of June, 1761; and after encountering many difficulties, and pursuing a route of about 600 leagues from Peterburgh, arrived at the destined place of observation on the 10th of April.

M Himacoff, the governor of the town, to whom he presented the order of the emperors, received him with respect, and afforded him every necessary assistance in accomplishing the object of his expedition. He lost no time in constructing an observatory, and in fixing and adjusting his instruments; and by means of a solar and lunar eclipse, he was enabled accurately to settle the longitude of the place. His observations of the transit, which were made with great precision, in the presence of M. Himacoff, count Pouchkine, and the archbishop of Tobolik, were speedily transmitted both to Peterburgh and Paris. The severity of the climate, which injured the abbé Chappe’s health, and other circumstances, induced him to halt his return; and having visi-
fited the mines at Cathhunburgh, of which he has given an interesting account, he proceeded to Cahan, and at length, after a journey of much fatigue and danger, arrived at Petersburg.

Declaring the offer which the empress made him of the place that had been occupied by Mr. de Laff, he returned to France in 1762, after an absence of two years. In the course of his perspective to and from Tobolke, he availed himself of such opportunities as occurred for investigating the nature of the soil and its productions; the rivers, mountains, coal, canes, animals, and minerals; the manners and customs of its inhabitants; and for collecting such particulars of information as might serve to improve an acquaintance with the extensive empire of Ruffia.

Upon his return he applied with diligence to the arrangement of the various materials which he had collected; and from these he formed a narrative of his travels, illustrated with charts and several engravings of different kinds, and comprehended in a work, which appeared in 1763, in 3 vol. 4to. It was nothing indubious in the discharge of his official duties, as assistant after the death of the prelate of the infaubrity of Quadrant, the 1st in June 1769, it was re-foredoom imposed, that it might be advantagesously employed in the north west part of Europe; but it was necessary to obtain a series of observations to the south-west, at the extremity point of California, viz. at Cape St. Lucan. The Abbé Chappel left for Mexico and, proceeding to Calix, he filled in a field which he had driven through, and expected as a visitation, and received California 19 days before the computed day of observation. At this time an alarming disorder prevailed in the district of California, where he proposed to make his observations, and he was advised to remove out of the reach of danger. But his zeal for the promotion of science was such, that before his departure from France, he replied to those who opposed him of the infalubrity of the climate, "That if he were here of dying the day after making the proposed obervation, that abundance should not deter him." Accordingly, he determined to remain at the village of St. Joseph, where he completed 15 observations in the most satisfactory manner. Three days after the death of the prelate, he was attacked with the disorder, which had before feized his companions; but his resolution was invincible. On the 18th of June, when he was thought to be in a flat of convulsion, he inquired on looking up to observe a lunar eclipse, and this occasioned a relapse. During the progress of his disorder, and as it approached to the fatal crisis, while he declared his convict on that he should not survive, he also expressed his satisfaction, that the object of his mission had been accomplished before his death, which happened Augst 11, 1769, in his 42d year. His papers were transmitted by M. Paul, a French engineer, the only survivor of this expedition, to the French Academy, and afterwards published under the direction of the youngest Callin. The Abbé Chappel was a lively, cheerful, social disposition, upright in his views, and candid in his conduct: devoted to the pursuit of science, and in a great degree remiss of all considerations of private interest. The brief history above given enunciates his incomparable firmness and intrepidity.

CHAPPEL, SUR CHAPEL.

CHAPPEL, William, in Biography, a pious and learned prelate, was born in 1782 at Lexington in Nottinghamshire, and educated at Chittis college, in the University of Cambridge, of which he became fellow in 1707. Having no prospect of advancement, he continued at college and devoted himself to the business of tuition, for which his talents, disposition, and general character peculiarly qualified him. As a difputant he was skilful and formidable; and it is said that on occasion of an act performed when king James visited the university in 1624, he pulld his respondent, Dr. Roberts of Trinity college, so hard, that, unable to maintain the contest, he fainted away. The king attempted to support him, but without success; upon which he declared himself happy that no recumbent a champion was at the same time so good a subject. By the interest of Laud, bishop of London, he was promoted, in 1633, to the deanship of Caph in Ireland; and to the provostship of Trinity college, Dublin, in 1634.

Subservient to the view of government in opposing that puritanical spirit, which very much prevailed in both kingdoms, he conducted himself with that temper and steadiness of discipline which awakened the spirit of his appointment; and in recompence of the services which he performed, he was promoted, in 1638, to the bishoprics of Cork, Clon Gui, and Ros, and was allowed to hold his provostship till the year 1642. Apparently, however, of the gathering forces, he withdrew his high prelates for the time being; and, in England, in 1644, his studies and imprisonment were exhibited against him before the lords, to which he was unable to give a satisfactory reply; and that his conduct, whatever might be the general tenor of it, was in some degree certain, he may reasonably presume from the circumstances of his having for his two sons all advanced private usher and Dr. Mellor, bishop of Meath, and also from his acquittal to the great patronage of Lord and Wentworth. At length he obtained leave to embark for England; but at Tynby, soon after his arrival, he was committed to gaol, on account of his having left Ireland without licence, and deposed in custody for seven weeks. His misfortunes were further gravated by the loss of the ship in which most of his property and his books were embarked. This reduced almost to a state of indigence, he returned to his native county; and having afterwards fixed his residence at Derby, he died there in 1659. Although he was a man of acknowledged learning, his publications were few. His "Mathematical Compendium," was printed at London in 1643, 8vo, as an English translation, entitled, "The True Mathematicks, in England," and published in 1644. His other works were "The Use of Holy Scripture," Lond. 1657, 8vo, and his own life "Vita Gallici Chappel," two years printed. Bosc. Hist.

CHAPPEL HILL, in Geography, a small-town of America, in Orange county, N. Carolina, seated on a branch of Newhope creek, which discharges itself into the N.W. branch of Cape Fear river. This spot has been selected for the seat of the University of North Carolina, which was opened for students in 1795. This town is placed on a beautiful eminence, and commands an extensive prospect of the surrounding country; 12 miles S. of E. of Hiliborough, and 472 S.W. of Philadelphia. N. lat. 35° 40'. W. long. 79° 0'.

CHAPPELLES, in Geography, a town of France, in the department of the Aube, and district of Barse-Sur-Seine; 10 miles S. E. of Tires.

CHAPPELES, or CHAPELLES, in Military Language, are barrels that are made use of for covering other filled with powder, the better to prevent it, and to prevent any of it from being lost by falling or finding its way through between the flaves of the barrels containing it when they are moved, broken or jolted. The name of chappe or chapelle, is also given to a plastering of cement, which is spread over all the raults of founderies, bombs, proofs, and magazines, to prevent any moisture or humidity from penetrating. This appellation is likewise given to a composition of earth, hork-dung, and hair, that is employed for covering the mould of a cannon or mortar.
CHAPPOY, in Geography, a town of France in the department of Sura; 25 leagues S. E. of Salins.

CHAPPIRE, a town of South America, in the country of Chil, and jurisdiction of Coquimbo.

CHAPTAKE, in Botany, Venetaus. See PERESDIUM.

CHAPTER, Capitulum, a community of ecclesiastics belonging to a cathedral, or collegiate church.

The chief or head of the chapter, is the dean; the body consists of canons, or predantas, &c. See Dean.

The chapter has now no longer any share in the administration of the diocese, during the life of the bishop; but succeeds to the whole episcopal jurisdiction during the vacancy of the see.

The origin of the chapters is derived from hence, that anciently the bishops had their clergy residing with them in their cathedrals, to assist them in the performance of sacred offices, and the government of the church; and even after parochial settlements were made, there was still a body of clerks who continued with the bishop, and were indeed his family, maintained out of his income. After the monastic life grew into request, many bishops chose monks rather than seculars for their attendants.

These bodies, either of monasteries or seculars, then had the same privilege of chusing the bishop, and being his council, which the whole clergy of the diocese had before; but, by degrees, their dependence on the bishop grew less and less; and then they had distinct parishes of the bishop's diocese assigned them for their maintenance; till at last, the bishop had little more left than the power of visiting them. On the other hand, these capitular bodies by degrees also lost their privileges; particularly that of chusing the bishop, for which the kings of England had a long struggle with the pope; but at last Henry VIII. got this power vested in the crown; and now the deans and chapters have only the shadow of it.

The same prince likewise expelled the monks from the cathedrals, and placed secular canons in their room; tho' he thus requited, are called deans and chapters of the new foundation such as Canterbury, Winchester, Worcester, Ely, Carlisle, Durham, Rochester, and Norwich: such also are the chapters of the four new sees, of Peterborough, Oxford, Gloucester, and Bristol.

Chapter is also applied to the assemblies held by religious and military orders, for deliberating on their affairs, and regulating their discipline.

Papists say they are so called, quod capitula ibi legentur.

The establishment of general chapters of religious orders is owing to the Cillergians, who held the first in 1116, and were soon followed by the other orders.

Chapter is also used for a division of a book; contrived for keeping the matters treated therin more separate, clear, and distinct.

The reformaters were uneaunticised with the division of books into chapters and fections. Papists say, the name chapter, capit, arose hence, quod fit altius fictiion capit, or quod capitatio toin summation. St. Augilius compares chapters to inns, as much as these refresh the reader, as those the traveller.

The division of the Bible into chapters is attributed by some to Stephen Langton, archbishop of Canterbury, in the reigns of king John and Henry III. But it was really done by Cardinal Hugo, who flourished about the year 1240, the author of the first Scripture Concordance, with a view of rendering this work an useful index to the Scripture. See BIBLE and CONCORDANCE. The chapters were again subdivided, not into verses, but by the letters A, B, C, D, E, F, G, placed in the margin at an equal distance from each other, according to the length of the chapters. In some, all the seven letters were used; in others, fewer, as the length of the chapters required. In 1445, Rabbi Nathan, a famous Rabbi among the Western Jews, finished a Concordance to the Hebrew Bible, in the manner of Hugo's above mentioned; and introduced the division of the Hebrew Bible into chapters: he also improved on his plan, by using the actual division into verses, and by numbering them, fixing the numerical letters in the margin at every fifth verse. Athens, in his edition of the Bible, 1661 and 1677, introduced the Indian figures, and placed them at every verse. Vatulius published a Latin Bible, in which the same kind of division was adopted; though some say this division and division by numbers were first used in R. Stephen's Latin Bible, published at Paris, 1553. R. Ste- phens made the same division of the chapters of the New Testament into verses, for the sake of a concordance to the Greek Testament, which was printed by his son H. Stephens.

Chapters, the three, is a phrase famous in Ecclesiographical History, signifying a volume published by Theodoret, an adherent of Nestorius, against St. Cyril, confining a letter of Ibas priest of Nisibis, to Mars a bishop of Persepolis; from extracts from the works of Diodorus and Taurus, and Theodore of Moppehtis, wherein the fame doctrines were taught, that were contended for by Nestorius; and of two pieces of Theodoret, the one against the council of Ephesus, the other against the anathemas of St. Cyril.

They make the famous three chapters; which were first condemned by an edict of Julianus, A. D. 344. and since by various councils, and many popes.

CHAPRE. See IMP:RS.

CHAPUZEAU, Samuel, in Biography, a native of Geneva, who became preceptor to William III. king of England, and afterwards governor of the pages of George, duke of Brunswick-Luneburg, in which situation he died "old, blind, and poor," at Zell, in 1701. Of his various works in history, politics, and belles lettres, we shall mention his "Description of Lyons," 1675; "An Account of Savoy;" "L'Europe vivant," or political state of Europe, in 1696; "Prefet State of the electoral House of Bavaria," 1673; "Le Theatre Francois," 1674; several comedies under the title of "La Mule enjouer, ou le Theatre comique." His arrangement and publication of Tavernier's voyages and travels, first printed in French, 1675, 4to, may be reckoned among his most useful labours. In 1693, he published the plan of an "Historical, Geographic, and Philosophical Dictionary," to which he had devoted 15 years; but it never appeared. He complained that Moret had made great use of his MSS. in compiling his own dictionary. Gen. Bing.

CHAIQUILLON, in Geography, a town of Persia, in the province of Segelan, now in ruins; 90 miles N. E. of Zan- reng.

CHAR, a town of Arabia; 140 miles N.W. of Mecca.

Allo, a river of France, which runs into the Boutonne, near St. Jean d'Angely.

Char, in Ichthyology. See SALMO ALPINUS, and CHARR, OR CHARRE.

Char de Neptune, in Natural History, one of the nume-
rous synonymous names of MADREFA LUCIANA, which see.

Char of lead, denotes the quantity of thirty pigs.

Chaka, in Africology, the name of one of the CANE,
vegetables.

Chara, in Botany, (supposed to be fancifully derived from χαμωθ, because, says Professer Marty, it is the joy or de-
light of the water; or rather, if it be worth while to add one uncertain conjecture to another, because it delights in wa-


Obf. Authors are much at variance with respect to the structure of this flower. Haller and Gertner are of opinion, that the yellowish or red globules which are found near the germ, cannot answer the purpose of the anther. "Or what use, inquires the latter author, can a cellular anther which never opens? What effect can be produced by pollen which is not dispersed, and which, if it were dispersed, is to light and vagabond, that it cannot remain on the germ, but must ultimately fall to the surface of the water? It is therefore sufficiently evident, that these globules are not real anthers; but are either mere aerial vessels designed to enable the plant to float on the water, or aborative germ filled with unimpregnated seeds." See Grott. de fruct., vol. 1. intro. p. 14. Dr. Smith acknowledges that as the plant flowers under water, there can be no wonder if the nature of its anther and pollen be obscure; but he has not a doubt with respect to the part in question being a proper anther, and recommends to further inquiry the opinion of the very able Mr. Correa, who thinks that the impregnation may be performed within the stem, by a undefined communication between the anther and germs, and that the five leaves which crown the germ, are not (as has been supposed) the stigma, but the tips of a five-leaved calyx, closely enclosing that part in a spiral manner. The analogy of Hippurus, to which this genus is nearly allied, induces him, also, to conclude that the flower is really a naked one, and that the four leaves which have been thought to constitute the calyx of the female flower, and which are sometimes wanting, are not other than proper leaflets of the plant. Under this supposition he has removed the genus to Monandria Memogynia, with the following essential character: Cal. none. Corn. none. Anther foetid, Stylo none. Berry with many seeds. See L. Bot. 374; and Flor. Brit. vol. i. p. 4. Gertner calls the fruit a one-celled, many seeded nut; and accordingly thus describes that of the most common species: "Trizehropy, a nutclouded with a membraneous integument, which never splits or separates spontaneously from the nut; shell oval-globular, crinkled, brittle, rather thick considering the size of the nut. Seeds bedded in a pale, friable, herbaceous inflan, which fills the cavity of the nut." But from this description the fruit is properly a berry.

Ch. 1. C. ypgiris. Linn. Sp. Pl. 2. Lam. 1. Mart. 2. Hedwig Tab. 32, 33. Eng. Bot. tab. 376. Lam. Ill. 3. Mart. 742. fig. 1. (Equiatorium suffruticans aqua repens: Bann. Prodr. 5. Ger. exim. 1115.) "Stem without prickles, flared; leaves awl-shaped, jointed." Whole herb foetid, brittle. Stems a foot long, thread-shaped, twisted. Leaves about eight in a whorl, erect-spreading, acute, compound, channelled above, bearing the flowers. Anther naked, foetid, depressed, stilly, in its decaying cracking into chinks. Germ surrounded by four leaflets adhering to the anther, egg-shaped, five to eight at the tip. Berry with a thick bark. This, in common with the other species, is often clothed with a greyish pritty matter, which has been supposed to constitute part of the plant, but is really more than an adherent incrustation of calyx and a lining of the water, which is never found on plants growing in ponds or low green grounds.

The plant on natural ground is found in a bright green colour, and in the C. Vulgaris of Dr. Smith, and the C. minor Linnaeus. 1. the fruit of Rass Symphon. The leaves of C. ypgiris, drawn from a species cut with the leaves as in our figure. C. Hippurus. Linn. Sp. Pl. Lam. 1. Mart. 3. Mart. Bot. 407. Lam. 1H. Pr. 2. 32. 33. (Equiatorium suffruticans aqua repens: Pehr. Tab. 175. 175.) "Needs on the stem capillary, crowded." Lam. "Stems and leaves frappulate." Lam. "Stem arrow-shaped, jointed; leaflets with a few often two times a stalk, rather short and broad, prickly thickly on the under part. Flowers in a leafy sole of C. Vulgaris. 3. C. Hippurus. Linn. Sp. Pl. (Equiatorium frappulate: Mart. 1. Lin. tab. 29. fig. 4. E. S. Hippurus Linnaeus. Mart. Bot. tab. 178. 178. fig. 6. (Equiatorium egg-shaped.)" The English names which have been referred to this species by Hudson, Wethering, and Sibthorp, are disputed by Dr. Smith; for he is only a variety of the preceding.

We have specimens now before us, taken many years since in the outlet of Mahim farm, in the Caven district of Yorkshire, which appear to us to be the C. tisdiorn of Linnaeus, but the plant is too marked by its calceolous-corr, that we will not venture to pronounce it specifically distinct from C. Hippurus. 4. C. flexillis, Linn. Sp. Pl. 4. Lam. 4. Mart. 4. Eng. Bot. tab. 170. minor. Lam. 11. Bot. 742. fig. 2. major. "Fruits of the plant without prickles, so rare, broader upwards." Linn. "Without prickles, so transparent; leaves cylindrical, obtuse, somewhat muchoate." Dr. Smith. Whole plant smooth, not frilled. There are two varieties figured by Vaillant (Act. Phils. 1791. tab. 3. fig. 8, 9,) one larger and the other smaller. Specimens of both are before us, both gathered, we believe, in some part of Yorkshire, and it appears to us that Linnaeus has formed his specific character from the former; Dr. Smith his, from the latter. All the species are annual, and grow in ponds and slow ditches, flowering in July and August.

CHARABASA, in Ancient Geography, a town in Africa Propria, according to Ptolemy.

CHARABAI, or TISERIDON, in Geography, a seaport town on the north coast of the island of Java, situated in a country which produces abundance of rice, sugar, coffee, pepper, cotton, &c. which is purchased by the Dutch at a low price: about 130 miles south of Batavia. N. lat. 60'. E. long. 109'.

CHARADE, or CARADE, is sometimes used for amber, (which fee); as also for the juice of the poplar-tree.

CHARABY, in Geography, a town of Persea, in the province of Mozzanderia; 59 miles W. of Asterabat.

CHARACENE, in Ancient Geography, a country of Afia, being the southern district of Sitakai. According to Ptolemy, it was the territory of the town of Charac, which fee.

CHARACENI, a denomination given by Ptolemy to the inhabitants of Charax, on the southern coast of the Tauric Cherbonitis.

CHARACINA, a small country of Afia in Cilicia, in which Ptolemy places the town of Fluvipolus.
CHARACITANI, in Ancient Geography, a people of Spain, placed by Ptolemy in the Tarragonene district. He adds, that they inhabited deep caverns, near the Tagus, into which they retired when they were pillaged by their neighbours.

CHARACOMA, a town of Laconia, situated on the road that passes from Arcadia to Sparta, and to the north of that city.

CHARACOMA, a name given by Ptolemy to a town of Arabia Petraea. Some have denominated it Characomba.

CHARACTER, in a general sense, signifies a mark or figure, drawn on paper, metal, stone, or other matter, with a pen, graver, chisel, or other instrument, to signify, or denote any thing. The word is χαρακτέρι; formed from the verb χαρακτάω, to engrave, impress, &c.

The various kinds of characters may be reduced to three heads, viz. literal characters, numeral characters, and abbreviations.

Character, literal, is a letter of the alphabet, serving to indicate some articulate sound, expressive of some idea, or conception of the mind. See Alphabet.

These may be divided, with regard to their nature and use, into nominis, real, and emblematical. Nominal characters are those we properly call letters; which serve to express the names of things. See Letter.

Real characters are those that, instead of names, express things and ideas. Emblematical, or symbolical characters, have this in common with real ones, that they express the things themselves; but they also have this further, that they in some measure perfect them, and exhibit their form: such are the hieroglyphics of the ancient Egyptians. See Hieroglyphic.

Characters, literal, may be again divided, with regard to their invention and use, into particular and general, or universal.

Particular characters, are those peculiar to this or that nation; or that been said: such are the Roman, Italian, Greek, Hebrew, Arabic, Gothic, Chinese, &c. characters. See each of these articles.

Universal characters are also real characters, and make what some authors call a philosophical language.

The diversity of characters used by the several nations to express the same idea, is found the chief obstacle to the advancement of learning: to remove this, several authors have taken occasion to propose plans of characters that should be universal, and which each people should read in their own language. The character here is to be real, not nominal; to express things and notions; not, as the common ones do, letters, or sounds: yet, to be mute, like letters, and arbitrary; not emblematical, like hieroglyphics.

Thus, the people of every nation should retain their own language, yet every one understand that of each other, without learning it; only by seeing a real or universal character, which should signify the same thing to all people; by what sounds forever each expressed it in their particular idiom.

For instance, by seeing the character δεικτός to signify to drink, an Englishman should read to drink; a Frenchman, boire; Latin, bibere; a Greek, πίνω; a Jew, מַעַרְבָּה; a German, trinken; and so of the rest in the same manner as facing a horse, each people express it after their own manner; but all mean the same animal. This real character is no chimera; the Chinese and Japanese have already something like it. They have a common character which each of those nations understand alike in their several languages; though they pronounce it with such different sounds, that they do not understand a title of the speech of one another.

The first, and most considerable attempts for a real character, or philosophical language, in Europe, are those of bishop Wilkins, and Dalgarne: but these, with how much art ever so contrived, have yet proved ineffectual.

M. Leibnitz had some thoughts the same way: he thinks the great men did not adopt the right method; and adds, it would be probable, indeed, that, by this means, people, who do not understand one another, might easily have a commerce together; but that they have not fixed on true real characters.

According to him, the characters should resemble those used in algebra: which, in effect, are very simple, yet very expressive; without any thing superfluous or equivocal; and contain all the varieties required.

The real character of bishop Wilkins has its just applause: Dr. Hook recommends it, on his own knowledge and experience, as a most excellent scheme; and, to engage the world to the study of it, published some fine inventions of his own relating to it. See Language.

M. Leibnitz tells us, he had under consideration an alphabet of human thoughts; in order to a new philosophical language, on his own scheme; but his death prevented this from being brought to maturity.

M. Lodwick, in the Philosophical Transactions, gives us a plan of an universal alphabet, or character of another kind: this was to contain an enumeration of all such finge founds, or letters, as are used in any language; by means whereof people should be enabled to pronounce truly and readily any language; to describe the pronunciation of any language that should be pronounced in their hearing; so that others accustomed to this language, though they had never heard the language pronounced, should at first be able truly to pronounce it: and, lastly, this character is intended to serve as a standard to perpetuate the sounds of any language. Abrodgm. vol. iii. p. 373.

In the Journal Litteraire, an. 1720, we have a very ingenious project for an universal character: the author, after obviating the objections that might be made against the babel of such schemes in the general, proposes his own: his characters are to be the common Arabic, or numeral figures. The combinations of these nine are sufficient to express distinctly an incredible quantity of numbers, much more than we shall need terms to signify our actions, goods, evils, duties, passions, &c. Thus is all the trouble of framing and learning any new characters at once prevented; the Arabic figures having already all the universality required.

The advantages are immense: for 1. We have here a stable, faithful interpreter; never to be corrupted or changed, as the popular languages continually are. 2. Whereas the difficulty of pronouncing a foreign language is such as usually gives the learner the greatest trouble, and there are even some founds which foreigners never attain to; in the character here proposed, this difficulty has no place: every nation is to pronounce them according to the particular pronunciation that already obtains among them. All the difficulty is, the accustoming of the pen and the eye to affix certain notions to characters that do not, at first sight, exhibit them. But this trouble is no more than we find in the study of any language whatever.

The inflections of words are here to be expressed by the common letters: for instance, the name character shall express a fally or a cell, a horse or a mare, an old hoff or an old mare, as accompanied with this or that distinctive letter, which shall shew the sex, youth, maturity, or age: a letter is
also to express the bigness or size of things: thus, v. g. a man with this or that letter, to signify a great man, or a little man, &c.

The use of those letters belongs to the grammar, which, when once well understood, would abridge the vocabulary exceedingly. An advantage of this grammar is, that it would only have one declension, and one conjugation: those numerous anomalies of grammarians are exceeding troublesome, and arise hence, that the common languages are governed by the populace, who never reason on what is best: but in the character here proposed, men of sense introducing it, would have a new ground whereon to build regularly.

The difficulty, however, is not in inventing the solemn simple, easy, and commodious character, but in engaging the several nations to use it; there being nothing they agree left in than the understanding, and purposing of their common interest. The consideration of a universal language, with respect to the mode of its formation, as well as its advantages and practicability, will be reserved under the article Language.

Characters, literal, may be again divided, with respect to the nations among whom they have been invented, and used, into Greek characters, Roman characters, Hebrew characters, &c.

The character now ordinarily used throughout Europe, is the Latin character of the ancients, which was formed from the Greek, and that from the Phenician, which Cadmus brought into Greece.

The Phenician character was the same with that of the ancient Hebrew, which subsisted to the time of the Babylonish captivity; after which they used that of the Amorians, which is the square Hebrew, now in use; the ancient being only found on some Hebrew medals, commonly called "Mosaic Medals."

Polycrates and others shewed that, beside the Phenician, the Chaldean, Syriac, and Arabic characters were likewise formed from the ancient Hebrew.

The French were the first, who, with the Latin of St. Gregory, admitted the Latin characters. And in a provincial synod, held in 1091, at Leon in Spain, the use of the Gothic characters invented by Ulflas was abolished, and the Latin ones established.

Medallists observe, that the Greek character, consisting only of majuscule letters, has preferred its uniformity on all medals as low as the times of Gallienus; there being no alteration found in the turn of the character, notwithstanding the many considerable ones both in the use and pronunciation. From the time of Gallienus, it appears somewhat weaker and rounder: from the time of Constantine to Michael, the space of 500 years, we find only Latin characters; and after Michael, the Greek characters recommence, but from that time they began to alter with the language, which was then a mixture of Greek and Latin.

The Latin medals preserve both their character and language as low as the translation of the feast of the empire to Constantinople. Towards the time of Decius, the character began to alter, and to lose of its roundness and beauty: some time after it retired itself, and subsisted tolerably till the time of Julian; when it fell into the flat barbarity mentioned under Michael; though it afterwards grew worse, and degenerated into the Gothic; so that the rounder and better formed the character is on a medal, the greater pretence it has to antiquity.

Characters, numeral, are those used to express numbers.

Numerical Characters are either letters, or figures, otherwise called digits. The kinds now chiefly in use, are the Common and the Roman: to which may be added the Greek, and another called the French character; as also the letters of other alphabets which have been made use of to express numbers. The common character is that ordinarily called the Arabic, as supposed to have been invented by the Arab astronomers; though the Arabs themselves call it the Indian character; as if they had borrowed it from the people of India.

The Arabic characters are ten, viz. 1, 2, 3, 4, 5, 6, 7, 8, 9. In the East, all the letters are called abjad.

The Arabic character is used almost throughout Europe, and that on almost all occasions; in commerce, in measuring, in astronomical calculations, &c.

The Roman character, consists of the majuscule letters of the Roman alphabet: whence probably its name: or, perhaps, from its being used by the ancient Romans on their coins, and in the inscriptions of their public monuments, erected in honour of their gods and great men; on their sepulchres, &c.

The numeral letters that compose the Roman character are in number seven, viz. I, V, X, L, C, D, M. The I denotes one, V five, X ten, L fifty, C a hundred, D five hundred, and M a thousand. The 1, repeated twice, makes two, 11; threes, three, 111; four is expressed thus, IV, I before V or X: taking an unit from the number expressed by each of those letters. To express six, an I is added to a V, VI; for seven, two, VII; and for eight, three, VIII: time is expressed by an I before X, IX, agreeably to the preceding remark.

The like remark may be made of the X before L or C, except that the diminution is by tens, not units: thus, XL signifies forty, and XC, ninety; an L followed with an X, sixty. LX, &c. The C before D or M, diminishes each by a hundred.

Besides the letter D, which expresses five hundred, that number may also be expressed by an X before a C inverted, thus, IX; and thus, in lieu of the M, which signifies a thousand, is sometimes used an I between two C's, the one direct, the other inverted: agreeable to this, six hundred may be expressed IDC; and seven hundred, IDC, &c.

The addition of C and D before, or after, raises CID by tens, thus, CCCI00, 10000; CCCI000, 100,000, &c.

This is the common way of notation, formerly used by the Romans; who also expressed any number of thousands by a line drawn over any numeral less than a thousand; e. g. V, 5000; LX, 60,000: so likewise M is 1000,000; MM is 2,000,000, &c.

Besides which, (I) certain liberties or variations have been admitted, at least by some modern writers; e. g. IIX, 8; ICIX, 89. (II) And certain characters have been used, which seem to have been derived from the letters; e. g. M, by which they express (Mille) 1000, was formed from CX, or CI; half of which, viz. IX, being reduced to 9. (III) And for the easier writing of these characters, 1, 10, 100, 1000, &c. have been altered into D; 100 into A; or V; 3, CI into oo or 4; whence X, 1000; or, 200, 200, V, X.

In Roman inscriptions, we meet with the characters Q and E, used to express a thousand. The usual note of a thousand, is either I between two CC's (direct and reversed) thus, CI0; or else X, thus, CX0. The former figure, when closed at top, exactly resembles an ancient M, thus, Q; and the latter, when that top, the figure of 8, inclined thus oo.

We also find in some inscriptions, the character E, which is X between two CC's, but closed on all sides. But the learned Dr. Taylor seems to suspect the accuracy of the copy
copy of the inscription from whence this character is taken. See Phil. Trans. N. 482, § 2.

As to the origin and use of the character X, so often met with on the coins, utensils, and manuscripts of the ancients, see X.

Greek numerals. The Greeks had three ways of expressing numbers. (1.) The most simple was, for every single letter, according to its place in the alphabet, to denote a number from a to ω 24; in which manner the books of Homer’s Iliad are distinguished. (II.) Another way was by dividing the alphabet into, (1) 8 Units: α ω, β 2, &c. (2) 8 Tens: α0, α 20, &c. (3) 8 Hundreds: α 100, a 200, &c. N. B. Thousands they expressed by a point, or accent under the letter, e. g. α 1000, β 2000, &c. (III.) A third way was by fix capital letters, thus, Π [a for μ], ΠΙ [πιν] 10, ΠΙI [πιλ] 20, ΠΙII [πιλλ] 30, ΠΙΠ [πιπ] 40, ΠΙΠΙ [πιπι] 50, ΠΙΠΠ [πιππ] 60, ΠΠΠ [πππ] 700, ΠΠΠΠ [ππππ] 800. Of these letters, they expressed unities, e. g. Ν or Ν Ν Ν 1000, Ν Ν Ν 1000, Ν Ν 1000, Ν 1000, Ν 1000, Ν 1000. From these complete or round numbers, if they may be so called, they formed compound numbers, as in the following table:

<table>
<thead>
<tr>
<th>Ν 1</th>
<th>11</th>
<th>110</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>134</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>348</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>653</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>863</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>1001</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>1071</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>1071</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>4074</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>6008</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>1727</td>
<td></td>
</tr>
</tbody>
</table>

It is to be observed, that the number 15 was never expressed by Π, according to the above mode of notation, but it is denoted by ΠΙ, being 6 and Π, the sum of which is 15. For the same reason, ΠΙ and 7 is used instead of Π 10 and 6, to express 16.

The 22 Hebrew letters express numbers as far as 4000: and the 5 remaining hundreds, under one thousand, are expressed by different forms of 5 of the letters, which seems to have been invented on purpose to express them.

It has been above observed, that five letters of different forms, called the final letters, were invented in order to affix or particularize the Hebrew numeration. This scarcely admits of a doubt, when it is considered, that as 5, and only 5; of the several hundreds wanted each a single letter, and as 5, and only 5; of these different forms were invented; therefore those forms were invented to express those remaining hundreds. The different forms of these 5 letters have been used at the end of words, perhaps, ever since their first invention. It is therefore probable, that if we could fix the age of these final letters, we might then fix the time, when the Bible numbers were expressed by single letters. These final numbers are not known to the Samaritans, and as they are not at all wanted to express words, and yet are used in the Bible, we may hence conclude, that they were first introduced into the Bible for the purpose of numbers. This is the use made of them by the Jews in their own writings; and indeed they are admitted, even now, into the Jewish Commentaries, as printed with the Hebrew text. See H. S. Jarchi on Gen. xxx, 8. As the age of these final numbers tends to fix the age of these numeral letters; it may be observed, that the final Mem is mentioned in the Talmud of Babylon; and that the authors of both Talmuds speak of the five final letters as of great antiquity, even in their time. St. Jerome also, in his preface to the book of Kings, mentions the final letters as equally in use with the 22 letters; and as his Hebrew MSS. might be 200 years old, if the final numbers were in his MSS. it follows, that they must have been used soon after the time of Christ. If, therefore, we may infer from Jerome, that the final letters were used in the Hebrew MSS. at the latest, about 200 years after Christ, we may infer from the Greek version, that they were not used in the Hebrew MSS. till about 100 years before Christ. Dr. H. Bodio tells us, that the book of Jeremiah was translated into Greek about 130 or 140 years before Christ, and from this version of Jeremiah, (ch. xxxviii, 8) it seems clear that the final letters were not then in the Hebrew text. For in that verse the 7 letters קינעכ (which are here 2 words, and properly signify to avus; τυπας) are rendered in all the copies of the Greek version τυπας. But such a rendering, being the proper Greek of קינעכ, which is one word only, shews that the ק was not then (κ) mem finally since the final Κ would have divided the letters into two words, and prevented such a wrong translation. Dr. Kennicott has applied these observations to the purpose of accounting for the corruption of the Hebrew text in its numeral letters. See his second dissertation on the state of the printed Hebrew text, &c. p. 212.

Character, French. It is called, because invented, and chiefly used by the French, is more usually denoted, character of account, or finance.

It consists of fixed figures; partly taken from the letters of the usual current hand, and partly invented by the contriver; the fixed characters are j, b, s, L, C, g, c. The j confounded standing for one, the b for five, the s for ten, the L for fifty, the C for a hundred, and the last character g for a thousand.

This character is only an imitation of the Roman character; and in its use in most respects the same, particularly in what relates to the combination of certain letters, which cancel before or after others, diminish or increase their value. Indeed it has these things peculiar in it, that when several things occur successively, only the last is expressed. 2dly, That sinity, and the following numbers to one hundred, 3 P 2 are
are expressed, thus, \( jijj \times j ij \), ninety; \( jijj \times j ij \), ninety one; \( jijj \times j ij \), &c.

It is principally used in the chambers of accounts, in the accounts given in by treasurers, receivers, farmers, and other persons concerned in the management of the revenue.

Characters in Printing, denote the letters or types, by the various arrangement whereof are composed forms; whence impressions are taken, by means of a press, on paper. For the method of calling these Characters, see Letter Foundery. For other characters in Printing, see Correction.

Character, is also used in several of the arts, for a symbol, contrived for a more concise, immediate, and artful conveyance of the knowledge of things.

In this sense of the word, Paulus Diaconus refers the invention of characters to Eumius; who, he says, contrived the first eleven hundred. To these were many more added by Tyro, Cicero's freedman, and by Philagryus, Faunus, and Aquila, freedmen of Macenas.

Laity, L. Ananus Senece made a collection of them, reduced them into order, and increased their number to five thousand. Tyro's notes may be seen at the end of Gruter's inscriptions.

Valerius Probus, a grammarian, in the time of Nero, laboured to good purpose in explaining the notes of the ancients. P. Diaconus wrote an ample treatise of the explication of the characters in law, under the reign of the emperor Conrad I.; and Goltzius another for those of medals.

Characters, or symbols, are now chiefly affected in the several parts of mathematics; particularly in algebra, geometry, trigonometry, and astronomy: as also in medicine, chemistry, music, &c. The principal of each kind we shall here subjoin.

Characters used in Arithmetic and Algebra.

\( a, b, c, \) and \( d \), the first letters of the alphabet, are the signs or characters that denote given quantities; and \( x, y, z, \) &c. the last letters, are the characters of quantities fought. Some for the former, use consonants, or large letters; and vowels, or small ones, for the latter.

Stifelius first used the capitals \( A, B, C, \) &c. for the quantities, unknown or required. Afterwards, Vieta used the capital vowels \( a, e, i, o, u, y, \) for quantities, unknown or required, and the consonants \( B, C, D, \) &c. for known or given numbers. Harriot changed Vieta's capitals into the small letters \( a, b, c, d, \) for unknown, and \( e, f, g \), &c. for known quantities. And Des Cartes changed Harriot’s vowels for the latter letters \( z, y, x, \) &c. and the consonants for the first letters, \( a, b, c, d, \) &c.

Note. Equal quantities are denoted by the same character.

For the method of expressing the powers of quantities. See Algebra.

\( m, n, r, s, t, \) &c. are characters of indeterminate exponents, both of ratios and powers: thus \( x^2, y^3, z^4, \) &c. denote indeterminate powers of different kinds; \( m, n, r, s, \) different multiples, or submultiples of the quantities \( x, y, z, \) according as \( m, n, r, \) &c. are either whole numbers or fractions.

\( a, b, c, \) the basis of addition, is called the affirmative, or positive sign, and is read plus, or more; thus \( 9 + 3, \) is read \( 9 \) plus \( 3 \); or \( 9 \) more \( 3 \); that is, the sum of \( 9 \) and \( 3, \) equal to \( 12 \).

When this character is set before any single quantity, it denotes that it is an affirmative or positive quantity; when it is set between two or more quantities, it denotes their sum, showing that the latter are to be added to the former. It is not easy to ascertain when, or by whom, this sign was first introduced; but we owe it probably to the Germans, and it seems to have been first used by Stifelius in his arithmetic printed in 1544. The early writers on algebra used the word plus in Latin, or pis in Italian, for addition; as they used minus, or mene. or merely the initial \( m, \) for subtraction; and thus these operations were denoted in Italy by Lucas de Bergo, Tartalea, and Cardan, while the signs + and − were employed much about the time in Germany by Stifelius, Scheubelius, and others, for the same operations.

— Before a single quantity, shows the quantity to which it is prefixed to be a negative quantity.

Between quantities, it is also the sign of subtraction, and is read minus, or lef; thus \( 14 - 2, \) is read 14 minus, or abating 2; that is, the remainder of 14, after 2 has been subtracted, viz. 12. This sign first occurs in Stifelius.

Is the sign of equality: thus, \( 9 + 3 = 12 \); signifies 9 plus 3, to be equal to 14, minus 2.

This character was used by Robert Recorde, and after him by Harriot: Des Cartes in lieu of it uses 22.

Wolfius, and some other authors, use the same character, =, for the identity of ratios; or to denote the terms to be in a geometrical proportion; which most authors express thus::

\[ x \] is the sign of multiplication, denoting the quantities on either side to be multiplied into one another, and was introduced by Oughtred; thus, \( 4 \times 6 \), is read 4 multiplied by 6; or the factum, or product of 4 and 6 = 24; or the rectangle between 4 and 6.

Ordinarily, however, in algebra, the sign is omitted, and the two quantities put together: thus \( bd \) expresses the product of the two numbers denoted by \( b \) and \( d \), which suppose 2 and 4, the product whereof is 8, signified by \( 8 \).

Wolfius, and others, make the sign of multiplication a dot (.) between the two factors: thus \( 6.2 \) signifies the product of 6 and 2 = 12.

Where one or both the factors are compounded of several letters, they are distinguished by a line drawn over them: thus, the factum of \( a + b - c \) into \( d \), is written \( d \times a + b - c \).

Guido Grandio, and after him Leibnitz, Wolfius, and others, to avoid the perplexity of lines, in lieu thereof distinguished the compound factors, by including them in a parenthesis, thus \( (a + b - c) \).

The parenthesis \( ( \), as a vinculum, was invented by Albert Girard, and used in such expressions as these \( \frac{1}{2} \times 5 \), and \( B \) \( (B + C) \), both for universal roots, and multiplication, &c. The straight-lined vinculum \( — \) was used by Vieta for the same purpose: thus \( A - B \) in \( B + C \).

\( \div \) is the character of division, and was introduced by Dr. Pell: thus, \( a \div b \) denotes the quantity \( a \) to be divided by \( b \).

Indeed, ordinarily, in algebra, the quotient is expressed fraction-wise; thus, \( \frac{a}{b} \) denotes the quotient of \( a \) divided by \( b \).

Wolfius, &c. make the sign of division (:) thus, \( 3 : 4 \) denotes the quotient of 3 divided by 4 = 2.

If either the divisor or dividend, or both, be composed of several letters, e.g. \( a + b \), divided by \( c \); instead of writing the quotient fraction-wise, thus, \( \frac{a + b}{c} \), Wolfius, &c. include the compound quantities in a parenthesis; thus, \( (a + b) : c \), or \( (a + b) : c \).

\( \otimes \) is the character of multiplication, or of producing the square of any quantity, by multiplying it by itself.
The character of evolution, or of extracting the roots out of the several powers, the reverse of √. Both these characters were used by Dr. Pell.

7. The sign of majority, or of the excess of one quantity beyond another: some use this \( \sqrt{\), or this \( \).}

8. The sign of minority. These two characters were first introduced by Harriot, and have been since used by Wallis and Lamy. Other authors use others; some use this \( 2 \).

9. The sign of fluence, commended in the Miscellanea Beroliniania, and used by Leibnitz, Wolius, and others; though the generality of authors use none.

The same character is used by other authors for the difference between two quantities, while it is yet unknown which is the greater. It was introduced for this purpose of denoting a general difference by Dr. Wallis.

\[ \sqrt{\] is the character of radicality, and shows that the root of the quantity, to which it is prefixed, is extracted, or to be extracted: thus \( \sqrt[3]{25} \) or \( \sqrt[4]{25} \) denotes the square root of 25, viz. 5; and \( \sqrt[3]{25} \) the cube root of 25. This sign is derived from the initial R or r of radix or root, which was used at first by Paciolius, Cardan, &c. The character \( \sqrt{\) seems to have been first used by Stifelius in 1544, and by Robert Record in 1557. At first they used the initial of the name after it, to denote the several roots: as \( \sqrt[3]{\) the quadratic or square root, and \( \sqrt[4]{\) the cubic root. But the numerical indices of the roots were prefixed by Albert Girard, just as they are now used, viz. \( \sqrt[3]{\), \( \sqrt[4]{\), \( \sqrt[5]{\), the 2d, 3d, or 4th root. See Root.

This character sometimes affects several quantities distinguished by a line drawn over them, thus, \( \sqrt[3]{b + c} \) denotes the square root of the sum of \( b \) and \( c \).

Wolius, &c. in lieu hereof, includes the roots composed of several quantities in a parenthesis, adding its index: thus, \( (a + b - c)^{3} \) denotes the square of \( a + b - c \), ordinarily written \( a + b - c^{2} \).

\( \therefore \) Is the character of arithmetical proportion disjunct; thus, \( 7:3:13:9 \), intimates \( 3 \) to be exceeded by \( 7 \), as much as \( 9 \) by \( 13 \); viz. by \( 4 \).

\( \therefore \) This is the character of identity of ratio, and geometrical proportion disjunct; thus, \( 8:4::30:15 \), expresses the ratio of 30 to 15, to be the same with that of 8 to 4; or that the four terms are in geometrical proportion, viz. \( 8 \) and 4, as \( 30 \) and \( 15 \). This character was introduced by Oughtred.

Wolius, in lieu hereof, uses the character of equality \( \equiv \); which he prefers to the former, as being more fictitious and expressive.

\( \therefore \) The character of geometrical proportion continued, implying the ratio to be carried on without interruption: thus, \( 2, 4, 8, 16, 32, \) \( \equiv \) are in the same uninterrupted proportion. This mark was introduced by Oughtred.

When one or more terms in an equation are wanting, their places are usually marked with one or more afterfifths; \( \frac{a}{y} + \frac{p}{y} + \frac{q}{y} \) \( \equiv \) \( o \).

\[ \text{Algebra and Arithmetic.} \]

\[ \text{Character of Decimals. See Separatrix.} \]

\[ \text{Characters used in Astronomy.} \]

\[ \text{Herfchel, or Georgian planet.} \]

\[ \text{Saturn.} \]

\[ \text{Jupiter.} \]

\[ \text{Mars.} \]

\[ \text{Aries.} \]

\[ \text{Taurus.} \]

\[ \text{Gemini.} \]

\[ \text{Cancer.} \]

\[ \text{Leo.} \]

\[ \text{Virgo.} \]

\[ \text{Libra.} \]

\[ \text{Scorpio.} \]

\[ \text{Sagittarius.} \]

\[ \text{Capricornus.} \]

\[ \text{Aquarius.} \]

\[ \text{Pisces.} \]

The characters for the Sun, Moon, Mars, Mercury, Jupiter, Venus, and Saturn, are used to denote the days of the week, viz. Sunday, Monday, &c.

With regard to the mythological signification of these characters, we may observe, that antiquaries and astrologers, according to whose opinion the planets were first distinguished by them, considered them as the attributes of the deities of the same name. The circle, in the earliest periods, among the Egyptians, was the symbol of divinity and perfection, and seems with great propriety to have been chosen by them as the character of the sun; especially as, when surrounded by small strokes projecting from its circumference, it may form some representation of the emission of rays. Some have thought, however, that the character of the sun, \( \bigcirc \), is the picture of a buckler; the middle point of which represents theumbo or boss; and it is observed, that the bucklers of the ancients used to be bright, in order to dazzle the eyes of their enemies, (vid. Plautius, art. i. fe. 1, 6.) Hyde, (de Rel. Vet. Perf. p. 106.) informs us, that the Persians often call the sun by a word which signifies a buckler; and in MSS. the character is often a buckler, seen in a side view; often a cone, which was sacred to the sun, (Porphyri. ap. Enfeb. Præp. Evang. p. 98.) A circle is mentioned as an Egyptian character of the sun, by Clemens of Alexandria, (Strom. l. v. p. 657. ed. Potter.) The femicircle \( \bigoplus \) is, in like manner, the image of the moon, the only one of the heavenly bodies that appears under that form to the naked eye; and accordingly it is thus mentioned by Clemens, (vid. supra.) As to the characters of the planets, the common opinion is, that they were taken from the symbols of those deities whose names they bear: thus, the character of Mercury \( \bigotimes \) is his caduceus or wand, with serpents twining round it; that of Venus \( \bigotimes \), a looking-glass, with a handle; that of Mars \( \bigodot \), a lance and buckler; that of Jupiter \( \bigcirc \), his thunderbolt; or, as others more generally agree, the first letter \( Z \) of his name in Greek, with a stroke through it, as a mark of abbreviation; and that of Saturn \( \bigotimes \), aickle or sythe. (Riccioi, Almag. vii. 1. vol. x. p. 482.) Salmasius, (Plin. Excit. p. 1237.) supposes, that all the characters are the initial letters of the Greek names of the planets. Kircher, somewhat fancifully, (Eddnp. Egypt. t. ii. pars 2. p. 402.) compounds the characters of the planets out of \( \bigodot \) and \( \bigodot \), a crofs + , the mark used for the four elements, and \( \bigodot \), the character of Arics, which he says, denotes fruitfulness.

\[ \text{Characters of the Aspects, Nodes, &c.} \]

\[ S \text{ or } \bigodot \text{ Conjunction.} \]

\[ \bigodot \text{ Sextile.} \]

\[ \bigodot \text{ Quincunx.} \]

\[ \bigodot \text{ Opposition.} \]

\[ \bigodot \text{ Quatril, or quadrature.} \]

\[ \bigodot \text{ Scorpion's head, or ascending node.} \]

\[ \bigodot \text{ Scorpion's tail, or descending node.} \]

\[ \text{Characters of Time.} \]

\[ \text{A. M. (ante meridian) or M. morning.} \]

\[ \text{O. or M. noon.} \]

\[ \text{P. M. (post meridian) or A. afternoon.} \]

\[ \text{Characters, Chemical.} \]

The reasons that have chiefly led
led to the invention of life of chemical characters, are the two following; namely, their conciseness, and the facility which they afford of concealing from the uninitiated the knowledge of valuable or curious facts. The latter reason is that by which the ancient chemists were for the most part influenced; the former is that which has induced some modern chemists to their adoption.

The extensive destruction of chemical books in Egypt, by order of Diocletian, and the combination of the Alexandrian library with the Arabians, in all probability occasioned the loss of many curious facts and processes, and the characters in which they were recorded: the utter incomprehensibility also of many of the early manuscripts on these subjects that are yet extant, (especially those written in Greek or Arabic,) has considerably diminished the number of characters which it is at all worth while to be at the trouble of reproducing.

In the table of ancient chemical characters, Plato Chymista, are comprehended all that are to be found in the printed works of chemists, from the time of Roger Bacon to Bergman. It is obvious, even on a cursory inspection, that some of these are borrowed from the science of astronomy; that others are mere arbitrary signs; and that others are rude types or hieroglyphics; the whole being defective in any uniform system, and very applicable to the use of chemistry, after it had assumed a scientific form.

Bergman, being aware of the unfitness of the old signs, has rejected all except those employed to denote chemical substances: to these he has added others to represent those bodies which were unknown to the older chemists; and has from this whole into a system, capable of expressing in a tabular form, with brevity and clearness, the results of figure and compound affinity, which was the only purpose to which they were applied by this eminent chemist.

When Lavosier had invented the system of chemistry which is at present received, and had reformulated the nomenclature in conformity with it, two of his countrymen, Mellis, Hassenfratz and Aétet, chose to employ themselves in the formation of a species of ctenography to correspond with the terms of the new system, but the good sense of the age being convinced that it was a difficult to add to the necessary difficulties of the most comprehensive of all sciences was wholly needless, has so unaniomously rejected the letters which these gentle- men have taken the trouble to forge, that any criticism upon the subject would be entirely fruitless.

Characters in Commerce

<table>
<thead>
<tr>
<th>Character</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Pounds weight.</td>
</tr>
<tr>
<td>N.</td>
<td>Gross, or number.</td>
</tr>
<tr>
<td>F.</td>
<td>Farthing or price.</td>
</tr>
<tr>
<td>R.</td>
<td>Rial.</td>
</tr>
<tr>
<td>£</td>
<td>Silver, or ducat.</td>
</tr>
<tr>
<td>1 or £.</td>
<td>Leather, pound.</td>
</tr>
<tr>
<td>s.</td>
<td>Shillings.</td>
</tr>
<tr>
<td>£.</td>
<td>Piece, or deniers.</td>
</tr>
</tbody>
</table>

Characters in Geometry and Trigonometry

<table>
<thead>
<tr>
<th>Character</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>A triangle.</td>
</tr>
<tr>
<td>L.</td>
<td>A line.</td>
</tr>
<tr>
<td>P.</td>
<td>A parallelogram.</td>
</tr>
<tr>
<td>R.</td>
<td>A right angle.</td>
</tr>
<tr>
<td>C.</td>
<td>A circle.</td>
</tr>
<tr>
<td>S.</td>
<td>A square.</td>
</tr>
<tr>
<td>A.</td>
<td>An angle.</td>
</tr>
<tr>
<td>D.</td>
<td>A parallelogram.</td>
</tr>
</tbody>
</table>

Characters in Grammar, Rhetoric, Poetry, &c.

<table>
<thead>
<tr>
<th>Character</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Appear.</td>
</tr>
<tr>
<td>C.</td>
<td>Emphatic or accent.</td>
</tr>
<tr>
<td>D.</td>
<td>Dialecitic.</td>
</tr>
<tr>
<td>P.</td>
<td>Period.</td>
</tr>
<tr>
<td>£.</td>
<td>Exclamation.</td>
</tr>
<tr>
<td>£.</td>
<td>Interrogation.</td>
</tr>
<tr>
<td>£.</td>
<td>Parenthesis.</td>
</tr>
</tbody>
</table>

Characters used in the Arithmetic of Infinites.

The character of an infinitesimal, or fluxion, thus, \( \varepsilon \), expresses the fluxions, or differentials of the variable quantities \( x \) and \( y \); two, three, or more dots, denote second, third, or higher fluxions. See Fluxion.

This method of denoting the fluxions, we owe to Sir Isaac Newton, the inventor of fluxions: it is adhered to by the English; but foreigners generally follow M. Leibnitz, and in lieu of a dot prefix the letter \( d \) to the variable quantity; on pretence of avoiding the confusion arising from the multiplication of dots, in the differentiations of differentials.

The character of a differential of a variable quantity, thus, \( dx \) is the differential of \( x \); \( dy \) the differential of \( y \). The character was first introduced by M. Leibnitz, and is followed by all but the English. See Calculus Differentialis.

Characters among the Ancient Lawyers, and in Ancient Inscriptions.

<table>
<thead>
<tr>
<th>Character</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>A.</td>
<td>Arecipe.</td>
</tr>
<tr>
<td>P.</td>
<td>Pater Patriae.</td>
</tr>
<tr>
<td>C.</td>
<td>Code.</td>
</tr>
<tr>
<td>E.</td>
<td>Extra.</td>
</tr>
</tbody>
</table>

Characters in Medicine and Pharmacy.

<table>
<thead>
<tr>
<th>Character</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.</td>
<td>R.</td>
</tr>
<tr>
<td>A.</td>
<td>Ducat.</td>
</tr>
</tbody>
</table>

Is the character of parallelism; implying two lines or planes to be equidistant from one another. See Parallel.

Character in Science is the science of things.
Characters

CONG. Congius, a gallon.
Cobb. Cochlear, a spoonful.
M. Manipulus, a handful.
P. A pulvis.
P. A. Equal quantities.

Characters used in Muse.
Characters of the musical notes, with their proportions.

<table>
<thead>
<tr>
<th>Note</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Large</td>
<td>8</td>
</tr>
<tr>
<td>A Long</td>
<td>4</td>
</tr>
<tr>
<td>Breve</td>
<td>2</td>
</tr>
<tr>
<td>Semibreve</td>
<td>1</td>
</tr>
<tr>
<td>Minim</td>
<td>1/2</td>
</tr>
<tr>
<td>Crotchet</td>
<td>1/4</td>
</tr>
<tr>
<td>Quaver</td>
<td>1/8</td>
</tr>
<tr>
<td>or Semi-quaver</td>
<td>1/16</td>
</tr>
<tr>
<td>or Demi-semi-quaver</td>
<td>1/32</td>
</tr>
</tbody>
</table>

Character of a sharp note. This character at the beginning of a line or space, denotes all the notes in that line or space to be taken a semitone higher than in the natural series. And the same affects all their octaves, above and below, though not marked.

When the character is prefixed to any particular note, it shews that note alone to be a semitone higher than it would be without such character.

Rests or Pauses of Time.

See the Plate Time-table ancient and modern.

Characters on Tomb-stones.
S. V. Sib. Victor; Siby, Traveller.
M. S. Memorii Sacrum; Sacred to Memory.
D. M. Dies Manibus.
IHS. Jesu.
XP. A character found on ancient monuments, about the meaning whereof authors are not agreed. See catalogue.

Characters, in Secret Writing. See Cipher.
Characters, in Swift Writing, or short-hand. See Stenography.

Character is also used for a certain manner, air, or assemblage of qualities, resulting from several particular marks, which disinguish a thing from any other, so as it may be known thereby.

Thus, we say, the character of Achilles; generosity and greatness of mind formed the character of the Romans; Ciceron had a character of politenesse, which is wanting in Democritus; every passion has its peculiar character.

The writers of characters are, Theophrastus, whose fragments are still extant; Du Moulin, in his Exemplar Morum; Paeschal, in his Characters Virtutum & Vitiarum; M. de la Chambre, in his Characters of the Passion: and De la Bruyere, in his Characters and Manners of the Age.

The drawing of characters is one of the most splendid, and, at the same time, one of the most difficult ornaments of historical composition. For characters are generally considered as professed exhibitions of fine writing; and an historian, who seeks to shine in them, is frequently in danger of
CHARACTERS.

of carrying refinements to excess, from a desire of appearing very profound and penetrating. He brings together so many contrats, and subtle oppositions of qualities, that we are rather dazzled with sparkling expressions, than entertained with any clear conception of a human character. A writer, who would characterise in an instructive and masterly manner, should be simple in his style, and should avoid all quaintness and affectation; at the same time not contenting himself with giving us general outlines only, but descending into those peculiarities which mark a character, in its most striking and distinctive features. The Greek historians sometimes give eulogiums, but rarely draw full and professed characters. The two ancient authors who have most laboured this part of historical composition, are Salutii and Tacitus. In describing characters, as well as in relating transactions, the historian should always have himself to be on the side of virtue. To appear neutral and indifferent with respect to good and bad characters, and to affect a crafty and political, rather than moral turn of thought, will, besides other bad effects, derogate greatly from the weight of historical composition, and will render the strain of it much more cold and unintelligible. See History.

Character, is a term in common with all the arts, implying something peculiar and original. In *Moses, perhaps more than in any other art, this term is wanted; as a movement or composition, said to be of a distinct call or character, implies invention. Without some specific stamp or impression, to awaken in the reader the idea of some passion, affection, or sentiment, it is of no character, but resembles Shakespeare's "Fellow without mark or likeness."

It is but in modern times that this kind of stamp has been aimed at or expected. Neither Corelli nor Gemistiani flamed the melodies of their movements with any thing but a kind of wafer feel, regularly barred indeed. Pure and sweet harmony, merrily figures, and pleasing effects are produced in mass of their productions just that innate and striking character, which is in many, felt, which distinguishes a movement from all others, and which, without learned modulation, studied combinations, or ingenious arrangement of the parts, fetizes the attention, impresses itself on the hearer's memory, never to be effaced, is wanting.

Handel has choruses of every species of character, and more fongs than any composer of his time. "Return, O God of Holts," is a sublime supplication. "He was despised and rejected," is impressed with a deep and dignified sorrow. "He shall feed his flock like a shepherd," has a true pastoral call.

Pergolesi, Jomelli, Piccini, and Sacchini, have produced airs of character so frequently, that it is now formed into a principle by men of original genius, such as Pacciuolo, Cunio, and Sarti in Italy, and Emanuel Bach, Haydn, and Mozart in Germany, who have seldom let a movement go out of their hands ere they have affected their feel to it.

Gluck produced great effects by harmony, energy, and bold modulation; but his melodies have seldom any peculiar mark of pathos, grace, or novelty.

Character, in Poetry, especially the epopea and drama, is the result of the manners, or that which each person has peculiar and singular in his manners, whereby he is distinguished from others. In the drama characters are chiefly displayed by means of sentiments and passions; but in the epopea, or epic poetry, which comprehends a greater compass of time and action, and which therefore allows a more full display of characters, they are displayed chiefly by means of actions.

As it is the business of an epic poet to copy after nature, and to form a probable interesting tale, he must study to give all his personages proper and well supported characters; such as display the features of human nature. This is called by Aristotle giving manners to the poem. It is by no means necessary that all his actors be morally good; imperfect, nay, vicious characters may find a proper place; though the nature of epic poetry seems to require, that the principal figures exhibited should be such as tend to raise admiration and love, rather than hatred and contempt. But whatever the character be which a poet gives to any of his actors, he must take care to preserve it uniform, and consistent with itself. Everything which that person says or does, must be suited to it, and must serve to distinguish him from any other. Poetic characters may be divided into two kinds, general and particular: the former are such as are wise, brave, and virtuous, without any further distinction; the latter express the species of bravery, of wisdom, of virtue, for which any one is eminent; they exhibit the peculiar features which distinguish one individual from another, which mark the difference of the fame moral quality in different men, according as it is combined with other dispositions in their temper. In drawing such peculiar characters, genius is chiefly exerted. In this part Homer has particularly excelled; Tasso approaches the nearest to Homer; and Virgil has been the most deficient.

It has been the practice of all epic poets to select some one personage, whom they distinguish above all the rest, and make the hero of the tale. This is considered as essential to epic composition, and is attended with several advantages. It renders the unity of the subject more sensible, when there is one principal figure, to which, as to a centre, all the rest refer. It tends to interest us more in the enterprise which is carried on; and it gives the poet an opportunity of exerting his talents for adorning and displaying one character with peculiar splendour. It has been asked, who then is the hero of "Paradise Lost?" The Devil, it has been answered by some critics; and in consequence of this idea, much ridicule and censure have been thrown upon Milton. But these critics have misunderstood that author's intention, by proceeding upon a supposition that, in the conclusion of the poem, the hero must needs be triumphant. Whereas Milton followed a different plan, and has given a tragic conclusion to a poem, otherwise epic in its form. For Adam is undoubtedly his hero; that is, the capital and most interesting figure in his poem. Blair's Lectures on Rhetoric, &c. vol. iii.

The poetical character, Bolfus observes, is not properly any virtue or quality in particular; but it is a composition of several, mixed and combined in various degrees, according to the occasions of the tale, and the unity of the action. All the single qualities that enter this compound, must not have the same rank, nor be equal to each other: hence, in that cafe, one prevailing on one occasion, and another on another, the character will appear changeable; and the poem, as well as the hero, will seem animated with several fads.

There must, therefore, be one to reign over all the rest; and this must be found in some degree in every part: just as the same hero, in several paintings, should have the same lines and features, how different soever his passions and passions may be.

This first quality in Homer's Achilles, is wrath; in Ulysses, dissimulation; and in Virgil's Aeneas, mildness; each of which may, by way of eminence, be called the character of those heroes.

These are never to go alone, but always are to be accompanied
panied with others, to give them the greater luster; either by hiding their defects, as in Achilles, whose anger is palliated by great courage; or by making them eke out in some solid virtue, as in Ulysses, whose diffudemake makes a part of his prudence; and in Eneas, whose mildness is chiefly employed in a subliminon to the will of the gods.

These secondary qualities of courage, prudence, and sublimination, make the goodness of the characters of those heroes, and even of the poems.

Boffu adds, that the quality of courage must always have a share in the character of a hero, to serve as a support to the reft: the heroic character, therefore, he makes a compound of three kinds of qualities. Those of the first kind are necessary and essential to the fable; those of the second are the supplements, or embellishments of the first; and courage, which fulfills the other two, makes the third.

The first, which is the chief, is to be some universal quality, to have place on all occasions, and to distinguish the hero wherever he is found.

For the unity of character, we have Horace's express command: *Sic quidvis jambibus dantur & una*.

The unity of character is somewhat different from that of the manners: in the latter, the unity or equality consists in not giving contrary sentiments to the same person; which is not sufficient to the unity of character: but to this must be added, that the same spirit must always appear on all occasions, whether contrary or otherwise: thus, Eneas shewing great goodness in the first part of the poem, and much valor in the second, but without discovering any of his former piety, and gentleness; there had been no offence against the eunoms of the manners, but much against the unity of the character.

So that besides the qualities which have their particular place on different occasions, there must be one to have place throughout, and to reign over all the others. Without this there is no character: as would be the cafe, though a poet give his hero the piety of Eneas, and the courage of Achilles, without considering the feverity of the one, and the mildness of the other.

A hero, it is true, may be made as brave as Achilles, as mild, or pious, as Eneas, and, if the writer thinks proper, as prudent as Ulysses; but it would be a mere chimera to imagine a hero, with the particular courage of Achilles, the piety of Eneas, and the prudence of Ulysses, at the same time.

The unity of character is not only to be kept in the hero, and the several other persons of the piece; but also in that of the poem itself: that is, all the characters, how opposite forever, must centre and re-unite in that of the hero; and be so fwayed by it, that this alone may seem to govern throughout the whole. Thus Homer makes wrath prevail throughout the whole Iliad; and artifice and diffudemake throughout the Odyssey; the hero's character is perceived everywhere, and has its full sway, and is favoured by the similitude of the characters of some of the other persons. Virgil had a great difficulty to grapple with to preserve his unity; because of the direct opposition between the humours of his hero, and those of some other of his persons, as in Turnus, Mezentius, Didon, &c. He therefore takes care not to carry those opposite characters to their full length, but moderates and restrains them: and as this moderation could not flow naturally from the persons themselves, it is produced either by some passion, as in Didon; or some dependences, as in Turnus and Mezentius. To this artifice he adds epistles, accommodated to the general character, by which he interrupts the particular actions, which require an opposite character.

Claudian's conduct, in this respect, is unpardonable; from the horrible characters of Pluto and the Furies, with all the terrors of hell, he passes to the gaiety and pleasures of the Graces, gilded palaces, flowery fields, &c. He has as many different prevailing characters in his three books, as Homer and Virgil in their sixty. See Drama and Epicene. For the characters in Comedy and Tragedy; see those articles.

Character is also used for certain visible qualities, which claim respect or reverence to those who are vellted with them.

The majesty of kings gives them a character which procures respect from the people. A bishop should fulfill his character by learning and solid piety rather than by worldly luire, &c.

Character is also used among Divines, especially those of the Romish church, for an indelible mark, or impression, which certain sacraments are supposed to leave behind in those who receive them. The sacraments that leave this character are incapable of being repeated. The character is generally supposed to be something physical. The sacraments of baptism, confirmation, and ordination, in particular, leave such indelible character.

Character, in Natural History, is synonymous with the definition of the genera of animals, plants, &c.

CHARACTERISTIC, in the general, is that which characterizes a thing or person, i.e. constitutes its character, whereby it is distinguished from all others.

Charactertelastic is peculiarly used in Grammar, for the principal letter of a word; which is preferred in most of its tenses and moods, its derivatives and compounds.

The characteristic frequently shews its etymology; and ought confantly to be retained in its orthography; such is the letter r in course, fort, &c.

The characteristics are of great use in the Greek grammar, especially in the formation of the tenes; as being the same in the same tenes of all verbs of the same conjugation, excepting in the present tense, which has several characteristics; and the futur, the aoritus primus, the preteterperfect, and the pluquam perfect tense of the fourth conjugation, which have two characteristics. The characteristics of the conjugations in the Hebrew grammar are the letters prefixed to, or inferred between, the radical letters: e.g. י in Niphal, ו and י of Hiphil, ו of Hophal, and י ו of Hihpahel.

These technical terms have obtained such long polish in the Hebrew grammar, that it would be difficult, and perhaps improper to expel them, or to substitute others in their room. The chief inconvenience attending them is, that they represent only the position or situation of the letters in the different modes or voices, but give no intimation of the meaning conveyed by these modes.

Characteristic of a Logarithm, is its index or exponent. This term was first used by Briggs in his Arithmetical Logarithmus, to denote the integral or first part of a logarithm towards the left hand; and this expresses, see less than the number of integer places or figures in the number corresponding to that logarithm, or how far the first figure of this number is removed from the place of units: thus, o is the characteristic of all numbers from 1 to 10; 1 the characteristic of all from 10 to 100; 2 of all from 100 to 1000, &c. See Logarithm.

Characteristic triangle of a curve. See Curve.

CHARADE, is the name of a new species of composition, or literary amusement. It owes its name to the Idler who
who invented it. Its subject must be a word of two syllables, each forming a distinct word; and these two syllables are to be conceived in an enigmatical description, first separately, and then together. The exercise of charades, although it may not be very instructive, is innocent and amusing; and may force to try the inventive talents of children, and to occupy their intervals of leisure.

CHARADRA, in Ancient Geography, a town of Greece, in the Pheceide, according to Herodotus. It was feated on an eminence, below which flowed the river Charadraus, about 20 stadia from Liza, according to Paufanias. Notwithstanding the vicinity of this torrent, the inhabitants were in frequent want of water.—Allo, a place of Greece, in Epirus, itinate, according to Polybius, near the gulf of Ambraeia.—Allo, the name of one of the towns founded by Pelops, according to Strabo, itinate in Messenia.

CHARADRIUS, in Ornithology, a genus of the grall order, in which the bill is roundish and obtuse; noltrils linear; feet three-toed, and furnished for running.

Species.


The length of this bird is from six to seven inches; the bill is of an orange colour; at the base, and at the tip, or anterior half, black; the upper mandible is also black at the base, and a black space extends from thence through the eyes to the ears; the forehead is white, and behind this is another mark of black. The chin, throat, and broad collar extending backwards from thence are white, and beneath this is another collar of black, encircling the neck behind. Its breast and under parts are white; back and wing-coverts pale brown; quills dusky; the middle feathers of the tail are greyish brown, becoming almost black towards the ends, the three next on each side the same, but having the tips white, the tail but one white, with a brown band, the outer one white, marked with a single spot. The plumage of the male inclines more to ash colour, and the white on the forehead occupies a greater space than in the female.

These birds inhabit Europe and America: they migrate into England in the spring, and leave us in autumn. They lay four eggs an inch and a half in length, and of a pale yellowish, spotted, and blended with black, upon the ground under some fitcher, for they make no nest. They run very fast, sometimes taking short flights, and twittering loud at the same time, then alight and run again, and, if still disturbed, will either fly away, or secrete themselves in some holes till the danger is over.

A variety of this bird, &c, is described as an inhabitant of Spain; the plumage is greyish, with the collar and abdomen white. Another, &c, is mentioned as a native of America; the colour of this is greyish-ash, the front and collar white; lower half of the tail black, tipped with ferruginous. This last kind was brought from Owyhee.


This species inhabits almost every part of the world. On the European continent they are met with chiefly in hilly or mountainous situations, in Sweden, Denmark, Lapland, Iceland, and as far south as Aleppo. It breeds on several of the unfrumented mountains of Britain, and especially in the heathy hills of the Scotch islands. In America, it appears on the coast of Labrador and Hudson’s bay, and from thence to New York, as low as Carolina. It has been observed in China, and in some of the islands of the South Seas; and a supposed variety of it, Pluvialis dominicus aurea of Briffon, is mentioned as a native of St. Domingo. The length of this bird is ten inches and a half; the bill is about one inch, and of a dusky colour; the irides dull red. The upper part of the plumage is dusky, spotted with greenish yellow; round the eyes and the chin almost white; sides of the head and body, together with the neck, with the upper parts, but paler; middle of the belly dusky yellow; the greater quills are dusky; tail barred, dusky, and dull yellow; legs black. In some individuals the belly is black, in others black and white. The male and female differ very little. In young birds the spots are not of a full yellow colour, as in the adults, but incline more to grey. The supposed variety before noticed as a native of St. Domingo, has the body blackish, varied with yellowish, and beneath white; and the lower part of the neck and breast pale grey; tail brown, having the margins of the feathers spotted with yellowish white.

RUDIBUS. Red, varied with black spots, and sprinkled with white; two middle tail-feathers fuscous, with ferruginous margins, the red whithit, Lath. Gmel. Rudy plover, Lath. Donov. &c.

Inhabits Hudson’s bay. The bill of this bird is straight and black; the head, neck, breast, and scapulars, with the wing and tail-coverts, of a ruddy colour, spotted with black, and powdered with white; the outer webs of the first four quills are brown; the inner white, tipped with brown; the red white above and brown beneath; legs black; toes divided at their origin. At Hudson’s bay it is known by the name of Mikk. Burns has Pasim.
A variety of this species is found in Newfoundland, which has the upper parts of a brownish ash-colour, mixed with brown, and streaked with black; forehead and under parts cinereous white; lesser and middle wing-coverts black, fringed with ash-colour; the greater cinereous with whitish edges; quills and tail dufty; legs black.


Size of the golden plover. The plumage above black, spotted with orange; at the base of the upper mandible the feathers are black; front, eye-brows, lower eye-lid, flanks, and vent white; wings and tail brown and black bands; legs black. This inhabits the northern parts of Europe, as Sweden, Denmark, Iceland, and Greenland.

RUBICOLELLUS. Cinereous; body beneath white; head and neck black, with a large, square, rufous-chestnut foot on each side. Lath. Charadrius rubricollis, Gmel. Red-necked Plover, Lath.

This species inhabits the South Seas. The bill is fuscous, at the tip black; the upper part of the plumage is ash-colour; with a slight mixture of white, the breast and under parts are white; quills and tail dufty; legs fuscous-colour. Length about seven inches and a half.


Inhabitats Egypt near the Nile. This is the size of a lark; the bill is black; forehead white, passing backwards in a streak over the eye; from the base of the bill a streak of black runs through the eye and reaches behind to the ears; top of the head, back, and wings brown; round the neck a collar of white; belly white; quills blackish grey; four middle tail feathers dusky brown; tail much rounded; legs black.

The Limnean Charadrius egypius is considered as a variety of this species. This is distinguished by having a black band on the breast; eye-brows white; tail-feathers with a black band, and white tip; and legs blue. This bird inhabits the funny plains of Egypt, and feeds on insects. Another variety, called the red-eyed plover, has the crown of the head black, and the legs red.

PHILIPPINUS. Fuscous; region of the eyes, collar, and tail black; front, body beneath, and tip of the tail-feathers white. Petit Pluvial de Collier du Leon, Gmel. &c. Size of the lat, and is a native of the Philippines.

NOVE-SELANDE. Greenish, face and collar black; annular stripe on the head, band on the wings, and body beneath white. Charadrius maritimus, Gmel. New Zealand Plover, Lath. Inhabitats New Zealand. It is known in Queen Charlotte's Sound by the name of Donohoea aites. This is rather larger than the ringed plover; the bill is of a red colour tipped with black; legs red.

GREGARIUS. Cinereous, beneath white; breast with a black femicircle, on the hind part rufous; tail-feathers white, with a black band. Charadrius gregarius, Pallas. Gregarious Plover, Lath.

Described by Pallas as being common in the fields about the Volga, Jack, and Samaara, where it appears in flocks; it is not seen farther north than 54° degrees; and is by some called the "Hen of Steppes." This is the size of a lapwing. The bill in shape and size the same as in that bird; crown of the head brown, mottled with white; forehead white, passing in a streak over each eye; the hind head; through the eyes a black streak. The body is of an ash-colour, somewhat approaching to that of the turtle; tail even at the extremity; legs furnished with an imperfect back toe.


Inhabitats the salt lakes in the deferts of Tartary; and is a rare and solitary bird. In size it rather exceeds the ringed plover. The crown of the head, back, and wings are greyish ash-coloured brown; tail brown, with the feathers whitish at the edges, and tipped with black; legs red.

TAR TARICUS. Collar cinereous; breast ferrugineous; band on the chin and breast black; abdomen white; wings and tail fuscous. Pallas &c. Observed near the salt lakes of southern Tartary. Supposed by some to be a variety of the dotterel.

MONGOLUS. Cinereous fuscous; front beneath white; throat and breast ferrugineous; chin with a black fuscous. Pallas &c. Mongolian Plover, Lath. This inhabits the salt lakes about the Mongolian country in tolerable plenty. It is the size of the common dotterel.


The length of this bird is nine inches and three quarters. Bill an inch long and black; eye-lids red; the forehead is white: between the eyes, across the head, a bar of black palling on each side to the hind head: the chin and fore part of the neck white: at the lower part of the neck, the white encircles it like a ring, and is accompanied by a bar of black all round; on the breast is another black bar, and, except those, all the under parts are white. The hind part of the head, neck, and upper part of the body and wings, are dusky brown; rump and tail rufous; the latter much rounded in shape, tipped with white, and barred near the end with black; legs pale yellow. This species inhabits America; it is a clamorous and restless bird. In Virginia it is called the kill-deer, from its note resembling the pronunciation of that word. There is a variety of this species which has the breast varied with black; front white; crown and collar black; bill and legs bluish; three outer tail feathers tipped with white. This is the Charadrius torquatus of Limneus, and Pluvialis à collier de St. Domingue, Buff. Pl. Eul.

JAMAICENSIS. Dusky fuscous, beneath white; breast spotted black and white; tail varied with whitish, rufous, and black; bill black; collar and legs white. Gmel. Pluvialis jamaicensis torquata, Briff. Large grey fink, Brown Collared Plover, Lath.

Size rather less than that of the noisy plover; length eight inches; bill an inch long, and black; upper part of the head, neck, body and wings, dull brown; throat, fore part of the neck, belly, thighs and vent, white; at the lower part of the neck the white passes round as a collar; quills dull brown; tail whitish, varied with rufous and blackish. Inhabitats Jamaica, where it frequents the banks of rivers.


The Dotterel is from nine to ten inches in length. The bill an inch long, and of a black colour: the forehead an intermixture of dusky and grey; over the eyes is a white hand which bends downwards, and palls to the hind head; the sides of the head and throat are white: the hind part of the neck, the back and wings, greyish brown; the feathers margined with pale ferrugineous, but those of the lower part
of the back and rump inclined to grey; fore part of the neck cinnereous olive mixed with a little white next the throat; the lower part of the neck is bounded with a line of black, beneath which is another of white; the breast and sides are of a pale dull orange; middle of the belly black; lower parts and thighs rufous white; tail olive brown, with a black band, and white tip; the two outer feathers edged with white; legs black. The female differs in being rather larger, in having the black on the belly mixed with white, and the general colour of the plumage more obscure.

These birds are common in the northern parts of Europe, where they may be supposed to breed. Linnæus says they are very frequent in Dalmatia and the Lapland Alps, and that they visit Sweden in May. They are known to breed in the north of Russia and Siberia. In England, they occur in great plenty in the counties of Cambridgeshire, Lincolnshire, and Derbyshire. With us they are migratory, appearing in flocks of eight or ten in number the latter end of April, and stay till the end of May or June, when they are very fat, and are much esteemed for the table. It is supposed they breed in the mountains of Cumberland and Westmorland, as they appear there in May, and are not observed there after the breeding season. We are informed in the Flora Scotia, that they breed on several of the Highland hills. The manners of the Dotterel prove it a likely bird. There is a variety of this bird which has the crown varied with white, grey brown and yellowish mixed with white, with the two middle tail feathers brown, and the lateral ones white.

FALKLANDICUS. Brown-clouded; front, neck beneath, and abdomen white; annual stripe on the head ferrugineous; breast and band on the crown black. Lath. *Rufus coroned Plover,* Portlock Voy.

This species, which is about seven inches and a half in length, inhabits the Falkland islands. The bill and legs are blackish; body beneath white; stripe encircling the head of the male resembling a crown.

SIBIRICUS. Front varied with black and white; crown barred with blackish; breast brown, terminated by a white band; belly ferrugineus. Lepch. It. *Charadrius Sibiricus,* Gmel. A native of Siberia.

OBSCURUS. Black, beneath ochraceous; front and chin whitish; collar dusky with pale friz. Gmel. &c. *Dusky Plover,* Lath.

This was found by the English circumnavigators in Dusky Bay, New Zealand, where the natives call it *Happo-bire*; in point of friz, it rather exceeds the common frizpe. The bill is black; forehead redish white; plumage on the upper part dusky, edges of the feathers paler; chin and fore part of the neck dusky white; lower part of the neck, breast, and under parts, dusky yellow ochre colour, with a tinge of red; neck marked with pale and dusky streaks, and transversely mottled with the sides with narrow lines; legs bluish; claws black.

FULVUS. Above blackish, the feathers edged with tawny; beneath whitish; breast fulvous spotted with black; wings with a white band. *Charadrius Fulvus,* Gmel. *Fulvous Plover,* Lath.

This bird inhabits the shores and marshy places of Otago-heite. The size is rather less than that of the lapwing; the bill is dusky; irides bluish black; its forehead and throat are dusky white; belly dusky white spotted with black; wing coverts black, spotted with fulvous, the lower order of black brown, tipped with white; quills brownish black, with white shafts; tail brown, with white bands; legs blue; claws black and blunted. A variety of this bird, in the late Leverian Museum, had the bill brown, legs yellowish, and the wing defluite of the white band. This was probably a young bird, the length being only eight inches; while that before described measured twelve inches and a half; the plumage on the upper part was brown, and had the feathers margined with golden yellow; the under part of the body was white, except the breast, which was of a dusky pale brown. The quills were brown, having the end half of the shafts white; the secondaries as long as the quills, and both of them reaching to the end of the tail and concealing it; the tail was two inches long, brown, and marked with obscure pale brown spots on each side of the web: legs about two inches long, and of a pale yellow colour. The native place of this variety could not be ascertained.

LUCOGASTER. Fulvous; body beneath, front, white line above and beneath the eyes white; legs pale blue. Gmel. &c. *White belied Plover,* Lath.

Described from a specimen in the late Leverian Museum. The length six inches; bill one inch; the plumage on the upper part dirty brown; secondaries and prime quill feathers of equal length; some of the first white for half their length from the base, with white shafts; of the middle tail feathers brown, the next white at the tip and base, the three exterior ones white, the last but one with a brown spot on the inner web near the tip, and the third black at the extremity. Native place unknown. Lath. &c.


This corresponds in size with the golden plover; the bill is an inch long, and black; irides red; crown of the head and throat are black, passing a little way down the neck before. The back part of the neck, and upper part of the body and scapulars are grey; sides of the head, and all the under part from the throat to the vent yellowish white, except a crecent of black on the breast, the convex part uppermorn. The outer wing-coverts are black, the middle ones grey, the greater yellowish white. On the fore part of the wing just within the bend, is a slightly incurvate black spur, about half an inch in length. The tail is yellowish white, tipped with black, and legs are black. This singular bird inhabits the marshy places of Lower Egypt. Sonnini, speaking of the natural productions of Rosetta, tells us the most numerous and generally diffused of all the aquatic birds in this part were the spur-winged plovers; "fowl animals (adds this writer) which might likewise be called manfully, for they have a haughty and almost continual movement of the head and neck, drawing them up brilliantly, and then quickly stretching them forward almost as if they were making haly and eager bows." Halléquilt acquaints us it inhabits the marshy places of Lower Egypt in the month of September, and that it is also found in other parts of the neighbourhood, and is called *Dominican,* the neck being black, with white sides, and not inaptingly resembling the collar part of the habit of that order of religious.

A variety of the spur-winged plover found in Russia, and which is frequent near Aleppo, about the river Ore, is of a ochreous-colour above, with the neck and lower part of the belly white; and the breast, wings, and tip of the tail black. This is the black-breasted Indian plover or Edwards, p. 47. The spur-winged plover of Edwards, pl. 280, is supposed to be the female. Another kind of spur-winged plover, *Le plover arm de Cayenne,* is inferred by Dr. Latham in his General Synopsis as a variety of this bird; and also appears as such in the German edition of the *Systema Naturae.* In Latham's Ind. Ord. this is, however, described as a distinct species, under the title of *Charadrius Cayanus.*

*Cayanus.* Head, back part of the neck, and pectoral band.
band black; annular band on the hind-head, fore part of the neck, belly, and base of the tail white; spurious wing armed with a spur. Lath. Ind. Orn.

This is a native of Caräne. Its length is nine inches; the bill an inch long, of a dusky colour; back part of the head and nape of the neck white mixed with grey; the fore parts and sides black, passing back to the nape, and occupying all the hind part of the neck, and thence extending forward on the fore part above the breast; space between this and the chin white; the middle of the back and wings are rufous grey; fasciules and quills black; under parts from the breast white; legs yellowish.


The length of this bird is ten inches and a half; the bill is yellow, red towards the end, and black at the tip. The forehead is covered with a carunculated yellow membrane passing round the eyes; the head and jet the contiguous part of the neck is black. The hind-head is furnished with a few short pointed feathers, pendant like a small crest, beneath which the hind-head is white. Above the plumage is rufous grey, all the under parts are white, with a few dusky dashes down the fore part of the neck; the quills and end of the tail black; legs red. This inhabits Senegal.

Coronatus. Piqueous, head above black, circle on the crown, belly, greater wing-coverts and tail white; the lat with a broad black band near the tip. Charadrius coronatus, Gmel. Pileaer couronné du cap de Bonne Esperance, Buff. Wreathed plover, Lath.

This bird inhabits the Cape of Good Hope. Its length is twelve inches. The bill is reddish, and dusky towards the point; the hind part of the neck, and upper part of the body are brown, glossed with greenish purple; as far as the neck the breast is grey; belly white; quills black; legs rufous-colour.

Bilorus. Rufous grey; eye-brows, abdomen, and band across the wing white; crown of the head, and bar on the wings and tail black; front with a pendent wattle. Charadrius bilorus, Gmel. Le plovier a lambeaux, Buff. Le plouvier de la côte de Malabar, Pl. Enl. Wattled plover, Lath.

This bird, which inhabits the coast of Malabar, is the size of the golden plover. The bill is yellow; on the forehead is a bare skin hanging down in a pointed flap on each side of the jaw; and the legs are pale yellow.


A native of Senegal. The length is seven inches. The bill black, and an inch in length; upper part of the head black; all the tail-feathers, except the two middle ones, marked with black near the ends, with the extreme tips white. The under parts from the chin pale rufous, deepset on the breast, where it is mottled with transverse dusky markings, and towards the vent nearly white; legs cinereous grey; claws black.


Inhabits India; and is about the size of the common lark.


Gmelin describes two other birds as species of the charadrius genus, namely, gallicus, and coromandus, both which are referred by Dr. Latham in his Ind. Orn. to the new genus curficus, those having the bill rounded, incurved at the tip, and terminating acutely, besides differing in other general particulars from the charadrius. See Curorius.

Charadrius, in Ancient Geography, a river of Greece, which passed near the town of Charadra, andsoon after discharged itself in the Cephisus, according to Paufanias.—Also, a river of the Peloponnesus in Messenia.—Also, a torrent of the Peloponnesus in the Argolid, in the route from Argos to Mantinea. It ran south of Hyilia, and flowed into the Argolic gulf. Another torrent of the name passed N. W. of Hyilia, and discharged itself into the river Inachus.—Also, a torrent of Achaia, the course of which was from north to south. Its mouth was near the promontory of Rhium. The waters of this stream were said to aid the females of animals that drank them in the act of conception, and therefore they were brought from a great distance for this purpose.—Also, a torrent of Arcadia, which ran at a small distance to the north of Orchomene, and discharged itself into a lake not far distant towards the east.—Also, a strong and ancient place of Asia in Cilicia; situate on the seacoast, in the vicinity of mount Cragus, according to Strabo.

Charag, the tribute which Christians and Jews pay to the grand signior.

It consists of ten, twelve, or fifteen francs per annum, according to the ciate of the party. Men begin to pay it at nine, or at sixteen years old; women are dispensed with, as also priests, rabbins, and religious.

Charagio, in Geography, a town of the island of Corfla, or department of Golo, two miles S. of Cervione.

Charaïns, a fek of the Jews in Egypt. They live by themselves, and have a separate synagogue; and the other Jews are remarkable for their eyes. To these are for their large noses, which run through all the families of this sect. These are the ancient Sifines. They strictly observe the five books of Moses, according to the letter, and receive no written traditions. It is said that the other Jews would join the Chraim, but those not having observed the exact rules, of the law with regard to divorces, think they think they live in adulteries.

Cheramokotan, in Geography, one of the small Kurile islands in the Northern Pacific Ocean. N. lat. 45° 52'. E. long. 154° 54'.

Charancy, a town of France, in the department of the Moleffe, and district of Longwy; 33 leagues W.S.W. of Longwy.

Charandass, in Ancient Geography, a place of Asia, situate on the Euphrasus of Thrace, and called also Delphius.

Charandra, a golf of the Red Sea, in which Ptolemy Philadelphus built a town, called Arsinoe, which see.

Charantía, in Botany, Dod. Sce Momordica Balsamina.

Charas, Moses, in Biography, early distinguished by his skill in chemistry and pharmacy, was born at Uzer, a town in Upper Languedoc, about the year 1618. He first settled at Orange, but at the end of a few years, in the hope of being able to exhibit his talents to a more advantage, he removed to Paris. In this expectation he was not disappointed, as he was soon fixed on to read the lectures on chemistry.
milily, at the Royal Garden there. This office he filled for nine years, until October 1685, when having embraced the doctrine of Luther, he was obliged, by the revocation of the edict of Nantes, which took place at that time, to quit France. He came thence to London, and was received by our king Charles II, with great kindness. After refiding five years in England, he went to Holland, took his degree of doctor in medicine at Leyden, and at length, on the prevailing solicitations of the Spanish envoy, he went to Madrid, invited thither to undertake the care of the health of the king of Spain. What success he had with his patient, we are not told; it was probably not considerable, as he suffered him to be imprisoned in the Inquisition, where he was detained four months, and did not escape, until he had made a full recantation of his errors. He was now upwards of forty-two years of age. He then returned to Paris, and was admitted a member of the Royal Academy. At Paris he continued until January 17th, 1698, when he died, aged eighty years.

In 1668, he published, in 8vo. “A Chemical Analysis,” of the famous elixary; the “Theriac Adromach,” with an account of each of the ingredients entering the composition of that heterogeneous compound. He had the good sense to attribute its salutary powers to the opium and ipecac contained in it, and therefore, contrary to the then received opinion, determines that age impairs, and not improves its efficacy. “Nouvelles Experiences sur la Vipere, les effets de fon venin,” &c. 1669, 8vo. Paris. A drop of the oil of tobacco inclosed into a wound infected with the viper, kills it immediately. He gives a neat anatomical description of the viper, and even describes the bag, the repository of the poison, but inflicts the liquor only becomes poisonous when the animal is irritated; contrary to the experiments of Sig. Redi, who had shown that the liquor taken from a dead viper, and inclosed into a wound through a gull, is as malignant, as when infected by the bite of the enraged animal. Redi defended his experiments, and was anwered by Charas in 1672, who still retained his opinion. The same year he published, “Pharmacopeia royalis galenicus, et chemique,” which, as well as his other works, have passed through several editions. Haller Bib. Med. Elov Dict. Hist.

CHARASM, in Geography. See CHARAS.

CHARATZAIKA, a fastness of Siberia, on the confines of China; 34 miles S.S.W. of Silengisk.

CHARAVARI. This appellation is given by the Poles to a fort of very large breaches, which take in the tails and greatest part of all their clothes, when they let out on horseback on a long journey or march, or when it rains, or the roads are bad and dirty. These are buttoned over the frock, and reach quite down to their heels. This fort of cuvette forms an essential part of the attire or dress of a Hulan.

CHARAVEND, a town of Perlia, in the province of Irap-Agemi; 123 miles S.E. of Iphahan.

CHARAUNI, or CHARRANCE, in Ancient Geography, a people of Scythia, on the other side of the Issus. Ptolemy alligns to them a town called Carvania. They correspond to the Karia or Karia of the present times.

CHARAX. CHARA-CLA, a promontory of the Tauric Cheironotus, N.E. of Cnossinoton, and W. of the promontory Corax, mentioned by Ptolemy and Pliny. — Alfo, a commercial port, placed by Strabo in Africa Propria, and called by Ptolemy Pharaon. — Alfo, a town of Asia Minor in Caria, falf by Steph. Byz. to have been called, in his time, Trallis. — Alfo, a town of Asia, situation in the interior, and between the mountains of the Leper Armenia, according to Ptolemy. — Alfo, a town orburgh of Asia in Parthis, according to Ptolemy. — Alfo, a commercial place of Asia Minor in Bitjyna, placed by Steph. Byz. in the gulf of Nicolea.

Alfo, a promontory of the isle of Crete.—Alfo, a place of Asia Minor in Phrygia, placed by Niceetas, cited by Ortelius, between Lampis and Grafogala.—Alfo, a town of the island of Corica, mentioned by Strabo.—Alfo, a town of Susania, situated between the Tigris and the Eulcus, upon the banks of a canal which connected these rivers.

CHARAX, in Ichthyology, a name given by Hellian, Appian, and many other Greek writers to the fish called by later writers Carassius. Cynicus Carassius of Linnaeus, who distinguishes it by having ten rays in the anal fin, and the lateral line straight. See Cynicus Carassius.

CHARAX, the lower town of China, fina eund radiis 51, is the name and character given by Gellius to the Dimulated Salmon, Sulina micraculus, which see.

CHARBANUS, in Ancient Geography, a mountain of Asia, in Media, which, according to Pliney, lay in the road from Babylon to Chactana. It is supposed to have been a part of mount Zagrus.

CHARON, in the Mangue, signifies that little black spot or mark that remains after a large spot, in the cavity of the corner teeth of a horse. About the seventh or eighth year, when the cavity fills, the tooth being smooth and equal, it is said to be raised.

CHARBONNIER, in Zoology, the name under which Buffon describes the Brant-fox, Canis Lupus of Gmelin. It is distinguished by having the tail straight, and tipped with black. The species inhabits Europe, Asia, and Chili in South America.

CHARBONNIER, in Ornithology. The Great Titmouse or Ox-eye of English writers is described by Buffon under the name of Charbonniere and Groffe Merlange. See Parki major. Buffon also describes the Colemous, under the name of Petite Charbonniere. See Parki atex.

CHARVISOOKA, in Geography, a river of Kamtschatka, which runs into the Penzinkoi gulf; 50 miles S.S.W. of Tiguilko.

CHARCAS, Audience of, a province of South America, regarded before the grand alteration in 1778, as a dependency of Peru, is equal in the extent of its jurisdiction to that of Lima, but with this disadvantage, that many parts of it are not so well inhabited; some abounding with immense deserts and impenetrable forests, while others are full of extensive plains, which are intercepted by the stupendous heights of the Cordilleras. The denomination of Charcas formerly included many populous provinces of Indians, whom the Inca Capai Yapanque subjected to his empire; but he carried his arms no farther than the provinces of Tuytras and Chaqui, where he terminated his conquests towards Callafuyno. On the death of this monarch, his son Inca Roca, the sixth in the succession of those emperors, pushed his conquests farther in the same path, till he became sovereign of all the intermediate nations to the present peninsula of Charcas. See Planta.

The jurisdiction begins on the north side at Valcamanta, belonging to the province of Lampa, in the diocese of Cufco, and reaches southward to Buenos Ayres. Eastward it extends to Brazil, being terminated by the meridian of demarcation; and westward, part of it reaches to the South Sea, particularly at Atacama, the most northern part of it; on this side the remainder of Charcas borders on the kingdom of Chili. Their vast tracts of land give ore bishopric, and five bishops his suffragans, viz. the archbishop of Plata, and the bishops of La Paz, Santa Cruz de la Sierra, Tucuman, Paraguay, and Buenos Ayres. See these articles.

CHARCA, or BETH SOLDO, KARR, or BETH-BARN, in Ancient Geography, a town of Asia, seated on the left bank of the Tigris; S.E. of Bithra.

CHARCANT.
CHARCOAL, in Chemistry. Under the article Carbon are mentioned the chemical properties of charcoal; nothing further therefore remains to be described except the method of preparing the sub stance and a few other particulars intimately dependent upon it.

Charcoal is prepared either by burning or distillation; of these the first is the simplest, most ancient, and usual method, on which account we shall begin with it.

The buhines of charcoal burning takes place during the whole of the summer months, and is for the most part carried on in the woods to save the expense of cartage. Two or three families commonly unite for this purpose, dwelling in tents or temporary huts during the time in which they are thus employed for the convenience of being near their buhines. After they have killed the timber, and it is become sufficiently dry, the process of converting it into charcoal is begun by raising a plot of ground a little higher than the surrounding surface, and bringing it to a slightly convex form by beating it, and thus forming a hard, dry, and solid floor. In the center of this area is placed a circle of stakes adjoining each other and composing a vertical hollow cylinder from three to four inches in diameter, and about six feet high. Round this interior cylinder are ranged suc- cessive concentric circles formed by truncheons from one to ten inches in diameter, care being taken that the truncheons in any one circle are of the same diameter, and that one built of the largest wood be always succeeded by one of the smallest wood, in order that there may be as few interstices as possible. The outermost circle is composed of brush-wood. When the pile measures from twenty to thirty feet in diameter, it is sufficiently large; a coating is now laid on of turf, the gruffy side next to the wood, and dry earth is heaped up round the bottom of the pile, and well rammed in order to prevent the admission of air. Three or four screens formed of large hurdles well stuffed with brushwood, are also prepared in order to protect the pile from the violence of the wind. All the preparations being now completed, the pile is kindled by dropping lighted chips down the hollow cylin- der in the center, which, in proportion as they are consumed, are supplied by others during the first three or four days, at the end of which period, the kindling of the pile is com- pleted. The top of the cylinder is now closed, and a row of holes, each about two inches in diameter, is pierced at the

<table>
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<tr>
<th>Parts of Lignum vitae afforded</th>
<th>Charcoal of a greyish colour resembling coal</th>
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<tr>
<td>Mahogany</td>
<td>25.4</td>
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<tr>
<td>Laburnum</td>
<td>24.5</td>
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<td>Chestnut</td>
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<td>Oak</td>
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<td>Holly</td>
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<td>Sycamore</td>
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<td>Walnut</td>
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<td>Beech</td>
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<td>Norway pine</td>
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<td>Elm</td>
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<td>Sallow</td>
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<td>Ash</td>
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<td>Birch</td>
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<tr>
<td>Scotthie pine</td>
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The author of the Rural Economy of the midland coun- tries observes, that in making charcoal, men accustomed to the buhines cut and cord in wood in the winter, and burn during the summer season. The minute of the process of which are there, he says, these. The fite, or hearth, being determined upon, the fward is pared off, and the fuds laid on one side. The wood usually about the cord is then laid in a ring, somewhat wider than the intended hearth; beginning on the outer circumference of the ring with the smallest of the round-wood, laying the larger pieces of top- wood, and the cloven roots, or but-ends, towards the center. With these last, some of them nearly as large as bathel-
blocks, they begin to make their pile, leaving a kind of chimney in the middle, (a vertical aperture, from a foot to eighteen inches wide), and round this core of roots set up the top-wood, (which has previously been cut at the time of wording, in such a manner, that no forkedfeet or other awkward crookedfeet are left; or, if not cut in this manner, or cut improperly, it is prepared by the coilliers themselves, previous to laying it ready for setting), joining the blocks, or rather fitting them in, as close to each other as possible; placing the crown fire of the logs outward, forming the pile in the shape of an inverted bowl, nearly semiglobular. The pile being formed, it is covered over with fods, which are pointed, to keep in the heat the better, and the seams are filled up with fine pulverized mould. The chimney is now filled with short pieces of dry wood; near the top a live coal is put; over these layer more of dry pieces: and upon these a close cap of fods is placed; nevertheless, this one coal, not larger than the fist, and excluded from the open air, is sufficient to set the whole pile on fire. As the pieces in the chimney burn away, they are replaced by fresh ones: thus feeding the fire with fresh fuel. Paled hurdles are placed on the windward side of the heap, to prevent the fire from arling partially.

When the fire begins to work itself out, at the outward sides of the bottom of the pile, it is known that the coal is fully burnt, (or rather the wood sufficiently charred), which it will be, in a pile of ten cords, in fine dry weather, in seven or eight days. The fire, during the whole time, is carefully kept from breaking out, by throwing mould or ashes upon the weak parts; so that, though the fire paffes through every part of the wood, little or none of the matter of heat escapes. It is observble, he says, that notwithfanding the intense heat, no part seems to be consumed; not the bark only, but even the moss upon it, comes out as entire as when it went in: the only apparent change is, in its being rendered friable and of a black colour. Wood that is charred, feems, he says, to be only very highly dried. It shrinks considerably during the process of charring; but there is no visible derangement of parts. One of the smaller pieces, which is not broken in the drawing, appears as entire when it comes out as when it went into the pile. The brittleness after charring, however, shows that the texture of the wood is altered by the action of the fire. As soon as the fire is out of the coal, on the outside of the heap, the workmen begin to draw; which is done by running a peel over the coal and the hearth, raising up the coal in such a manner as to let the mould and ashes of the fods fall through between the pieces, upon the inward parts, still full of fire. If this makes its appearance in any particular spot, a peel full of ashes is immediately thrown against it. Having got sufficiently near to the fire, the coals raised by the peel are raked oft with long, wide-toothed, iron rakes; the teeth about a foot long, and flanging about six inches a-part; the handle and head of wood, except a plate of iron on the back, with which the small coal is gathered together. No sieve, nor any rake with finer teeth than the above, is used. The coal being light, it is readily brought to the surface of the ashes and dirt; and, when there, is easily collected with the back of the rake. The hide, thus drawn, being rounded up and secured with ashes, another, the cooleft part, is drawn in the fame manner. The drawing is an infernal businefs: the men working among fire and heat enough to suffocate Satan himself. Such pieces as ftil retain fire, after they are drawn, are quenched with water; which the workmen have in plenty flanging by them, in pails. If a large piece contain much fire, (which hides itself chiefly in the chinks of the large pieces), it is plunged bodily into the water. If the heap itself prove too refractory to be kept under by the ashes alone, a sufficient quantity of water is thrown upon it, to keep the fire under. Such large pieces as are fopificous are laid on one fide, in order that those which take fire may be the more readily discovered. A waggon attends to take away the coal as fast as it is drawn: for, if it take fire, or get wet in the hands of the burners, it is at their risk; and, while in the waggon, it is at the risk of the waggoner. Every particle burnt is so much entire fuel.

The quantity of ashes arising from a charcoal hearth, he says, is considerable. There were four cart loads taken up from two small hearths, and a load or two more full remained. The dust of charcoal has been found, by repeated experience, to be of great benefit to land, especially to fuch foids as are till and four. It is to be used in the fame manner as foot and wood-ffhes. See and .

And the author quoted above observes, that charcoal ashes are in good esteem in the midland districts as a manure, particularly for turpins, and for mung grafs land. They arife principally from the fods used in covering, but in part from the bits of coal which break off in taking it out of the ashes. There cannot be any doubt but that all the refe of charred materials that become reduced into a powdery flate during the process of drawing the coal, is highly beneficial, when applied on the more flill and heavy fort of land as a manure, as much advantage has been derived from it in the experience of different cultivators.

The microscope discovers a furprifing number of pores in charcoal: they are disposed in order, and traverse it lengthwise; so that there is no piece of charcoal, how long ever, but may be boxes glazed through. If a piece be broken pretty short, it may be seen through with a microscope. In a range the eighteenth part of an inch long, Dr. Hook reckoned one hundred and fifty pores; whence he concludes, that in a charcoal of an inch diameter, there are no less than five millions seven hundred and twenty-four thousand pores.

It is to this prodigious number of pores that the blackness of charcoal is owing: for the rays of light, striking on the charcoal, are received and absorbed in its pores, instead of being reflected; whence the body null of reflectivity appear black, blackness in a body being no more than a want of reflectivity.

Mathematical instrument makers, engravers, &c. find charcoal of great use to polifh their bradl and copper plates, after they have been rubbed clean with powdered pumice-stone. Mr. Boyle says, that the more curious burn it a second time, and quench it in a convenient fluid. Plates of horn are polifhable the fame way, and a glof may be afterwards given with triply.

Charcoal and foot-black are the two most durable and useful blacks of the painter, and the varnish-maker. Those of the former kind are used both as pigments and pencils; and charcoal crayons prepared from the willow are preferred on account of their finepuf. See concerning them Lewis’s Comemium Phil. Techn. p. 536. Charcoal tinges glasses in fusion yellow, reddish, &c. and by baking it assimilates yellow. See ibid. p. 628. See also his observations on the differences of different carbons, &c. and of the manner of distinguishing between the vegetable and animal. Ibid. p. 356. and fig.

Charcoal was anciently used to distinguish the bounds of estates and inheritances; as being suppod incorruptible, when let very deep within the ground. In effect, it preserves
serves itself so long, that there are many pieces found entire in the ancient tombs of the northern nations.

Mr. Dodart says, there is sometimes found charcoal made of corn, probably as old as the days of Cæsar: he adds, that it has kept so well, that the wheat may be still distinguished from the rye; which he looks on as a proof of its incorruptibility.

CHACON, in Geography, a town of Persia, in the province of Farsistan; 70 miles S.E. of Shiraz.

CHARD, an ancient town of Somersetshire, England; is situated in the southern part of the county, and consists of 246 houses, which are disposed in two streets interecting each other. This place was anciently denominated Cerde, which name, according to Mr. Collinson, it obtained from Cerde, a Saxon chief, who was repeatedly engaged against the Britons in this part of the island. Two or three springs rise in the immediate vicinity of the town, and this part of the country is so high, that the streams of water may be turned either north into the Bristol channel, or south into the British channel. Chard, in the reign of Edward I., was made a free borough, and sent members to parliament nine times: but it afterwards lost this privilege. A market was formerly kept here on Sundays, but the market-day is now Monday, and is well supplied with corn, and vast quantities of potatoes. Collinson's History of Somersetshire, 4to. vol. ii.

CHARDIN, Jean, in Biography, the son of a jeweller at Paris, of the Protestant persuasion, who distinguished himself as a traveller. He was born at Paris in 1643, and followed the profession of his father. At the age of 21, he set out on his travels, and remained for a considerable time in Persia. After his return in 1670, he printed at Paris an account of the coronation of Soliman III. King of Persia, together with the principal events that introduced his reign. In the year 1671 he again departed for the east, and having spent several years in Persia and the East Indies, he collected various particulars of curious information concerning the state of those countries, which he published after his return to Europe. In 1681 we find him in London, where he was knighted by Charles II. and appointed his majesty's jeweller. He married the daughter of a French refugee in London, and died in this city in the year 1733. A collection of his travels was published in 10 vols. 12mo. in 1711, and in 4 vols. 4to. in 1723, at Amsterdam. They were translated into English, German, and Flemish: and as they contain authentic and valuable information, with regard to the religion, manners, products, and commerce, &c. of the countries he visited, they obtained an extensive circulation. Among other curious particulars, he records several medical facts; and particularly an account of his own case, when he was attacked with a dangerous fever at Cambrai, and cured by the country physicians, who employed the repeated suction of cold water. This fact has suggested an useful hint to modern practitioners.

CHARDIN. See JARDIN.

CHARDONNE, in Geography, a town of France in the department of the Meuse, and district of Bar-le-Duc; 4 miles N. of it.

CHARDON, in Conchology. The French distinguish a species of ray by this name, the Raja fulvatica of Linnaeus, which see.

Charon pour monter a l'assaut, in Military Language. When the use of crampons (creepers or cram-irons) was not at all known, the sapper, to avoid slipping down in mounting the breach, or to the assault, took off one shoe. At present he makes use of a crampon, or shardon d'iron, which is fastened with a strap and buckle, or by means of a screw to the heel of the foot. But this last method does not seem to be sufficiently firm or solid, particularly for assaults of much danger.

CHARDONNET, points of iron, like those of darts, placed on the top of a grate, or the coping of a wall, to prevent any peril's getting over them.

CHARDONNERET, Chardonnet jaune, &c. in Ornithology, the name under which Buffon and other French authors describe Fringilla thalassina, which see. — Called by Pennant and Latham the American Goldfinch.

CHARDIS, in Gardening, is a term which is applied to different parts of different sorts of vegetables after they have undergone a sort of blanching, and are become tender by being tied up or covered in some way or other. Thus in the artichoke they are the leaves, which have been wrapped up during the autumn and winter with straw bands; the tops of the plants being only just left out. And in the white beet they are the dewy shoots of the tops of such plants, as have been covered with long dry dung during the winter season.

CHARE CULLOU, in Geography, a town of Asia, in the province of Cabul; 42 miles S.W. of Cabul.

CHARENTE, a river of France, which rises in the department of the Upper Vienne, passes by, or near to, Civray, Kuffee, Vertee, Maulle, Angoumois, Jarnac, Cognac, Saintes, Rochefort, &c. and discharges itself into the sea, about eight miles below Rochefort, opposite to the isle of Oleron.

CHARENTE, department of, a district or division of France; taking its name from the river Charente, which passes through it, and formed of Angoumois, and a part of Saintonge. It is bounded on the north by the departments of Upper Vienne, and the Two Sevres; on the east by those of Upper Vienne and Dordogne; on the south by those of Dordogne, and Lower Charente, which bounds it also on the west. Its length from N. E. to S. W. is about 56 miles, its average breadth 30 miles, its territorial extent about 6310000 hectares, or about 1,153,684 square acres, and its population about 321,577 persons. It is divided into five communal districts, which comprehend 28 cantons, and 455 communes. Its capital is Angoumois. This department, in the 11th year of the French era, contributed 2,978,926 francs, and was charged with an expense towards the support of administration, justice, and public instruction, of 279,019 francs, 66 cents.

CHARENTE, Lower, department of, is situated on the seacoast, north of the river Gironde, and takes its name from the river Charente, which crosses it near its center: it is composed of Annis and a part of Saintonge. It is bounded on the north by the departments of La Vendee, and the Two Sevres; on the east, by a part of that of the Two Sevres, and by that of Charente; on the south, by the departments of Dordogne and Gironde; and on the west by the ocean. Its length is somewhat more than 80 miles, and breadth unequal, being towards the south about 10 miles, towards the north about 20, and in some parts nearly 40. Its territorial extent is 7247½, or about 1,494,450 square acres, or 716,814 hectares: its population consists of about 402,105 persons: it is divided into ten communal districts, comprising 37 cantons, and 506 communes; its contributions amount to 4,105,94 francs, and it is charged with expenses to the administration, judiciary, and public instruction, amounting to 331,035 francs, 66 cents. The capital is Saintes.

CHARENTENAY, a town of France, in the department of the Yonne, 7 miles S. of Auxerre.

CHARENTON, Joseph Nicholas, in Biography, a French Jesuit, was born at Blois in 1663; and having spent 15 years as a missionary in Persia, settled at Paris, and pursued his studies till his death in 1755. Besides a translation of two devotional pieces of Thomas Kempis, he also published "The General History of Spain, by Father-Marmara, 3

translated
translated into French, with historical, geographical, and critical notes, medals, and maps," 7 vols. 4to. Paris 1725; to which he has added a valuable preface. This work is held in confiderable estimation.

Charenton, in Geography, a town of France, in the department of the Cher, and chief place of a canton, in the district of St. Amand; 5 miles E. of it. The place contains 8,148, and the canton 5,507 inhabitants: the territorial extent comprehends 255 kilometeres, and 11 communes.—Allo, a town of France in the department of the Seine, and chief place of a canton, in the district of Senois. The place contains 8,16, and the canton 7,773 inhabitants: the territorial extent includes 68 7/8, kilometeres, and 11 communes.

Châora, or Châerai, a town of the island of Cuba; 5 miles W. of Habana.

Châerai, or Châerai, a town of the kingdom of Naples, in the province of Calabria Ultra; 9 miles S. of Girace.—Allo, a river of Naples, which runs into the sea 10 miles S.S.E. of Girace.

Chares, in Biography, a famous Boturary, was a native of Lindus, and a disciple of Lyfippus; and his name is transferred to as the fabricator of the Rhodian Colossus of the Sun, which was a metal statue of an immense bulk. See Colossus.

Chares, in Ancient Geography, a river of Peloponnesus, in the Argolid, near which, according to Plutarch, was fought a severe battle between Aratus and the tyrant of Argos.

Charge, in Electricity, in a strict sense, denotes the accumulation of the electric matter on one surface of an electric, as a pane of glass, Lephyd phal. &c. whilst an equal quantity passes off from the opposite surface: or, more generally, electricity are said to be charged, when the equilibrium of the electric matter on the opposite surfaces is destroyed, by communicating one kind of electricity to one side, and the contrary kind to the opposite side; nor can the equilibrium be restored till a communication be made by means of conducting substances between the two opposite surfaces. And when this is done, the electric is said to be discharged.

The charge properly refers to one side, in contradistinction from the other; since the whole quantity in the electric is the fame before and after the operation of charging; and the operation of charging, unless what is gained on one side is lost by the other, by means of conducting rays applied to it, and communicating either with the earth, or with a sufficient number of non-electrics. In order to facilitate the communication of electricity to an electric plate, &c. the opposite surfaces are coated with some conducting substance, usually with tin-foil, within some distance from the edge; in consequence of which the electricity communicated to one part of the coating is readily diffused through all parts of the surface of the electric in contact with it; and a discharge is easily made by forming a communication with any conductor from one coating to the other. If the opposite coatings approach too near each other, the electric matter forces a passage from one surface to the other, before the charge is complete. And some kinds of glafs have the property of conducting the electricity over the surface, or of being permeable to it, so that they are altogether unfit for the operation of charging and discharging. Mr. Canton supposes that this quality of glafs is owing to its unvitriled parts. If, indeed, the charge is too high, and the glafs plate obtain too little attraction between them, the two opposite electricities forces a passage through the glass, and makes spontaneous dis charge, and the glafs becomes unfit for further use. See Conductors, Electrics, Lephyd Phal, &c.

Charge, in Military Affairs, has chiefly the three meanings, viz. an attack, an accuation, and a load or quantity of powder. The French make use of it technically in the first of these general meanings, in two different senses, using the terms charge precipitate, and charge a volante. The charge precipitate is given when the four times are precisely marked, as charges vos armes, un, deux, trois, quatre; and is chiefly applicable to the drill. The charge a volante is executed in the same manner as the charge precipitate with this difference only, that the soldiers do not wait for the specific words.

It was a custom with most of the ancients to charge with volafls, mixed with their martial music. The Galls, the Germans, the Parthians, and all the barbarians in general, observed this custom. The Turks have preferred it, and march towards the enemy with the most terrible howlings; they believe, and not without reason, that these howlings animate the soldier, divert his thoughts from the dangers which surround him, and strike a terror into the enemy. The Romans, and some of the Greeks, such as the Argians, the Mantinians, and the Macedonians, did the same; but they did it by rule; so that what was among the Barbarians, no better than a confused noise, excited by an impetuous motion, was among the others a matter of discipline. As soon as they came in sight of the enemy, they gave a general shout before they advanced nearer to him; and this shout continued, and it was from the manner in which it was given, the general formed his judgment of the disposition of his troops. The Samnites and the Etrurians had the same custom as the Romans. In an engagement between the latter and the Samnites, which terminated in the retreat of both, they kept looking at each other a long time, before either gave the shout; neither being willing to give it first. Craffus, as we are informed by Plutarch, after being harassed by the Parthians during a whole day, resolved to charge them with all his forces. He ordered the shout to be given by a signal from the trumpets, which soon after founded to charge; the troops then put themselves in motion; and ran up to the enemy, exciting each other from time to time with repeated shouts. The Romans at the same time drummed their jaulins, and drove against their lances, which still augmented the noise, and carried with it a very terrible effect. If the shout had been to be repulsed, they set up a new shout every time they returned to the charge, but it was never given by the party which attacked. The second line, when it did not charge with the first, kept its shout till its turn for setting off came; as did likewise the revete. Those troops gave louder and louder shouts, in proportion as they redoubled their efforts. Some of the Greeks did not shout in charging, but only sung a kind of air, which they called the hymn of battle." We still find traces of this custom among the Ar- nauts, inhabitants of Macedonia, at present subject to the Turks. These people, shout and bold like their ancestors, engage with a rapid pace: the chief sing, and their troops answer, while they press forward with an accelerated velocity. These hymns should be short, and composed of short verses, set to a lively air. Horace speaks in one of his odes of a poet called Tyrteus, who, in the wars of Mphina, anim- ated by his verses the Lacedemons to such a degree, that they thereby gained a complete victory. The Lacedem- onians, however, did not always follow this custom. In the time of Theucides, they marched in silence, to the sound of flutes, and by its cadence regulated their steps, the better to preserve their ranks. This, without doubt, suggested to the Romans the first idea of marching to time, which much contributed to the perfection of the military art. Although the step of the Romans was not only regulated, but animated by the sound of warlike instruments, they thought the shout necessary.
necessary at the time of their charging the enemy. As they charged running, the rapidity of their motion, joined to the noise of their own shouts, and of the trumpets and horns, inflamed them, and filled them with a sort of fury, which their leaders nevertheless knew how to moderate by the exactness of their discipline. Plut. in Crassum. Livy, 1. e. c. 21.

_Cha de mine, or Charge of a mine_, is the quantity of powder that is put into its chamber for the purpose of springing it, or making it explode.

_Chafe of powder, in Artillery Matters_, is the quantity of powder put into a piece of ordnance for faltling, saluting, proving, or rejoicing; or for propelling, projecting, or throwing from it shots, bullets, shells, grenades, &c.

Various charges of powder are best adapted to the different uses to which artillery is applied, as field service, battering in breach, garrison-service, firing en richefeet, &c. &c.

The charge of powder for proving guns is equal to the weight of the ball; but for service the charge is one-half, or one-third of the weight of the ball, or even less; and, indeed, in most cases of service, the quantity of powder is too great for the proposed execution.

In the British navy, the allowance for thirty-two pounders is but seven-sixteenths of the weight of the bullet. But a late author is of opinion, that if the powder in all ship cannon whatever was reduced to one-third weight of the ball, or even less, it would be a considerable advantage, not only by saving ammunition, but by keeping the guns cooler and quieter, and at the same time more effectually injuring the vessels of the enemy. With the present allowance of powder, the guns are heated, and their tackle and furniture strained, and this only to render the bullet less efficacious. For a bullet which can but just pass through a piece of timber, and loses almost all its motion thereby, has a much better chance of rending and fracturing it, than if it paffed through with a much greater velocity. See Robins’s Tracts, vol. i. p. 290, 291.

Professor Euler concludes, from certain calculations, by means of which he has formed a table, representing the charges for the greatest velocity, that those assigned by Mr. Robins are much too great. See True Principles of Gunery investigatd and explained, &c. 1777. p. 120. 260.

Mr. Robins observes, that the charge is not to be determined by the greatest velocity that may be produced, but that it should be such a quantity of powder as will produce the least velocity necessary for the purpose in view; and if the waffe be moderate, no field-piece should ever be loadd with more than \( \frac{3}{4} \), or at the utmost \( \frac{4}{5} \) of the weight of its bullet in powder; nor should the charge of any battering piece exceed \( \frac{1}{2} \) of the weight of its bullet. Tracts, &c. vol. i. p. 266, &c.

Different charges of powder, with the same weight of ball, produce different velocities in the ball, which are in the subduplicate ratio of the weights of powder: and when the weight of powder is the same, and the ball varied, the velocity produced is in the reciprocal subduplicate ratio of the weight of the ball: and this corresponds both to theory and practice. See Dr. Hutton’s paper on Gun-powder, in the Phil. Trans. for 1778, p. 50. and his Tracts, vol. i. p. 266. This, however, is on a supposition that the gun is of an indeterminate length; whereas, on account of the limited length of guns, some variation from this law occurs in practice, as well as in theory; in consequence of which it appears, that the velocity of the ball increases with the charge only to a certain point, which is peculiar to each gun, where the velocity is the greatest: and that, by farther increasing the charge, the velocity is gradually diminished, till the bore is quite full of powder. By an easy fluxionary process, it appears, that, calling the length of the bore of the gun, \( l \), the length of the charge, producing the greatest velocity, \( b \), ought to be \( \frac{2.718281828}{4.718281828} \) or about \( \frac{1}{2} \) of the length of the bore; where \( 2.718281828 \) is the number whose hyperbolic logarithm is 1. But for several reasons, says Dr. Hutton, in practice, the length of the charge, producing the greatest velocity, falls short of that above mentioned, and the more so as the gun is larger. From many experiments, he has found the length of the charge, producing the greatest velocity, in guns of various lengths of bore, from 15 to 40 calibres, as follows:

<table>
<thead>
<tr>
<th>Length of bore in calibres</th>
<th>Charge for greatest velocity</th>
</tr>
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<tbody>
<tr>
<td>15</td>
<td>( \frac{1}{5} )</td>
</tr>
<tr>
<td>20</td>
<td>( \frac{2}{5} )</td>
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<tr>
<td>30</td>
<td>( \frac{3}{5} )</td>
</tr>
<tr>
<td>40</td>
<td>( \frac{4}{5} )</td>
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</table>

See Cannon.

_Charge, in Gunrey_, implies not only the quantity of powder put into a piece of ordnance for firing it with, but also the shot, shells, grenades, &c. with which it is loaded. The success of a campaign, of a siege, or defence, often depends on the skilful and judicious application of artillery. But in a most every application of it, there is more powder than is either proper or necessary made use of; and our pieces of ordnance have in general by far too much windage.

_Charge, in Military Language_, denotes an attack either of infantry or of cavalry.

_Charge bayonet_, is a word of command given to infantry to rush on the enemy and attack them at the point of the bayonet.

_Charge, to found a_, is a signal given by found of trumpet for cavalry to commence the attack.

_Charge, in Military or Martial Law_, is the specific faction of any crime or offence, for which a commissioned officer, non-commissioned officer, or funder, is tried by a court-martial. In all charges of this nature, the time and place, or when and where the crime or offence was committed, must be set forth with accuracy and precision.

_Charge, in Heraldry_, is applied to any figures or things which occupy the field of a shield of arms, and are placed either throughout the whole superficies of the escutcheon, or elfe in some special part of the same, whether it be animal, vegetable, or any other matter. Anciently, arms were simple and plain, consisting of few figures, distinctly placed in the field: the heralds of those times, as we find by their writings, being of opinion, that the less that appeared in a coat, the more honourable it was. As coats of arms increased in number, a deviation from their original principles soon became unavoidable; and a conspicuous variation from each other was absolutely requisite, in order to their making a due armorial distinction between families. This was at first effected, either by a repetition, on the same escutcheon, of some one or other of those particular figures, which had before been used as charges, or by placing in the field two or more distinct bearings. This mode, however, was soon found to be inadequate to the purpose; for the continual multiplication of arms had exhausted all the variations that could be made with respect to the figures then used in heraldry, and required additional marks of distinction. Hence was introduced, from time to time, such a multitude of new charges, that there is scarcely anything, either natural or artificial, that either is not, or hath not been, represented in the coat-armour.

Charges peculiar to the art and usage of armory, as the cross, chief, pale, fesse, &c. are called _proper charges_; and frequently ordinaries.

Bloom restrains the term charges to those additions, or re-
wards of honours, frequently placed on escutcheons, as cantons, quarterings, gules, &c.

**Charge.** in Law, denotes the instructions given to the grand jury with respect to the articles of the inquiry, by the judge who presides on the bench.

**Charge,** also signifies a thing done that bindeth him who doth it; or that which is his to the performance of it; and **Discharge** is the removal of that charge. Lands may be charged in various ways; as, by grant of rent out of it, by statutes, judgments, conditions, warrantees, &c.

Lands in fee-simple may be charged in fee; and where a man freely disposes of the land itself, he may charge it by a rent, or statute. Lit. ecc. 648. Moar. Ca. 179. Dyer 10. If one charge land in tail, and land in fee-simple, and die, the land in fee only shall be chargeable. Bro. Ch. 9. Land intailed may be charged in fee, if the eiate-tail be cut off by recovery: if tenant in tail charge the land, and afterwards levy a fine or suffer a recovery of the lands, to his own use; this confirms the charge, and it shall continue. 1 Rep. 61. If one joint-tenant charge land, and afterwards release to his companions, and die, the survivor shall hold it charged; but if it had come to him by survivorship, it would be otherwise. 6 Rep. 76. 1 Shep. Abr. 325. He that hath a remainder, or reversion of land, may charge it; because of the possibility that the land will come into possession, and then the possession shall be charged. But where one leaves land for life, and grants the reversion or remainder over to A. B. who charges the land, and dies, and the tenant for life is heir to the fee; in this case he shall hold it discharged, for he had the possession by purchase, though he had the fee by demise. Bro. 11. 1 Rep. 62.

If a rent be falling out of a house, &c. and it falls down, the charge shall remain upon the foil. 9 E. IV. 20. But when the eiate is gone upon which the charge was grounded, then, generally, the charge is determined. Co. Litt. 340. And in all cases where any executory thing is created by deed, then, by consent of all the parties, it may be, by deed, defeated and discharged. 10 Rep. 29.

**Charge,** in the **Manage,** a fort of unguent, made of oil, honey, gels, turpentine, and sometimes of lees of wine, and other matters, applied externally to a horse, &c. for the cure of strains, bruises, and swellings.

**Charge,** a military term for a few detached paffages for trumpets, side-drums, and kettle-drums, performed when on the point of charging or attacking the enemy. "Sound the charge!" is the command given to the trumpets; "Beat the charge!" to the drums.

**Charge,** Fr. loaded, crowded with parts. This is said of *Mafia,* when the subordinate parts are to load and duty that the principal melody cannot be heard through them. See Caricata, which has the same meaning in Italian. Rameau and Gluck have been accosted of this redundancy of notes in their operas; the former from a systematic determination to give to every base its full harmony; the latter, perhaps, from a desire to place the French in their own way, by pursuing the method of Lulli and Rameau, but he likewise gratified his own taste in manifesting his ingenuity by giving to each part a different subject in the accompaniment, and also in giving way to the force and fire of his own genius. Piccini, in his early productions, put the instrumental performers in his operas to hard labour by giving them so many notes to execute, that he has been said at Naples, "to put the orchestra in flames." But this was in his comic operas, full of quarrels and improprieties. The Buona figliola maritata required more rehearsals than any opera that was ever performed in this country. But he did not crowd his score from pedantry or futility, but to produce effects by the instruments which it would have been ridiculous for even comic fingers to attempt. When Piccini gave way to his native fire and invention, it was for something ingeniously planned, and which when well executed, interested and delighted the audience.

**Charge,** or rather Other **Overcharge,** in Painting, is an exaggerated representation of any person, wherein the likeness is preferred, but at the same time ridiculed.

Few painters have the genius necessary to succeed in these charges: the method is, to select and heighten something already amiss in the face, whether by way of defect or redundancy; thus, A. G. if nature have given a man a nose a little larger than ordinary, the painter falls in with her, and makes the nose extravagantly long; or if the nose be naturally too short, in the painting it will be a mere lump; and thus of the other parts.

De Piles observes, that there are charged outlines which plague, because they are above the lowliness of ordinary nature, and carry with them an air of freedom, with an idea of a great talent, which deceives most painters, who call such excelle the grand manner. And although, to such persons, who have a true idea of correctness, simplicity, and elegance of nature, their excelles may seem superficial, as they only adulterate the truth, yet one cannot forbear to commend some things that are overcharged in great works, when the distance whence they are to be viewed softens them to the eye; or when they are used with such discretion as makes the character of truth more apparent. It ought, however, to be remarked, that, in the antique flates, which are allowed to be the rule of beauty, nothing appears charged, anything affected; nor is there any thing of that kind in the works of those who have always imitated them; as Raphael, Domenichino, Nicolò Poussin, and some others.

**Charge of lead,** is thirty six pigs. See Lead, Pig, &c.

**Charge, in Sea-Language,** is sometimes used for burden; thus, a *flip of charge* is such as draws much water, or swims deep in the sea, though sometimes an unwieldy ship, that will not bare nor steer, is called a *hip of charge.*

**CHARGED, in Heraldry.** A shield, carrying on it some figure or impresa, is said to be charged therewith.

So, also, when one bearing, or charge, has another figure added upon it, it is properly said to be charged. This was the ancient method of blazon; but it is now laid aside.

**charged cylinder,** in Gnomery, is that part of the gun which contains the powder and ball.

**CHARGEOLR,** a charge for great guns.

**CHARGERS,** are also either bandleaders, or little flanks that contain powder for charging and priming.

**Charger, in Military Language,** is likewise a term made use of to denominate a horse which an officer is mounted on in action.

**Charger en Canne, en Mortier, en Fusil, &c.** is to put into it the powder, the ball, the shell, the cartridge, &c.

**Charger pennenti, to charge the enemy; is to march towards the enemy directly in front, receiving his first fire, but retarding your own. You are thus fire to fight to advantage, as you have gained ground, a circumstance that seldom fails to ensure success to the assailants, and to discourage those who are attacked. This phrase is also employed to denote the prefling upon, pursuing an enemy, and the obstructing and shutting up his communications, ways, and pâillage.

**Charger l'epée à la main,** to charge sword in hand. Before the use of the bayonet, the soldier took his musket by its rest in his left hand, and charged the enemy with his sword.
sword in his right; which method of charging must have been very incommodeous, fatiguing, and difficult. M. le maréchal de Puypérou, in his art of war, derives this phrase from the time when the mullet was used without the bawomct.

CHARGES MILITAIRES; all employments, offices, or appointments by brevet, from a field-marshals of France down to the lowest subaltern officer, were called chargés militaires. But the office or appointment of intendant general of stores and provisions, and all those of a similar nature, constituting the fute of an army, and part of its staff, do not come under the denomination of charges militaires.

CHARGEUR, an artilleryman, whose duty or bunif con is to charge or load the cannon.

CHARGEY, in Geography, a town of France, in the department of the Upper Sûone, and district of Gray; 1 league N. of Gray.

CHARIDEMUS, in Ancilus Geography, Gato del Gato, a promontory of Spain, at the extremity of the coast of Britons.

CHARIENISMUS, in Rhotor: a figure wherein a taunting expression is softened by a jeer.

CHARILLOS, Los, in Geography, a town of South America, in Peru, and in the jurisdiction of Lima.

CHARIN, or Carin, Lewis, in Biography, an eminent scholar and physician, was born at Lucens in Switzerland, in the beginning of the 15th century. In the early part of his life, he was preceptor to part of the family of the Fuggers. In Basle, where he died in 1760, he was in considerable repute for his skill in the practice of medicine; but his name is recorded principally for having left by his well provision for foundling, and supporting for ever, three scholarchips in the university of that city. Elly, Dict. Hitt.

CHARINA, in Ancient Geography, a place of Asia, in Chambadene, to the east of mount Zagus in Media.

CHARINDAS, a river of Asia, in Media, according to Ptoleomy.

CHARIOPOLIS, a place situated towards Thrace and Macedonia.

CHARIOT. See Coach. Chariots were used both for military purposes, and in the Olympic games. War- chariots were very generally used by the ancient inhabitants of various nations. We learn from Homer, and from the Sacred Writings, that they were used in many parts of the eastern world for military purposes. Among the Medes and Persians they had chariots with two wheels, which were generally drawn by four horses abreast, with two men in each; one of dislinguished birth and colour who fought, and the other only for driving the chariot. Cyrus, however, thought this method very expensive, and of little service; because the equipment of 500 chariots required 1300 horses and 600 men, of whom only 300 fought; the other 500 who were persons of distinction, and capable of performing signal service, being occupied merely as charioteers or drivers. To remedy this inconvenience, he altered the form of the chariots, and doubled the number of fighting men that rode in them, by putting the drivers into a condition to fight, as well as the others. He caufed the wheels of the chariots to he made stronger, so that they might not be so easily broken; and their axle-trees to be made longer, that they might thus become more firm and steady. At each end of the axle-tree he caufed fcythes to be fastened that were three feet long, and placed horizontally; and he caufed others to be fixed under the fame axle-tree with their edges turned to the ground, that they might cut in pieces men or horses, or whatever the impetuouf violence of the chariots should over turn. It appeared from several passages in ancient authors, that, in after times, they armed the beam or pole to which the horses were fastened with pikes, having iron points which projected forward; the yokes of the horses had also pointed iron three cubic inches in length: and the hinder part of the chariot was armed with several rows of sharp knives to hinder any force encoun tering behind. Between the spokes of the wheels were placed javelins, and even the fellies of the wheels were furnished with fcythes, which tore every thing they met with to pieces. The driver of one of these carenges was called the charioteer; and his feat was a kind of little tower, made of very f lids wood, and raised breadth high. Sometimes the tower was large enough to hold several armed men, who threw flowers of darts and arrows at the enemy. Chariots of this kind were in use for many ages in all the oriental countries. They were regarded as the principal strength of the armies, as the most certain instruments of victory, and as an apparatus the best adapted to strike the enemy with combination and terror. In proportion, however, as the military art improved, the people found the ineconveniences attending them, and at length laid them aside. For, in order to obtain any advantage from them, it was necceary to fight in immense plains, where the ground was very even, and where there were no rivulets, grottoes, woods, or vineyars. Several methods were also contrived, in process of time, to render them absolutely useless. A ditch was cut in their course which was sufficient to stop their progress. Sometimes an able and experienced general, as Eumenes in the battle which Scipio fought with Hannibal, attacked the chariots with a detachment of slingers, archers, and spearmen, who, spreading themselves on all sides, poured such a flower of stones, arrows, and lances upon them, the whole army shouting at the same time so loud, that they terrifed the horses of the chariots, and occasioned such disorder among them, as often made them turn round, and run foul upon their own forces. At other times they rendered the chariots inefficace and inactive, only by marching over the space which separated the two armies, with an extraordinery swiftnes, and advancing suddenly upon the enemy. The strength and execution of the chariots depended on the length of their course; and this gave impetuoufity and rapidity to their motion, without which they were feeble and insignificant. It was after this manner that the Romans under Silla, at the battle of Chersones, defeated and put to flight the enemy's chariots by raising loud peals of laughter, as if they had been at the games of the circus, and by crying out that they should fend more. Diod. Sic. i. xvi. Q. Curtius i. iv. Xenoph. Cyprou. lib. vi. Livy, i xxxvii.

In the western world war-chariots were much used in ancient times. Accordingly we find that those who fought from chariots of this kind, constituted the most remarkable corps in the armies of the ancient Britons. This formidable corps seems to have been chiefly composed of persons of distinction, and the very flower of their youth. As this singular art of war was, at the period to which we now refer, almost peculiar to the ancient Britons, and they greatly excelled and delighted in it, we shall give a brief description of the different kinds and conffuctions of their war-chariots, and of their way of fighting from them. Before Britain was invaded by the Romans, if we consider the imperfect state of some of the most necessary and useful arts in the country, we could hardly expect to find in it wheel-carriages of any kind, much less chariots for battle, for pleasure, and for war, of various forms, and of elegant and curious workmanship. It appears, however, from the concouning testimonies of many writers of the most unquesionable credit, that there were such chariots in prodigious numbers, even in the most remote and uncultivated parts of this island in the ancient

3
Chariots. (Tact. vit. Agric. c. 12, 15. Cæs. de Bell. Gall. I. liv. c. 24, 25. l. v. c. 16, 19. Xiphilin. ex Dioge. Sever. Dio Cassius l. xii. Mela. l. iii. c. 5. Strabo. l. iv. p. 203. Diod. Sicul. l. v. c. 35, 52.) The wheel-carriages and war-chariots of the ancient Britons are mentioned by Greek and Roman authors under several different names, particularly the following, viz. Cassius, Cæsarius, Carrus, Carus, Carrus, Charis, CHariotus, Erida, and Rueda. The Britons seem to have been a kind of carriage used rather for travelling than for war. It comprised two or more persons who were called Con- cœrones, from their sitting together in the same machine. It probably derived its name from the British word Bin, head or chief; and these carriages might have obtained this appellation from the high rank of the persons who used them. The Pærium teems to have been a larger kind of carriage than the former, and is thought to have derived its name from having four wheels, as a fara in the British tongue, and pæra in the Zélée dialect of the Greek tongue, (which was spoken by the people of Marseille in Gaul) signifies four. The Carrus, or Currus, was the common cart or wagon, used by the ancient Britons in time of peace, for the purposes of agriculture and merchandise, and in time of war, for carrying their baggage, and wives and children, who commonly followed the armies of all the Celts nations. The Carus was a war-chariot, and a very terrible instrument of destruction: being armed with sharp swords and hooks for entangling and tearing all who were too happy as to come within its reach. This kind of chariot was made very light, and had few or no men in it besides the charioteer; being designed to drive with great force and rapidity, and to do execution chiefly with its hooks and feythes. The Eridaun and Rheda were also war-chariots, probably of a larger size, and more strongly made than the carus, and designed for accommodating a charioteer for driving it, and one or two warriors for fighting. The greatest number of the war-chariots of the ancient Britons were of this kind.

Two circumstances respecting these war-chariots are very remarkable; viz. their number and the admirable dexterity with which they were managed and conducted. Cæsar acquaints us (De Bell. Gall. l. v. c. 19) that after Catiline had dispersed all his other forces, he still retained no fewer than 4000 of these war-chariots about his person. The fame illustrious warrior and writer, who was an attentive observer of every thing of this kind, gives us (De Bell. Gall. l. iv. c. 23) the following account of the dexterity with which the Britons managed their war-chariots: "Their way of fighting with their chariots is this: first, they drive their chariots on all sides, and throw their darts; insomuch that by the very turn of their horses, and noise of the wheels, they often break the ranks of the enemy. When they have forced them way into the midst of the cavalry, they quit their chariots and fight on foot. In the mean while the drivers retire a little from the combat, and place themselves in such a manner as to favour the retreat of their countrymen, in case they should be overpowered by the enemy. Thus in action they perform the part both of nimble horsemen and of able infantry, and by continual exercise and ofte have arrived at such expertise, that in the most steep and difficult places, they can flop their horses upon full lefletch, turn them which way they please, run along the pole, roll on the harness, and throw themselves back into their chariots, with incredible dexterity." War-chariots had also been used by the people of Gaul in former times; but they seem to have laid them aside, for they were engaged with the Romans under Julius Cæsar; (Diod. Sic. l. v. p. 52. Liv. Hist. l. x. c. 28.) for that general makes no mention of them in any of his battles with the Gauls. It is probable, therefore, that in Cæsar's time chariot-fighting was known and prac-
ticed only in this island, and continued to be so until it was subdued by the Romans, and longer in those parts of it that were not conquered. When we consider what a singular and formidable appearance it prodigies a number of these war-chariots, driven with such rapidity, and managed with such dexterity, must have made in advancing to the charge, we need not be surprized that the Roman soldiers, though the bravest and most intrepid of mankind, were so much disconcerted, as we are told they were, by this way of fighting. Cæs. de Bell. Gall. l. v. c. 15, 16.

Chariots were used in the celebration of the Olympic games; and they were introduced into those games in the 27th Olympiad. Indeed it appears, from the story of Ozonamus and Pelops, that the chariot-race was known in Elis, even before the institution of the Olympic games; and therefore it seems to have been discontinued on account of the great scarcity of horses throughout all Greece, not only at the time of the revival of these games, but for many olympiads after, and also on account of the great expenditure that attended the breeding and managing of horses, and perhaps from the little estimnation in which the Olympic games were held at their re-institution. In process of time they acquired extraordinary celebrity, and the introduction of the chariot-race, as well as the race of running-horses, admitted in the 33d Olympiad, served to encourage those who excelled in the breeding and managing of horses, and thus to excite a emulation which tended to supply Greece with a stock of these animals, which were so much wanted. Accordingly we find that the rich and noble became competitors in the chariot-race; and Alcibiades in particular outshone not only all his competitors, but all who either before or since contended for the honour, in the number and magnificence of his chariots, and in the victories obtained by them: for he brought at once seven chariots into the course, and carried off at the same time, the first, second, and fourth prize, according to Thucydidcs (l. vi.), or third, according to Hecatores and Euripides; the half of whom composed an ode upon the conqueror, part of which is quoted by Plutarch. In this ode the poet compliments Alcaibades upon his having gained at once three prizes; a thing, says he, which no Greek had ever done before him. The Emperor, when they introduced the chariot-race into the Olympic games, were particularly desirous of inducing the wealthy to aspire after the Olympic olive, as they alone were able to support the great expense that necessarily attended the breeding, keeping, and managing of horses; and, therefore, they wished the conditions of obtaining the prize as easy as possible, by exempting them from the trouble and danger of driving their own chariots. No one, however, was prohibited from driving his own chariot; and the office of charioteer was anciently far from being dishonourable; besides, the skill of managing the horses, which were then used only in chariots, was reckoned among the accomplishments of a hero; but when chariots came to be laid aside in war, which seems to have happened soon after the heroic ages, the ufefulnes of, and consequently the reputation, of that art began to decline by degrees, whereas it soon came to be lodged in inferior hands. Although the mastery of the horses was procured the conqueror, and reposed the crown, the horses had a share of the honour, and were crowned with the congratulations and applause of the whole assembled. A crown was also given to the charioteer, to whose feet and to whose victory was always in a great measure owing. Skill and courage were indispensably necessary to both happy a contest, which the many startings, round the pulleys, and the number of

1 chariots
CHARIOT.

chariots which sometimes ran together, rendered extremely difficult and dangerous. Alecbandes, we have already said, brought at one time for his own share seven chariots, and he must have had competitors who disputed the crown with him. Sophocles speaks of 10, and Pindar of no less than 40 chariots, which contained at the same time. The number, therefore, of carriages must have embarrassed the competitors on these occasions; more especially when attention is given to the course itself. See HIPPODROME.

When we consider the form of the chariots, the attitude of the drivers, the rapidity of the motion, and the accidents that were likely to occur, arising from the nature of the course, and the number of chariots that frequently ran together, we have less occasion for wonder at their being thrown out of their chariots and put in danger of their lives, than at their maintaining their posts amid so many difficulties, and coming off with safety and success. These chariots, by some figures of them upon ancient medals, &c. seem to have been very low, open behind, but closed up before and on the sides, with a kind of parapet, which was sometimes enriched with various ornaments. There does not appear to have been any seat for the driver, who is therefore always represented leaning, and leaning forward to the horses. They had but two wheels, and consequently the fore part of them must have been supported by the horses, which inevitably rendered their motion very unequal, and made it so difficult for the charioteer to keep upon his legs, that nothing but a long course of practice could induce a man from falling in such a situation. Nero, manifestly folly equal to his vanity, exposed himself to the danger of this exercise. He entered the Hippodrome in a chariot drawn by ten horses, which he undertook to drive himself, and was thrown out of his chariot, to the great hazard of his life; and though he was put into it again, he found himself unable to finish the race, and defiited. Nevertheless, he was proclaimed conqueror, and honoured with the Olympic crown. In return for the compliment, at his departure, he presented the Hellanodices, and judges of the games, with the sum of 250,000 drachmas, or about 8000l. and all Greece with her liberty.

Upon the day of the race, the chariots, at a certain signal, marched out of the lodges in which they stood, and entering the course according to the order before settled by lot, were drawn up in a line; but whether abreast, or one behind another, is a question among the learned.

At the sound of a trumpet they all started, some times to the number of 40, started from the barrier, and all prattled with ardour and emulation towards the fame point or pillar. "

Soil thou not how, when from the goal they started, the youthful charioters with beating heart
Rush to the race, and panting fearlessly bear
Th' extremes of year's hope and chilling fear;
Stoop to the reins, and with all their force;
The flying chariot kindles in the course,
And now a low, and now aloft they fly,
As horse thro' air, and firm to touch the fly.
No stop, no stay; but clouds of sand arise
Spare'd and cast backward on the follower's eye:
The bindroot blows the foam upon the first:
Such is the love of praise, an honourable thing!"


Sophocles, in his tragedy of Elektra (v. 700, &c.) has given a noble description of a chariot race in all its forms, of which we have a translation by Mr. Web (sub infra).

Of chariots for the race, there were different kinds, subject to the same laws and customs, executing that the length of the race was diminished for some of them. The chariot first introduced into the Olympic Hippodrome, was the τίλιος ἀμφώ, or complete chariot, so named either because it was drawn by full-aged horses, or because it was drawn by four horses, which number seems to have made a complete set among the ancients. These four horses were all ranged abreast; the two middle ones only were harnessed to the chariot by the yoke; the two side horses were fastened either to the yoke or some other part of the chariot by their traces. Erichthonius, according to Virgil (Georg. i. iii.) was the first that drove with four horses, and, according to Manilius (i. i. 22.) he was for that invention honoured with a place among the heavenly bodies. Pagondes of Thebes had the honour of first obtaining the prize of this fort of chariot race in the Olympic games, as Erichthonius had in the games called Panathenaic. In the 936 Olympiad was added the race of the chariot called "Sy- nornis," which was drawn by a yoke, or one pair only of full-aged horses. The "Apenis" was a chariot, drawn by two mules, and was introduced into the Olympic games by an Afandruflus; but, as mules were held in abomination by the Eleans, and not allowed to be bred in their country, this race was abolished within a very few Olympiads after its first admission. Paufanias (l. v. c. 9.) informs us, that it was introduced in the 70th Olympiad, and abolished by proclamation in the 84th. In the 994 Olympiad was introduced the τελικος ἀμφώ, which was a chariot drawn by four colts, and the ξερις ἀμφώ, or chariot drawn by two colts, which was introduced, according to Paufanias (l. v. c. 8.) in the 120th Olympiad, and he says that Bellicethe, a Macedonian lady, was the first that carried off the crown in that race. Mr. Web has, by paffages from Pindar, alligned to each species of the chariots above described, the different lengths of the race appropriated to it. The whole course or round, όμος, being equal to four stadia, it is inferred, that the two pillars, viz. that from which the horses started, and that round which they turned, which divided the course into two equal lengths, were two stadia distant from each other; consequently the whole length of the race of the τελικος ἀμφώ, or chariot drawn by full-aged horses, consisting of 12 rounds, amounted to 48 stadia, or six Grecian miles; and that of the τελικος ἀμφώ, or charriot drawn by colts, consisting of eight rounds, to 32 stadia, or four Grecian miles; and a Grecian mile, according to Arbutnott's computation, was somewhat more than 800 paces, an English mile being equal to 1056. For farther particulars, see Web's "Dissertation on the Olympic Games" in his translation of the Odes of Pindar, vol. iii. sect. 13. See also an elaborate dissertation on the ancient chariot, both for war and the race, by Mr. Pownall, in Berenger's "Art of Horsemanship," vol. i. p. 271, &c.

CHARIOT a c a m p o, in Military Language, a car or carriage solely made use of for carrying and transporting the body of a piece of ordnance. Such chariots receive the gun-carriages, require fewer horses, and get more easily along bad roads in the field and on a campaign.

CHARIOTS d'un armee, the chariots or carriages of an army. These may, in a variety of circumstances, be rendered of the greatest assistance and advantage by an able general, who sees himself followed or almost harassed by superior forces. He can employ them for covering his march; supporting his columns; and for preventing his being harassed by the enemy. He may make use of them to cover his camps whilst he is hurryng on his encroachments. By flitting up the avenues to a single village, that an enemy wishes to take possession of, he may, by means of a proper disposition of them for that purpose, give a great effusion of blood.

When Alexander Farman, was leading an army of Spaniards rum?
CHARISTICA, Commodity, or Donation, a person to whom is given the enjoyment of the revenues of a monastery, hospital, or benefice.

The charistematics, among the Greeks, were a kind of donatives, or commodities, who enjoyed all the revenues of hospitals and monasteries, without giving an account the soil to any person. — The original of this abbe, referred to the Ionoeolites, particularly Constanine Cepouronovas, the armed enemy of the monks, whose monasteries he gave away to strangers.

In after-times, the emperors and patriars gave many to people of quality, not by way of gift, to reap any temporal advantage from them; but to repair, beautify, and patronize them. At length avarice crept in, and those in good condition were given, especially such as were rich; and at last they were all given away, rich and poor, those of men and of women; and that to laymen, and married men.

Coustelier, in his Ecclesiical Greece Monuments, gives us the form of these donations: they were granted for life, and sometimes for two lives. See Annex.

CHARISTUS, in Ancient Geography, a river of the Colchide territory, according to Pliny. By Ptolemy it is called Charisias, and by Strabo Charis. Arrian denominates it Charisias, and places between the Phasis and the Chobus, about 99 Cud from the one and the other. It is now named Tamain.

CHARIS, a town of Asia, placed by Appian in Parthia.

CHARISASAR, in Geography, a town of Asia, in the country of Candaia; 15 miles N. E. of Candaia.

CHARISIA, in Ancient Geography, a town of Peloponnesus in Arcadia. The ruins, according to Paufanias, lay between Scia and Tricoli.
nance of houses of correction, or of the poor. 35 Eliz. c. 7. § 27. Money given to put out apprentices, either by parishes or public charities, pays no duty. 8 Ann. c. 9. § 40.

CHARITY, one of the three grand theological virtues; confounding in the love of God and our neighbour. Charity is the habit or disposition of loving God with all our heart, and our neighbour as ourselves. It has two material objets, therefore, as the school expresses it; viz. God and our neighbour.

CHARITY is also used for the effect of a moral virtue, which consists in supplying the necessities of others, whether with money, counsel, affnance, or the like.

CHARITY, brief. See Brief.

CHARITY, brothers of. See Brothers.

CHARITY, schools of. See Agape.

Charity-schools, are schools erected and maintained in various parishes, by the voluntary contribution of the inhabitants, for teaching poor children to read, write, and other necessary parts of education.

In most charity-schools the children are likewise clothed, and put out to trades, services, &c. on the same charitable foundation.

Charity-schools have spread throughout most of the con-

 siderable towns of Great Britain and Ireland; and do ho-

 nour to the benevolent and patriotic spirit of the country, whilst they contribute, in a variety of ways, to the relief and advancement of individuals, and to the general prosperity and welfare of the nation.

In Scotland the establishment of parish schools has taught almost all the common people to read, and many of them to write and account. In England and Wales the establishment of charity-schools has had a similar effect, though not so universal, because the establishment has not been so universal; though liberal provision has been made, by private bequests and donations, for extending this public benefit. If in those little schools the books by which the children are taught to read were a little more instructive than they commonly are; and if, instead of a smattering of Latin, which the children of the common people are sometimes taught there, and which can scarcely ever be of use to them; they were instructed in the elementary parts of geometry and mechanics, the liter-

ary education of this class of people would perhaps be as complete as it can be. There is hardly a common trade which does not afford some opportunities of applying to it the principles of geometry and mechanics, which would not therefore gradually exercise and improve the common people in those principles, the necessary introduction to the most sublime as well as to the most useful sciences. The people might easily be led to encourage these most essential parts of education, by giving small premiums and little badges of distinction to the children of persons in the inferior ranks of life who excelled in them. And the public might impose upon almost the whole body of the people the necessity of acquiring these most essential parts of education, by obliging every man to undergo an examination, or probation in them before he could obtain the freedom in any corporation, or be allowed to set up any trade either in a village or town corporate.

It was in this manner, by facilitating the acquisition of their military and gymnasical exercises, by encouraging it, and even by imposing upon the whole body of the people the necessity of learning those exercises, the Greek and Roman republics maintained the martial spirit of their respective citizens. They facilitated the acquisition of those exercises, by appointing a certain place for learning and practising them, and by granting to certain masters the privilege of teaching in that place. Those masters do not app.

peal to have had either salaries or exclusive privileges of any kind. Their rewards consist in what they got from their scholars; and a citizen who had learnt his exercises in the public gymnasium, had no legal advantage over one who had learnt them privately, provided the latter had learnt them equally well. These republics encouraged the acquisition of such exercises, by bellowing little premiums and badges of distinction upon those who excelled in them. See more on this subject, on the importance and utility of the instruction of the poor, in Smith's Wealth of Nations, vol. iii. See also School and Chart. School.

In London we had formerly a charitable corporation for the relief of the industrious poor, erected under queen Anne; for enabling indigent manufacturers and traders to take up money at common and liberal interest; there being a fund of 30,000l. raised for that end.

The money was lent to the industrious poor at 6l. per cent. interest, on pawns and pledges, to prevent their falling into the hands of pawn-brokers: and hence the society derived its appellation: but they likewise took 6l. per cent. for the charge of officers, warehousemen, &c. In the 7th year of king Geo. II. the chief officers of this corporation, by conveyance of the principal directors, abandoned and broke, and defrauded the public proprietors of great sums; and for relief of the sufferers, as to part of their losses, several statutes were enacted. See flats. 5 Geo II. c. 31, c. 32. 7 Geo II. c. 11.

Charity, order of. There are several religious orders which bear this title: one instituted by St. John de Dieu, for the affilliation of the sick: this institute was approved of in 1350, by Leo X. and confirmed by Paul V. in 1617. The religious of this order apply themselves wholly to the service of the diseased. See Brothers of Charity.

Charity of the Holy Virgin, is a religious order established in the diocese of Challons, by Guy lord Joinville, &c. towards the close of the 13th century, approved under the rule of St. Augustine, by the popes Boniface VIII. and Clement VI.

In each parish of Paris, there was a society of women, who applied themselves to find out and relieve the wants of the poor of the parish; and on this account called, Dames de la Charité, and Seurs de la Charité.

CHARKE, Richard, in Biography, was a dancing-master, an actor, a man of humour, and a performer on the violin, with a strong hand. He was leader of the band at Drury-lane theatre. As a composer, he only distinguished himself by being supposed the first who produced that species of musical buffoonery called a Medley Overture, wildly made up of threads and patches of well-known vulgar tunes. But we believe that this very easy species of pleasantrays was first suggested by Dr. Pepusch, in the overture to the Beggar's Opera, brought on the stage in 1728, and Charke's medley overture bears date 1735. There is a flang hornpipe under Charke's name, which used to be a favourite among the tars. We believe him to have been a facetious fellow, gifted with a turn for b. g. humour, of which, and of his tricks and stories, Dr. Arne, in moments of jocularity, used to give specimens.

He was married to Charlotte, the youngest daughter of Colley Cibber, a female not without talents as an actress; but of such an eccentric and indecorous character, that the memory of her life, though written and softened by bringing her own biographer, could never be read by persons of her own sex, not wholly abandoned. For many years of her life she never appeared on or off the stage in a female dress. Mademoiselle d'Eon's habiliments during many years, were a real disguise and concealment; but Mrs. Charke's.
favored person being well known, her dress was no disguise, but a publication of her impudence.

As long as Charles was the leader of Drury-lane band, his concerto on the violin was the lure in the second nuftle, two or three times a week; which many lovers of music had to go into the theatre to hear, who never laid it to the curtain was drawn up, before which time their money was returned, if demanded. His debts obliged him to leave his car spofa; and, returning to Jamaica, he there, in a short time, and in the prime of life, ended his days. Though this couple was allowed to possess talents of various kinds, there was nothing in which they manifested more ingenuity than in plaguing each other.

CHARKINA, in Geography, a fortress of Russian Tartary, on the Don, in the government of Caucasus; 25 miles N.E. of Astrachan.

CHARKING, or CHARKING, the burning of wood to make charcoal.

CHARKLIIQUEU, in Geography, a town of Atlas Turkey, chiefly inhabited by tanners, who manufacture the beautiful morocco leather. The caravans stop here two or three days. The town is situated between Erzerum and Tous.

CHARKOV, or KHARKOV, a government of Russia, formerly comprised in the government of Ukraine Slavonia, and containing 15 districts. It is bounded on the north by Kurisk, on the east by Voronetz, on the south by Catherinofnaff, or Ekatherinofnaff, and on the west by Tcheremishof and Kief; about 185 miles in length, and from 40 to 80 in breadth.

CHARKOV, or KHARKOV, the capital of the above government, seated on the Uda, which falls into the Donetz, and forming one of the 15 districts of the government of the same name. It contains 10 churches, 2 convents, and several public seminaries; 352 miles S. of Moscow, and 640 S.S.E. of Petersburg. N. lat. 57° 21'. E. long. 37° 34'.

CHARKS, pit-coal charred, or charred. See Coal.

CHARLATAN, or CHARLETAN, an empiric or quack, who retails his medicines on a public stage, and draws the people about him with his bawleries, feats of activity, &c.

The word, according to Calpurne, comes from the Italian Ce
tato, or Ce
ta, a town near Spoleto, in Italy, where these impostors are said to have first rilen. Menage derives it from circulato, and that from circulatorius, of circulator, a quack.

CHARLEMAGNE, or CHARLES I., in Biography, king of France, and emperor of the Holy Roman Empire, born in the year 742. By the death of his father Pepin the Short, in 768, and at the express desire of the dying monarch, Charles, in conjunction with his younger brother Carloman, succeeded to the throne of France. At first they appeared to rule the empire with equal and undivided authority; the partition of power, however, soon threatened michtiefs similar to those that had been experienced under the earlier sovereigns of France; but the death of Carloman, in 771, at the moment when he was meditating an open rupture with his brother, ensured the public tranquillity. Charles, thus rendered sole monarch of the Franks, was endowed by nature with all those qualities which could conciliate the affections of his subjects, by whom, it is said, he was equally beloved and revered. Unlike his father, he was tall in stature; his air was courteous and dignified; his body robust, and finely formed; his eye keen and penetrating, and his countenance open and prepossessing.

Having become, by the death of his brother, sovereign of a mighty empire, and freed from every thing that might shackle his genius, or fet bounds to his ambition, his first object was to infuse a military spirit into the nation; he re-stablished the ancient assemblies of the field of Mars, and, beflowing on them the title of parliaments, delegated to them a portion of his authority, by constituting them members of the legislation. In retorting to this measure of State policy, he felt no apprehension for his own security: the force of his genius and the greatness of his talents placed him beyond the dread of any rival he endeavoured, therefore, to infuse into all ranks of his subjects a thirst for military glory. By these means Charles was enabled to double the extent of his empire. The whole of Gaul, Italy, the vast territory which extends from the Rhone to the Vit
us, and to the Baltic, together with a great part of Spain, fell under his powerful dominion.

Previously to the death of Carloman, Charles had divorced his wife and married Bertha, daughter to Didier, king of the Lombards; this prince, however, granting an open protection to the widow and children of Carloman, with a view, no doubt, of possessing a part of his dominions, excited the jealousy of Charles, who obtained a second divorce. Didier, enraged at the humiliation, fought an alliance with pope Adrian, but having failed in the attempt, he attacked the papal territory, and endeavoured to freeze on the person of the pope. Adrian solicited the succour of Charles, who instantly crossed the mountains, entered Italy, defeated his adversary, and thus put an end to the kingdom of the Lombards in Italy, which had lasted 2(?) years. Charles immediately took possession of the vacant throne, and was declared by the pope king of Italy, and patron of Rome. In his first visit to the capital, the newly acknowledged sovereign was received with all the honours which had formerly been paid to the representative of the emperor; and these honours obtained new decorations from the gratitude of pope Adrian. No sooner was he informed of the approach of the monarch, than he dispatched the principal people of Rome to meet him, with the banner, about thirty miles from the city. At the distance of one mile, the Flaminian way was lined with the schools, or national communities of Greeks, Lombards, Saxons, &c.: the Roman youth under arms, and the children of a more tender age, with palms and olive branches in their hands, chanting the praises of their great deliverer. At the sight of the cortege and other holy emblems, he dismounted his horse, led the procession of his emissaries to the Vatican, and, as he ascended the stairs, devoutly kissed each step of the threshold of the apostle's. The pope was waiting for him at the head of his clergy in the portico: they embraced as friends and equals, but in their march to the altar, the king assumed the right hand of the pope; nor was he content with a van fllew of respect. In the twenty-six years that elapsed between the conquest of Lombardy and his imperial coronation, Rome, which had been delivered by his sword, was subject, as his own, to the sceptre of Charles.

Previously to these successes in Italy, Charles had been called on to exhibit his military talents in a contest with the Saxons, who were inimical to the government and religion of the Franks. They rejected with contempt the servile obligations of tribute, and in succedaneous engagements displayed a ferociousness of courage which could only be repelled by the superior skill and intrepidity of the troops of Charles. A decisive victory, after various less important defeats, obtained over them at Onsaburgh, by which they lost their capital, their temple and their god Irmenulf, obliged their leaders to sue for peace, and to accept of such terms as were imposed on them by the conqueror.

Sarcely had Charles returned, from receiving the oaths of allegiance and other marks of homage from his new subjects in Lombardy, where he had caused himself to be crowned, when another revolt of the Saxons recalled him to their country. They had already assumed a formidable app
The fate of Tassilion did not crush the designs of his con-
d federates, the Huns and the emperor of the East; but their
enterprises served only to augment the glory of Charles, and
his commanding genius triumphed over the Greeks in the
plains of Italy. The latter renounced for ever the fortunes of
Adalgive, the son of Didier; and with the young prince,
the hope also of restoring the kingdom of the Lombards:
but the former still continued their dilatory incursions, and
provoked the victorious king of the Franks to retaliate
the calamities which they had inflicted on Bavaria. At the head
of a formidable army, he invaded the country of the Huns,
forced their intercessions in an obstinate engagement, and
penetrated as far as Raal on the Danube.

The defections of the Moorish chiefs invited Charles to
the conquest of the islands of Majorca and Minorca; but
the satisfaction which he felt from this expedition was more
than balanced by the tumults which prevailed at Rome, on
account of the election of Leo III. as successor to Adrian.
The cause of Leo against his rival was zealously espoused by
Charles, who sympathized in all the sufferings of the pontiff,
and, what was of more importance to his situation, rendered
him every assistance that his case required.

Charles had been accustomed to pass annually from the
Pyrenees into Germany, and thence to Italy. At the latter
end of the year 799, as he was approaching Rome in one of
these journeys, pope Leo dispatched a messenger to meet him,
with the keys of St. Peter, and the standard of the city; thus
rendering him every respect, religious and civil, of which he
was capable. On the festival of Christmas, which was then
the first day of the new year, Charles appeared in the church
of St. Peter; and to gratify the vanity of Rome, he had ex-
changed the simple drefs of his country for the habitat of
a pontiff. After the celebration of mass, at which the king
had devoutly assisted, the pope suddenly placed a precious
crown on his head, and the dome of the church resounded
with the acclamations of the people. "Long life and
victory to Charles, the most pious Augustus, crowned by
God the great and pacific emperor of the Romans." The
pope immediately consecrated the monarch, and conducting
him to a throne, paid him those marks of respect which had
then been claimed by the ancient Cæsars. Charles from this
time undoubtedly, in the name of Charlemagne, the appel-
ation of Magnus, the Great. In a familiar conversation with
his secretary and son-in-law, Erkuban, he protected his igno-
rance of the intentions of the pontiff: if, however, he did
not seek or even expect the honours devoted upon him,
he nevertheless was ambitious in maintaining them, and
insisted on being recognized as emperor of the West, by all
those princes with whom he had any correspondence.

Among the ambassadors who came to congratulate the
good fortune of the emperor, were those of the caliph
Harun-Al-Raschid, who ceded to him the sepulchre and the
sacred places of the city of Jerusalem. But a still more
interesting negotiation was intrusted to the munificence of Irene,
the empress of the East, who, having rendered her relud-
tious to her subjects, by the murder of her own son, endeavoured
to secure the protection of Charlemagne, by a proposal of
marriage. The emperor entertained the idea, and dispatched
ambassadors to the Byzantine court to arrange the necessary
preliminaries to so important a treaty. In the mean time she
was dethroned by Nicephorus, who ascended the throne, and
exiled the late empress. The new sovereign, anxious to
preserve to himself the title of emperor of the East, contented
to acknowledge in Charlemagne the dignity of Augustus,
and to settle with him the mutual boundaries of their empires
in Italy.

From this period the talents of Charlemagne were em-
ployed
ployed in repelling the encroachments of the Danes and the Normans under their leader Godfrey, who menaced with their fleets and armies the tranquillity of the west. Peace was at length established from motives of mutual convenience, and it was agreed that the subjects of Charlemagne were on no account to violate the Norman territory, and Godfrey promised to respect the dominions of the emperor of the West.

The empire of Charlemagne in Europe began to rival that of ancient Rome, and a new era is dated from his reformation of the western empire. This prince was at the same time sovereign in France, Spain, Italy, Germany, and Hungary. The Roman province of Gaul had been transformed into the name and monarchy of France, but its limits were contracted by the independence of the Bretons, and the revolt of Aquitaine. Charlemagne purified and confined the Bretons on the shores of the ocean: after a long contest, the rebellion of the dukes of Aquitain was punished by the forfeiture of their province, their liberty, and lives. The Saracens had been expelled from France by the grandfather and father of Charlemagne, but they ill polishecl the greatest part of Spain, from the rock of Gibraltar to the Pyrenees: these he dispossessed of their powers, and made himself master of the infant kingdoms of Navarre and Arragon. As king of the Lombards, and patron of Rome, he reigned over the greatest part of Italy. Charlemagne was the first who united Germany under the same sceptre; and by his conquest of the Avars, he obtained possession of Hungary, Transylvania, Ubria, Croatia, and Dalmatia, with the exception of the maritime towns, which his moderation left under the real or nominal sovereignty of the Greeks.

In the year 806 Charlemagne assembled the princes and nobles of his empire at Thionville, in whose presence he made the final distribution of his kingdoms. In 810 his son Pepin died, whole natural son, Bernard, then only an infant, Charlemagne caused to be proclaimed king of Italy; and in the course of only a very few months the unhappy monarch witnessed the death of his eldest son, Charles. The increasing weight of public cares suggested to him the necessity of associating his surviving son, Louis, to the imperial purple; the ceremony was performed at Aix-la-Chapelle, and the aged sovereign inculcated on the mind of his son, by every motive which long experience could suggest, the maxim by which he had advanced the grandeur and happiness of his subjects. Early in the following year his increased and rapidly increasing fortunes warned him of his approaching dissolution. He was attacked in the middle of January by a fever, which was followed by a pleurisy: the prelude of affliction he bore with firmness and resignation. On the 27th a fainting fit announced a speedy termination to his life, and on the following day this great prince expired, in the 47th year of his reign, and the 72d of his age; carrying with him the sincere regret of all his subjects. He died at Aix-la-Chapelle, and was buried in the church of Notre Dame in that city, which he had himself built.

From this sketch of the career of Charlemagne, it is not difficult to appreciate the various merits of his character. As a warrior and politician, he has been rarely excelled. He was indefatigable in his attention to public business, and in the performance of all the duties attaching to his high station. Considering the times in which he flourished, he did much to improve the condition of his subjects: he suppressed mendicity; he composed a series of exceptional edicts for the correction of abuses, and the reformation of manners, among the people at large; and he attended to the economy of his own immediate household. He established a fixed and invaluable price of corn, in the hope of enabling the meanest of his subjects to supply their wants. These, and various other regulations, though not characteristic of the true principles of legislation, did honour to his attempts to mollerate the state of society. It is true, that among other improvements which he contemplated for the good of his country, he formed the vast project of a canal which should unite the Danube and the Rhine, and thus establish a free communication between the ocean and the Euxine; he bestowed himfelf the friend of learning and learned men, and made such efforts to promote the interest of literature, as entitle him to great praise. He invited to his court learned men from all nations, with a view, no doubt, of inspiring his people with a thirst for knowledge; among these was our country-man, Alcuin, a clergyman celebrated for his literary attainments, who received the highest tokens of respect and honour from the emperor, and who even became his companion and preceptor in the sciences. He founded schools in various parts of his dominions, and instituted within the boundaries of the count a kind of learned society, every member of which was called by some celebrated name of antiquity. He collected all the ancient songs relative to the history of his country, and to all things connected with the advancement of his mind, that he might possess on all the knowledge which he afforded to learning, and the marked respect and reverence which he shewed to men of literary talents, reflect the highest lustre on the character of the emperor of the West. He was highly esteemed for his regard to religion, and to the clergy; but the authority with which he invested his aspirers body laid the foundation of their tyrannical claims over his left enlightened and less able prelates. As a man, Charlemagne was simple in his dress, easy in his manners, and temperate in his mode of living. His morals are stained with the charge of inconstancy, to which the number of his wives and concubines bear infallible evidence. As a statesman, his conduct has been arraigned by the measures of dividing his kingdom, during his own life, among his sons. His many wars prove that he little valued the lives of his subjects, in a cause in which his ambition was concerned. His humanity flanks impeached by the extirpation of his nephews, the sons of Carolman, and by the cruelties frequently exercised upon the valiant Saxons, whose attachment to freedom and their country merited a very different kind of treatment. These are blemishes in the character of Charlemagne which time cannot obliterate; but, after every allowance for his frailties, it must be admitted, that the title of Great, which has been blessed with his name for more than ten centuries, has seldom been awarded upon fairer claims: and it is to be regretted that in the lapse of a thousand years so few have been ambitious of attaining to that degree of celebrity which attaches to the virtues of Charles the Great. Gibbon, Hume, Du Frebnoy, Modern Univ. Hist.

Charlemagne has merited a place in medical history, by his good taste in preferring the secta fomna of the Romans to the Gallic plan-chant. We have from contemporary writers, the relation of a serious quarrel between Gallic and Roman physicians, so early as the time of Pope Adrian and Charlemagne, concerning superiority of taste and knowledge; a quarrel which has been since often renewed, but which, had it been left to the reference of unprejudiced and intelligent judges of other nations, would have been soon determined without ever coming to a second trial or combat.
The French, however, after every defeat, revive with still greater clamour, their pretensions to a titular sovereignty, without having the least claim to it, either from inheritance, conquest, or former possession.

The story of this ancient musical quarrel is somewhat long, but the necessity of inferring it here at full length seems the greater, as it not only shews the antiquity of the ridiculous rivalry and hatred still subsisting between French and Italian musicians, but is a convincing proof that the English were not the only people obliged to the Romans for the method of chanting the Psalms, and singing their hymns in their cathedral service. See biographical article Bene, veraneable. Multuple millionaries were sent, at this time, from Rome to other parts of Europe, to instruct the converts to the gospel in the church service; which accounts for that similarity and almost identity of melody, observable in the sacred music of all the countries of Europe at the time of the reformation, till which period, little other music was known or practiced than of that of the church.

'The most pious king Charles having returned to celebrate Easter at Rome, with the apostolic lord, a great quarrel ensued, during the festival, between the Roman and Gallic fingers. The French pretended to sing better, and more agreeably, than the Italians: and the Italians, on the contrary, regarding themselves as more learned in ecclesiastical music, which they had been taught by St. Gregory, accused their competitors of corrupting, disfiguring, and spoiling the true chant. The dispute being brought before our sovereign lord the king, the French, thinking themselves sure of his countenance and support, insulted the Roman fingers; who, on their part, emboldened by superior knowledge, and comparing the musical abilities of their great master, St. Gregory, with the ignorance and vulgarity of their rivals, treated them as fools and barbarians. As their altercation was not likely to come to a speedy issue, the most pious king Charles asked his chantors, which they thought to be the purest and best water, which that was drawn from the fountain, at the fountain-head, or that which, after being mixed with turbid and muddy rivulets, was found at a great distance from the original spring? They cried out, unanimously, that all water must be pure at its source; upon which, our lord the king said, Mount ye then up to the pure fountain of St. Gregory, whose chant ye have manifestly corrupted. After this, our lord the king applied to pope Adrian for finger-masters, to correct the Gallican chant; and the pope appointed for that purpose Theodore and Benedict, two chantors of great learning and abilities, who had been instructed by the disciples of St. Gregory himself: he likewise granted to him Antiphonaria, or choral books of that faint, which he had written himself in Roman notes. Our lord, the king, at his return to France, sent one of the fingers, granted to him by the pope, to Metz, and the other to Soissons; commanding all the finger-masters of his kingdom to correct their Antiphonaria, and to conform in all respects to the Roman manner of performing the church service. Thus were the French Antiphonaria corrected, which had before been vitiated, interpolated, and abridged, at the pleasure of every choir-man; and all the chantors of France learned from the Romans that chant which they now call the French chant. But as for the beats, trills, shakes, and accents of the Italians, the French were never able to execute or express them; nor, for want of sufficient flexibility in the organ of voice, were they capable of imitating in these graces, any thing but the tremendous and guttural noise of goats. [Chevaillier, et sur une table de caprice, are explications applied in France and Italy to such fingers as have a bad shake. John Diaconus, in his Life of St. Gregory, gives in

queer and barbarous Latin, scarcely to be translated, a curious account of the vocal abilities of the ancient Germans and French, who, in attempting to sing the Gregorian chant, were wholly unable to express its sweetness; "injuring it by barbarous changes," suggested, says he, either by their natural ferocity or inconstancy of disposition. Their figures were gigantic, and when they sung, it was rather thunder than musical tones. Their rude throats, instead of the inflections of pleasing melody, formed such rough sounds, as resembled the noise of a cart jolting down a pair of flairs." Quae牙齿 per gradus confusae fanamia, rigidus vocis jactant. Vide S. Greg. cap. 2.] The principal school of singing was established at Metz, and in the same proportion as the Roman chant exceeded that of this city, the fingers of Metz surpassed all those of other French schools. The Roman chantors likewise instructed those of France in the art of organizing and our sovereign lord Charles having, besides, brought with him into France matters in grammar and arithmetic, ordered these arts to be cultivated throughout his dominions; for, before the reign of the said lord the king, the liberal arts were neglected in France." [Et reverius est Res plenissim Carolus, &c. Vide Annal. & Hill. Francor. ab an. 706, ad an. 950. Scriptores Coctanenses. Impr. Francoforti 1594. Sub vita Caroli magne.]

The abbé Velley, who, in his Hist. de France, tom. i. p. 53, gives the same account of the establishment of the Roman chant in France, adds, that "the monach was likewise desirous of introducing into his churches the liturgy, or mass, as used at Rome; but here he met with greater difficulties. The French clergy, jealous of their ancient usages, opposed, in a body, this measure, as an innovation; the royal authority, however, at length prevailed." After such an account of Charlemagne, it is hardly possible to read the following passage without amazement. "Charles confirmed the Infrumens with his hand, that is to say, by making his mark; for it is to be observed, that this prince, of the most learned men of his age, at that time could not write!" According to Mezeray, the addition to the signature of this prince, at the bottom of each treaty, must have been erred; for he there says, "I have signed it with the pommet of my sword, and promise to maintain it with the point."

In Charlemagne's time, liions, mimes, and actors of farces, were very numerous in France: and, according to the abbé Vertot (Mem. de Litt.), this prince made a collection of ancient Gallic songs; and Eginhard, his historian, obhiges that these songs, which were chiefly military, like those of the Germans, constituted the principal part of the History of France, and comprised the most heroic actions of her kings.

In the history of France there have been eight other monarchs of the name of Charles, besides Charlemagne; they, however, are not sufficiently renowned to induce us to give separate articles of each. The reign of the second Charles, whom we shall call Charles II, was diabolous to the country as well as unfortunate to the sovereign. France, under this sovereign, was perpetually subject to hostile invasions and internal commotions. He was the grandson of Charlemagne, and was poisoned by his physician after a long reign of 38 years.—The character of Charles III, who wholly surrendered himself to his minister Hagonon, a man of talents, but of infamous principles, is sufficiently expressed by his surname the Singe. He died in 926, after a reign of more than 30 years. In the reign of Charles IV, who was son to Philip the Fair, a fierce war raged between France and England, which ended in the cession of the province of Guienne to England: he died in 1328, after a short reign of six years.—Charles V. is celebrated
brated for his love of learning; he made a large collection of books, and died in 1580—Charles VI. began his adminis-
tration with such effectual reforms for the alleviation of the public burdens, that he became extremely popular, and ob-
tained the appellation of Well-beloved. His reign was very
unfortunate, owing to the bad management of his ministers, and the contentions of the dukes of Orleans and Burgundy. Henry V. of England taking advantage of the internal com-
motions of France invaded and conquered a great part of it.
This prince was subject to fits of insanity; but his intentions
were always good; he was beloved by his people for his
many excellent qualities; on account of his misfortunes he
was the object of commiseration, and the regret of many
accompanied him to the grave, in 1422, after a reign of 42
years.—Charles VII. called the Victorious, regained his king-
dom which had been lost in the former reign. By his ac-
tivity the English were driven from all their possessions, ex-
cept Calais. Under this prince the militia was disestablished, and
a standing army was first instituted, for the maintenance of
which the perpetual taille was granted. From this reign
France dates several of those institutions which always tend
to make a nation great. This sovereign died in 1461.—
Charles VIII. ascended the throne in 1483, at the age of
13. In 1494, contrary to the representations of his coun-
fellors, he set out with a determination to conquer Naples,
though he was scantily supplied with troops and money.
His progress was unsuccessful. In six weeks he traversed Italy,
and entered Naples in triumph, and in a fortnight after he
was master nearly of the whole kingdom. He died in 1498;
—Charles IX. ascended the throne in the year 1563, when
he was only ten years old. To his mother Catherine de Medici was
given the regency, a trust that the abdication in a
most shamefaced manner. To her is to be imputed that in-
dible disgrace to the reign of Charles IX. the infamous massacre
of Paris on St. Bartholomew's day, 1572. It has been said,
that at the approach of the fatal hour, the king showed signs
of compunction for the orders that he had been induced to
give, but upon being reproached by the savage Catherine for
his want of decision, he exclaimed, "Well then, let not one
be left to be upheld me with breach of faith." He betrayed
no symptoms of pity during the execrable deed; but even fired
with his own hand on the miserable wretches endeavouring
to escape across the river. His dilatation before, and his
cruelty during this horrible transection, fix his character, and
rank him among the Nero's and Domitians of the world.
He died in May 1574, a prey to all the horrors of remorse,
having probably never enjoyed an hour's peace after the massacre
he had functioned.
CHARLEMONT, in Geography, a town of the Nether-
lands, in the county of Namur, ceded to France by the treaty of
Nimeguen. It was built by Charles V. in 1555, not far
from Givet, on a mountain near the Meuse. It is small but well
fortified; 8 leagues S.W. of Namur, and 7 N.E. of Rocroy.
CHARLEMONT, a village of the county of Armagh, Ire-
land, on the banks of the Blackwater, where there is a fort,
which, though now neglected, has a governor regularly ap-
pointed. It was built by Lord Montjoy, lord deputy at the
latter end of queen Elizabeth's reign, to guard the passage
over the Blackwater, and was called from his christian
name. It was purrised by the Irish under Sir Phelim
O'Neih, in 1641, and the governor and garrison put to death,
after which it remained for some years in the possession of the
Irish. Previous to the Union it was a borrough, but has now
lost its privilege. Of late years it has been remarkable only for
having given title to that reprehensible and popular nobleman,
who was general of the volunteers of Ireland in 1689, and
who was first president of the Royal Irish Academy, which
was in great measure established by his exertions. Charle-
ment is 65 miles N. by W. from Dublin. Ware's Antiqui-
ites.
CHARLEMONT, a township of America, in Hampshire
county, Massachusetts; 16 miles W. of Deerfield, containing
665 inhabitants.
CHARLEMAINE, a town of France, in the department
of the Jemeppe, and principal place of a district, is situa-
ted on the confines of Hanaut, on the north side of the river
Sambre, in a place formerly called Charroy. It was for-
tified and betrayed in 1678, assuming the name of Char-
les-les-Fontaines; in honour of Charles II. king of Spain. In 1793, it
changed its name to Charles-sur-Sambre. At the peace of
Aix-la-Chapelle, in 1648, it was given to France; by the
treaty of Nimeguen it was ceded to Spain; and in 1693
taken by the French. In 1697 it was returned to Spain;
by the peace of Utrecht it was surrendered to the States-Gen-
eral; in 1716 it was granted to the emperor by the bar-
rier treaty; and in 1746 again surrendered to France. It
Carries on a considerable trade in iron-works and foundery.
The place contains 1744, and the two cantons 24,27 inhabit-
ants. The territorial extent comprehends 850 kilometres
and 66 communes. N. lat. 50° 20'. E. long. 4° 10'.
CHARLES I. third son to James the Sixth of
Scotland, and First of Great Britain, by Anne of Den-
mark, was born in Scotland, in the year 1600, and suc-
ceded his brother Prince Henry as Prince of Wales, in
1616. In 1617 the king of England, anxious to con-
clude the dignity of his son in marriage, warmly pressed
an alliance with the court of Madrid. Philip, equally zeale-
ous for the establishment of his filler, listened to his over-
tures with pleasure. Besides the portion of fifty hundred
thousand pounds, he offered with the infant the restitution
of the palatinate to Frederic. When all measures were
agreed to between both parties, and nothing was wanting
but the dispensation from Rome, this connexion, so honour-
able and advantageous to England, was broken by a roman-
tic enterprize, originally conceived with a design of hasten-
ing the proposed alliance. The sole recommendation of
personal accomplishments had raised George Villiers, from
an obscure lot in life to the rank and title of duke of Buck-
ham. His influence over James was unbounded. To in-
gratiate himself equally with the son, he proposed to the
prince of Wales to break through the forms of royalty,
and, travelling to Madrid in disguise, to introduce himself
the infant as an ardent and devoted lover. This proposal
was in unison with the spirit of gallantry natural to Charles's
time of life. The son was obliged to interest, and the fa-
vourite to reproach, before a reluctant consent could be ex-
torted from James; when the prince of Wales, accompanied
by Buckingham, quitted London privately, and crossed
over to Calais. They even ventured on their journey to visit
the French court in disguise, where the princess Henrietta,
father to Lewis, made a serious and permanent impression
on the heart of the young prince. Though Charles and the
duke were received at Madrid with every mark of respect
and attention, yet the volatile manners and diffusive pleasures
of the latter but ill accorded with the gravity and dignity of the
Spanish court. His pride was peculiarly offensive to
Olivarez; and their rising hatred had already shewn itself in
mutual expressions of contempt. when Buckingham, influ-
enced by caprice or difficulty, determined to return without
accomplishing the object of his journey. He hastily obtained
the acquiescence of Charles. A plausible pretence was fur-
nished by the delay of the dispensation from Rome; but his
real motive was more openly proclaimed in his last conver-
sation with Olivarez. He declared it was his intention to
promote every measure which could cement the friendship of England and Spain; but he added with his usual haughtiness, "with regard to you, Sir, in particular, you must expect from me all possible enmity and opposition." The count replied, with becoming dignity, that he accepted of what was proffered. The first part of the duke's speech, however, was not dictated by the same frankness as the last; and immediately on his arrival in England he prevailed on the king and prince, first to suspend, and afterwards to break off the negotiation with Spain.

As it would be impossible to enter in detail on so extended a field of narration, on which whole libraries have been written, as to late a period of our history would open to our view, and as a mere table of contents of this and the succeeding reign would swell our pages without adding to the information of our readers, who must all be supposed to have heard of ship-money, long parliaments, civil wars, commonwealths, and martyrs, we have resorted on the course of giving a character, rather than an history of our own Charles's. We have given at some length the account of the circumstances attending the rupture of the Spanish, and consequent accomplishment of the French marriage, because it was on this occasion that the first Charles, ill-fated and misguided, appeared upon the public scene; and by observing his conduct and character on this occasion, we can be at no loss to account for the progress of his career through life, and the consequences in which he was involved at the close. Among all the varying representations, to which party and prejudice have given occasion, what is generally considered as a bad natural character has rarely, if ever, been attributed to him. But a habit of confidence in the advice of persons, whose judgment was no better, and their defiles infinitely worse than his own, began in the instance which we have just produced, and continued to the end, gaining strength from time, from increasing difficulties, from obstinacy inflamed by opposition, from the necessity of the approaching crisis and the mad excess to which some principles were carried by the contrary party. Charles acceded to the throne with the impetuous Buckingham for his minister; and this very circumstance impressed on the palate of the nation a foretaste of fulpicion and distrust. Felton's knife removed the minister, but the natural inclination of doing as he liked had been impressed on Charles, and he was at no loss to find seeming friends, who were willing to exchange the hazardous office of telling him the truth, for the few less dangerous task of carrying his views into execution, in spite of popular opinion and the rising force of parliamentary power. Strafford was a minister of great abilities, whose vanity might have curbed the spirit of resistance, but had been left deeply rooted. Even he, in his tum, might have been borne in civil affairs, had not Land's supercilious and intolerance been fo extremely offensive in the management of the ecclesiastical jurisdiction. Yet, had Charles been faithful to his colleagues, he might have saved himself. But the fate of his victims appeared to be the watch-word for an attack upon his own person, through the medium of a civil war, in which it was difficult for an innocent individual to avoid ranging himself under the equally detectable banners of the conspirators or the round-heads. The events of the war had little connection with the personal character of the king. But his conduct whether in prison, on trial, or at the scaffold, was firm, unaffected, and decent; so that those, whose views of his political and religious case are the farthest from granting him the palm of martyrdom, may creditably feel a sentiment of commiseration, not unaliend to the sympathy excited by those who have really been martyrs. His private virtues were unquestionable, and even the repulsive feature of his character as a man rather added dignity to his deportment as a monarch. He was respectable both in literature, polities, and the arts. He was deficient neither of abilities for the functions of government, of regularity in the conduct of life, nor of amicable temper in his personal and domestic relations. Had he relied more on himself and less on others, he might possibly have prospered better; though it is much to be questioned whether personal character could at all have interfered with the trial of the great question, agitated between the contending parties. If we regard him as an author, the "Eikon Bathe" would secure to its author a very considerable reputation among the writers of the age: but it must still be strongly doubted whether king Charles had any claim to the credit of the performance. But we cannot perhaps illustrate the character of Charles more fully and fairly, than by transcribing the summary of his virtues and vices, poured into the opposite delineations of Hume and Mr. Macaulay.

The character of this prince (observes Mr. Hume), as that of most men, if not of all men, was mixed; but his virtues predominated extraordinarily above his vices, or, more properly speaking, his imperfections: for scarce any of his faults rose to that pitch as to merit the appellation of vices. To consider him in the most favourable light, it may be affirmed that his dignity was free from pride, his humanity from weakness, his bravery from rashness, his temperance from avarice, all these virtues in him maintained their proper bounds, and merited unfettered praise. To speak the most hardly of him, we may affirm that many of his good qualities were attended with some latent frailty, which, though seemingly incomparable, was able, when seconded by the extreme malevolence of his fortune, to disappoint them of all their influence: his beneficent disposition was clouted by a manner not very gracious; his virtue was tinctured with superciliousness; his good fense was disfigured by a deference to persons of a capacity inferior to his own; and his moderate temper exempted him not from hasty and precipitate resolutions. He defers the epithet of a good, rather than of a great man; and was more fitted to rule in a regular established government, than either to give way to the encroachments of a popular assembly, or, finally to subdue his pretenisons. He wanted supplencns and dexterity sufficient for the first measure: he was not endowed with the vigour requisite for the second. Had he been born an absolute prince, his humanity and good sense had rendered his reign happy and his memory precious: had the limitations on prerogative been in his time quite fixed and certain, his integrity had made him regard, as sacred, the boundaries of the constitution. Unhappily, his fate threw him into a period when the precedents of many former reigns favoured strongly of arbitrary power, and the genius of the people ran violently towards liberty. And if his political prudence was not sufficient to extricate him from fo perilous a situation, he may be excused: since, even after the event, when it is commonly easy to correct all errors, one is at a loss to determine what conduct, in his circumstances, could have maintained the authority of the crown, and preserved the peace of the nation. Exposed without revenue, without arms, to the assault of furious, implacable, and bigotted factions, it was never permitted him, but with the most fatal consequences, to commit the smallest mistake; a condition too rigorous to be imposed on the greatest human capacity.

Some historians have rashly questioned the good faith of this prince: but for this reproach, the most malignant scrutiny of his conduct, which, in every circumstance, is now thoroughly
Radical, a moderate and pliant will, and the magnificence of his profligacy and declarations; we shall allow, that probability and honour ought justly to be numbered among his most shining qualities. In every treaty, those concessions which he thought he could not in conscience maintain, he never could, by any motive or persuasion, be induced to make. And though some violations of the petition of right may perhaps be imputed to him; there are more to be ascribed to the necessity of his situation, and to the lofty ideas of royal prerogatives, which, from established precedents, he had imbued, than to any failure in the integrity of his principles.

This prince was of a comely presence; of a sweet, but melancholy aspect. His face was regular, handsome, and well proportioned; his body strong, healthy, and justly proportioned; and being of a middle stature, he was capable of enduring the greatest fatigue. He excelled in horsemanship and other exercises; and he polished all the exterior, as well as many of the essential qualities, which form an accomplished prince.

Historians (fairs M. s. Macaulay) are called upon to scrutinize with exactness his principles, conduct, and character; since, from the false colourings which by designing men have been thrown on these, and the rancour with which his opponents have been falsely aspersed, have been deduced consequences destructive to the security and welfare of man, and highly injurious to the reputation of patriot citizens.

In the character of Charles, as represented by his panegyrists, we find the qualities of temperance, chastity, regularity, piety, equity, humanity, dignity, condescension, and equanimity; none have gone so far as to allow him integrity; and many writers, who condemn his political principles, give him the title of a moral man. In the comparison of this representation with Charles's conduct, accurately and fully described, it is discernible that vices of the worst tendency, when shaded by a formal and pliable carriage, when concordant to the interests of a faction and the prejudices of the vulgar, assume the appearance of, and are imposed on the credulous world as virtues of the first rank. Passion for power was Charles's predominant vice; idolatry to his regal prerogatives his governing principle. The interests of his crown legitimated every measure, and sanctified in his eye the widest deviation from moral rule. His religion was to this a secondary and subordinate affection; the prelates of the church of England paid him an impious flattery: they inculcated a slavish dependence on the regal authority; the corruptions in their ecclesiastical discipline fostered superstition; superstition secured their influence over the people; and on these grounds, and to these ends, they kept an interest in the king's heart, which continued to the last period of his life. If Charles had an higher estimation of the faith in which he had been educated than of popery, it was because the principles of popery acknowledged a superior allegiance to their spiritual than their temporal prince; but regarding that superstition to be most favourable to the interests of monarchy, he preferred it to the religion of any differing sect, and publicly avowed his will, that there never had been a schism in the church. Neither gratitude, clemency, humanity, equity, nor gentleness, have place in the fair part of Charles's character. Of the virtues of temperance, fortitude, and personal bravery, he was undeniably possessed. His manners partook of the diffipation, and his conversation of the indiscretion, of a court. His chastity has been called in question by an author of the highest repute; and were it allowed, it was tainted by an excess of uxoriousness, which gave it the properties and the consequences of vice. The want of integrity is manifest in every part of his conduct; which, whether the corruption of his judgment or heart, left him no fair opportunities of reinstatement in the throne, and was the vice for which, above all others, he paid the tribute of his life. His intellectual powers were naturally good, and so improved by a continued exercise, that, though in the beginning of his reign he spoke with difficulty and hesitation, towards the close of his life he discovered in his writings a purity of language and dignity of style; in his debates, eloquence, and quickness of conception. The high opinion in which he entertained of regal dignity occasioned him to observe a flatness and impertinencies of manner, which, to the rational and intelligent, was unamiable and offensive; by the weak and the formal, it was mistaken for dignity. In the exercise of horsemanship he excelled; had a good taste, and even skill in several of the polite arts; but, though a proficient in some branches of literature, was no encourager of useful learning, and only patronized adepts in the largest, the divine right and utility of kings and bishops. His understanding in this point was so depraved by the prejudices of his education, the flattery of praises, and the affections of his heart, that he would never endure conversation which tended to inculcate the principles of equal rights in men; and, notwithstanding the particularity of his situation, enforced his attention to doctrines of this kind, he went out of the world with the same fond prejudices with which he had been fostered in his nursery, and enjouled in the zenith of his power.

Charles was of a middle stature; his body strong, healthy, and justly proportioned; his face was regular, handsome, and well proportioned; and his aspect melancholy, yet not unpleasing. His surviving issue were three sons and three daughters. He was executed in the 45th year of his age, and buried, by the appointment of the Parliament, at Windsor, decently, yet without pomp. The duke of Richmond, the marquis of Hertford, the earls of Southampton and Lindsay, at their express desire, were permitted to pay the last duty to their master, but were denied (by colonel Whitchurch) the honor of the burial service, according to the book of Common-Prayer.

Lord Lyttelton, speaking of Charles I., makes the following observations. He had many better qualifications than his father, but as wrong a judgment, and greater obliquity. He carried his affection for the clergy, and abhorrence of the puritans to an excess of bigotry and rage. He agreed so ill with his parliaments, that he soon grew weary of them, and refused to be troubled with no more; none were called for twelve years together, and all that time he governed as de facto as the bishop of Peruia. The laws were either openly infringed or explained in the manner he directed: he levied money on his subjects against privileges expressly confirmed by himself. In short, his passion for power might have been fully gratified, if his more prevailing one to bigotry had not engaged him in a few evils undertaking, of forcing the same form of worship upon his subjects in Scotland, as he had declared himself to warmly for in England. It is safer to attack men in their civil rights, than their religious opinions: the Scots, who had acquiesced under tyranny, took up arms against perfection. Their insurrection made it necessary to call a parliament; it met, but was instantly dissolved by the intemperate folly of the court. All hopes of better measures were put an end to by this last provocation. The Scots marched into England, and were received by the English, not as enemies, but as brothers and allies. The king, unable to oppose them,
them, was compelled to ask the aid of another parliament. A parliament met, exasperated with the oppressions of fifteen years: the principal members were men of the greatest capacity, courage, and virtue, firmly united among themselves, and whom the court could neither corrupt nor intimidate. They resolved to make use of the opportunity, to redress their grievances, and secure their liberty; the king granted every thing that was necessary to either of those ends, except such securities as might have been turned against himself; but what, perhaps, was really concession, had the appearance of constraint, and therefore gained neither gratitude nor confidence: the nation could no longer trust the king; or, if it might, particular men could not; and the support of those particular men was become a national concern: they had exposed themselves by serving the public; the public therefore judged that it was bound in justice to defend them. Nor indeed was it possible, when the work of reformation was begun, after so long a denial of justice, to keep a people fore with the remembrance of injuries received and satisfaction refused, within the bounds of a proper moderation. Such a liberty is much easier in speculation than it ever was in practice. Thus, partly for the safety of their leaders, and partly from a jealousy of his intentions too justly conceived, the parliament drew the sword against the king: but the sword, when drawn, was no longer theirs; it was quickly turned against them by those to whose hands they trusted it: the loneleft and woful of both parties were outwitted and overpowered by villains; the king perished, and the constitution perished with him.

This prince, during the life of his father, had received instructions in music from Coperario, an Englishman whose name was Cooper; but who having been in Italy, wished to pass for a native of that country. According to Playford, Charles, while prince of Wales, had made a considerable progress under this master on the violin da Gamba; and when he ascended the throne, he not only discovered a great affection for music in general, but manifested a particular attention and partiality to compositions for the church. [Playford (Pref. to his Introd.) speaking of the musical skill of our princes of the house of Tudor, says, "Nor was his late majesty Charles I. behind any of his predecessors in the love and promotion of this science, especially in the service of Almighty God, and with much zeal he would hear reverently performed, and often appointed, the service and anthems himself, especially that charming service composed by Dr. William Child being of (from) his knowledge in music, a competent judge therein; and would play his part exactly well on the bato-viol, especially of those incomparable fancies of Mr. Coperario to the organ." ] At his private concerts he is said to have condescended to honour with his notice several of his musical servants, who had the good fortune to be frequently in his presence; and to gratify them in a way the most flattering and agreeable to every artist of great talents, with smiles and approbation, when either their productions or performance afforded him pleasure. And, indeed, whatever political crimes may be laid to the charge of this prince, he was certainly a most liberal and gracious master to his domestics, and possessed a singular power of attaching them to his person by kindnees and consideration, still more than by royal bounty and munificence.

In the beginning of his reign, Nicolò Laniere, (a real Italian) was appointed master of the king's band; (see Lis- zier) and in Rymer's Fædera, (tom. xviii. p. 228.) is recorded a grant to him and the rest of the royal band for their several amusements and yearly pensions. The name, however, of such musicians as were in a more peculiar manner honoured with this prince's notice, afterwards, do not appear in the grant; as it was observed, that his majesty was particularly delighted with the choral compositions of Dr. Child; the performance on the lute of Dr. Wilton; and the music of William and Henry Lawes, which was introduced in the masques that were exhibited at court.

The productions for the church during this reign, though superior in excellence to those of any other species, yet if we except those of Dr. Giles and Elwes Bevin, who more properly belong to the reign of king James, are too few in number, that the augmentation they make to our former stock lies in a very small compass.

This prince, however, his judgment or that of his councillors may have erred, appears to have been poissified of an invariable good taste in all the fine arts; a quality which in less morose and turbulent times would have induced him to the most enlightened part of the nation: but now his patronage of poetry, painting, architecture, and music, was ranked among the deadly sins, and his passion for the works of the bel arts in the kingdom, profane, pagan, popish, idolatrous, dark, and damnable. But however gloomy flate-reformers may extirpate this prince, it would be ungrateful in the lovers and professors of any of the fine arts, to lose all reverence for the patron of Ben Jonson, Rubens, Vandyke, Inigo Jones, and Dr. Child.

William and Henry Lawes were early established in the favour of this monarch, and indeed in that of the whole nation, to a degree for which their musical productions do not clearly enable us to account. William, taking up arms early in the grand rebellion in defence of his royal patron, was killed by an accidental shot at the siege of Chester in 1645. Henry was always a loyalist, though he long enjoyed the favour and friendship of Milton; but this was previous to the political life of our great poet. Henry Lawes set Comus to music in 1634, and Survived not only the rebellion, but the interregnum and restoration, extending his life to the year 1662.

Though the early part of Charles the First's reign was favourable to the fine arts, particularly to music of the dramatic kind in the frequent and splendid masques that were performed at court and in the mansions of the principal nobility; yet from the breaking out of the civil war in 1642, nothing but hope and confusion reigned. In 1643 the cathedral service was totally suppressed, which gave a grievous wound to sacred music, not only checking its cultivation, but annihilating as much as possible the means of restoring it, by destroying all the church books, as entirely a whole of the Romish communion had been at the time of the reformation.

During such a period, what leisure or disposition could there be for the culture of art which had no connexion with the reigning interests and passions of men? The fine arts have been truly and emphatically called the arts of peace, and the celebrated periods in which they made the most considerable strides towards perfection, were calm and tranquil. Musicians, who previous to those unhappy times had employment either in the chapels royal, cathedrals, or public exhibitions in the capital, were forced to seek about the country, and fledge an asylum in the lodges of private patrons, whose mansions, and abilities to protect them, did not have been very precarious. And, indeed, if they could have been rendered permanent, they would not so much have contributed to the advancement of the art, as the pride, effort, and emulation of working for a severe and fastidious public would have done. Many a man of creative genius and gigantic abilities, has been managed by idle fa-
vanity, and self-applause in a private station, where safe from rivals, and certain of the approbation of a small, and perhaps ignorant and partial circle of friends, he has degenerated into billefines, conceit, and affectation.

Charles II., king of Great Britain, was the son of Charles I. and Henrietta-Maria of France, born in 1630. At the time of his father's execution, he was a refugee at the Hague. During the time of the commonwealth, he was a wanderer and a dependant, and was one of the various characters which presented themselves at the memorable treaty of the Pyrenees. His importunate necessities reduced him to implore the assiduity of Mazarine and Don Lewis de Haro. The former refused so much as to see him. The latter received him with a generosity and ancient hospitality, which was ever the characteristic of his nation, and relieved his personal wants by the present of a considerable sum of money. But the powers of the continent were wisely cautious of interfering in the internal constitution of England, and paused before they enlivened themselves for the support of royalty and its hazardous claims. Even after the death of Cromwell, the commonwealth, thoughickly, yet survived, and there was at least a possibility that it might recover under an able regimen and superintendent. Indeed, the constitution of parliament appears to have been much better a speculation than that of royalty; and Charles, whose condition, like that of a patient in the crisis of a fever, never seemed so desperate as at the precise period of a change to convalescence, that the court of Madrid ordered the royal exiles to quit the territories of Spain. This was undoubtedly a servile attempt to conciliate the friendship of a party, which must have been hitherto in a country the principles of whose government were so diametrically opposite to those of republicanism. But practical statesmen, who are not infected with a spirit of political quixotism, will applaud and justify the prudence which dictated an unpalatable acquiescence, however unfortunate it might have been in point of time and preface. It happened, in point of fact, that a very short time intervened between the order in question and the restoration of the exiled monarch. England, wearied out with contending factions, impatiently waited for the re-establishment of her ancient constitution, and looked to that event as to the consummation of her happiness. The wishes of the people were seconded by the loyal declarations of general Monk, who marched from Scotland at the head of an attached, brave, and well-disciplined army. Charles was invited once more to grace the palace of his ancestors with his presence. So strong was the torrent of returning allegiance, that he took possession of his kingdom without the smallest effusion of blood. It was to be wished that he had been duly impressed with the circumstances, far more favourable than he could reasonably expect, under which he retrieved the situation to which he was defined by birth, but from which fortune had displaced him. Conciliation and prudence might have carried both the king and the people to a height of external prosperity and domestic happiness, beyond what Great Britain had ever experienced. But he erred most grievously in remembering on the throne the difficulties he had experienced in adversity, whether at home or abroad. He forgot the generosity of Don Lewis de Haro, but he remembered his banishment from the dominions of Spain; and the subsequent alliance he concluded with Portugal, may, in a great measure, be ascribed to his resentment at the neglect of the court of Madrid. It was not indeed till a later period of his reign, that he avowed and exhibited the diftrust he had cherished against the Presbyterian and the friends of liberty; but when it did appear, it hurried him into excesses of tyranny, incongruent with the gay and social tendencies of his natural temperament. But even these virtues, little as they weigh in the estimate of a public character, were converted into bane and poison by the licentiousness into which they suffered a monarch of dissipate temper to fall, who nearly drew into his own vortex whatever remained of purity and propriety, from times which, though too precie and formal, wore on the side of safety in sacrificing the waywardness of will and pleasure to rigid, though sometimes mistaken duty. Dissipation was attended by expense, as its necessary and natural consequence; and exorbitant expense involved the king and government in pecuniary embarrassments, disgraceful negociations, and the venal barter of national honour and vital interests. The sale of Dunkirk was unpopular; and the exploit of the Dutch at Chatham disgraceful. A minister was able to far to enliven the heart of Charles, as to make him lose sight of his own honour and his people's welfare in a blind attachment to the politics and alliance of France. Arbitrary measures, and demonstrations of an inclination towards Poppery, began to be more unequivocally manifested; and though the firm renonciations of the English parliament occasionally compelled a fulmination of the intercourse with Lewis, and a more moderate and tempering policy at home, it seemed from the complexity of the times, that there was no alternative between an arbitrary government and a renewal of civil holilities. There was, however, notwithstanding all his obliquities, a better feeling about Charles II. which prevented him from driving things to extremity. It is even supposed, that, tired with combating the free spirit of his parliament, he became uneasy under the plan of goverment he had adopted, and meant to pursue a different system; and if so, the house of Stuart had the most serious reasons to lament that his life was not further prolonged. But Charles the second of England, so celebrated in the annals of politics, wit, gallantry, and profligacy, was cut off from the opportunity of reformation and repentance, if ever such a scheme had seriously taken possession of his thoughts. He died at variance with his parliament, and deified by his people. Had the misfortunes of his father served to restrain the arbitrary principles and dissolute conduct of Charles, or the rash zeal and blind obedience of James for the church of Rome, the revolution would never have taken place; but the laws of the country were violated, and the established religion was fought to be subverted, in a greater or less degree, more openly or more covertly, according to the circumstances of the times, but uniformly, from the period of the restoration to that of the revolution; and the issue was, that the subjects of Great Britain were ultimately compelled to seek their safety in revolt, and in the protection of the prince of Orange.

With respect to the general character of Charles, it seems most candid, as in the infancy of his father, to place in opposition the different, and often opposite, determinations of Hume and Mrs. Macaulay.

During the few days of the king's illness, says Hume, cleragmen of the Church of England attended him; but he discovered a total indifferency towards their devotions and exhortations. Catholic priests were brought, and he received the sacrament from them, accompanied with the other rites of the Romish church. Two papers were found in his cabinet, written with his own hand, and containing arguments in favour of that communion. The duke had the imprudence immediately to publish these papers, and thereby both confirmed all the reproaches of those who had been the greatest enemies to his brother's measures, and afforded to the world a specimen of his own bigotry.

If we survey the character of Charles II. in the different lights, it which it will admit of, it will appear various, and give
give rise to different and even opposite sentiments. When
considered as a companion, he appears the most amiable and
engaging of men; and indeed, in this view, his deportment
must be allowed altogether unexceptionable. His love of
railway was so tempered with good breeding that it was never
offensive. His propensity to satire was so checked with
difference, that his friends never dreaded their becoming the
object of it: he felt the expression of one who knew
him well, and who was himself a good judge, could not be
said so much to be very refined or elevated, qualities apt to
beget jealousy and apprehension in company, as to be a plain,
gaining, well-bred, recommending kind of wit. And though
perhaps he talked more than strict rules of behaviour might
permit, men were so pleased with the affable, communicative
departure of the monarch, that they always went away
contented both with him and themselves. This, in-
deed, is the most shining part of the king's character: and
he seems to have been infallible of it: for he was fond of
dropping the formality of state, and of relapping every
moment into the companion.

In the duties of private life, his conduct, though not free
from exception, was, in the main, laudable. He was an
cal, generous lover, a civil, obliging husband, a friendly
brother, an indulgent father, and a good-natured mæster.
The voluntary friendships, however, which this prince con-
trasted, nay, even his sense of gratitude were feeble; and
he never attached himself to any of his ministers or courts
with sincere affection. He believed them to have no motive
in serving him but self-interest; and he was fluid ready, in
his turn, to sacrifice them to present ease or convenience.

With a detail of his private character we must set bounds
to our panegyric on Charles. The other parts of his con-
duct may admit of some apology, but can deserve small ap-
plause. He was indeed so much fitted for private life, pre-
ferably to public, that he even overlooked order, frugality,
and economy, in the former: was profuse, thoughtless, and
negligent, in the latter. When we consider him as a sovereign,
his character, though not altogether destitute of virtue, was
in the main dangerous to his people, and dishonourable to
himself. Negligent of the interests of the nation, careless
of its glory, averse to its religion, jealous of its liberty, la-
eth of its treasure, sparing only of its blood; he expended
it by his measures, though he ever appeared but in sport,
the danger of a furious civil war, and even to the ruin
and ignominy of a foreign conquest. Yet may all these
enormous, if fairly and candidly examined, be imputed, in
a great measure, to the indifference of his temper: a fault
which, however unfortunate in a monarch, is impossible for
us to regard with great severity.

It has been remarked of Charles, that he never said a
foolish thing nor ever did a wise one: a confine which,
threw too far carried, seems to have some foundation in his
character and deportment. When the king was informed of
this saying, he observed, that the matter was easily accounted
for: for that his discourse was his own, his actions were
the ministry's.

If we reflect on the appetite for power inherent in human
nature, and add to it the king's education in foreign coun-
tries, and among the Cavaliers, a party which would nat-
urally exaggerate the late usurpations of popular assembies
upon the rights of monarchy; it is not surprising, that civil
liberty should not find in him a very zealous patron. Ha-
rassed with domestick faction, weary of clamours and com-
plaints, oppressed with debts, straitened in his revenue, he
fought, though with feeble efforts, for a form of govern-
ment, more simple in its structure, and more easy in its
management. But his attachment to France, after all the
pains which we have taken, by inquiry and conjecture, to
fathom it, contains still something, it must be confided, mys-
terious and inexplicable. The hopes of rendering himself
absolute by Lewis's assistance seem so chimerical, that they
could scarcely be retained with such obstinacy by a prince
of Charles's penetration; and as to pecuniary subsidies, he
fully spent much greater sums in one season, during the
second Dutch war, than were remitted him from France during
the course of his reign. I am apt therefore (says Home) to
imagine, that Charles was, in this particular, guided chiefly
by inclination, and by a prepossession in favour of the French
nation. He considered that people as gay, sprightly, polite,
elegant, courteous, devoted to their prince, and attached to
the Catholic faith; and for these reasons he cordially loved
them. The opposite character of the Dutch had rendered
them the objects of his aversion; and even the unceasing
humours of the English made him very indifferent towards
them. Our notions of interest are much warped by our af-
fections; and it is not altogether without example, that a
man may be guided by national prejudices, who has ever been
little biased by private and personal friendship.

The character of this prince has been elaborately drawn
by two great masters perfectly well acquainted with him,
the duke of Buckingham and the marquis of Halifax; not
to mention several elegant brochure given by Sir William
Temple. Dr. Welwood likewise, and bishop Burnet have em-
ployed their pencil on the same subject: but the former is
somewhat partial in his favour; as the latter is by far too
harsh and malignant. Instead of finding an exact parallel
between Charles II. and the emperor Tiberius, as affec-
ted by that pratele, it would be more just to remark a full con-
trast and opposition. The emperor seems as much to have
surpassed the king in abilities, as he falls short of him in vir-
tue. Provident, wise, active, jealous, malignant, dark, ful-
ken, unfeizable, referred, cruel, unrelenting, unmerciful;
these are the lights under which the Roman tyrant has been
transmitted to us. And the only circumstance in which it
can justly be pretended he was similar to Charles, is his love
of women, a passion which is too general to form any illus-
rious resemblance, and which that detestable and detested
monarch shared also with unnatural appetites.

Mrs. Macaulay observes, that nature had bestowed on
Charles II. powers, which if properly exerted, might have
constituted an heroic character; but which, by an adver-
fate, enabled him to exceed in wickedness and folly all the
princes who had ever sat on an English throne.

The unhappy fate of Charles I. and the adversity into
which it hurriedly threw his son, by depriving him of the
advantages of parental care, and exposing him, at a time of
life when the passions are the strongest and the judgment the
weakest, to the pernicious licentiousness which prevailed in
the court of France, gave such strength and power to the
natural bias of his disposition, as totally to efface every ver-
tige of that moral sense which helps to form the mixt chara-
ter of the generality of mankind, and which is so very
entirely lost, even by the most illustrious. If with the ju-
diced eye of prejudice we can excite, and even applaud
the mean hypocrisy used by Charles, during his absence
with the Scotch covenanters, the breach of his oaths, and the
barbarity with which he afterwards treated this people, when
exalted to a kind of despotic power over them, with the per-
fections with which he repaid the services of the English pre-
bytersians; what can even the voice of faction say to the in-
gratitude with which he treated the ancient and faithful
friends of the fortunes of his family; and the dishonouring all
those with ignominy who endeavoured to reconcile the pre-
rogative of the king with the safety of the nation, and the
II. father's or cable: but in, an tcr, and that I the highest degree of affection? If with the men of pleasure, and the thoughtless companions of the bottle, we view with complacency, and even with applause, the licentious manners of a prince infected with the vices of every country which had yielded an asylum to his wandering steps, it is possible not to reflect, that Charles was totally deficient in that kind of sympathy and indulgent good nature which often accompany the effeminacy of a luxurious life; and that the unjust severity and even cruelty with which he treated all those whom he regarded as his enemies, are blemishes not to be excused when united to the ferrelest manners and the highest degree of principle.

If with the Papists, we applaud the king for the piets desogns he had entertained of restoring the British empire to the church of Rome; what can we say to the calm manner in which he abandoned this design, and the whole party, to their inveterate enemies? What can we say to the breach of the promise he had made to this body, that he would declare his conversion, and avow his patronage after the receiving a sum of money for this purpose from the coast of France? And what can we say to the mean manner in which he concealed his predilection to Popery till the hour of his decease, in which he vainly hoped to secure a safe passage to the regions of eternal bliss, from the merits of a submission exerted by the terrors of an afflicted conscience? And if, with the zealous churchmen, we regard him as the patron of the reduced privileges of that holy body, what excuse can we make for the deep designs he had entered into, of sacrificing all those sacred rights to the ambition of Papists, and the interests of the papal chair?

In the duties of private life, we are told by the panegyrists of Charles, that his conduct, though not free from exception, was in the main laudable: but though a large measure of indulgence is to be given to the foibles, the firmest, and even the vices of every man or woman, who has not received the benefits which arise from a perfect form of education, yet we cannot possibly trespasa so highly on our sense of propriety, decency, and the inimitable virtues of sobriety, as to rank a facility in which the king became the constant dupce of his amorous inclinations and passion for variety, among the good qualities of a rational agent; nor can we agree to the observation, that Charles was a civil and obliging husband, merely on the merit of his not having sacrificed an innocent woman to the venom of party spirit. On the contrary, setting aside the advantages of affluence, and the splendor of rank, the queen's situation must be considered as equally mortifying to that in which every other female is involved, whom a severe fate unites in the indissoluble bonds of matrimony with a proud rake.

On the subject of the king's constancy to the duke of York's interest, it is observable, that a coldness and mutual jealousies prevailed between the two brothers till the period of the first French treaty; a circumstance which rendered all future dissension dangerous to the peace and happiness of both. Burnet affords, that Charles both hated and feared his brother; and Sir John Kerley, who has manifested the highest degree of partiality to the conduct of the king, allows that it was motives of policy alone which were the grounds of his inlexible patronage: as on this single instance, therefore, thus circumstanced and opposed by the whole tenor of Charles's public and private conduct, it is impossible to agree with the duke of Buckingham, that this prince was even inclined to justice; or with the rest of his panegyrists, who found on the merits of the act of indemnity, issued from the necessity of the times, a propensity in his disposition to clemency and forgiveness; we must conclude, that the half picture drawn of Charles II. by bishop Burnet, is a just likeness, viz. that he had enormous vices without the tincture of any virtue to correct them; that, under the appearance of gentleness, he concealed a cruel and unrelenting heart; and under the mask of sincerity, the highest degree of hypocrisy and dissimulation; that he was void, not only of every principle, but every manly sentiment; that he was as incapable of friendship as of integrity; that he considered power and the trunks which accompanied it, in no other light, than as the means to gratify his criminal and selfish passions; that he acted as too rather than the protector of his people; and that it was undutiful, indiscreet, and the love of ease, which were the single correctors to that rage for absolute power which invades all princes; and which, but for the predominance of his vapid passions, Charles would have pursued with a vigilance equal to the importance of the undertaking; and which, notwithstanding the unconquerable indolence of his temper, the depravity of the times had, in a great measure, enabled him to effect.

Lord Lyttelton speaks of this monarch in the following terms. The methods pursued by Charles the Second, in the conduct of his government, were in many respects different from his father's, though the purpoie of both was much the same. The father always bullied his parliaments; the son endeavoured to corrupt them; the father obstinately refused to change his ministers, because he really esteemed them as honest men; the son very easily changed bis, because he thought they were all alike dishonest, and that his designs might as well be carried on by one knave as by another: the father was a tool of the clergy, and a perverter, out of zeal for the religion; the son was almost indifferent to religion, but loved the passions of his clergy against the differents from motives of policy: the father desired to be absolute at home, but to make the nation respectable abroad; the son afflicted the king of France by his invasions on the liberties of Europe; that, by his help, he might maintain the title of legislator, nay, he was even a penitent to France, and, by so vile a production of his dignity, set an example to the nobility of his realm, to sell their honour likewise for a penion; an example, the ill effects of which have been felt too feebly ever since.

Yet, with all these vices and imperfections in the character of Charles the Second, there was something so bewitching in his behaviour, that the charms of it prevailed on many to connive at the faults of his government; and, indeed, nothing could be lo hurtful to a country, which has liberties to defend, as a prince who knows how at the same time to make him self despotic and agreeable: this was eminently the talent of Charles the Second; and, what is most surprising, he profited it without any great depth of understanding.

But the principal instrument of his bad intentions, was a general depravity of manners, with which he took pains to infect his court, and they the nation. All virtues, both public and private, were openly ridiculed; and none were allowed to have any talents for wit or business, who pretended to any sense of honour, or regard to decency.
The king made great use of these new notions; and they proved very pernicious to the freedom, as well as to all of his subjects; but an indolence, natural to his temper, was some check to his designs; and, fond as he was of arbitrary power, he did not pursue it any further than was consistent with his pleasure and rejoic.

All music, except Stile's puerile, seems to have been filtered from the year 1612 to 1662; but at the restoration of monarchy and ancient religious establishments, all the surviving musicians, who had been degraded and involved in the calamities of the civil war, quitted their retreats. Many however had died in, and during the conflict, in every order of the state. No more than nine of the six and twenty bishops were living; and death had probably made the like havoc among the rest of the inhabitants, in proportion to age and numbers. Of those that fell by the sword, we know not the exact calculation; but, except archbishop Laud, the prelates may be supposed to have died in their beds. Of the gentlemen of Charles the First's chapel, none seem to have claimed their former station, but Dr. Wotton, Christopher Gibbons, and Henry Lawes; the last, indeed, did not long survive the restoration.

Child, Christopher Gibbons, Rogers, and Wilton, were created doctors, and therie, with Law of Oxford, though advanced in years, were promoted; Child, Gibbons, and Law, were appointed organists of the Chapel Royal, and Captain Henry Cook master of the children. Cook had been bred up in the King's Chapel, but quitted it at the beginning of the rebellion; and in 1642, obtaining a captain's commission, he retained the title of captain ever after. Gibbons was likewise organist of Westminster Abbey; Rogers, who had termly been organist of Magdalen College, Oxford, was preferred to Eton; Wilton had a place both in the chapel and Westminster Abbey; and Albertus Byrne, a scholar of John Tomkins, was appointed organist of St. Paul's, where he had been brought up.

The establishment of Charles the Second's chapel, at the time of the coronation, appears by the following entry in the cheque-book.

April the 23d, being St. George's day, 1661.

Dr. Walter Jones, subdean.
Roger Nightingale
Ralph Amner
Philip Tinker
John Sayer
Durant Hunt
George Law
Henry Smith
William Tucker
Edward Lowe
William Child
Christopher Gibbons
Henry Cook, master of the children
Henry Lawes, clerk of the cheque
Thomas Piers
Thomas Hazzard
John Hardie

[Names of organists and musitians followed, including names like William Haynes, Thomas Blagrove, Gregory Thorneall, Edward Bradock, Henry Purcell, James Coe, Nathaniel Watkins, John Cave, Alphonso Marth, Raphael Courtville, Edward Colman, Thomas Purcell, Henry Frott, John Goodgroom, George Betchenhorn, Matthew Pencll, and others.]

At which time every gentleman of the chapel in orders, had allowed to him for a gown five yards of fine scarlet; and the rest of the gentlemen being laymen, had allowed unto each of them four yards of the like scarlet.

The salaries of the gentlemen of the chapel had been augmented both by James I. and Charles I. and in the year 1663; Charles II. by the privy seal, further augmented them to twenty pounds a year; and granted to Capt. Cook and his successors in office, thirty pounds a year, for the diet, lodging, washing, and teaching each of the children of the Chapel Royal. A copy of this grant is entered in the cheque-book, and said to have been obtained by the solicitation of Mr. Cook.

The small stock of choral music with which the chapel began, in becoming a few years somewhat delightful by frequent repetition, the king perceiving a genius for composition in some of the young people of the chapel, encouraged them to cultivate and exercise it; and many of the first set of choristers, even while they were children of the chapel, composed anthems and services that are still used in our cathedrals. These, by the king's special command, were accompanied by violins, cornets, and flutes, to which instruments introductory llyphonies and ritornelles were given, and the performers of them placed in the organ-loft.

Dr. Tindal, in the dedication to the second volume of his manuscript Collection of English Church-music to Lord Harley, affirms the following reasons for the change of style in the music of the Chapel Royal, by a mixture of what he terms theatrical and secular.

"The standard of church music begun by Mr. Tallis, Mr. Bird, and others, was continued for some years after the Restoration, and all composers confirmed themselves to the pattern which was set them.

"His majesty, who was a brisk and airy prince, coming to the crown in the flower and vigour of his age, was fond, if I may so say, tired with the grave and solemn way which had been established by Tallis, Bird, and others, ordered the composers of his chapel to add symphonies, &c. with instruments to their anthems; and thereupon established a select number of his private music to play the symphonies and ritornelles which he had appointed. The old masters of music, Dr. Child, Dr. Gibbons, Mr. Low, &c. organists to his majesty, hardly knew how to comport themselves with these new-fangled ways, but proceeded in their compositions, according to the old style, and therefore there are only some services and full anthems of theirs to be found.

"In about four or five years time, some of the forwardest and brightest of the children of the chapel, as Pelham Humphrey, John Blow, &c. began to be masters of a faculty in composing; this his majesty greatly encouraged, by imbibing their youthful fancies, so that every month, at least, they produced something new of this kind. In a few years more, several others, educated in the chapel, produced their compositions in this style; for otherwise it was vain to hope to please his majesty."

King Charles the Second, (says the Hon. Roger North, Mem. of Mus.) though a professed lover of music, had an utter aversion to Fancies, which was increased and confirmed by a successful entertainment given him by secretary Williams. After which the secretary had no peace; for the king, as was his custom, could not forbear whetting his wit upon fancy music, and his patron the secretary; nor would he allow the matter to be disputed upon the point of superiority, but ran it all down, by saying, have not I cares? He could bear no music to which he could not beat time, which he continually tried to do to all that was performed in his presence, which he generally heard wading. Of fancies he only approved the soft strain in triple time; which rendered that kind of movement fashionable among the masters and composers for the stage, as may be seen in the printed songs of the time.
CHARLES V.

His majesty had once a wife, in order to compare styles, to hear the singers of several nations, German, Spanish, Italian, French, and English, perform together on the court stages, at Whitehall. The Italians performed the celebrated trio of Carissimi, Che dite, che fiate; and the English brought up the rear under great disadvantage, with I pass all my hours in a foathy old grove; for though the king chose that song as the best, others were not of his majesty’s opinion.

The old way of comforts was laid aside by this prince immediately after his restoration, when he established his band of 24 violins, after the French model, and the style of music was changed accordingly. So that French music became in general use at court, and in the theatres; indeed, performers on the violin had a lift into credit before this period, when Baltyzar, a Swede, came over, and did wonders upon it by swiftness and double stops. But his hand was accounted hard and rough, though he made amends for that by often tuning in the lyra way, and playing idoms conformable to it, which were very harmonious, as is manifest by many of his pieces still extant.

During the first years of king Charles’s reign, all the music in favour with the beau-monde, was in the French style; which, at this time, was rendered famous throughout Europe, by the works of Baptift Lulli, a Frenchified Italian, and master of the court music at Paris, who enriched the French music by Italian harmony, which greatly improved their melody. His style was theatrical, and the pieces called branscì, or overtures, consisting of an entrée and a courante, will ever be admired as the most flatly and complete movements in music. All the composers in London strained hard to imitate Lulli’s vein. However, the whole tendency of the age, affected the foot more than the ear; and no one could listen to an entrée, with its sprints and leaps, without expecting a dance to follow.

The French instrumental music, however, did not make its way so fast as to bring about a revolution all at once; for, during a great part of this king’s reign, the old music was still used in the country, and in many private meetings in London; but the treble viol was discarded, and the violin took its place.

The taste of Charles I. seems to have been French in all things, but particularly in music; for he had French operas; a band of twenty-four violins, in imitation of the French band at Paris; French masters of his band, Cambert, and, afterwards, Grabu; he sent Pelham Humphry to study under Lulli, and young Banister to learn the violin at Paris. Indeed, though we have since had better models for our musical studies of all kinds, from Italy and Germany, music, as well as every other liberal art, was at this time in a higher state of cultivation in France than in England. But though Lulli carried Italian dramatic music into France, it was such as had been produced during the infant state of the art in Italy; yet, notwithstanding the subsequent improvements it received in its native country, from innumerable masters, particularly since they were furnished with lyric poetry by Metastasio, near a century elapsed before our neighbours the French perceived it possible to compose better music than that of Lulli.

Our merry monarch, (as he is called in the Spectator, No. 462) certainly loved music, and had an accurate ear, particularly for time; nor would he allow any composition to be music, to which he could not beat the measure; which is, in general, a very good criterion of clearness, accent, and rhythm; but these bring all wanting in the music of Lulli, excites a wonder at his majesty’s partiality for French music. But, He had heard little or no Italian music, and the German music of his time was rude and unpolished in melody, though in harmony and fugue very learned. But little our gay and voluptuous sovereign would not give himself the trouble to analyse, or even to hear. Purcell, the nation’s darling, born in 1658, was but two years old at the restoration; and at the death of Charles but 24, at which time his fame had scarcely taken wing’s

CHARLES V. This celebrated prince was born at Ghent, on the 24th February, 1500. He had not completed his sixteenth year, when the rich inheritance of Cathie, of Arragon, and Navarre, of Naples, Sicily, and Sardonia, devolved on him, by the death of his maternal grandfather, Ferdinando. His early youth had been formed by Margaret of Austria, his aunt, and Margaret of York, the widow of Charles the Bold. These two princesses were distinuiugished equally by their virtue and abilities. On the death of his father, Philip, William de Croy, Lord of Chievres, and Adrian of Utrecht, were the princes appointed by his grandfather Maximilian, for the purpose of carrying forward his education, and forming his sentiments and principles. It was the whim of Adrian, however improbable its success, to involve his young mind in all the vexatious mazes of metaphysical theology; but the more authoritative and more acceptable instructions of Chievres led him from monastic speculations to the robust exercises of military life. The arts of government were a no les acceptable studies, connected with the history of his own kingdom, and of those neighbours with whom he had most frequent intercourse. From his fifteenth year, when he assumed the government of Flanders, Charles was accustomed to business. It was a part of his discipline to peruse flate papers, to prelude at the deliberations of his council, and to propose in person those questions on which he wished for advice. From such an education, his habits and manners assumed a character disproportioned to his years. Yet his outlet was marked by no feats of superior genius. His figure and address, his graceful and manly accomplishments, were flattering to the vanity of his subjects; but there was a certain temporizing deference, which seemed to lay him open to the artifices of courtiers, and a tone of pallion which prepared him for a dupe, and his people for a prey.

Ferdinando, his grandfather, died in 1515; on which event Charles claimed the title of king, while his mother Joanna was yet alive. The times were difficult; but Ximenes was equal to the crisis. The Pope, as head of the church, and the Emperor, as head of the empire, concurred in confirming the dignity, as of their own right; and on these grounds was Ximenes instructed to press the claim on the Spanish nation. Yet, by the laws of Spain, the full right to the crowns of Cathie and Arragon belonged to Joanna; nor had any public act, declaring her incapacity, reconciled the pretentions of Charles, either to the delicacy of filial forbearance, or to the privileges of the two nations. Ximenes protested against the principle, but was prompt and vigorous in carrying his orders into execution. The title was recognized at Madrid, in spite of discontent; though the states of Arragon were obstinate, under the irreolate administration of the archbishop of Saragossa. The Arragonians waited for the king’s arrival in Spain, before they would acknowledge any other title than that of prince. The war which had arisen from the holy league had been transmitted by Ferdinando to his grandson, who, as king of Spain, was in actual hostility against France. But Chievres, conscious of the advantage which his countrymen, the Flemings, derived from their commerce with the French, warmly recommended an accommodation, and obtained the manage-
ment of the treaty. The king of France listened with joy to the first overtures. The principal articles of the treaty were, that Francis should give in marriage to Charles his eldest daughter, an infant of a year old, with all his claims and pretensions to the kingdom of Naples, for her dowry. In consideration of Charles's being already in possession of Naples, he was to pay 100,000 crowns a-year to the king of France until the accomplishment of the marriage, and the half of that sum annually as long as the princess had no children. When Charles should arrive in Spain, the heirs of the king of Navarre might repudiate him their right to that kingdom; and in default of due satisfaction, Francis was at liberty to afflict with his forces. Charles probably would never have signed such conditions, but for the purpose of securing a safe passage into his Spanish dominions. Yet such was the ascendancy of his Flemish favourites, and their jealousy of Ximenes, that after a year's delay, nothing but the repeated remonstrances of the cardinal, and the murmurs of the Spaniards, prevailed on him to embark. No sooner was Ximenes informed of his arrival, than he advanced to meet him. But his journey was stopped by ill-feats, which some attributed to poison, though it seems naturally accounted for, by extreme old age and unfeizable fatigue. The neglect of his counsels, and the cold formality with which the king, as a matter of form, allowed him to retire, produced an effect equal to any poison, in his almost immediate death. Charles received the news of it with indifference; but he had scarce entered Valladolid, before he was sensible of his loss. The cortes of Castile infiltrated on his mother's name appearing first in all public acts, and on the revocation of her authority, in cafe of her recovery. They were liberal in their grants; yet was the discontent loud; to which the king's hesitation in speaking Spanish, and attachment to Frenenish favourites, not a little contributed. These events took place in the years 1518 and 1519.

Before his departure from Aragon, Charles sent his brother Ferdinand into Germany, and thus obviated his intrigues. He found the cortes of Aragon highly refractory; the assembly of Catalonia full worfe; and the Castilians were taking those measures, in defence of their privileges against strangers, which laid the foundation of that memorable union among the confederates of Castile. With respect to the rejection of Navarre, neither the monarchs of Castile nor their barons were inclined to part with it, and the conference at Montpelier was abortive. The death of Maximilian vacated the imperial throne; and the European princes had learned, from the Italian wars, the advantages which might be derived from that dignity. The previous negotiations of Maximilian, and the situation of his hereditary dominions with respect to the Turks, had predisposed the former towards the elevation of Charles. But he was opposed by a formidable rival in Francis, who pressed it on the consideration of Europe, that the crown was elective, and ought not to be made, by preceptive custom, hereditary in the house of Austria. His emissaries contended besides, that the person who held the crown of Naples was excluded by a fundamental constitution. To their arguments were added horrid loads of treachery, and unlimited promises.

The electors directed their views to Frederick Duke of Saxony; but he rejected their proposal, and at the same time effectually turned the scale in favour of Charles, who received the news of his election at Barcelona. But his Spanish subjects were fuller and refractory, refusing to grant any subsidy to an absent sovereign. Charles, in his turn, countermanded the association of the "brotherhood," which proved the source of much calamity to the kingdom. The cortes of Castile were not less violent than the Valencian barons. Opposition and artifice united could with difficulty extort a donative, to enable him to appear with becoming splendor in Germany.

Conscious of the rivalship which still subsisted between himself and the king of France, Charles was desirous of courting the alliance of Henry VIII. of England, whose possession of Calais gave him a great degree of influence with both monarchs. Henry had agreed to an interview with the French king between Guines and Ardrès; but Charles studiously pre-occupied his favour, byItering directly from Corunna to Dover, and, by a visit of only four days, at once made a favourable impression on the king of England, and attached Wolsey to his interest, by a pension of 7,000 ducats, and the lure of his future succession to the apostolic chair. After the interview with Francis at Guines, Henry returned the visit of Charles at Gravelines, who, excused, by his seeming deference, the impreffions which the conduct of his rival had made.

From the Low Countries, Charles pursued his route to Aix-la-Chapelle, where he was invested with the crown of Charlemagne. Germany was now his by election; Castile, Aragon, Austria, and the Netherlands, by succession; Naples and Granada inherited by the right of conquest; Mexico added to his resources by Fernando Cortes. Yet his territories were dilant and disjointed; his authority was limited; his subjects were strangers to each other, and reluctant in their obedience to him.

Luther had now declared the pope to be Antichrift. The first act therefore of the emperor's administration was to appoint a diet at Worms, to check these new and dangerous doctrines. These events occupied the years 1520 and 1521.

In the mean time, the discontent in Spain had gathered to a head. The citizens of Toledo, Segovia, Burgos, Zamaora, were all influenced by the same spirit. Adrian trembled in Valladolid at the rapid progress of insurrection; but he forced his naturally lenient disposition, and ordered a body of troops to proceed against the delinquents. Charles, though he had received accounts of these transactions, could not return immediately to Spain, without endangering the imperial crown. He therefore promised, to those who continued faithful, not to exact the subsidy granted by the late cortes; and engaged, that no office should be conferred in future, but upon native Castilians. At the same time he wrote to the nobles, to excite them to the defence of their own rights, and those of the crown, against the commons. He appointed the high admiral and the high constable of Castile, whose abilities and influence would be highly useful in an appeal to arms, to act as regents in conjunction with Adrian. But the junta, relying on an unanimous support, now aimed at a more extensive reform of political abuses. They demanded that the king should return, and reside in his Spanish dominions: that he should not marry without the consent of the cortes; nor appoint a foreign regent in case of unavoidable absence. That no stranger should be naturalized; and that those who already held public offices should resign them. A reduction of the taxes, an extended and reformed representation in all future cortes, which were to assemble as matter of right once in three years, were the other objects to which their remonstrances were directed.

These internal factions encouraged Francis to take up arms. A body of troops, under Andrew de Foix, invaded Navarre, in behalf of Henry d'Albret. The Castilian nobles heard of the irruption with indifference; but when the enemy prefumed to invade Lagrogno, a small town of Castile, all parties were routed at once: they took the French general prisoner, and brought Navarre back to its obedience.

Charles,
Charles, having entered into an alliance with pope Leo, determined on open war. The progress of this treaty, to contrary to his inclinations, had been concealed from Chievres. The chagrin of the latter, on the discovery, shortened his days, and left the royal pupil to the uncontrolled exercise of his own powers. Robert de la Mark had ravaged the open country of Luxembourg, and laid siege to Vinton. Charles, at the head of 20,000 men, over-whelmed the territories of Robert, and reduced him to sue for mercy. The count of Nassau was commanded to invade Mezières; but the chevalier Bayard, the knight, without fear, and without reproach, managed his slender resources with such skill and gallantry, that the imperialists abandoned the siege with considerable loss. At this time, Francis, at the head of a superior army, from excels of caution, missed the opportunity of a personal engagement with his rival, suggested by the crafty Bourbon, which might have been fatal to the future grandeur of Charles, who soon faced the disgrace of his retreat by the reduction of Tournay, and secured an important advantage in the alliance of Henry, king of England.

In the mean time, Francis, defeated in Italy, had renewed the war on the side of Spain. Navarre was again invaded, and Fontarabia, a strong town of Basçay, was taken by Bonivert, admiral of France. This loss determined Charles to re-visit his Spanish dominions. On his way, he halted at London six weeks, received the garter, confirmed his alliance with Henry, and again caressed Wolsey with distant hopes of succeeding Adrian. The emperor's first attention was directed, on his arrival in his Spanish dominions, to heal the wounds of faction. He rejected the bloody suggestions of his council, and excepted only fourcore perons from the general pardon. When an officious courtier offered to inform him where one of the most considerable rebels was to be found, he replied, with a smile, "you had better let him know I am here, than tell me where he is." Thus, by his magnanimity and address, he established an ascendancy over the Spaniards, of which he availed himself to obtain pecuniary grants and military support, equal to the prosecution of all his enterprises. Among these, his mysterious correspondence with Charles, duke of Bourbon, was not the least important. That nobleman was equally entitled to favour by his birth and services. But Louisa, the king's mother, had contracted a violent attachment to the house of Bourbon, and had communicated her prejudices to her son. The death of the duke's wife revealed Louisa's passion; but her advances were rejected, and her affection again converted into hatred. She commenced a suit against him for the duchy of his deceased comfort, and he was stripped of his fortune by an openly notorious sentence. This political intrigue was brought to bear in the year 1523. But the conspiracy was discovered and disconcerted. The confed- rates were repelled in three separate attempts to invade France, and lost half the Milans. But the wealth of Mexico prompted Charcs to new enterprises, and purchased him new allies. He opened the campaign of 1524, with the siege of Fontarabia, which he thought while the magazines were yet full, and the walls entire. Charles received the intelligence of the victory of Pavia at Madrid, with an air of the most perfect complacency and moderation; but the pro- jeets which he entertained on this unexpected success, were most extensive and ambitious. Yet his own embarrassments were scarcely inferior to those of the prince his former, from the limited condition of his revenues, and the universal jealousy of his neighbours. In the mean time France was filled with contention by the defeat at Pavia: the king sent the first news of it to his mother, in these words: "Madam, all is lost, except our honour." Henry now began to tremble for the balance of power, and his minister Wolsey repeated the faithful promises of the papacy. The former therefore secretly advised Louisa of his support, but in his language to the emperor, offered to invade Guinene with a powerful army, on condition that Francis should be delivered to him, and the monarchy of France extingushed. These extravagant proposals were designed to diffcult the emperor, on whole rejection of them the king of England found a decent pretext for withdrawing from his alliance.

The low state of the emperor's finances preventing him from penetrating into France with the forces of Spain and the Low Countries, he proposed terms to Francis of a rigorous nature, that the latter, drawing a dagger, exclaimed, "It is better that a king should die thus."

The removal of Francis from Italy had equally enraged Bourbon and Pescara. The discontent of the latter had reached Jerome Morone, vice-chancellor of Milan, whose genius for intrigue was inflamed by the hope of delivering Italy from the yoke of foreigners. He tempted Pescara with the throne of Naples; and the latter acceded to the proposal: but, on reflection, he deemed it either most honourable, or most safe, to reveal the whole confi- dence to the emperor, who had been already apprized of it by his spies. He commanded Pescara to continue the negotiation. The latter invited Morone to a last interview; but Antonio de Leyva had been concealed in the apartment, and, appearing suddenly, arrested Morone, and committed him to the castle of Pavia. Sforza was declared to have forfeited all title to the duchy of Milan, which was seized in the emperor's name. But the emperor's recent acquisitions in Italy were more than counterbalanced by his increasing dangers. The health and even the life of Francis, whole captivity was ex- pected to prove so advantageous, had been endangered by six months of harsh treatment. Charles, therefore, hastened from Toledo to Madrid, and inspired his prisoner with the hopes of speedy deliverance; but he relapsed into his former dulness and indifference, as soon as he had produced the effect intended, which was soon counteracted by the arrival of Bourbon in Spain. Charles met the rebellions subject without the gates of Toledo, though he had with difficulty been prevailed on to visit the king. But the Spaniards detested Bourbon's crime, and shunned all intercourse with him.

In the year 1526, the two monarchs came to an agreement, by which the French king was to restore Burgundy to the emperor in full sovereignty, as soon as he was let at liberty, delivering at the same time the Dauphin and the duke of Orleans, or twelve of the principal nobility in lieu of the last, as hostages. In confirmation of this agreement, Francis was to marry the emperor's sister, the queen dowager of Portugal. The treaty was signed about the middle of January, and on the return of the ratification from Paris some weeks after, the marriage was consummated, and Francis took leave of his new brother-in-law with dissembled demonstrations of regard. In the course of the same year, Charles married Isabel, the sister of John III. king of Portugal, a choice equally acceptable to the Cortes of Càñilo and Arragon, and pleasing to the court of Lisboa.

On the death of Lewis II. king of Hungary and of Bohemia, on the field of Mohacz, those kingdoms were claimed by the archduke Ferdinand, as inheriting the ancient pretentions of the house of Austria, and in right of his wife, the sister of the deceased monarch. The Valyowde of Transylvania was a competitor; but the personal merit of Ferdinand, and the influence of the emperor now had the
foundation of that pre-eminence, which has rendered the House of Austria so formidable to the rest of Germany, since these acquisitions became hereditary in their family. Having experienced the danger of awakening the fears of mankind, Charles affected to disclaim the enterprise of Bourbon against the pope's liberty. But Europe was not to be cajoled by prayers and proceedings, and Francis rushed to action. The Milans were threatened by the imperial forces, by the expedition against Rome, and the Italians received Lauriere with open arms. The whole dutchy, as well as Alexandria and Pavia, must have been restored to France, had not Lauriere feared the jealousy of the confederates. He, therefore, marched towards Rome, where the pope was still a prisoner in the castle of St. Angelo. The Imperial army demanded their arrears; and Charles, who could depend neither on his fidelity for the liberty of the cortes, nor on the liberality of the church, himself clement his freedom for three hundred and fifty thousand crowns. Part of this sum was distributed among the Imperial troops, who then quitted Rome, and pointed their retreat towards Naples.

In the year 1559, while the contending parties were fluctuating in their counsels, a negotiation, undertaken between Margaret of Austria, the emperor's aunt, and Louise, the mother of Francis, terminated in the peace of Cambrai, by which Francis was to pay two millions of crowns for the ransom of the dauphin and the duke of Orleans; to relieve the towns he held in the Milanese; to renounce his claims to Naples, Milan, Genoa, and all beyond the Alps; to abandon the Venetians, the Florentines, and the duke of Ferrara; to pay a sum of money to the Emperor for losses he had sustained; to disclaim the indulgence of his paternal feelings at the expense of his character as a public man and a sovereign. Henry VIII. accorded to the peace of Cambrai; so that this interval of tranquillity gave Charles an opportunity of visiting his Italian and German dominions. Before his embarkation, a question having arisen whether the inhabitants of Barcelona should receive him on his entry, as emperor or as count of Barcelona, he instantly decided for the latter title, and was rewarded for his flattering dispositions by an oath of allegiance from the lords of the provinces to his infant son Philip. In Italy, he appeared in all the pomp of military and civil state; and took infinite pains to influence every unfavourable prepossession from the minds of the natives, by the equity and moderation with which he attended the concerns of the country. But in the year 1550, the affairs of Germany called for his immediate attention. Though Solyman had been obliged to abandon the siege of Vienna with disgrace, the empire disorders of the empire demanded the presence of its head. Several of the German princes, who had embraced the opinions of Luther, had not only established in their territories that form of worship, but had entirely suppreffed the rites of the Romish church. Many of the free cities had imitated their conduct. Nearly one-half of the Germanic body had revolted from the papal see, and its authority was considerably weakened in the other half. The Imperial influence began to be weakened by these divisions, to suppreff which, the diet of Augsburg was called, and attended by all the princes of the empire, especially those who had protected against the decrees of the late diet at Spire, for the celebration of mass. The princes of the free-Bavarians were the electors of Saxony, the marquis of Brandenburg, the Landgrave of Hesse, the dukes of Lauenburg, and the prince of Anhalt. They conducted themselves with decency, but defended their opinions with fortitude. Their tenets were, however, condemned by the majority of the diet, whose decree induced them to confede more closely, and produced the league of Smalkalde. In the year 1532, the emperor marched against Solyman; but the campaign was not without any memorable event. He afterwards fell against Tunis, and took the Goletta, garnished by six thousand Turkish soldiers, under the command of Sultan, a renegade Jew, which led to the defeat of Barbarossa. But before Charles could give the necessary orders for protection against military violence, the soldiers had precipitated themselves on the city of Tunis, where thirty thousand inhabitants perished in one day, and Charles's victory was blunted by the excesses of lust and avarice. Mulhe Hafcen took possession of the throne, and committed to his mercy the crown of Tunis; to set all Christian slaves at liberty without ransom; to allow the emperor's subjects the free exercise of their religion; to exclude the Turkish corsairs from his harbours; to deliver up the Goletta and all his fortified posts, and to pay twelve thousand crowns annually for the subsistence of the garrison. The issue of this expedition dazzled Europe, and 20,000 slaves, freed from bondage, and clothed at his expense, traced his return to Spain; after which, in the year 1570, he improved his leisure in providing funds and forces for a new war. He drew money from Naples and Sicily, troops from Germany, and then threw down the gauntlet to the king of France, in presence of the pope and cardinals. His confidence of success was so great, that, notwithstanding the remonstrances of his envoys and generals against the plan of his campaign, he defined the historian, Jovius, to make a large provision of paper to record his impending victories. But Francis had discovered his design of penetrating into the southern provinces of France, and left it to the Maréchal Montmorency to defeat the plan who executed the trust by making a descent from the Alps to Marsailles, and from the sea to the confines of Dauphine. Charles sailed two months in Provence, and then, having lost half his troops by disease or famine, gave the signal for a reluctant retreat; and nothing could have saved the Imperialists from destruction, but the adherence of Montmorency to his favourite maxim, that a bridge of gold should be made for a flying enemy.

In the year 1578, the two monarchs, listening to the exhortations of the Roman pontiff, extended their truce of ten months to ten years. A few days after signing the treaty, the emperor, on his passage to Barcelona, was driven by contrary winds on the coast of Provence, and invited by Francis to a personal interview, at which the two rivals seemed to have buried all animosity, and to contend only for superior cound and liberality. Charles had no sooner landed in Spain, in 1579, than he was acquainted with the edition of his troops, who had plundered the Milanese, and were only to be quieted by the address of the imperial generals, who borrowed and extorted money to discharge their arrears, and then disbanded the greater part of them. Before the success of his plan was ascertained, the emperor had endeavoured to influence the liberality of his Catholic subjects; but the nobles pleaded exemption from any tax, and prevailed to urge on Charles a confiding residence in Spain. They were dismissed with indignation, and were not afterwards called to the assembly of the Cortes. But they still affected their personal privilege. On the return of the emperor from a tournament, one of the freemen struck the duke of Infantado's horse, who drew his sword and wounded the officer. Charles ordered the judge of the court to arrest the duke; but the contable of Castile claimed the right of a jurisdiction over a grantee, and conducted Infantado to his apartment, attended by all the nobles present. The emperor perceived the hazard of irritation, and prudently sent to the duke of Infantado, offering to punish the person who had insulted him: but the duke forgave the officer, and gave him a compensation for his wound.
CHARLES V.

In the year 1540, Charles, having negotiated a safe conduct by deceitful assurances, passed through France with a small but splendid train of about an hundred persons, and meeting the king at Chatellerault, proceeded with him to Paris, where he laid only six days, and pleading the necessity of his presence in the Low Countries, was accompanied as far as St. Quentin by his generous and unsuspecting rival. The citizens of Ghent were incapable of resistance; and he received their ambassadors with a declaration that he would appear with them as their sovereign, with the sceptre in one hand, and the sword in the other. He entered the city on his birth-day, and put twenty-six of the principal citizens to death, and thus set an example of severity, which might bridle the fictitious spirits of his other subjects in the Netherlands. In the year 1541, he summoned a diet at Ratibon, in which while he confirmed the papal authority, he privately assailed the reformed of his protection, and thus induced them to grant him a liberal supply of men and money for the war against the Turks. The remembrance of the glory he had acquired in his late expedition to Africa inflamed him with the desire of conquering Algiers. After a tedious and tempestuous navigation, at an advanced season of the year, against the advice of Andrew Doria, he anchored off the coast of Africa, to experience a series of calamities, which neither prudence could counteract nor exertion overcome. On the second day after his landing, there arose a tempest which overawed the camp during the night, and the next morning at day break they were attacked by the enemy, who were with difficulty repulsed. His ships were most of them wrecked, and eight thousand men perished in an hour, either in the sea or by the hands of the Arabs. The next day Doria sent him word that he had borne away with the remnant of the fleet to Cape Metafuz, which was three days march from the present camp. Puffed by sickness and by wounds, by famine and the Arabs, they at length reached Metafuz, and Charles by prudent dissimulation gained a credit for fortitude and humanity, which prosperity had hitherto allowed him no opportunity of claiming. He flourished in the hardships of the meagre foldiers; he exposed his person, and animated his fellow-sufferers; and though a body of Arabs hovered about his rear, he was the last to quit the shore. On his return to Spain he was attacked on various sides. In the year 1542, five formidable armies invaded his dominions, but they only consumed their strength in fruitless enterprises. In 1543, he obtained a liberal supply from the Cortes, borrowed a considerable sum from John, king of Portugal, on the security of the Molucca islands, negotiated a marriage between his son Philip, and Mary the daughter of that monarch, obtained donations from the states of Aragon and Valencis, and a valuable consideration from Ofria de Medici for withdrawing his garrisons from the citadels of Florence and Leghorn, and prevailed with Henry of England to declare on his side. Under these circumstances, it might have been expected that Charles would have opened the campaign of 1544 with vigour; but after providing for the security of Spain, and detaching a body of Spanish troops into the Netherlands, he passed into Germany, and preferred the intrigues of the diet to engaging in the operations of the field. He at length signed his final treaty with Francis, in which, besides the public articles, there was a private agreement for the extermination of the protestant heresy. He now summoned the diet to Ratibon, whether the Protestant sect deplored, though the Roman catholic members appeared in person. The emperor, while the elector of Saxony and the landgrave of Hesse were hesitating whether to renounce their homage and restore war, had been reinforced by Paul's quota of troops, and some of his own Spanish forces. He determined, however, to wait until his lines till the protestant force should be dissipated by diffusion and necessity. As soon as Maurice of Saxony, with whom he was in secret league, had by an intercept withdrawn the elector to the relief of his subjects in Saxony, the emperor put his troops in motion in the winter of 1547, and reduced the duke of Wurttemburg, the cities of Ulm, Augsburg, and Straubourg, to submission. At this period he was the most formidable of the parties which have been called the star of the house of Austria. Francis died at Rambouillet, in the thirty-third year of his reign. From this source of duellistic, the emperor crossed the Elbe, leading his cavalry in person, together with the flower of his army, routed the Saxons, and took the elector prisoner. Having now dispersed his enemies in the field, Charles summoned a diet at Augsburg, and in the year 1548 proposed that ycleum of doctrine, known by the name of the Interim, which was confided by both parties as an unsatisfactory and infamous compromise. But the power of the author ensured its reception everywhere, but in Magdeburg, Bremen, Hamburg, and Lubeck. On the death of Paul, and the succession of Julius the Third to the apostolical chair in 1555, the emperor began to cherish the ambitious design of transmuting the German empire to his son, as well as the kingdom of Spain, and his dominions in Italy and the Low Countries. But he met with a powerful obstacle in the jealousy of his brother Ferdinand. The Germans were besides dissatisfied with the revenge and haughty manners of Philip, and alarmed at the concentration of so much power in the head of the empire; so that Charles was reluctantly compelled to drop the scheme. He therefore refrained the enforcement of the interem, and would probably have succeeded completely, had he not been deceived by Maurice, whose intricate plan of policy blinded the most quick-fisted prince in Europe. In 1551, the diet pointed Maurice out as the most proper general to enforce the reception of the interim, and Charles approved of the recommendation. His credulity could not fail of placing him at length in a most embarrassed situation, and he tried the effect of negotiation. The danger of the emperor at Innsbruck and his sudden retreat by torch-light are well known; and these two masters of finefeet came to a better understanding, which terminated in a peace, and the establishment of the protestant church in Germany, by the treaty of Passau in 1552.

But the German princes, engrossed by their own concerns, took little care of the French, who were expostulated to the refitment of Charles. Emerging from his retreat, he advanced to march towards Hungary, but turning suddenly to the right, and being joined by Albert of Brandenburg, invaded Metz at the head of eighty thousand men. His intentions having been anticipated, the city was ably defended by Francis duke of Guise; and notwithstanding the emperor's perseverance even to obstinacy, founding himself defeated by his soldiers, whose spirits had been exhausted by hardships, and whose numbers had been thinned by a pestilential disease, he yielded to the solicitations of his generals, and retreated. His disappointment exasperated him to a feverish caution against fortune, whom he likened to other females, in her preference to young men, and insouciance to her earlier favourites. In 1553, however, he effaced in some measure the disgrace of his repulse at Metz, by the capture of Terouanne and Hesdin.

In 1554, the French king determined to act vigorously both in the Low Countries and Italy, that he might compel Charles to an equitable peace. He ravaged Hainaut, Liege, and Artois; reduced Marienburg, took Bouveires, and Danzig by assault, and invaded Rends, to the relief of which
which the emperor marched notwithstanding his infirmities. He wished to avoid a decisive action, but a dispute about a post brought on a general engagement, in which the Imperialists were repulsed, and might have been completely routed, but for the tardiness or jealousy of the enemy. The emperor, on his retreat, entered Picardy, and took his revenge for the ravage of Hainault and Artois. In Italy, his general, the marquis of Merano, defeated the Florentine exile, Strozzi; Siena was besieged, and capitulated on honourable terms; and Charles was in hopes of recovering Metz by an intrigue with the father guardian of a convent of Franciscans in the city. But in this design he was disappointed by a delivery on the very day of execution. The death of pope Julius the Third, and the exaction of cardinal Caraffa, the invertebrate enemy of his house, augmented his chagrin, and he now, at the early age of fifty-six, determined to retire from public life. Both his constitutional and mental powers began to be seriously impaired by the increasing severity and duration of the gout; the complication of his political concerns, extending to every nation of Europe, was beyond his strength to manage, and he had a natural gift of mankind. He therefore thought that he should better consult his fame by a voluntary retreat than by continuing to struggle against the tide of more active and vigorous competition. On the twenty-fifth of October, 1555, when the States of the Low Countries were assembled at Bruxelles, Charles seated himself for the last time in the chair of state, and explained, by the president of the council, his intention in calling the meeting. He then rose from his seat, and leaning on the prince of Orange’s shoulder, took a solemn review of his own administration, and pathetically detailed his reasons for retiring. He addressed his son in a strain of serious and dignified exhortation, in which he enjoined him to prove his gratitude by confiding the welfare of his people. Exhusted by this long address, he sunk into his chair, more honoured and beloved by his subjects in his new character of a philosopher, than when dazzling their eyes by the pomp of state, and swelling their pride and his own by conquest and grandeur.

In the beginning of the next year, he resigned the crown of Spain, and all its dependencies, referring nothing to himself but an annual pension of an hundred thousand crowns, for domestic expenses and charity. His last public act was the negotiation of a long truce with France, by which he secured his son an interval of peace, and finding it hopeless to tamper with his brother for the transfer of the imperial dignity to Philip, he cloistered all by formally transferring his claims of allegiance from the Germanic body to the king of the Romans. On his way to the place of his retreat, he visited Ghent, the place of his nativity, and after a prosperous voyage, arrived at Laredo in Biscay. As soon as he landed, he prostrated himself on the earth, and said, “Naked I came out of my mother’s womb, and naked I now return to thee, thou common mother of mankind.” He felt mortified at the thin attendance of Spanish nobility at Burgos, and was still more affrighted at his son’s ingratitude and ditillary payment of his pension. His retirement was fixed at the monastery of St. Justín, a few miles from Pazzecina in Etremadura, with which spot he had been stricken in passing by it some years before. It was esteemed the most healthful and delicious situation in Spain; and an architect, whom he sent before him, had accommodated the arrangements to the simplicity of his future habits. His plan of life was that of a private gentleman, from which all ceremonious forms were discarded. He never inquired after the politics of Europe, but occupied himself with the cultivation of his garden, and the exercise of riding on a little horse, the only one he kept. He occasionally entertained a few neighbouring gentlemen at his table, and lectured mechanical principles with Turrano, an ingenious artist, who accompanied him in his retreat. A considerable portion of his time was devoted to religious exercises, and in this dig- nified leisure did he pass the first year of his seclusion. But the debility arising from a broken constitution, and the natural tendency of a superstitious faith and practice, at length degraded his sinking mind to the servility and infancy of monastic penances. Promoted by the monks, to whose direction he had resigned himself, he resolved to celebrate his own obsequies, which he did with all the solemnity of a real funeral. The awful impositions which the ceremony, however absurdly and improperly devised, had left upon his mind, hastened the event which he had so vaguely anticipated. On the following day he was fezd with a fever, and expired on the twenty-first of September, 155^, in his fifty-ninth year. The character of his mind was rather that of careful and deliberate attention than of brilliant talents or rapid conception. He preferred benevolence to pleasure, and made public concerns at once his study and amusement. But his promptitude in execution was equal to his patience in deliberating; he was at once fagacious in devising measures, and firm and resolute in carrying them forward. Though he devoted himself more to the cabinet than to the field, he never appeared at the head of his armies without entitling himself to rank with the greatest generals of the age. But his principal excellence consisted in the felicity with which he applied the important science of human nature to the choice of fit agents and the adaptation of abilities to situation and office. If his manners were less pleasing than those of his rival, his virtues were at least as solid, and his adherents as faithful and attached. His confidence in his generals was unbounded; he rewarded their services munificently; he neither envied their glory, nor mistrusted their intentions. But his ambition was infatiable, and his policy too often ungenerous; while his contemporaries, Francis the First and Henry the Eighth, with numberless vices from which he was exempt, were characterized by an openness and credulity, which made them more popular, principally because it rendered them less dangerous.

Charles seems to have lived more in the Netherlands, than either in Spain or Germany. And it was during his reign that so many great composers flourished in that country, as to incline musical historians to assign to them the invention of counterpoint. Rabaisius, in the prologue to the 3d book of his Pantagruel, written in 1552, names 60 et autres joyeux musiciens, whom he had heard perform, the chief of whom were Netherlanders. Sandowal, in his life of the emperor Charles V. tells us that he was a great friend to the science of music, and after his abdication, would have the church-offices only accompanied by the organ, and sung by fourteen or fifteen singers, who were good musicians, and had been selected from the most expert performers of the court. He was himself so faithful, that he knew if any other singer intoxicated, and if any one made a mistake, he would cry out, such an one is wrong, and immediately mark the man. He was earnest too, that no secular should come in; and one evening, when a contango from Phæseta’s flood near the death with the fingers, and sung one verse with them eminently well, before he could sing another verse of the barbarians ran and told the prior to turn him out of the choir, or at least bid him hold his tongue.

The emperor understood music, felt and talked its curiosities; the singers often discovered him behind the door, as he sat in
Charles XII.

Charles VI., fifth son of the emperor Leopold, was born 1683, declared king of Spain by his father in 1700, and crowned emperor in 1711. Though we never heard, from good authority, that this prince was a poet, a musical composer, or performer, his retaining Apollo Zino and Meta-flario so many years in his service, chiefly to furnish dramas for music, and employing the bell composers of the time, of whatever country, to let them, and every great vocal performer of good morals to sing in them, prove him to have been an intelligent, munificent, and dignified patron of the musical art, in all its higher departments, fancied and professed. See Operæ et Oratorio.

Charles XII., king of Sweden, was born in 1682, and succeeded to the crown on the death of his father Charles XI. in 1697. According to the laws of the state, he was not at first crowned till he had attained the age of 18, but he speedily emanciped himself from the restrictions by which the will of the late king intended him to be bound. In very early life he had been trained to violent and martial exercises; and had in a thousand trials shown an impracticability of disposition, which no force could conquer, but which was always alive to sugggestions of military glory. He was invited to the study of Latin, because his contemporaries, the kings of Poland and Denmark, were reputed to be well versed in that language. From reading the history of Alexander, by Quintus Curtius, his passions were inflamed with a desire of imitating that renowned conqueror, and of becoming himself another Alexander in feats of martial prowess. With this view, he, in a short time after his father's death, gained over a party in the council to deprive the dowager regent of her authority, and to surrender to him the reins of government without any limitations. An easy way was fixed for his coronation; but he, unwilling to wait for the formal forms that long custom had rendered necessary on such solemn occasions, corruptly snatched the crown from the hands of the archbishop of Upps, and placed it on his own head. At first the young king seemed little ambitious of entering into the details of government; he was fond of amusements, and attached to those who were subfervient to his pleasures; but to others, however high their rank, and respectable for talents and wisdom, he exhibited a proud and fullf him.

The inexperience of Charles encouraged the kings of Poland, Denmark, and the czar of Russia, to enter into a confederacy against him, for the purpose of wresting from him a part of his dominions, which had been ceded to his father and grandfather. The youthful monarch was not desconcerted at the news of this powerful league; he seemed rather to rejoice that an opportunity would be afforded him of displaying his hitherto latent courage and abilities. When their deigns were certainly known, a Swedish council was convened, at which the king attended, for some time, the silent spectator of their proceedings; in the midst, however, of their discussions, respecting the measures to be pursued, he rose, and with a dignified air declared that he had determined never to engage in an unprofitable war, but having been drawn into one by the ambitious views of an enemy, he would never desist till he had humbled and ruined him. "It is," says he, "my resolution to go and attack the first who shall dare to marrow his designs; and when I have conquered him, I trust the others will be intimidated." This declaration, so unexpected on the part of his council, was followed by a total change of counsels. He gave up all his former amusements, and renounced those habits and indulgences that might seem to withdraw his attention from the more important business of his country. In his domestic concerns he enjoined, by factions not to be flighted, the strictest economy; he had since all the exterior splendour of dress; and prepared to exhibit in his own person the flutean style and the hero.

The Danes, commanded by the duke of Wartenburg, attended by the king in person, commenced the attack, by invading the duchy of Holstein, which belonged to the brother-in-law of Charles. The Swedish sovereign at first sent a body of troops to his foe, and some attempts were made at negotiation between the parties; but the Danish kings, instead of yielding to the ill voice of peace, excited the sovereignty of Poland to invade Livonia with a Saxen army, to draw off the attention of the Swedes from attacking the duke. The king was no sooner informed of this circumstance, than he drew his sword, determined not to yield an inch to the设计s, but hurried the invaders into a state of complete humiliation. He quitted his capital in May 1700, to revisit it no more; and, embarking his troops at Copenhagen, sailed for Denmark, and proceeded at once to Copenhagen. As soon as the vessel in which he was touched the ground, he leaped into the sea, sword in hand, followed by his guards and great officers; and advancing in the midst of a shower of muskelt-shot, he asked of the general who fled near him, what the whiffing was which he heard: "It is the noise of the bullets fired at you," replied the general. "This then," said the king, "shall henceforth be the musk in which I will delight." At the fame moment the general was wounded, and a lieutenant fell dead by his side. The Danish entrenchments were speedily forced, and Charles approached Copenhagen without further opposition. The king of Denmark had taken refuge with his army in Holstein. Under these circumstances, Charles resolved to finish the war at once, and prepared to besiege Copenhagen by land, while the fleet blockaded it by sea. The citizens, defeterd by their sovereign, and terrified at the preparations making by Charles, besought him not to destroy the town; and the king on horseback, at the head of his regiment of guards, received the deputies, who fell on their knees, and whose request he granted, on the consideration of their paying a certain sum of money. The king of Denmark, finding his capital gone, and himself without the means of extricating his country from the power of the Swedes, was glad to listen to almost any terms that might be offered. The victorious monarch assured him that he required nothing but justice to be done to the duke of Holstein, which must include a complete indemnification for all his losses, as well as a restoration of all his possessions. Thus, in a few weeks, did a youth only 18 years of age conclude a war on terms the most honourable to himself, and to the total discomfiture of the aggressor. In the mean time Riga, the capital of Livonia, had been so bravely defended, that king Anglius of Poland, in despair of taking it, raised the siege. At this period, the Swedes, after the example of their king, were feted with an enthusiastic
for military glory, that allowed no time for reflection. Taxes, which are the fines of war, were considered and readily granted as an honorary tribute; and every family was ambitious of furnishing a folder. The troops soon became habituated to the toils and privations connected with a military life, and were contented with the coarsest fare, and that even in small quantities.

No sooner had Charles concluded a treaty with the king of Denmark, than he turned his arms against the Russians who had undertaken the siege of Narva, with 80,000 men. The Swedish monarch, though at the head of 20,000 troops, advanced to the relief of the place with less than half that number. When he was within sight of the Russian vanguard, he was urged to select upon the great disparity of numbers; to which he replied, "Do you doubt whether the king of Sweden, with 8000 men, can beat the czar of Russia, who is at the head of 80,000 men?" The Russians at first found the shock with advantage; but, after an engagement of three hours, their entrenchments were forced with great slaughter, and Charles entered Narva in triumph. The Swedes captured many times their own number of prisoners, butchered all the enemy's artillery; but the king only retained the principal officers, whom he treated with great kindness. On this occasion the czar, who was absent from this battle, failed, "I knew that the Swedes would beat us; but, in time, they will teach us to become in our turns the conquerors."

A close alliance was now formed between the czar and the king of Poland; and the latter engaged to furnish a large succour of German. Charles having passed the winter at Narva, entered Lithuania, and appeared in the neighbourhood of Riga. He passed the Dvina, on the banks of which were posted the Poles and Saxons, whom the Swedish monarch attacked with great bravery, and after an obstinate and bloody engagement, gained a complete victory. He then advanced to the capital of Courland, from whence he passed into Lithuanian, and entered in triumph the town of Bergen, where the czar and the Polish sovereign had a few months before planned his destruction. The king of Sweden now determined to dethrone the sovereign of Poland; the intrigue formed in that country facilitated the enterprise; and Augustus finding little resource in the attachment of his subjects, attempted to negotiate, and employed for the purpose the courtiers of Königsberg, one of the most captivating women of the age; but all her seductions were useless against him who had renounced pleasure, and who, as a farther security to his virtue, constantly refused an interview. Aware also of the discontent of the Poles, he entered into a secret correspondence with the miscontents, and marched into Warfaw, which opened its gates to him at the first summons. He was soon waited upon by the leaders of the discontented party, to whom the Swedish monarch gave the most positive assurances that he would never give the Poles peace till they had elected a new king. Augustus, being informed of these proceedings, assembled all his troops, which were at least double the number of those under his opponent. The contesting kings met in a plain between Crecow and Warfaw: the attack was begun by the Swedes, and though the battle was fought with the greatest valour on the part of Augustus, yet victory declared itself for Charles. It cost him, however, the life of his friend and relation, the duke of Holstein, over whom he shed tears of unsatisfied affection. The king of Sweden marched to Crecow, which immediately surrendered; and Augustus fled into Saxony; in the pursuit of whom Charles unfortunately fell from his horse, and broke his thigh, an accident which detained him some weeks in a state of inactivity. A second victory obliged the Polish sovereign to provide for his security by retiring into Saxony. At length the Poles resolved to depose their sovereign, which was effectuated in February 1704; and Stanislaus Leszkinski was chosen his successor on the 12th of the following July, and by the interell of Charles he was crowned at Warfaw the 16th of October.

The czar sent 60,000 Russians to attack the Swedes in their conquests; they entered Poland in separate armies, and were joined by a great number of Saxons and Cullacks. Charles attacked and defeated the Russian troops, and nothing could impede the progress or equal the celerity of the victorious Swedes. If a river interposed, they swam over it; and the Swedish monarch, at the head of his cavalry, marched 30 leagues in 24 hours. Struck with consternation and dismay at these rapid movements, the Russians retired beyond the Donibehren, and left Augustus to his fate; who, was, in a short time after, compelled to renounce his pretensions to the crown of Poland, and to acknowledge Stanislaus lawful sovereign of the kingdom. He renounced, at the same time, his alliance with the czar, his most powerful friend, and gave up all the subjects of Charles who had withdrawn their allegiance, and especially Patkul, who at the time bore the character of ambassador to the czar. While the treaty was pending, Charles and Augustus had an interview; during which the dethroned sovereign received marks of studied civility from the conqueror, but he was nevertheless obliged to submit to his will, even to the writing a letter of congratulation to his rival and successor for Stanislaus. Such conduct on the part of the Swedish monarch cannot be justified on any principle, and the savage treatment of the virtuous Patkul, whom he caused to be broken on the wheel, with every circumstance of ignominy and severity, will for ever impair the character of emperors, worthy of general indignation.

Charles, now in the zenith of power and reputation, compelled the emperor of Germany to make some very humiliating concessions in favour of his Protestant subjects in Saxia, of whose interests he declared himself the protector. But his heart was principally occupied in measures of revenge against the czar, whom he determined to dethrone, as he had done Augustus; for this purpose he marched at the head of 45,000 men from Saxony. The czar was at Grodnau in Lithuania, whither Charles followed him, in the depth of winter, and entered the city at one gate as the czar went out of the opposite one. Determined on his object he purified the Russians and drove them across the Dnieper. In his way, with the advanced guard alone he defeated a large body of them entrenched behind a morass. The czar Peter began now to be fearfully alarmed for his empire, and caused proposals of peace to be made; to which the haughty king answered, "I will treat with the czar at Moscov." To this the czar replied with diffidence, but in the tone of a prediction, "My brother Charles is determined always to act the Alexander, but I flatter myself he will not find me a Darius." In the month of October, 1708, he had arrived within 100 leagues of the Russian capital, when impassable roads and a scarcity of provisions induced him suddenly to turn aside into the Ukraine. A rigorous winter now commenced, which to the Swedes, who were unprovided with proper clothing and necessaries, was so far infupportable that in one march two thousand of them perished with cold. Charles, however, flared with his soldiers all the hardships incident to the situation, and thus inspired them with principles of patience and fortitude fearlessly to be expected. In April, 1709, the whole army under the Swedish monarch was reduced to about 35,000, and in a few weeks the king penetrated to the town of Poltowa on the eastern frontier of the Ukraine. Here the czar had laid up
his magazine; it was therefore of the utmost importance to Charles to gain possession of the place. He accordingly invested it, but his operations were interrupted by the approach of the enemy at the head of 70,000 men. Charles always unwilling to yield to another what he could himself perform, went to reconnoitre the enemy, and was wounded by a musket shot, which broke the bone of his heel. No change in his conduct betrayed the wound to his attendants, and he continued six hours longer on horseback giving his orders with the greatest tranquillity. He was, at length, carried to his tent in executive agencies, and such was the nature of the wound that the surgeons were of opinion that the king must lose his leg. Another mode was, however, adopted, and the king, during a painful operation, kept his leg steady with both hands, looking on like an indifferent spectator. The czar having collected all his forces, was advancing, and to the Swedes a retreat seemed impossible. Without calling a council of war, Charles refused to wait for the enemy in his entrenchments, but ordered a general attack for the next day, and then went to bed. On the 8th of July, 1700, was fought the celebrated battle of Pultowa which decided the fate of the Swedish king: he caused himself to be carried in a litter, at the head of his infantry, and after the combat of cavalry, which was disastrous to his cause, he advanced against the Russian line, defended by a formidable artillery. One of the first volleys killed two horses of his litter, by another, two fresh horses were killed, and the litter dashed to pieces. He was then carried by his life-guards, and of the twenty-one were destroyed out of twenty-four. The Swedes began to give way on all sides; their principal officers were killed or made prisoners, nine thousand were left dead on the field of battle, and their camp at Pultowa was forced. Even in this extremity the king refused to fly. By the orders, however, of Poniatowski, he was placed on horseback, notwithstanding the pain occasioned by his wound, and about five hundred horse rallied around him, by whose exertions he was conveyed safe through ten Russian regiments, and brought to his baggage. As long as he reached the Dnieper, whither Lewenhaupt had gone with what remained of the army, amounting to about sixteen thousand men of various countries. There were chiefly pursed by the Russians, to whom they eventually surrendered, with the exception of the king, who was conveyed across the river in a small boat, a few of his officers who accompanied him, and about three hundred Swedish horses, with a number of Poles and Cossacks, who ventured to swim across. With these Charles escaped to Bender, a Turkish town in Moldavia. Here he was received with every mark of respect, and remained in a state of inaction, employing himself partly in military exercises, partly in reading, and playing chess. The Turks and neighbouring Grecians, hearing of his exploits, flocked in crowds to see him. His indefatigable resolution to abate from wine, and his great regularity in conforming to their customs, and in attending at their religious services, made the Mahometans consider him as a true believer, and inspired them with an ardent desire of marching under him to the conquest of Russia.

While thus at a vast distance from his kingdom, his enemies were busy in pulling down all the fabric of power which he had reared by his conquests. Augustus returned into Poland, and repopulated himself of his throne. The czar took Wiborg, and all Carelia, poured his troops into Finland and laid siege to Riga. The king of Prussia invaded Swedish Pomerania; and the king of Denmark made a descent on Schonen, and took the town of Helsingburg. The Swedes however, remained firm; and the disaffection of their king rather enhanced their loyalty and patriotism than diphirited them. The idea of dethroning the czar of Russia was still uppermost in the mind of Charles: he solicited the affiance of the Ottoman Porte, and Archmet III. the reigning sultan, sent him a present of a thousand ducats, while the grand vizier paid to his envoy, "I will take your king in one hand, and a sword in the other, and conduct him to Moscow at the head of 200,000 men." The czar's money, however, changed the sentiments of the Turkish ministers, who laid aside all thoughts of war. The military chieft which Peter had taken at Pultowa furnished him with new resources against the vanquished Charles, whose treasures were turned against himself. The hopes which the fallen king had entertained against his enemy being thus frustrated, he accused the grand vizier with corruption, who in his turn procured an order for him to leave the Turkish dominions, but with this he refused to comply. By some unexpected changes in the Ottoman court, his interest again prevailed, and liberal offers were made of finding him home with a large treasure. He retired from the windows upon the Turks, and with this he was not contented, but persevered in demanding money for his convey; and at length he refused to go at all, though he had received 12,000 purces from the grand vizier to pay his debts and defray his expenses. An order was given to compel him to depart, but Charles determined to retake the whole Ottoman power with 500 Swedes, and actually began fortifying his camp in the face of an army of 20,000 Turks and Tartars. No enticement against this mad project had any avail, he conceived his honour concurred, and no considerations of prudence or humanity had weight with him. The Janizaries unwilling, from a respect for his character, to proceed to extremities, sent a deputation of their fencers to propose terms of accommodation; but instead of listening to them, he threatened to cut off their beards, if they did not depart. "Let the iron-head then perish, if he will perish," they indignantly replied, and the attack immediately commenced. The little camp was soon forced, and the 500 Swedes were made prisoners. Charles fought refuge in his house, together with a few general officers and domesties. After he had fled from the windows upon the Turks, 200 of whom he killed, and bravely maintained himself under the edifice was in flames. In this extremity a constant had the presence of mind to observe that the charcary-house, which was at the distance of fifty yards, had a stone roof, and was proof against fire, and in which they might defend themselves to the last. "There is a true Swede," exclaimed the monarch, rushing out, like a madman, at the head of a few desperadoes. "From respect to the person of the king, the Turks at first recoiled, but recollecting their orders, they made him prisoner, and carried him, by main force, to the tent of the bashaw. That officer sent the Swedish monarch in a chariot to Demotica, a small town at the distance of ten leagues from Adrianople where the emperor then resided with his court. Here he remained a considerabe time, and left the Turks should not pay him the respect due to his royal person, or should be tempted to exact from him any thing beneath his dignity, be feigned illness, and confine himself to his bed for the space of ten months. It was generally believed throughout Europe that he was dead, and the future of Sweden no longer expecting his return, requited his sultan to undertake the regency. She found him not at all willing to comply, but finding it was their intention to put an end to the wars which were ravaging their country, she refused to act, and sent her brother word of their proceedings. He indignantly wrote to the senate, that if they pretended to interfere with public affairs, he would send one of his hosts to govern them.

Weary of the state of inactivity in which he lived, he obtained
tained permission to return to his own dominions. He took a formal leave of the Turkish court by a very splendid embassage. He set out on his return in October 1714, and after crossing the land and sea to Stralsund, he arrived in the night at Stralsund: he was admitted with difficulty, but as soon as he made himself known, the whole city was in a blaze of illumination for joy at his arrival. Charles found his affairs in a very distressing state; but without giving himself time to reflect upon this, he dispatched orders to his generals to renew the war with fresh vigour. Intoxicated by the presence of glory, all the young men crowded to the standard of their king, and fearlessly they were left for the labours of agriculture but the aged and infirm, who were little qualified to save Sweden from a famine, with which she was threatened. On opening the campaign, Charles was surrounded by so many enemies, that value could be of little service, without a greater force. The combined army of Prussians, Danes, and Saxons, invested Stralsund, in hopes that the king would there perish, be taken prisoner, or be compelled to make peace. The idea of Rügen being possessed by the enemy, it was of importance to dislodge them; Charles made a desperate attempt for that purpose, but was repulsed. He returned to Stralsund, pursued the siege in person, and performed, as usual, prodigies of valour. The fall of the city was, however, inevitable, and fearing lest he should come into the hands of the enemy, he embarked in a small vessel, and by favour of the night, passed safely by through the Danish fleet, and was landed in Sweden. The next day the town capitulated. He wintered at Carlscroon, and was permitted to visit his capital till he could appear there under more prosperous circumstances. He raised new troops, and in the following spring made an invasion into Norway with twenty thousand men. He pushed on as far as Christiansia, but for want of provisions, was obliged to return to Sweden. He now, through his minister, the baron de Gueritz, effected a peace with Russia, and began to devise means for the de-thronement of George I. of England, and the restoration of the Stuart family. Another object of his ambition was to re-establish Stanislas in Poland. To effect these purposes, an alliance was formed between Sweden and Russia, by the intervention of cardinal Alberoni, an Italian, a man of considerable activity and enterprise. The impetuosity of Charles, the alliance which he had formed, and the ambition of his minister, seemed ready to overturn the system of Europe. In the interval, however, of preparing for this vast enterprise, the Swedish monarch, as if willing to lose no time, invaded Norway, in order to wrest it from the king of Denmark, and thus indemnify himself for the provinces which he had ceded to the czar. He formed the siege of Frederickshald, in the month of December, regardless of the cold of a Norwegian winter, which not unfrequently froze the channels to death on their polts. To animate his troops, the Swedish sovereign exposed himself to all the rigour of the climate, and to the dangers of the siege; and, covered only with his cloak, usually slept in the open air. Anxious to finish the siege, he, on the evening of the 11th of December, visited, with his principal engineer, the trenches that had been formed. He was rolling with his elbows upon the parapet, attending to the workmen who were opening the ground by hand-light. Almost half his body was exposed to the battery of the enemy, which was firing grape shot at the very spot in which he died. He had been in that dangerous situation some time, with no one near him except the chief engineer, and an aide-de-camp, when he was seen to fall upon the parapet, heaving a great sigh. He was taken up dead, with his forehead beat in by a cannon shot, and his right hand grasping the hilt of his sword. Such was the end of this extraordinary character, though there have been historians who maintain that he was assassinated by the French aide-de-camp, Sigeur; but after investigating all the circumstances that attended the event, there is no good reason for believing other than that he received his wound from one of the Danish battalions.

Charles died at the age of 56 years and 6 months, after a reign of 21 years. His military talents may command admiration, but there was little in his character to awaken in the feelings any emotions of attachment or esteem. He possessed many eminent, but few, if any, amiable qualities. He was a mere soldier; in person he was well formed: in conversation he was awkward and bashful: he was just, but rarely exhibited any traits of kindness. Charles seems never to have known what it was to fear, and the bluntness of his feelings rendered him incapable of hardships and dangers for himself and others. His wonderful intrepidity and perseverance in whatever he undertook; his fortitude under misfortune; his contempt of danger, and his passion for glory, will for ever rank him foremost among military heroes, but no king was ever more lavish of human blood, or ever less consulted the real interests and happiness of his people. Univer. Hist. Voltaire Hist. de Charles XII. Du Frenays. Coxes Travels, vol. 4.

Of the other eleven Charleses of Sweden, there is little to be said to entitle them to separate articles in this work. Charles Canuto, the eighth of that name, from grand marshal in the reign of Eric, made himself sovereign in the year 1454. In the exercise of his office he was twice compelled to renounce all pretensions to the crown. He retired to Finland, where his credit was so low, that the archbishop refused him a small loan. His retreat did not give peace to his distracted country, he was accordingly recalled, and put in possession of all the honours of sovereignty; and in 1470, he closed an eventful life, resigning his kingdom to his nephew Sture. The historians of his country have praised for his regard to justice, as well as for political talents: he is said also to have been versed in philosophical and mathematical knowledge.—Charles X. was born in 1622, and very early engaged in military service. His rank and high reputation as a military commander caused him, in 1648, to be appointed general in chief of the Swedish forces. In 1655, he succeeded to the crown. He immediately revived the martial spirit of the country, and during the six years of his reign was engaged continually in war. He died in 1660, of a fever, leaving behind him a considerable reputation for private virtues, which were wretched compensations for the disasters which he inflicted on his country, by an inordinate ambition, and a fondness for martial glory.—His son, Charles XI. though a minor, at the death of his father, concluded an advantageous peace with his neighbours. In a few years he made himself absolute, after which one of his first measures was to raise the nominal value of the coin, in order to liquidate the public debts. Such a step is always unjust, and in general, very injurious to the state that adopts it. He forbade the exercise of any religion except the Lutheran, and performed many other acts of despotic authority. His subjects remonstrated against his assumed arbitrary power by means of deputes; these he caused to be prosecuted and convicted of high treason, among them was Petkull, who pleaded the cause of his country with energy and manly eloquence, for which a sentence of capital punishment was passed against him, which he avoided by flight. The character of this monarch was stern, inflexible, and unfeeling; in reply to his queen, who was interfering in behalf of some of his subjects grievously oppressed, he said, "Madam, we have taken you to bring us children, not to give
Charles Emmanuel III. is, however, by much the most celebrated of the dukes of Savoy. He succeeded to the throne, by the voluntary resignation of his father, in 1730, with the titles of duke of Savoy and king of Sardinia, his predecessor having, at a general peace in 1713, been given Sicily, with the title of king; this, in four years after, he exchanged with the emperor for Sardinia, which it was agreed he should enjoy with the regal title. This prince, in 1731, united with France and Spain in a war against Austria; and in 1742 he allied himself with the queen of Hungary. During the several wars in which he was engaged, he experienced many reverses of fortune, but was for the most part successful. When he had obtained a peace, he devoted himself to the establishment of such regulations as might be beneficial to his subjects; he was particularly anxious to pay the debts which had been incurred by the war. When he had accomplished that favourite object of his heart, he exclaimed, "This day is the happiest of my life; I have just now suppressed the last of the extraordinary taxes." "How few," says a contemporary writer, "of the occupiers of thrones, have been capable of feeling such a pkasure?" His moderation and attachment to his country kept him free from the war of 1756, and in 1763 he enjoyed the felicity of acting as mediator between the contending powers. He zealously promoted every thing that could render his kingdom prosperous. He corrected the abuses of law by a new code, which was afterwards published at Paris, in 2 vols. 1760. By his example, as well as by edicts, he sanctioned the principles of economy and good morals. He died on the 22d of February, 1777, leaving behind him the character of a wise and good king. Du Frenay. 

Charles, Cape, in Geography, a cape on the east coast of Labrador, N. lat. 52° 27'; W. long. 55° 25'.—Also, a cape of America on the coast of Virginia, at the east side of the mouth of the Chesapeake. N. lat. 37° 12'. W. long. 75° 58'.

Charles River, a river of America, in the state of Massachusetts, anciently called Quinnibogen, the principal branch of which rises from a pond bordering on Hopkinton. It passes through Holliston and Bellingham, divides Medway from Medfield, Westham, and Franklin, and proceeding to Dedham, forms, by a curious bend, a peninsula of 950 acres of land. A stream, called "Mother Brook," runs out of this river in this town, and falls into Neponset river, forming a natural canal, uniting the two rivers, and affording a number of excellent mill-falls. From Dedham the course of the river is northerly, dividing Newton from Needham, Welton, and Waltham, passing over romantic falls; it then bends to the N.E. and E. through Watertown and Cambridge, and falling into Bolton harbour, unite with the waters of Mystic river at the point of the peninsula of Charlestown. It is navigable for boats 7 miles to Watertown. The most remarkable bridges on this river are seven which connect Bolton with Charlestown and Cambridge. On this river are seven paper mills, besides other mills.

Charles County lies on the western shore of Maryland, between Potomack and Patuxent rivers. Its chief town is Port Tobacco, on a river of that name. Its extreme length is 28 miles, and breadth 6 and 1/2, and it contains 20,016 inhabitants, including 10,385 slaves. The country has few hills, is generally low and sandy, and produces tobacco, Indian corn, sweet potatoes, &c.

Charles, a cape on the S.W. part of the coast entering into Hudson Bay. N. lat. 62° 42'. W. long. 74° 15'.

Charles
CHARLESTON, in Geography, a post town of Cecil county, in the state of Maryland, near the head of Chesapeake bay; 6 miles E.N.E. from the mouth of Susquehanna river; 19 W.S.W. from Elkton, and 59 S.W. by W. from Philadelphia. N. lat. 39° 34'. In this place there are about twenty houses, chiefly inhabited by people who are employed in the herring fishery. Beyond it the country is much diversified with hill and dale; and the soil being of an indifferent quality, the lands are so little cleared, that in many parts the road winds through uninterupted woods for four or five miles together. The scenery in the neighbourhood is highly interesting. Near Charleston there is a small foundery for cannon, which are bored by water, and of which two 24 pounders are manufactured every week. The iron is extremely tough, so that few of the guns built on being proved.

CHARLESTON, a district in the lower country of South Carolina, lying between Santee and Combahee rivers, and divided into 14 parishes. To the late legislature it lends 48 representatives and 13 senators, and to congre on one member. It contains 66,996 inhabitants, of whom 16,532 are free; and pays taxes amounting to $14,734. ed. Sterling.

CHARLESTON, the most considerable town, though not the present seat of government, in the state of South Carolina, situate in a district of the same name, on a tongue of land formed by the confluent streams of Ashley and Cooper, two large and navigable rivers, though not of great extent. By their union below the town they form a spacious and convenient harbour, which communicates with the ocean at a distance of about 7 miles below Sullivan's island. The tide in these rivers which commonly rives about 6½ feet, has the singular property of uniformly rising 10 or 12 inches more in the night.

The situation of the town is flat and low, and the water brackish; but the agitation occasioned by the tides, and the refreshing sea breezes contribute to render it more salubrious than any part of the low country in the southern states. The freets, though too narrow for a place so large, and so warm a climate, are regularly formed; running from E. to W. and from river to river, they open in beautiful prospects, and they are kept clean and healthy by means of subterraneous drains. The freets are interfetted at right angles by others, which divide the town into a number of squares. The modern houses are chiefly confructed with brick and have tiled roofs; and many of the buildings are neatly, elegant, and airy. The public edifices are an exchange, a flate-houfe, an armourey, a poor house, and an orphan's houfe. Besides several respectable academies, here is a college adapted to the accommodation of a number of students. The two banks of Charleston are a branch of the national bank, and the South Carolina bank, established in 1792. The places of public worship are, two episcopal churches, two for Independents, one for Scotch Presbyterians, one for Baptists, one for German Lutherans, two for Methodists, one for French Protestants, one for Quakers, a Roman Catholic chapel, and a Jewish synagoge. The adjacent country abounds with poultry and wild ducks; fish are rare in the market; and with regard to the beef, mutton, and veal, they are not generally celebrated of the bell kind. Charleston was incorporated in 1753, and divided into 13 wards, in which are as many wardens, chosen by the inhabitants, one of whom is elected intendent of the city, by whom and the wardens is formed the city council, which is empowered to make and enforce bye-laws for the regulation of the police. The number of inhabitants was estimated in 1787, at 15,000, including 3400 slaves, and occupying 1600 houses.
houfs; but in 1791, the inhabitants amounted to 16,750, of whom 7684 were fliues. This town has often suffered by fire, and particularly in June 1796. The value of exports from the port of Charleston in the year ending Nov. 1797, amounted to $5,527,341. 56, Sterling, and the number of vessels cleared in that year from the custom-house was 587, of which 753 were American, and the rest belonging to Great Britain, Ireland, Spain, France, and the United Netherlands. In 1794, the value of exports amounted to $3,846,392 dollars. The light-house of this town lies in N. lat. 32° 45', W. long. 79°, 496; 496 of the inhabitants, being by the late census of 1796, electors.—Alfo, a township of Mason county in Kentucky, fittuated on the Ohio at the mouth of Lauren's creek; 6 miles N. of Washington, and 60 N.E. of Lexington. N. lat. 38° 45'.—Alfo, a township in Chester county, Pennsylvania.—Alfo, a poft town in the county of Chehire, and flate of New Hampshire, on the E. side of Connecticut river, 30 miles S. of Dartmouth college, 116 N. of W. of Bolton, and 431 N.E. of Philadelphia; incorporated in 1753, and containing about 100 houfes, a congregational church, a court-house, and an academy. Through this town the road paffes from Bolton to Quebec. N. lat. 43° 10'; W. long. 72° 19'.—Alfo, the principal town in Middlesex county, Massachusetts, called by the aboriginal inhabitants "Mifkwaun," connected with Bolton by Charles river bridge. This town is built on a peninsula, formed by Mylne river on the E. and a bay from Charles river on the W. It is advantageously fittuated for health, navigation, trade, and almofl all kinds of manufactures. The adjoining hills, celebrated in the history of the American revolution, afford delightful prospects of Bolton and its variegated harbour of Cambridge and its colleges, and of an extensive tract of highly cultivated country. It contains within the Neck or parifh about 250 houfes, and 2000 inhabitants. The principal public buildings are a congregational church and an alms-house. Its chief manufactures are thofe of pot and pearl-ash, ship-building, rum, leather, fiver, tin, brafs, and pewter. Its houfes, population, trade, and navigation, have greatly augmented within a few years past. This town is a port of entry in conjunction with Bolton. At the head of the Neck is a bridge over Mylne river, connecting Charlestown with Malden.—Alfo, a village in Berkeley county, Virginia, fittuate on the great road leading from Philadelphia to Winchester; 20 miles from Winchester.—Alfo, a township in Washington county, Rhode ifland, having the Atlantic to the S. and feparated from Rich- mond towards the N. by Charles river, a water of Pawca-tuck, 19 miles W. of Newport; containing 2022 inha- bitants, including 12 slaves.—Alfo, a town on the ifland of Nevis, one of the Caribbees, belonging to Great Britain. It has large houfes and well-furnished fhips, and is defended by Charles-fort. Near the town is a high mountain, the altitude of which, taken from a quadrant in Charlestown bay, is falt to be 11 mile perpendicular, and from the bay to the top 4 miles. N. lat 16° 54'; W. long. 66° 14'.—Alfo, one of the principal towns in the ifland of Barbadoes called Olinon.

CHARLETON, in Biography. See CHARLTON.

CHARLETON, in Geography. See CHARLETON.

CHARLETON, in Biography. See CHARLETON.

CHARLETON, in Geography, an ifland situated at the bottom of James's Bay, in New South Wales, on the coast of Labrador, and exhibiting a beautiful pro- fect of trees and branches, which are spread over the ifland.

The air at the bottom of the bay, though in N. lat. 51°, is excessively cold for nine months of the year, and very hot for the other three, except on the blowing of a N.W. wind. The foil, on both the eafit and west fides, bears all kinds of grain; and about Ropert's Bay are fome fruits, as goose-berries, frawberries, and dewberries. N. lat. 52° 30'. W. lon. 82°.—Alfo, a township in Saratoga county, New York. By the late census of 1795, 268 of its inhabitants were eelctors.—Alfo, a township in Worcester county, Massachusetts, incorporated in 1754, and till that time forming the wester part of Oxford; 60 miles S.W. of Bolton, 15 S. W. of Worcester; containing 1966 inhabitants.

CHARLEVALE, Charles Faucon de Vey, lord of, in Biography, a polite scholar and poet, was born in 1613, and, notwithstanding the feeble-ness of a peculiarly delicate constitution, lived to the advanced age of 80 years. Of his conversation and writings, it is faid, they were charac- terized by sweetness and refinement; and Scarron faid of him, "that the Mufes fed him only with blanc-mange and chick- en-water." He was not only personally attached to polite literature, but a liberal patron of literary merit. Upon be- ing informed that M. and Mef. Dacier were returning from Paris to the country, in order to avoid expence, he prefied them to accept of 10,000 livres in gold. His death was occasioned by a fever, which his phyficians thought that they had fubdued by frequent bleedings. On faying to one an- other, in the preffence of Thevenot, the king's librarian, "the fever is going at lait," he interpoled, and obferved, "O no, it is the patient that is going," and he died in three hours. A small collection of his poems, conflituting of flanzas, epigrams, fongs, and fonnets, which are easy and elegant, but feeble in thought and iyle, appeared in 1759. Nouv. Dict. Hiét.

CHARLEVALE, in Geography, a town of France, in the department of the Eure, and district of Les Andelys; 10 miles S.E. of Rouen.

CHARLEVILLE, a market and poft town of the county of Cork, Ireland, fittuated on the border of the county of Limerick. It is in many repects a flourishing town, and its trade is daily increasing. It was formerly called Rath- gogan; but the first Lord Orrery, better known by his former title of Broghill, being the politoff of it, changed its name to Charleville, in honour of the king; made it the seat of his government, as president of Munster, and had it erected into a borough, fo that it fent two members to par- liament, till the union deprived it of this privilege. Lord Orrery also established a free school there; and one of his successors gave ground for a charter-school, for the recep- tion of 53 children. The country round about is very fer- tile; the foil is a light brown earth lying deep on a lime- stone bottom. Mr. Young speaks of 30 looms for making ferge being in this town. It is 112 miles S.W. from Dub- lin, and 29 N. from Cork. Smith.

CHARLEVILLE, a town of France, in the department of the Ardennes, and chief place of a canton in the diufet of Mezieres, from which it is feparated by the Meul. Before the revolution, it belonged to the prince of Coët, being exempt from the general taxes of the kingdom. The place contains 7400, and the canton 12,567 inhabitants: the territory includes 1371/2 kilometers and 12 communes.

CHARLEVOIX, Peter Francis-Xavier de, in Biography, a writer of voyages and travels, was born at St. Quentin, in 1664; and having entered the faculat of Jefuits, taught the languages and philofophy with reputation. After returning from his foreign missions, he was engaged for 24 years in the conduct of the "Journal de Trevoux," and was much elcemed by his brethren of the society for the pu-
CHARLIER, Jean, an eminent ecclesiastic, born in 1303, at Gerion, in France, from whence he takes the name Gerion, by which he is more commonly known than by that of Charlier. He received his education at Paris; after which, he studied divinity ten years under Peter d'Alilly and Giles Dufchamps, and received the degree of doctor in 1392. Three years after, he was appointed to the chancellorship and canonry of the church at Paris. At this period, the violent disputes between the dukes of Orleans and Burgundy, and the schism in the papal see, rendered Charlier's office very difficult to be executed. He went as a deputy, with others, in 1446, to Gregory and Benedict, the competitors for the papal see, with a view of persuading them to restore union to the church; and was afterwards highly instrumental in the deposition of both, and in the election of Alexander V. On the abdication of the duke of Orleans, by the order of the duke of Burgundy, in 1408, he inveighed publicly and loudly against the foul crime, by which he incurred the greatest danger from the triumphant party. He attacked the propositions written by John Petit in defence of the action committed by the duke of Burgundy; procured the cenures of them by the faculty of theology at Paris, and supported their condemnation at the council of Constance, where he appeared in the capacity of ambassador from the king of France, and deputy from the university of Paris. At that council, he spoke on all matters of doctrine and discipline with so much eloquence, and conducted the cause in which he had embarked so ably, that he obtained the highly esteemed appellation from cardinal Zabarella, and the titles of evangelical and most erudite doctor were conferred upon him. At the instance of Gerion alone, the council of Constance decreed, that Petit's principles wereetical, feitious, authorising treason and perjury; and they farther decreed, that whoever maintained it should be considered as obdurate heretics. On every occasion he displayed the purest and most enlightened zeal for the reformation of manners, and his own example proved the sincerity of the motives by which his conduct was actuated. His noble indignation against the infamous principles avowed and defended by Petit, drew upon him the malice of the Burgundian faction, so that he dared not, upon the breaking up of the council, return immediately to France, but remained in Germany in the disguise of a pilgrim. At length he undertook the humble occupation of a schoolmaster at Lyons, in which he continued some years, and died in 1429, aged 66. Gerion was author of many works, which were collected in 1769, and published at Antwerp, in five volumes folio. To him has sometimes been ascribed the celebrated tractate "On the Initiation of Christ," but Du Fresnoy, and other French historians, have determined that this was not written by Gerion. To the Antwerp edition of his works is prefixed a piece entitled "Gerfonna," containing a multitude of curious biographical anecdotes of the author, Peter d'Alilly, and other contemporary divines. According to the testimony of Du Pin, the church never had an author of greater reputation, more profound knowledge, and more solid piety, than Gerion. His style, though harsh and sometimes careless, is methodical, and his arguments are generally conclusive. "He defends the truth," says the ecclesiastical historian, "upon all occasions, with an admirable and undaunted courage. He suffered a cruel persecution for a righteous cause, and died in exile for maintaining it with vigour." Du Fresnoy, Du Pin. - Priéville's Eccl. Hist.

CHARLIET, in Geography, a town in France, in the department of the Loire, and chief place of a canton, in the district of Roanne; 12 miles N.W. of Lyons, and 3 N. of Roanne. The place contains 2829, and the canton 10361 inhabitants: the territory includes 1475 square kilometres and 15 communes.

CHARLOCK, in Botany. See Sinapis arvensis, and Raphanus raphanistrum.

Charlock, in Gardening, (Sinapis nigra), is a weed too generally known to the farmer to require a minute description. It is frequently called charlock, catlock, corlock, and white rape. Almost the whole plant is covered with pellucid hairs.

There are, according to some, two sorts of charlock, one bearing white and the other yellow flowers; but they are said to be only a variety of the same plant.

And it is observed by the author of the Staffordshire agricultural report, that the "yellow-flowered weed termed charlock by the farmer, is not one individual, but three separate and distinct plants, each species more or less abounding in different places, and which are as follows: 1. The rough-leaved charlock, or wild mustard, (Sinapis nigra); 2. The smooth-leaved or wild rape, (brassica napus); and 3. The rough-leaved wild radish with white flowers, (Raphanus raphanistrum). These plants are all annuals, produced entirely from seeds, which they bear in great abundance, and which seeds will lie in a clod as safe as in a granary, and vegetate at the end of twenty years, when ploughed up and exposed to moisture. These intruders are only to be extirpated by ploughing them under when the field is fallow, or by weeding them out of the crop before their feed shall have been ripened; for if suffered to perfect and feed their seed, each single plant will produce an hundred; the farmer should therefore carefully prevent this by weeding or hoeing them out in time. The increase of the above and some of our field weeds, when they are permitted to feed their seed, is, he says, beyond all calculation."

The young plants of charlock, are said so nearly to resemble those of turnips that they are not easily distinguished but by the taste; the charlock being hot and bitter, and the turnip mild. Farmers should therefore be very careful in weeding their turnips left they mistake them for charlock. Mr. Lile has suggested that cold wet lands are always more subject to charlock than white or chalky lands; and that by an experiment which he made in sowing charlock seed and turnip-seed at the same time, he found that the turnips appeared in three days, but the charlock not in less than ten.

It has been remarked that sheep are fond of eating these weeds; and that of course advantage may be derived from feeding them down in the spring by sheeps. See WEEDS.

CHARLOTIA, in Geography, a town on the E. shore of St. John's river in East Florida, seated on a high bluff, 15 or 20 feet in perpendicular ascent from the river, and half a mile or more in length. The aborigines of America feem, from the remains of great tumuli and conical mounts of earth and shells, and other traces of a settlement, to have
had a large town in this place. The river for an interval of about 12 miles above the town, is divided into many channels by a number of islands.

CHARLOTTE, a considerable township on the east side of Lake Champlain, and the south-westernmost in the county of Chittenden and state of Vermont. It is separated on the north from Burlington by Shelburne, and contains 6,595 inhabitants.

CHARLOTTES, a county of Virginia, lying S.W. of Richmond on the head waters of Staunton river, and containing 10,978 inhabitants, of whom 4,916 are slaves. The court-house is distant 21 miles S.S.W. from Prince Edward court-house, and 379 in the same direction from Philadelphia.

CHARLOTTES Bay, a bay on the south-east of Nova Scotia. N. lat. 44° 35', W. long. 58° 50'.

CHARLOTTES Cape, a cape at the south extremity of New Georgia. S. lat 54° 32', W. long. 36° 11'.

CHARLOTTES Fort, a fort of America, in the late state of South Carolina, near the town of Petersburg in the late state of Georgia.

CHARLOTTES, Queen, isle, a group of islands on the N.W. coast of America, bounded towards the south by Cape St. James, and to the north by Cloak Bay, North Island, and Dixon's Straits; and situate between N. lat. 51° 49' and 54° 12', and W. long. 134° 50' and 135°. The inhabitants of these islands confide, according to Captain Dixon's account of several tribes of Indians, who are in their disposition and manners docile and savage, so that they see frequently in a state of hostility with one another, and fear on the bodies of their enemies that are slain in battle, whilst they prefer the heads as trophies of victory. However, they carry on by means of their canoes, a very considerable trade in furs of an excellent quality. They appeared to be much addicted to plunder, and with this view they not only permitted, but urged their females to go on board the English ships whenever invited, availing themselves of the opportunities which these visits afforded them of stealing, with singular dexterity, whatever fell in their way. Although every tribe in these islands is governed by its respective chief, they are nevertheless divided into families, each of which appears to have regulations, and a kind of subordinate government of its own.

The chief usually trades for the whole tribe, but sometimes each separate family, disapproving his method of barter, has claimed a right to dispose of its own furs, and the chief has always complied, though it is uncertain whether he receives in consideration of his compliance any emolument. The number of sea-otter skins collected by captain Dixon at these islands was no less than 18,511, many of which were very fine; other furs are found in less variety here than in many other parts of the sea-coast: racoons, pine-martins, and seals, being the main kinds that were seen. Portlock and Dixon's Voyage, &c. p. 328, &c. Svo. Vancouver's Voyage, vol. 1. p. 369, &c. It has been diffused to whom we are indebted for the first discovery of Queen Charlotte's Islands: captain Meares, (Voyages, p. 53,) says, that captains Lowrie and Guyle, who commanded two vessels that were fitted out at Bombay in 1780, and which arrived at Nootka Sound on the 29th of June, where they remained till the 27th of July, in which day discovered that land to which Mr. Dixon gave the name of Queen Charlotte's Islands; which is said to have done merely from a jocular opinion, as they were never proved to be such, till captain Douglas, in the Iphigenia, sailed through the channel which separates them from what was then supposed to be the American continent. M. Fleureuf, in his introduction to Marchand's voyage, does not presume to dispute with the English this last discovery; for he says that La Peroufe, who had rightly presumed that these lands must be an island, had not an opportunity of satisfying himself in this particular; but he contends with captain Meares the priority of the discovery attributed to captains Lowrie and Guyle. It is not known, he says, at what precise period captain Meares discovered Queen Charlotte's Islands, nor how the discovery was made, nor what portion of these lands they examined; but we certainly know, that La Peroufe discovered them on the 10th of August of the same year; that he followed and examined the coasts of them for 10 days, and ranged along them from north to south, over an extent of 50 leagues. After all, on whatever side the priority lies, the two discoveries must be nearly contemporary; and it is alleged, that on both sides the honour is equal.

Captain Dixon, continuing his route in 1787, from the space included between the parallels of 55° and 57° to the S.S.E. discovered on the 18th of July, land in 54° 24', which was the north part of those islands that are now laid down in the English charts under the name of Queen Charlotte's Islands, and of which La Peroufe had been the first discoverer the preceding year. Dixon ranged along the Archipelago, as La Peroufe had done, by the western shore, to its southern extremity, doubled it to the northward, and finally closed along the coast, as far as 51° 10'. He afterwards ran down the east coast of these islands, as he had ascended it, without pursuing his researches towards the continent. Captain Duncan in 1788 anchored and traded in several harbours of the east coast of Queen Charlotte's Islands, examined and visited them, from the latitude of 52° to 54°. Captain Douglas, who made a voyage to the N.W. coast of America in 1785, in company with captain Meares, running down the coast, visited some ports which had not been known, and one among others, towards the latitude of 55°, to which he gave the name of Port Mores. That harbour is situated on the northern side of the limits, which to the northward separates from the continent the lands discovered in 1786 by La Peroufe, and called Queen Charlotte's Islands. It appears that captain Douglas is the first known navigator who passed through this latitude, and thus penetrated by the north into the gulf or channel which lies situated between the islands to the west and the archipelago of San Lazaro. Douglas ranged along this coast throughout its whole length, without ever casting to sea land on both sides, the arm of the sea that separates the islands from the continent not being more than 20 leagues wide; and he ran down as far as Nootka Sound, where he rejoined captain Meares. The two ships of these commanders carried to Canton the furs which they had procured on the different parts of the coast that they had visited. See Marchand's voyage by Fleureuf, vol. 1. Intro.

CHARLOTTES, Queen, Sound, a sound of New Z. land, visited by captain Cook in 1774; the situation of which was minutely ascertained by the observations of M. Waré, to be in N. lat. 41° 5' 56° 5'. E. long. 174° 25' 25°. Alto, a land on the western coast of N. America, in N. lat. about 51°, and E. long. 128°.

CHARLOTTES, a town of the island of Dominica, on the west coast, formerly called Rosian. N. lat. 15° 37', W. long. 69° 47'.

CHARLOTTES Town, a town of the island of St. John, in the gulf of St. Lawrence, situate about the center of the island, towards the south coast. N. lat. 46° 15'. W. long. 62° 50'.
CHARLOTTEBURG, a town of America, in the county of Brunswick and state of North Carolina, seated on an island, and having an inlet and found of the same name, a little to the south of it. N. lat. 35° 18'. W. long. 81°.

CHARLOTTENBERG, a town of Germany, in the circle of Welphalia, and county of Holzapfel, built by the French refugees; 4 miles S.W. of Holzapfel.

CHARLOTTENBURG. See Berlin.

CHARLOTTESB KG, a town of America, in the state of Jersey, and county of Bergen; 12 miles N. of Morris town.

CHARLOTTENLUND, a town of Denmark, in the island of Zealand; 4 miles N. of Copenhagen.

CHARLOTTESVILLE, or CHARLTON, a poll town of America in Salisbury district and state of North Carolina, and the chief town of Mecklenburg county, seated on Steel creek, which joins the Sagaw, and falls into Catawba river, about 10 miles N. of the South Carolina boundary, and 44 S. of Salisbury, containing about 40 houses, a court-house, and gaol.

CHARLOTTESVILLE, a town of America, the capital of Albemarle county in the state of Virginia, lying on the poll road from Richmond to Danville in Kentucky; and containing about 45 houses, a court-house, and a gaol; 86 miles W.N.W. of Richmond, and 40 S.E. by E. of Staunton.

CHARLTON, WALTER, M. D. in Biography. Of this learned and ingenious physician, and of his numerous writings, Anthony Wood, who was cotemporary with him, has given a long account, from which the following is principally taken. He was born at Shepton Mallet, in Somersetshire, on the second of February 1619, and received the rudiments of his learning under his father, who was rector of the place. In 1645, he was admitted a commoner in Magdalen Hall, Oxford, and put under the tuition of Mr. John Wilkins, afterwards bishop of Cheltenham, under whom he made considerable progress in logic and in philosophy. His disposition leading him to the study of medicine, he soon became conspicuous for his proficiency in that art, and in 1642 he was created doctor in medicine by the favour of the king, Charls the first, and appointed his physician in ordinary. With this title he came to London, was admitted a fellow of the college of physicians, and continued to enjoy a considerable share of credit during the troublesome times that followed. On the restoration of king Charles the second, he was made one of his physicians in ordinary, and a member of the newly formed royal society, about which time his first publication appeared, "Spiritus Gorgonius exatus, feu de caufa, signis, et fanfaneum Litthaleset." Svo. Luz. Bat. 1650, in which he adopted the opinion of Van Helmont, as to the cause of the generation of urinary calculus, and recommends the feed of the wild carrot as a powerful lithotriptic. "Excercitationes pathologique, in quibus morborum pene omnium natura et caufa ex novis anatomicae inventis inquiruntur." London, 1661, 4to. In this, as well as in the rest of his medical labours, there is little new; but they tended to spread the knowledge of the many improvements in anatomy and phialy, which had been made by the Bartholomew, by Harvey, Giffon &c. "Natural History of Nutrition, Life, and voluntary Motion, containing all the new discoveries of Anatomists." 4to. London, 1658. But his writings were not confined to medical subjects. He wrote "The Darkness of Atheism discovered by the Light of Nature," "The Ephebian and Cimmerian Matrons; two remarkable examples of the power of love and wit." In 1660, to shew his loyalty, which had perhaps been suspected, from his living about the court of Oliver Cromwell, he circulated a flisc, containing a character of his most fancied majesty, Charles the Second; and in 1663 he published "Chorou Gigantum; or the most famous Antiquity of Great Britain, vulgarly called Stone Henge, standing on Salisbury Plain, referred to the Damis." 4to. Luige Jones had supposed it was a Roman temple. Charlton, instructed, Wood says, by Olaus Wormius, the Danish antiquary, inferred, that the flones were placed there by the Danes, but they were supposed, with more propriety, to be Druidical remains. We have also by him an Harveian oration, printed in 1682: Lectures on the structure of the heart, the course of its motion, &c. read before the college on the 10th, 20th, and 21st, days of March, 1682, with numerous other pieces, for titles of which see Wood's Athenae Oxoni., Haller's Bib. General Biography, &c. In 1689 he was made president of the College of Physicians, which office he held two years. It is probable, however, that he never had any very considerable share of practice, as we find him soon after this retired to the island of Jersey, "where he now is, Ant. Wood says, viz. 1695, a learned and unhappy man, aged, and grave, yet too much given to romance." Wood gives a list of more than twenty publications by Charlton, and he is known to have intended many more, the manuscripts being now in the British museum. The greater part of his publications and writings were alien to the practice of medicine, and most therefore have tended rather to obfure, than forward his acquisition of fortune. He died in the year 1707, in the 88th year of his age.

CHARLTON, in Geography, an island in the southern part of Hudson's bay. N. lat. 52° 8'. W. long. 83°.

CHARLY, a town of France, in the department of the Aisne, and district of Chateau-Thierry, 2 leagues S.W. of it.

CHARM, derived from the Latin carmen, verfe, a magick power, or spell, by which with the affiliation of the devil, forcers and witches are supposed to do wondrous things far surpassing the powers of nature. See Magic.

Phylactery, figures, &c. are, all, kinds of charms.

CHARMANDA, in Ancient Geography, a nation of Asia, placed by Xenophon on the other side the Euphrates.

CHARMES, in Geography, a town of France, in the department of the Valois, and chief place of a canton, in the district of Mirecourt, 23 leagues N.E. of it. The place contains 2686, and the canton 10774 inhabitants; the territory includes 217 ½ kilometres and 27 communes.

CHARMIDAS, in Biography, the companion of Philo of Larissa (see Philo), and celebrated for the compass and facility of his memory, and for his moral wisdom. Cie. Tus. Quod. l. i. Pint. H. N. i. c. 16. Stobux, form. 212.

CHARMIS, a native of Marcellae, but for his great skill in the practice of medicine invited to Rome, where he flourished in the time of the emperor Nero. Having succeeded in restoring some of the principal men there to health, by means of the cold bath, he soon found himself at the head of the profession, and was thence enabled to acquire a large property. He is said to have charged one of his patients 200,000 livres, or 6000 livers, for a single cure. He decried, many says, the practice of his brethren; though he might have recollected, that the cold bath, by the use of which he acquired his reputation, had been recommended by Ant. Musa. He invented
Charon, in *Ancient Geography*, a small town on the island of Sardinia, founded, according to Steph. Byz., by the Carthaginians.

CHARMOGOL, in *Geography*, a town of Perßa, in the province of Chorasan: 200 miles N. of Erat.

CHARMONY, a town of France, in the department of the Meuse: 14 miles N.E. of Vitry.

CHARMOSYNA, in *Mythology*, a festival at Athens; and, according to Pluarch, in Egypt.

CHARMOTAS, in *Ancient Geography*, a sea-port of the Arabian gulf, the entrance of which, according to Strabo, was fair and dangerous.

CHARMOUTH, in *Geography*, a village of England, on the coast of the county of Dorset, at the mouth of a small river called Char, where the Danes made a defiant, and ravaged the country, in the years 853 and 840; 3 miles E. of Lyme.

CHARMUT, in *Ichthyology*. The Linnaean Silurus anguillaris, which inhabits the Nile, and other rivers of Africa, is known among the Egyptians by the name of Charmut. See Silurus anguillarisl

CHARMUTH, *Silurus charmatl nubiticus* of Hasselquint is the Linnaean Silurus anguillaris, which is.

CHARMUTHA, in *Ancient Geography*, a peninsula of the Arabian gulf, on the coast of Arabia Felix, according to Diodorus Siculus.

CHARNEL, a portico, or gallery, anciently near the church-yard; over which were disposed the bones of the dead, when the flood was confumed.

The charnels, or charnel-houses, are now usually contiguous to the church.

CHARNAY, in *Geography*, a town of France, in the department of the Indre and Loire, and district of Loches; 10 miles S. of it.

CHARNE, in the *Materia Medica*, a name given by some of the ancient writers to the *Silica dulcis*, or carob-tree. The Arabian physicians mention two kinds of this; the Syrian, and Nabathean: the first they call *afgenbat*, and the other *ahabat*. Avicenna tells us, that the first of these was a purgative, and was given with succus in pains of the bowels; and the other an astringent, in profit in the maladies of the bowels.

CHARNY, in *Geography*, a town of France, in the department of the Meuse, and chief place of a canton in the district of Verdun; one league N. of Verdun. The place contains 615, and the canton 901; inhabitants: the territory comprehends 215 kilometres and 22 communes.

CHARNY, a town of France, in the department of the Yonne, and chief place of a canton in the district of Joigny; 19 miles N. of Auxerre. The place contains 513, and the canton 13,141; inhabitants: the territory includes 287½ kilometres and 22 communes.

CHAROLLES, a small country of France, before the revolution; so called from Charolles, the capital.

CHAROLLES, a town of France, in the department of the Saône and Loire, and chief place of a district. The place contains 240, and the canton 10,811 inhabitants: the territory includes 190 kilometres and 14 communes.

CHARON, a town of France, in the department of the Loire, in the canton of Rochefort.

CHARON, in *Mythology*, the ferryman of hell; son of Erebus and Nox, according to the theology of Hesiod. His province it was to carry in his boat, over the waters of Acheron, Styx, Cocytus, and Phlegethon, the souls of the dead; particularly of those who were buried; for persons who were not interred were supposed to wander about the shores for 100 years before they were carried over. Thus Virgil (Aen. vi) describes their state:

"Centum errant annos, volitant hae litora circum: Tum demum adfluit flaga exoptata revivit."

A hundred years they wander on the shores, At length, their penance done, are wafted o'er.

However, Charon was first paid his fare, which was never less than one obolus, nor more than three, which was put into the mouths of persons interred. Some mythologists have derived his name from *charon*, fine gravel, formed of a præv. and *gran*, granul, denoting the ungracefulness of his aspect. Others say, that Charon, the old Egyptian, fig. simply a ferry-man. The Arabian historians describe Charon as a person of great power; who could load several camels with the keys which opened the numerous apartments that contained his treasures. Perhaps in Egypt the name of Charon was a dignity bestowed on the boatmen who conveyed the bodies of the Pharaohs over the lake Moeris to deposit them in the cells of the labyrinth, of which he was the keeper. Without doubt, the person who performed the same office on the lake of Memphi, with respect to the inhabitants of that city, had the same title. If this conjecture be founded, we discover the reason why the Greeks, borrowing from the Egyptians, gave the name of Charon to the boatman of hell; and why the Arabs call the lake of Moeris, "biruk Caroom," and runs in its vicinity "balad Caroom," the burgh of Charon, and "caf Caroom," the palace of Charon. The present inhabitants of Egypt have a kind of traditional fable, that Charon was a person of mean extraction, who placed himself near this lake, and demanded a certain sum for every corpse that was ferried over to be interred; which impost he continued for several years without any authority; but as he insisted upon receiving the usual fare for the king's son, the fraud was discovered and discontinued. The king, however, as the fable reports, perceiving the advantage of this impost, confirmed it by royal authority, and appointed Charon to the post he had before occupied, which he rendered the most lucrative office in the kingdom. It is also said that he became rich and powerful, as to suffice his sovereign, and ascend the throne in his stead. To this fanciful narrative we may subjoin the account given by Tzetzes, who, representing the Fortunate islands as British, observes, that the souls of the dead are reported to be carried thither; and that on the shores of the ocean, which washes the island called Britain, men fish by fishing, who are subjected to the Franks, but pay them no tribute, because, as it is reported, they transport the souls of the dead to the coast of Britain, which is reckoned among the islands of the Blefled, and the habitation of deceased persons, conveyed thither by these fishermen. Charon is represented by the poets as a fat, squalid, old man, with a long grey beard, and rheumatic eyes, clad with tattered rags, that scarcely covered his nakedness. Virgil describes him as possessing the vigour and firmness of old age, mealy clad, with a long beard, grey matted hair, and fixed fiery eyes. Thus,

"Portitor has horrendus aquas et fluminis fervat Terribili quizalare Charon: cui plurima mento Canities inculta jacet; ibant lumina, flammas: Sordidus ex humerus nodo dependet amictus."
CHA

Ina ratem conto subigit, velitque missiatur,
Et ferrugineâ fulvecat corpora cymbâ,
Jam feniur; sed cruda Deo viridique fere-Euus."

Aen. vi. v. 258, &c.

There Charon stands, who rules the dreary coals:
A fordid god: down from his hoary chin
A length of beard descends, uncom'd, unclean;
His eyes like hollow furnaces on fire;
A girde, foul with grace, binds his obscene attire.
He spreads his canvas, with his pole he steers,
The freights of fitting ghosts in his thin bottom bears.
He look'd in years; yet in his years were seen
A youthful vigour, and autumnal green.

CHARONDAS, in Biography, a native of Catanea in Sicily, flourished about 446 years B. C. and is supposed to have been a disciple of Pythagoras. He was distinguished both as a philosoper and a legislator; and is said to have framed a code of laws for his own native place and several other cities of the Chalcidians, and also for the Megi; and they were afterwards adopted by the inhabitants of Thurium in Magna Graecia, rebuilt by the Sybarites, when they established their republic. Some of these laws were such as follow: Persons who married a second time, if any children by their first wives were living, were excluded from the Senate: and from all public employments, because bad fathers, as the legislator conceived such to be, would make bad magistrates. All false accusers were carried through every part of the city crowned with heath or brome, and thus exposed to public ignominy, as the vilen of men. All those were perfected and fined who composed a correspondence, or contracted a friendship with wicked men. Conceiving ignorance to be the greatest evil and the source of vice, Charondas enjoined, that the children of all the citizens should be instructed in literature and the sciences. Instead of putting detectors and those who fled in the day of battle to death, he sentenced them to appear for three days in the city, chained in the habit of women. To prevent the rash and hasty abrogation of his laws, he enjoined, that those who proposed to alter or amend them, should appear in the public assembly with a halter about their necks, and if the alteration proposed did not pass, they were to be immediately frangled. Charondas did not long survive his own laws. Returning one day from pursuing some thieves, and finding a tumult in the city, he came unarmed into the assembly; though he himself had prohibited any person doing so by an express law. When a person observed him and recriminated in fierce terms on account of the violation of his own laws, "I do not violate them, says he, but thus may they, with my blood;" and having thus spoken, he plunged his sword into his bosom, and expired. Diod. Sic. Diog. Laerc.

CHARONIUS, Charman, is used as an epithet for caves, some of which are found in Italy, and in other parts of the world, where the air is so loaded with a poisonous vapour, that animals cannot live in them even a few moments.

CHAROST, in Geography, a town of France, in the department of the Cher, and chief place of a canton in the district of Bourges, seated on the river Arnon; four leagues S.W. of Bourges. The place contains 1,550 and the canton 86,535 inhabitants: the territory includes 3,242 kilometres, and 13 communes.

CHARPE, in Military Language. This consists of two ropes or cables fastened together, somewhat crossways from one pontoon to another, as also to the banks or sides of a river, when you wish to make a bridge across it, in order to keep the pontoons steady in their places.

CHARPENTIER, Francis, in Biography, a native of Paris, where he was born in 1626. Although he was originally intended for the bar, his love of retirement, and attachment to literature, diverted him from this pursuit, and induced him to rank himself among the men of letters. His reputation and connections caused him, in 1657, to be elected a member of the French Academy; and after he had been employed by the minister Colbert, in recommending to the nation the proposed establishment of an East India company, he was chosen, under the function of the minister, a member of the new-instituted Academy of Inscriptions and Belles Lettres, for which distinction his knowledge of the ancient languages peculiarly qualified him. M. Charpentier, however, though conversant with ancient writers, and though he had commenced his career by the translation of Xenophon's Cyropedia and Memorabilia, was very far from indulging a bigotted attachment to antiquity; and in the dispute that agitated the literati concerning the comparative merit of the ancients and moderns, he took part in favour of the latter. In 1676, he wrote "A Defence of the Use of the French Language for the Inscriptid on the Triumphal Arch," and in 1683, he published two volumes "On the Excellence of the French Language." These publications excited the aroused enmity of Boileau, who satirized him with much unmerited severity; although it must be allowed that his task was unequal to his vivacity and learning. The inflated style of the inscriptions placed under the pictures of Le Brun in the gallery at Versailles, such as "The incredible passage of the Rhine," and "The miraculous capture of Valence;" incurred just censure, and the epistles were craved by the king's order. In his adulation of the king he exceeded his contemporaries, even at a period when they were vying with one another in this kind of panegyric. Charpentier was ambitious of displaying his rhetorical powers, which he polished in an eminent degree, on various occasions; and particularly in the meetings of the French Academy, at which he was affilious in his attendance. His last work, entitled "A Dissertation on the Excellence and Utility of Academic Exercises," was published in 1695. As to his private character, it was eminently mild and honourable. Whilst he retained the grateful remembrance of benefits which he received, he soon forgot injuries, and never cherished rancour against any of his adversaries. He died in 1704; and long after his death some literary fragments were published under the title of "Carpentariana," that are held in no great estimation. D'Alemb. Hist. des Mem. de l'Acad. Fr. Gen. Diog.

CHARPENTIER, in Military Language, a carpenter. Such workmen are absolutely necessary in the service of an army. Without their assistance the miners can do nothing. For all military operations in general their services are indeed more or less necessary. Care should be taken, that such of them, as follow an army, are strong and robust.

CHARPENTIER, Juvene, in Ornithology. See Picus exalbula.

CHARPEY, in Geography, a town of France, in the department of the Drôme; 3 leagues E. of Valence.

CHARPOT, in Ancient Geography, a town of Asia, situate between the mountains, in the valley through which passed the river Ararans in its Course to the Euphrates.

CHARR, Char, or as sometimes called Charrée, in Ithylhys, the common name of the Alpine salmon, Salmo Alpinus of Linnaeus. This fish is found in the lakes of Weitmorland, and the mountainous parts of northern Europe. It is esteemed an excellent fish for the table, and prized is considered an article of luxury. In England we distinguish more than one kind of charr, though they are generally believed to appertain to a single species only. Mr. Pennant, upon
upon the authority of the Rev. Mr. Farinh of Carlisle, cru-

necates the Cali chalk; the Cali chalk, or one which has not

spawl of the preceding clakan, and is on that account reck-

oned to be in the greatest perfection; and the Red chalk,

which last is distinguished in Weftmorland by the name of

Red chalk, because in duncing the field assumes a higher co-

lor than the others. The late circumstances is observable

in the town. With respect to the Targn of the Welsh, or

"Red kelly," a kind of chalk found in one of the Snowdo-

nors lakes, we are not satisfied that it is of the same species

as the chalk of Weftmorland, though uniformly described as

such by authors. We shall notice more particularly un-

under the article Salmo Alpinus, observor only in this place,

that the fish spawes at a different time of the year from the

former, that it is smaller, and brighter instead of paler in co-

lour when in seacon than the red chalk of the Weftmorland

lakes. Vide Donov. Brit. Fishes ; and article Salmo alpinus.

CHARRE, or CHARRE, in Ancient Geography, a town

t of Afn, in Mepopotamia, situate near the river Scythus, now

called " Harania," and thought to be the fame that bears

this appellation in the history of Abraham's peregrinations.

CHARARA, in Geography, a town of Persia, in the

province of Farisian ; 45 miles N.W. of Schiras.

CHARRÉ, a town of Arabia; 9 miles N.E. of San'a.

CHARRETTE, a cart. Every one knows the meaning

of this word. But it is proper to introduce it, as charrettes

are extremely useful in matters of artillery. They serve

the purpoce of carrying and transporting ammunition ;

and vary in their forms or figures in different departments thereof,

as the lieutenant generals and commanding officers of artill-

ery have them constructed according to his own method.

to suit the countries they serve in.

CHARRIERE, Joseph, de La, in Biography, a fur-

geon of eminence of Annecy, in Savoy. After refiding

several years in Paris, and receiving the instruction of the

belt matters there, he returned to Annecy, where he soon

distinguished himfelf by his superior attainments. In 1600,

he published, as the result of an extensive practice, "Traité

des Opérations de Chirurgie," 12mo. Paris. He gives the

descriptions of each of the diseases, with the reasons for,

and the manner of performing the operations, and though

this treatise was supered by the Institutiones Chirurgieae

of Heister, as Heister's has been by the works of later

writers, it enjoyed, in its time, no small share of reputation,

as appears by its having been reprinted fix or seven times in

the space of twenty years. "Anatomie nouvelle de la Fête

de Phomme," 12mo. 1703. Paris. The parts are minutely

and with sufficient accuracy described, but with no addition

to what was before known on the subject. Hall. Bib. Anat.


CHARRING of Pofts, in Rural Economy, the pracice

of reducing that part of the surface of pofts which is to be

put into the ground to somewhat of the flate of charcoal, so

to render it more durable and lasting. This method of prepa-

ring pofts is highly useful where they are to be placed in

wet situations, or to stand between wet and dry. The pracice is common in Norfolk; where, according to

Mr. Marshall, it is thus performed: "A trench is dug eighteen inches wide, eighteen inches deep, and fix feet

long, and aired by burning the flaw and a faggot or two in

it previously to laying down the pofts. This being done,

the pofts are laid across the trench; placing the part to be

burnt, namely, the part propend to stand between air and

soil, immediately over the fire; thrashing the fuel (dry

oven faggots) in at the windward end of the trench. As

one side becomes charred, another is turned downward;

and, to prevent the fire from spreading too wide (reaching too high up the poft), the part not intended to be burnt is

wetted by means of a wet straw band, tied round the poft, on

the part where the fire ought to be checked; pouring

water from time to time upon the twisted fraw. The pofts

having been repeatedly turned on all sides, until white ashes

begin to form on the surface of a black coat of coal, about

one inch of an inch thick, then they are removed, and their

places supplied by others. Chips, he fays, are preferable

to faggots, as fuel, in this operation; as they can be drift

in between the pofts wherever an increaf of fire is wanted."

From the great scarcity of hop-poles it has been sug-
ggled that this method may likewise be useful in preferving

the bottom parts of them from decaying. As 3000 of

these poles are required for an acre of land, this is conceived
to be an object of great moment to the hop planter.

CHARROW, Carriage, or Wagnoe, in Military Language.

This word ought to be regarded as extending in its meaning
to all carriages, horses, mules, and, in general, to every thing

defined for the transport of all kinds of provisions and ammuni-

tion for the use of armies.

CHARRON, Peter, in Biography, was the fon of a

bookfeller, at Paris, and born in 1541. He was educated

for the law at Orleans and Bourges, and in the university of

the latter place he took his doctor's degree. He practised

as an advocate in the parliament of Paris for five or six

years; but renouncing the profition in dífguif, he directed

his attention to theology, took priest's orders, and became

a celebrated preacher. His reputation was fuch, that he

was solicited to accept the office of canon to several churches,

and he served as fuch to several cathedrals; he was also nomi-

nated by queen Margaret her preacher in ordinary, and he

was in the retnue of Cardinal d'Armagnac, legate at Avi-

gon. After a long abfence from Paris, he returned

thereafter in 1588, and made an attempt to gain admission

of the Cathchans, and then among the Celeb-

tines, but he was refufed, on account of his being too

man to adopt their discipline; he therefore refolved to

retain the office of a parish priest. At Bourdeaux, he con-

tracted an intimate friendship with the famous Michael

Montagne, and imbibed his philosophical sentiments. Their

mutual affection was fuch, that Montagne gave by his will

to Charrown the privilege of bearing his arms, and Charrown

made the brother-in-law of Montagne his refuddary legate.

In 1394, Charrown published his treatise, entituled "Three

Treatises," propelling to maintain, 1. That there is a God and

a true religion; 2. That of all religions the Christian

is the only true one; and 3. That among Christian

communion the Roman-Catholic is the only true church.

This orthodox treatise procured for him the fupport of the

bishop of Cahors the dignity of grand-vicar, and a theological ca-

nonship; and in 1595 he was depoited to the general assembly

of the clergy, and made secretary to that body. In 1603,

he printed a volume of "Christian Diffcourts," and in 1601

appeared the firft edition of his "Treatie on Wilfom." In

1603; he went to Paris to print a second edition of this

work, and there died suddenly in the street. This book,

though his character was unblemifh, and his inocency in

his religious profefion unquestionable, occasioned his being

ranked among the molt dangerous free-thinkers. Attached

from his infancy to a fystem of faith inofensible to reason,

he seems to have thought it neceffary, in vindication of his

opinions, to depreciate the conclusions of mere reafon.

Hence he was led to fuggel, that strength of mind inclined

to Atheism; and also to affert, that the immortality of the

soul, though an univerfal dogma, is founded on very weak

natural arguments. He likewise gave offence by maintai-
ing that, although all religions derive their origin from
heaven by divine inspiration, yet all have been received by
human hands and means. In the second edition he excepted
the Christian religion. He was also charged with lay-
ning undue stress on the differences which have always sub-
stituted among Christians, together with the evils resulting
from them; and the strength and fairness with which he flated
the arguments against revelation were disapproved by some of
his adversaries. On these accounts the second edition of his
work excited great alarm and opposition among theologians,
and the impression was allowed, after some alteration in the
work itself, by particular favour. Although the author in this
treatise, which was evidently formed on the principles
of Montaigne’s essays, has introduced many original and
ingenious observations, he exhibits upon the whole a gloomy
picture of human nature and society. Charron himself,
however, was of a gay and cheerful disposition; ready in
conversation; and liberal, considering the age in which he
lived, as to his mode of philosophizing. Gen. Dict. Nou.
Dict. Hist. Breucker’s Phil. by Lindeh, vol. ii.3

CHARRONS, cartwrights, workmen very necessary in
the suite of an army, and particularly of the artillery.

CHARROUX, in Geography, a town of France, in the
department of the Allier, and district of Gannat; 5 miles
N. of Gannat.

CHARROUX, a town of France, in the department of the
Vienne, and chief place of a canton, in the district of Civar,
1 1/2 leagues E. of it. The place contains 1581, and the can-
ton 6828 inhabitants: the territory includes 237 1/2 kilome-
tres and 9 communes.

CHART, or Hydrographical Map, in Navigation,
is a representation, in plans, of a part, or of the whole of
the water on the surface of the globe, and the adjacent
coast. There are various kinds of charts, as Plane, Mercator,
&c.

Charts were first introduced into the marine by Prince
Henry, duke of Víchio, son of John I. king of Portugal, about
the year 1420. There were of the kind denominated plane
charts, and continued in use for many years, and for very
small portions of the coast, even to the present time. For
any considerable extent, charts of this construction were
soon found to be very erroneous; and their errors were suc-
cessively expost by Martin Cortes, a Spaniard, in his trea-
tise, intitled Breve Compendio de la Sphera, y de la Arte de
Navegar con nuevos Instrumentos y Reglas, printed at Seville
in the year 1556; by Petrus Nonius, a Portuguese, in his trea-
tise de Arte et Ratione Navigandi, printed at Basle in 1587;
by Mr. Edward Wright, in his Certain Errors in Navigation
detected and correctt, of which the first edition was print-
ed at London in 1599; and by others. These errors, as
enumerated by this last author, in his own words, are the
following: 1. Error in the proportion of the length and
breadth of places in the common sea charts. 2. Error in
finding out the difference of longitude by the common sea
charts. 3. Error in the lying and bearing of places one from
another, in the common sea charts. 4. Error in setting of
places out of the common sea charts into the globe. 5. Error
in showing the distances of places in the common sea
charts.

In order to correct these errors of the plane chart, Gerard
Mercator, in the year 1569, published a chart, in which the
meridians and parallels of latitude are upright lines, as in
the plane chart; but in order to compensate the errors arising
from the parallelism of the meridians, he increased each de-
gree or portion of the meridian with its distance from the
equator. It, however, appears, that his charts had no claim
to accuracy; for the intervals between the parallels of each
Vol. VII. ten degrees of latitude in the chart, as given by Blundeville
in his Exercices, page 356, do not agree with the differences
of the corresponding meridional parts of those parallels.
Thus, the difference, according to the chart, between the par-
allels of 50 and 60 degrees, is 1 1/2 less than the difference of
the meridional parts of those parallels; and that between
the parallels of 70 and 80 degrees is upwards of 4 degrees less
than the truth. It is hence evident Mercator had no certain
fixed rule for dividing the enlarged meridian. The disco-
very of a rule for this purpose was left to Wright, who
published the first table for that purpose in his book above
mentioned; in the preface to which he expresses himself as
follows: "But to come to those that may perhaps object,
I doe but altum agere, in doing no more then hath bin done
already by Gerardus Mercator in his univerall mappe of the
world many years since. I must anwser, that indeed by
occasion of that mappe of Mercator, I first thought of cor-
recting so many, and grolfe errors, and abfurdisties, as I have
already toucht, and are hereafter at large shewed in the
common sea-chart, by increasing the distances of the par-
allels from the equinoctial towards the poles, in fitch fort,
that at every point of latitude in the chart, a small part of
the meridian might have the fame proportion almoft to the
like part of the parallel, that it hath in the globe. But the
question then is: how this should be done, I learned neither of Mercator,
or any other man else. And in that point I wish had been
as wise as he, in keeping it more charily to myself. For to
so perhaps it might have been more beneficall to me."

In the above paragraph, we have Wright’s express declara-
tion, that no man taught him the true method of enlarging
the meridian line; and as all charts prior to his discovery
were erroneous in this increase of the degrees of latitude,
he, consequent y, was the first discoverer of the true method
of constructing this kind of a chart. We cannot omit men-
tioning, in this place, Wright’s very ingenious idea of tran-
fering the several circles, &c. on the globe to a plane sur-
facc. "Suppose, says he, a spherrical superficies, with meri-
dians, parallels, rumbes, and the whole hydrographical
description drawn thereupon, to be inscrib’d into a concave
cylinder, their axes agreeing in one.

Let the spherrical superficies swell like a bladder, (whiles
it is in blowing), equally always in every part thereof (that
is, as much in longitude as in latitude) till it apply, and
join itself (round about, and all along till towards either
pole) unto the concave superficies of the cylinder: each par-
allel upon this spherrical superficies increasing successively
from the equinocial towards either pole, until it come to be
of equal diameter with the cylinder, and consequently the
meridians till widening themselves, till they come to be so
far distant every where each from other as they are at the
equinocial. Thus it may most easily bee understood, how
a spherrical superficies may (by extension) be made a cindrical,
and consequently a plain parallelogram superficies; be-
cause the superficies of a cylinder is nothing else but a plain
parallelogram wound about two equal equidistant circles
that have one common astree perpendicular upon the centers
of them both, and the peripheries of each of them equal to
the length of the parallelogram as the distance between
two circles, or height of the cylinder is equal to the breadth
thereof. So as the nautical sphere may be hereafter to
be nothing else but a parallelogram made of the spherrical
superficies of an hydrographical globe inscrib’d into a con-
cave cylinder, both their axes concurring in one; and the
spherrical superficies dwelling in every part equally in lon-
gitude and latitude, till every one of the parallels theriupon
be inscrib’d into the cylinder, (each parallel growing as
great as the equinocial) or till the whole spherrical superfi-
cies,
the touch and apply itself every where to the concavity of the cylinder.

In this nautical planisphere thus conceived to be made, all places must needs be ficate in the same longitudes, latitudes, and directions or courses, and upon the same meridians, parallels, and rhumbs, that they were in the globe, because that at every point between the equinoctial and the pole, we undertand the sphatical superficies whereof this planisphere is conceived to be made, to twel equally as much in longitude as in latitude (til it join itself unto the concavity of the cylinder) fo as hereby no part thereof is any way distorted or displaced out of his true and natural situation upon his meridian, parallel, or rhumb, but only dilated and en- larged: the meridians also, parallels, and rhumbs, dilating and enlarging themselves likewise, at every point of latitude in the same proportion.

Now then let us diligently consider of the geometrical lineaments, that is, the meridians, rhumbs, and parallels of this imaginary nautical planisphere, that we may in like manner express the same in the mariners chart. For so undoubtedly we shall have therein a true hydrographical description of all places, in their longitudes, latitudes, and given proportional lineaments, or respective situations each from other, according to the points of the compass in all things correspondent to the globe, without either sensible or explicable error.

Since, in this projection, the parallels are all made equal to the equator, it is evident they are enlarged in the proportion of the radius to the co-line of their respective latitudes: wherefore, the meridian, in order to preserve every its proportion to the several parallels thus encased, must, at the latitude of each parallel, be enlarged in the proportion of the radius to the co-line of the latitude, or so that the length of a minute of the true or proper meridian, which upon the globe is the same in all latitudes, and equal to the length of a minute of the equator, may be to the length of a minute on the enlarged in any latitude, as the co-line of the latitude to radius; or, which is the same, as radius to the feant of the latitude: Therefore, the length of a minute on the proper meridian must be to the length of a minute on the enlarged meridian, at any latitude, as radius to the feant of that latitude. Hence, a table of natural feants, to every degree and minute of the quadrant, and whose radius is 1, will express the several lengths of the enlarged meridian at the latitudes belonging to those feants respectively. And, hence, the sum of the feants of all the minutes from the beginning of the quadrant, to the degree and minute of any parallel’s latitude, will be, in minutes of the equator, or nautical miles, the length of that part of the enlarged meridian which is contained between the equator and the given parallel. In this manner Mr. Wright constructed his “Table of Latitudes for graduating a Meridian in the general Sea-Chart,” to every degree and minute of the quadrant, which has since obtained the general name of “A Table of Meridional Parts;” and by the French, that of “La Table des Grécentes.”

The above method of dividing the meridian is not strictly geometrical; and, in order to shew that Wright knew this to be the case, we cannot avoid extracting the following paragraph from his Corrëction of Certain Errors, &c., p. 12. But in this table it was thought sufficient to use such exactness, as that thereby (in drawing the lineaments of the nautical planisphere) sensible error might be avoided. Else it lieth to be more precise, may make the like table to decades or tens of seconds, out of “Joachimus Rheticus his Canon Magnus Triangulorum.” Notwithstanding, the geometrical which direcrt exact truth, cannot be satisfied neither: for whole fake and further satisfaction, 1 thought good to adjoin also this geometrical conecit of dividing a meridian of the nautical planisphere."

“Let the equinoctial and meridian be drawn upon a globe: Let the meridian (divided into degrees, minutes, seconds, &c.) roul upon a bright line, beginning at the equinoctial, the globe swelling in the mean time in such fort, that the semidiameter thereof may be always equal to the feant of the angle, or arch contained between the equinoctial and semidiameter, infilling at right angles upon the forefaid straightforward line: the degrees, minutes, and seconds, &c. of the meridian, noted in the bright line, as they come to touch the face, are the divisions of the meridian in the nautical planisphere. And this conecit of dividing the meridian of the nautical planisphere may satsise the curious exactness of the geometrician; but for mechanical use, the table before mentioned may fullit.”

The above paragraph seems to have induced several eminent mathematicians to endeavour to discover a more accurate method of enlarging the meridian: and, in the year 1645, a method, strictly accurate, was pubhished, as an addition to Northrow’s Epitome of Navigation, by Mr Henry Bond. This method appears to have been discovered by chance; but neither the name of the discoverer, nor the time when it was discovered, are known. The demonstration of this method was still wanting: this, however, was given, for the first time, by the excellent Mr. James Gregory of Aberdeen, in his Exercitaciones Geometric, published in the year 1668, but not without a long train of reasoning: and in the year 1695, a more concise demonstration was given by Dr. Halley in the Philosophical Transactions of London, No. 219. vol. xix. Both these demonstrations are reprinted in the 2d volume of Baron Maleres’ Scriptores Logarithmi, printed in the year 1791.

In Dr. Halley’s demonstration, it is shewn, that if, “in the common tables of logarithmic tangents, the indices alone are taken as integers, and all the rest of the values as decimals: then the difference between the logarithm of the radius, and the logarithmic tangent of half the complement of any given latitude, divided by 0.001 120 331 14, &c. will be the meridional parts corresponding to that latitude.”

For the demonstration of this proposition, the reader is referred to the article MERIDIONAL Parts. Dr. Halley has shewn various other methods of constructing a table of meridional parts.

CHART, globular, is a projection so called from the conformity it bears to the globe itself. This projection was proposed by Meff. Senex, Wilfon, and Harris, in which the meridians are inclined, the parallels equidistant and curvilinear, and the rhumb-lines real spirals, as on the surface of the globe. From this last property, it is evident it can be of very little use in navigation; as a map, however, it has its advantages.

CHART, reduced, is that in which the meridians and parallels are represented by straight lines; these last are parallel to and equidistant from each other but the former being directed to the pole, are not parallel: and hence a rhumb-line on this chart is a curve, and, therefore, it is of little use in navigation. The degrees of latitude are equal, but those of the extreme and intermediate parallels are unequal; the length of each extreme parallel being equal to the length of a degree on the meridian, multiplied by the cosine of the corresponding parallels. A chart of this kind will answer tolerably well for the equatorial parts of the earth, but not for parts distant from the equator, unless for a small country, and then only as a map.

CHART, spheroidal, a chart adapted to the spheroidal figure of the earth. In Mercator’s chart, the figure of the earth
earth is supposed to be that of a perfect sphere: but theory confirmed by observation has shown it to be an oblate spheroid. Sir Isaac Newton, from theory, found the ratio of the equatorial to the polar axis to be as 230 to 229. By comparing menfurations made at different parts of the earth, this proportion has been found to vary considerably, some making it more, and others less, than what Sir Isaac Newton affixed. From a comparison of the measure of a degree in France with that at the polar circle, the diameter of the equator to the axis of the earth was found to be as 178 to 177. Vide Degree du Meridien, &c. Paris, 1741, p. livi. According to Don George Juan, this proportion is as 266 to 265; and agreeable thereto he calculated a table of meridional parts for the spheroid. Again, M. Du Sejour, from a comparison of the lengths of pendulums vibrating seconds in different latitudes, concludes the proportion to be as 321 to 320. Traite Analytique, tom. ii., p. 270. And, agreeable to this proportion, J. De Mendoza Rios, etq. calculated a table of meridional parts for the spheroid, which is inserted in the Connoisement des Temps pour l'annee 1793.

In the year 1758 Mr. Benjamin Martin published the first spheroidal chart, in his "New Principles of Geography and Navigation," adapted to Don George Juan's proportion of the equatorial diameter of the earth's axis. These charts have not, however, come into general use.

Chart, variation, a Mercator's chart, upon which are laid down curve lines, representing the variation of the compasses at those places through which they pass. This chart was first constructed by Dr. Halley, in the year 1700, with a view to find the longitude. Since the variation at the same place is liable to an annual change, the above chart, in a few years, became almost useless. In the years 1744 and 1756, it was republished in London by Melliss, MOUNTAIN, and Doddson, from nearly one hundred thousand observations. It was also published at Paris, in 1765, by M. Bellin, and again at London in the years 1768 and 1774. Variation charts, adapted to different years, have been published by Mr. Samuel Dunn. Vide Dr. Mackay's Longitudes, vol. i. p. 264. For the method of finding the longitude at sea by this method, the reader is referred to the article Longitude; see also Variation.

Chart of the Inclination, or Dip of the Magnetic Needle, contains curve lines expressing the quantity of the inclination or dip of the needle at those places through which they pass. A chart of this kind, for a small portion of England and France, was published by Mr. William Whiton, in his treatise entitled "The Longitude and Latitude founded by the Inclination or Dipping Needle," printed at London in 1721. In the year 1768, M. Wilck of Sweden published a general chart, exhibiting the lines of equal dip, in the most frequented parts of the globe. This chart was re-published by M. Le Monnier, in his treatise "Lois du Magnetisme," printed at Paris in 1776. It has been proposed to find the latitude by means of a chart of the inclination of the needle; and by both inclination and declination of the needle, the latitude and longitude might be found, provided the theory of the variation was known, and instruments could be constructed to shew the quantity of the variation and dip, with sufficient accuracy.

Charts, Constructions of.

I. Of the plane chart.

The number of degrees of latitude which the chart is intended to contain, and the extent from east to west being fixed upon; a line is to be drawn near the side or end of a sheet of paper, in length equal to the whole length of the chart, from north to south; and this line is to be divided into degrees, and numbered accordingly. From each end of this line perpendiculars are to be drawn, and made equal to the intended extent of the chart from east to west, and their extremities are to be joined by a straight line. If the chart is to commence at or near the equator, and to extend only a few degrees of latitude, the divisions of the parallels may be equal to those of the meridian: but if the chart begins at any considerable distance from the equator, it will conduct to accuracy to make the length of each degree of the parallel equal to the co-ine of the mean latitude, the radius being 60 minutes; or, the extreme parallels may be divided according to the above proportion, and in that case it will become a reduced chart. Meridians and parallels are there to be drawn at convenient distances.

A scale is now to be made of thin paper or pasteboard, equal in length to the extent of the chart from east to west, and divided and numbered accordingly. By this scale, the positions of those places contained within the limits of the chart are very easily laid down, by placing the divided edge of the scale over the latitude of the given place; and under the given longitude, a mark being made will represent the position of the place on the chart.

A compass is to be infected in any convenient place of the chart, an arrow showing the direction of the food tide or current. The times of high water set and change are to be marked in their proper places, expressed in Roman characters; foundings and quality of the ground at bottom, the leading marks to avoid dangers, &c.

II. Of a Mercator's Chart.

A Mercator's chart, for any given portion of the surface of the globe, is constructed as follows:

The limit of the proposed chart is first to be determined, that is, the number of degrees of latitude and longitude which it is to contain, and the degree of latitude and longitude of its commencement.

Find the meridional parts answering to each degree of latitude within the intercalated limits of the chart, and take the difference between each, and that corresponding to the least degree of latitude in the chart; and reduce these differences to degrees, by dividing by 60.

A parallel, representing that of the least latitude, is to be drawn; upon which the number of degrees in the proposed difference of longitude, from a scale of equal parts, is to be laid off, and divided into degrees, and smaller portions, if convenient, and numbered at each fifth or tenth degree. From each end of this parallel a perpendicular is to be drawn, and made equal to the difference of the meridional parts of the extreme latitudes taken from the divided parallel; and the ends of these meridians are to be joined by a straight line, which will represent the other extreme parallel, and which is to be divided and numbered in the same manner as the first drawn parallel; the meridians are then to be divided into degrees, and numbered at every fifth or tenth degree.

Take the meridional difference of latitude between the beginning of the chart, and the next fifth or tenth degree of latitude from the divided parallel, and lay it off from the first parallel on each of the scale meridians, and join these points by a straight line. In like manner, the meridional difference of latitude answering to each successive interval of five or ten degrees, is to be taken from the first drawn parallel and laid off, and the corresponding parallels are to be drawn and numbered accordingly, and the intermediate spaces are to be subdivided. If the chart is upon a large scale, the meridional difference of latitude answering to each degree, is to be laid off from the least parallel.
CHART.

If the chart is intended to be upon a larger scale, equimultiples of the intervals are to be taken, such as will answer to the proposed extent of the chart.

A ship of strong paper is to be divided and numbered in the same manner as the first drawn parallel. Now, each place within the limits of the chart is to be laid down, by placing the ship of paper so that its extreme points of division may be at the latitude of the given place on each meridian; then, under the longitude of the place a mark is to be made, which will represent the position of that place. In like manner, all the places on the coast are to be laid down and connected by observations made on the coast; or if no sketch had been drawn, the contour of the coast is to be drawn agreeable to the best charts. Meridians and parallels are to be drawn through every fifth or tenth degree of latitude and longitude and extended to the coast.

A compass is to be inserted in some convenient part of the chart, and the points extended to the land: an anchor is to be drawn where there is a good anchoring ground, and in places where it is safe only to float a tide, an anchor without a block is to be laid down. The soundings, the quality of the ground, the times of high and low water, &c. are to be marked in their proper places.

For the method of laying down a Mercator's chart by means of a scale of logarithmic tangents, the reader is referred to Dr. Mackay's Treatise on Navigation, from which the greater part of the preceding, and also the remaining part of this article are extracted.

III. Of the Variation Chart.

Having constructed a general chart according to Mercator's projection, mark down with dots all the places in which the declination of the magnetic needle has been ascertained; then draw lines through those points having the same declination. These lines, or arcs, are called lines of declination; and by proceeding in this manner as far as the variation is known the chart will be completed.

CHARTS, manner of using.

The principal use of a chart is, to find the course and distance between any two places within its limits, and to lay down the place of a ship on it, so that the position of the ship with respect to the intended port, the adjacent land, islands, &c. may be readily perceived.

As it is incompatible with the plan of the present work to infer large charts, therefore, in performing the following examples, it is supposed, the practitioner has the necessary charts before him.

I. USE OF THE PLANE CHART.

Problem I.

To find the Latitude of a Place, on the Chart.

Rule.—Take the nearest distance between the given place and the nearest parallel of latitude, which being applied in the same way on the divided meridian, from the point of intersection of the parallel and meridian, will give the latitude of the proposed place.

Example.—Required the latitude of Port Louis, in the Isle of France.

The least distance between Port Louis and the nearest parallel being laid in the same way on the meridian, from the extremity of that parallel, will reach to 20° 8' S. the latitude required.

Problem II.

To find the Course and Distance between two given Places on the Chart.

Rule.—Lay the edge of a scale over the given places, and take the nearest distance between the center of any of the compasses on the chart and the edge of the scale, move this extent along, so as one point of the compasses may touch the edge of the scale, and the straight line joining the points may be perpendicular thereto; then will the other point show the course, and the interval between the places being applied to the scale, will give the required distance.

Example.—Required the course and distance from Cape St. André to Cape St. Sebastian, both in the island of Madagascar?

The edge of a scale being laid over the two places, then, by moving the compass as directed, the course will be found to be N.E. 4/5 E. and the interval between them will measure 105 leagues.

Problem III.

The Course and Distance found from a known Place being given to find the Ship's Place on the Chart.

Rule.—Lay the edge of a scale over the place failed from, parallel to the given course; then take the given distance from the scale on the chart, and lay it off from the given place by the edge of the scale, and it will give the point on the chart representing the place of the ship.

Example.—The correct course of a ship from Cape St. Maria, on the N. side of the entrance of the river La Plata, was N.E. by E. and the distance 258 leagues. Required the place of the ship on the chart?

The edge of the scale being laid over Cape St. Maria, in a N.E. by E. direction, and the distance 258 leagues, laid off from Cape St. Maria by the edge of the scale, will give the place of the ship, which will be found to be in latitude 38° 15' S.

Problem IV.

Given the Latitude in, and Meridian Distance, to lay down the Place of the Ship on the Chart.

Rule.—Through that place from which the meridian distance is reckoned, let a meridian be drawn, then lay a scale over the given latitude, and the meridian distance being taken from the scale on the chart, and laid off by the edge of the scale from the point of its intersection with the meridian, will give the ship's place.

The manner of performing this problem is obvious; and the various other problems that may be resolved on the plane chart, require no further explanation, being only the consequent of the remaining problems in plane sailing.

II. USE OF MERCATOR'S CHART.

Problem I.

To find the Latitude of a Place with the Chart.

Rule.—This is performed in the same manner as Problem I. on the plane chart.

Problem II.

To find the Longitude of a Place on the Chart.

Rule.—Take the least distance between the given place and the nearest meridian, which being laid off on the equator, or divided parallel, from the point of intersection of the parallel and meridian, will give its longitude.

Example.—Required the longitude of Funchal in the island of Madeira?

The least distance being taken between Funchal and the nearest meridian, and laid off from the intersection of that meridian with the divided parallel, will give 17° 0' W. the longitude required.
Problem III.  
To find the Course between two given Places on Mercator's Chart.

Rule.—For the manner of performing this problem, the reader is referred to the use of the plane chart, Problem II.

Problem IV.  
To find the Distance between two given Places on the Chart.

1. When the given places are under the same meridian.  
Rule.—Find the latitude of each; then, the difference, or sum of their latitudes according as they are on the same, or on opposite sides of the equator, will be the distance required.

Example.—Required the distance between the nearest extremities of the islands of Grenada and Gaudaloupe?

Latitude of southernmost extremity of Gaudaloupe - - - - - 15° 52' N.
Latitude of northernmost extremity of Grenada - - - - - 12° 14' N.

Distance - - - - - 338 = 218 M.

2. When the given places are under the same parallel.  
Rule.—If that parallel is the equator, the difference, or sum of their longitudes, found by Problem II, is the distance between them. If not, take half the interval between the given places, lay it off on the meridian on each side of the given parallel, and the intercepted degrees will be the distance between the places.

If the given parallel is near the north or south extremity of the chart, the following method may be used. Take an extent of a few degrees from that part of the meridian where the given parallel is the middle of the extent; then the number of extents, and parts of an extent, contained between the given places, being multiplied by the length of an extent, will give the required distance.

Example.—Required the distance between Cape Cantin and Funchal, both lying nearly in the same parallel?

By proceeding as directed above, the distance will be found to be 6° 45' or 1343 leagues.

3. When the given places differ both in latitude and longitude.  
Rule.—Find the difference of latitude between the given places, and take it from the equator, or graduated parallel; then, lay the edge of a scale over the given places, and move or slide one point of the compass along the edge of the scale, until the other point just touches a parallel. Now, the distance between the place where the point of the compass rested, and the point of intersection of the edge of the scale and parallel being applied to the equator or divided parallel, will give the distance between the places in degrees and parts of a degree; which, multiplied by 60, will give the distance in miles.

Example.—Required the distance between Cape Finisterre and Porto Santo?

Take the difference of latitude between the given places, viz. 9° 54', from the graduated parallel, and move one point of the compass along the edge of the scale, laid previously over the places, until the other point just touches a parallel; now, the interval between the place where the point of the compass rested, and the point of intersection of the scale and parallel, being applied to the divided parallel, will measure 11° 24', or 228 leagues.

Remark.—To some charts a set of scales is adapted to each degree of latitude within the limits of the chart; by which the distance between any two places is easily measured, by applying that distance to the scale answering to the middle parallel of latitude of the two places.

Problem V.  
Given the Latitude and Longitude in, to find the Ship's Place on the Chart.

Rule.—Lay the edge of a scale over the given latitude, and lay off the given longitude from the first meridian, or the difference of longitude from the nearest meridian, by the edge of the scale, and the ship's place will be obtained.

Example.—The latitude is 47° 30' N. and longitude 12° 15' W.; it is required to lay down the ship's place on the chart?

Lay the edge of the scale over the latitude 47° 30' N.; then take, from the divided parallel, the interval between 10° and 12° 15', which laid off by the edge of the scale from the meridian of 10°, will give the ship's place.

Problem VI.  
Given the Course steered from a known Place, and the Latitude in, to find the Ship's Place on the Chart.

Rule.—Lay the edge of a scale over the place failed from, in the direction of the given course, and its intersection with the parallel of latitude arrived at will be the place of the ship.

Example.—A ship from the Lizard failed S.W. by S. and her observation is in latitude 45° 20' N. Required the place of the ship on the chart?

The edge of a scale being laid over the Lizard, parallel to the S.W. by S. rhumb, will intercept a parallel drawn through the given latitude, 45° 20' N. in the ship's place.

Problem VII.  
Given the Course steered, and Distance run from a known Place, to lay down the Ship's Place on the Chart.

Rule.—Lay the edge of a scale over the place failed from, in the direction of the given course; then, take the distance from the equator, put one point of the compass at the intersection of any parallel with the edge of the scale, and the other point of the compass will reach to a certain place by the edge of the scale; now, this point remaining fixed, draw in the other point of the compass, until it just touch the above parallel; apply this extent to the equator, or divided parallel, and it will give the distance of latitude. Hence, the latitude come to will be known; and the point of intersection of the corresponding parallel with the edge of the scale, will be the place of the ship.

Example.—A ship from Cape St. Vincent failed S.S.W. 300 miles. Required the ship's place on the chart?

Lay the edge of a scale over Cape St. Vincent, parallel to the S.S.W. rhumb. Take the distance five degrees from the divided parallel; place both points of the compass close to the edge of the scale, so that one of them may be at the intersection of a parallel with the edge of the scale, and the other on that side of the parallel on which is the acute angle formed by the scale and parallel. Now this last point of the compass remaining in the same position, diminish the extent of the compass, until the other point touches the parallel, and this extent applied to the divided parallel, will measure 4° 37'; hence, the latitude in, is 32° 25' N.; and a parallel drawn through 32° 25', will intercept the edge of the scale in the place of the ship.

Problem VIII.  
Given the Latitude and Longitude failed from, the Course steered, and Longitude come to; to find the Ship's Place on the Chart.

Rule.—Draw a meridian through the longitude come to; then,
then, lay the edge of a scale over the place failed from, in the direction of the course, and its intersection with the meridian will be the place of the ship.

Example,—The true course of a ship from Cape St. Bernard, in the island of Bourbon, was N.E. ¾ N. and the longitude come to 59° 40' E. Required the ship's place on the chart?

The edge of a scale laid over Cape St. Bernard, in a N.E. ¾ N. direction, will intercept a meridian drawn through the given longitude 59° 40' E. which will represent the ship's place; the latitude of which is 15° 18' S.

Chart, Biographical, See Biography. See also Hay-fair's Chronology, p. 247.

Chart, Chronographic, is a delineation of particular countries.

Chart, Heliographic, a description or delineation of the body of the sun and of the mausoleum or spots observed on it.

Chart, Historical. See History.

Chart, Seismographic, a representation of particular appearances of the spots of the moon, or of her appearance and mimic.

Chart, Telegraphic, a description or delineation of the telegraph on paper.

Chart, Topographic, is a specific delineation of military posts and positions in given tracts of country. This ought always to be as correct as possible in regard to their relative dispositions of the positions and more, especially with regard to their relative heights. It is in this respect particularly that military surveys and reconnaissances are defective. The French have formed companies of topographers for the purpose of correctly and expeditiously pointing out to generals and other commanding officers all the leading points and relative situations of ground and locality. A general, however, should not rely implicitly on their reports or delineations, but ought if practicable to examine the principal positions himself, particularly those that he fixes on for his encampments.

Chart, primarily signifies a sort of paper made of the plant papyrus or burlis.

Charta emporica, in Pharmacy, &c., a kind of paper made very soft and porous, and used as a filter.

Charta, also used in ancient customs for a charter or deed in writing. See Charter.

Charta de fregis. See Charter of the forest.

Charta magna, the great charter, is an ancient instrument, containing several privileges, and liberties, granted to the church and state, by Edward the Confessor, together with others relating to the feudal laws of William the Conqueror, granted by Henry I., all confirmed by the succeeding princes about thirty times. See Magna charta.

Charta mercatoria, a charter or declaration of protection and privileges granted to foreign merchants, first published by Edward I. in 1303; who also afoertained the customs or duties, which those foreign merchants, in return for the said charter, were to pay on merchandise exported and imported. Upon the grounds of this famous charter, historians agree that this king was the first who established the great customs on merchandise. This charter was confirmed by Edward III. in 1328.

Charta paxdonationis se defendenda, is the form of a pardon for a person's killing another man in his own defence.

Charta paxdonationis uti garata, is the form of a pardon of a man who is outlawed.

Charta simplex, is a single deed, or deed-poll. See Deed.

Charta, in Ancient Geography, a place of Asia in Mesopotamia, where the Romans had a garrison.—Also, a town of Palestine, mentioned in the book of Joshua as belonging to the tribe of Zebulon; it was granted to the Levites of the family of Merari.

Chartagune, in Military Language, a solid retrenchment almost always withdrawn from the enemy's view, that is thrown up in a wood or forest for the defence of an important place.

Charta, in Ancient Geography, a large and rich town of Asia, situated to the call of Hircania.

Chartan, a town of Palestine, in the tribe of Naphtali. It was granted to the Levites of this tribe, who were of the family of Gerham.

Chartani, a people of Africa, placed by Ptolemy in Libya near Egypt.

Chartarius, the name with chartophylax.

Chartel. See Cartel, Champion, Combat, Duel, &c.

Charte, Chart, in Law, an instrument or written evidence of a thing under the seal of a prince, lord, church, chapter, or community.

The word charter comes from the Latin charta, anciently used for a public or authentic act; from Xaper, thick paper or parchment, wherein public acts were used to be written.

Bracontays, donations are sometimes made in charters, in perpetuum rei memoriam; and Britton, in his 35th chapter, divides charters into those of the king and those of private persons.

Charters of community, were certain privileges first obtained by violence, or purchase, and afterwards freely be- lowed by emperors, kings, and barons; whereby the inhabitants of towns and cities were enfranchised, all marks of servitude abolished, and these cities, &c., were formed into corporations and bodies politic, to be governed by a council and magistrates of their own nomination. The first person who conferred these privileges, was Lewis the Gros in France, about the beginning of the twelfth century; and his example was followed very generally by others. These charters convey a very striking representation of the wretched condition of cities previous to the institution of communities, when they were subject to the judges appointed by the superior lords of whom they held, and had scarcely any other law but their will. Each concei- tion in these charters must be considered as a grant of some new privilege which the people did not formerly enjoy, and each regulation as a method of redressing some grievance under which they formerly laboured. The charters of communities contain likewise the first expedients employed for the introduction of equal laws and regular governments. For an account of the most important articles in these charters ranged under the two general heads, of such as respect personal safety, and such as respect the security of property; See Robertson's Ch. V. vol. i. p. 348. &c. See Cities.

Among royal charters granted to communities, it appears that in the reign of Edward IV. by his letters patent under the great seal of his realm of England, bearing date the 24th of April, 1469, in the nineth year of his reign, this patent, "of and for him and his heirs, give and grant licence into Walter Holiday, Marshall, John Cuff, and Robert Marshall, Thomas Granc, Thomas Calthorne, William Cliff, William Christian, and William Eyneyham, then minifrels of the said king, that they by themselves should be in deed and name one body and comonality, perpetual and capable in the law, and should have perpetual feceffion; and that as well the minifrels of the said king, which then were, as other minifrels of the said king and his heirs which should be after-
wards, might at their pleasure, name, chuse, and ordaine, and successively constitute from among themselves, one marshall, able and fit to remain in that office during his life, and also 2 wardens every year to govern the said fraternity and guild.

The original charter is preferred in Rymer's Polyglotta, tom. xii. Pro fraternitate imparabilis regis. James the First, upon what beneficial principle it is now difficult to discover, by letters-patent incorporated the musicians of the city of London into a company, and they still continue to enjoy privileges in consequence of their constituting a fraternity and corporation; bearing arms azure, a swan argent, within a treble counter-flour, or: in a chief, gules, a rose between two lions, or: and for their crest the celestial sign Lyra, called by astronomers the Orphian Lyre. Unluckily for the bona vivans of this tuneful tribe, they have no hall in the city for festive delights! However, on days of greatest gourmandize, the members of this body are generally too busily employed in exhilarating others, comfortably to enjoy the fruits of good living themselves. And here historical integrity obliges us to say, that this company has ever been held in derision by real professors, who have regarded it as an institution for foreign to the cultivation and prosperity of good music, as the train bands to the art of war. Indeed the only uses that have hitherto been made of this charter seem the offering to aliens an easy and cheap expedient of acquiring the freedom of the city, and enabling them to pursue some more profitable and respectable trade than that of building; as well as empowering the company to keep out of processions and city feasts every street and country dance player of superior abilities, to those who have the honour of being styled the worth of the corporation.

This charter granted by Charles I, to the musicians of the city of Westminster, had lain dormant from that time till the reformation; but immediately after that event, the persons named in it, who were still living, determined to refuse music from the disgrace into which it had fallen, and exert their authority for the improvement of the faculty, and interest of its professors. Fifty-two musicians, consisting of the king's band and other professors, natives and foreigners, the most eminent of the time, were enrolled in this charter as the king's musicians: "and all such as are, and shall be the musicians of his majesty, his heirs and successors, shall from henceforth for ever, by force and virtue of the said grant, be a body corporate and politic, in deed, fact, and name." The other powers granted by this charter, allowed the corporation to meet from time to time, in order to make bye-laws and impose fines on such as transgressed them, "which fines they shall have to their own use."

In pursuance of these powers, the corporation hired a room in Durham Yard, in the Strand, within the city and liberty of Westminster. Their first meeting was on the 22d day of October, 1661; Nicholas Laniere then being marshal; from which day they proceeded to make orders, summoning, fining, and prosecuting the first professors who dared "to make any benefit or advantage of musick in England or Wales," without first taking out a licence from their fraternity. Among the instances of the exercise of their power, Jan. 13th, 1665, it was "ordered that Matthew Lock, Christpher Gibbons, Dr. Charles Colman, and William Gregory, do come to the chamber at Durham Yard, on Thursday next, at 2 of the clock in the afternoon, and bring each of them ten pounds, or threew caufe to the contrary."

This seems to have been one of the most oppressive and unmeaning monopolies with which the Stuarts had long vexed the nation. Such a tyranny as this over the professors of a liberal art, there is reason to fear, would be abused in whatever hands it was lodged. The College of Physicians, which superintends the dispensations of life and death, may have its life by preventing or detecting Charlatanerie; but that the minister of our innocent amusements should be subject to any other control than that which the common law of the realm is empowered to exercise over men of all ranks and degrees in the state, seems at first but a wanton and useless, if not a noxious delegation of power, which was less likely to benefit the public, or accelerate the progress of the art, than to enable artificers to torment and harass each other.

It appears by the transcriptions of this corporation, the minutes of which are extant in the British Museum among the Harleian MSS. No. 1911, that the meetings of its members continued no longer than 1679; when finding themselves involved in law suits and incapable of enforcing the power they assumed, and penalties they threatened, it was thought most advisable to leave the art and arts to the neglect or patronage of the public.

The fund for the support of decayed musicians or their families, established in 1738, and formed into a regular society of musicians, after the commemoration of Handel, in 1784, having been honoured by his majesty's immediate countenance and protection, and graciously allowed to assume the title of Royal Society of Musicians, had a charter granted them. See Commemoration of Handel, and Fund for decayed Musicians and their families.

Charter of the forest, is that wherein the laws of the forest are comprised and established. In the time of king John, and that of his son, Henry III., the rigours of the feudal tenures and the forest laws were so warmly maintained, that they occasioned many infractions of the charters or principal foundations; which at last produced all this effect, that first king John, and afterwards his son, conferred on the two famous charters of English liberties, magna carta, and carta de foresta. The latter, in particular, was well calculated to redress many grievances and inroads of the crown in the exerion of forest law. This charter, as well as the other, was established, confirmed, and settled in the reign of Edward I. See Forest.

Charter, Great, Magna charta. See Magna charta.

Charters of immunity or franchises, were granted to some towns and villages by the lords on whom they depended, long before the institution of communities in France. But there are very different from such as became common in the 12th and 13th centuries. They did not erect these towns into corporations; they did not establish a municipal government; they did not grant them the privilege of bearing arms; they contained nothing more than a manumission of the inhabitants from the yoke of servitude; an exemption from certain services which were oppressive and ignominious; and the establishment of a fixed tax or rent which they were to pay to their lord in lieu of impositions which he could formerly lay upon them at pleasure. Two charters of this kind to two villages in the county of Rouillon, one A. D. 974, the other A. D. 1025, are still extant. Such concessions, it is probable, were not unknown in other parts of Europe, and may be considered as a prep towards the more extensive privileges conferred by Louis the Great on the townsfolk from his dominions. See Charters of community.

Charters of the king, are those whereby a king makes a grant to a person or community; v. gr. a charter of exemption, that a person should not be imprisoned on a jury, &c. See Letters patent.

Charter of pardon, is that whereby a person is forgiven a felony, or other offence against the king's crown and dignity, of which there are several forts. See Pardon.
CHARTERS OF PRIVATE PREFACE, are deeds and instruments for the conveyance of lands, etc. And the purchaser of lands shall have all the charters, deeds, and evidences as incident to the same, and for the maintenance of his title. Co. Litt. 6. Charters belong to a feoffee, although they be not sold to him, where the feoffees are not bound to a general warranty of the lands; for there they shall belong to the feoffor, if they be sealed deeds or with in writing, but other charters go to the tenant. Monr. Ca. 687. The charters belonging to the feoffor, in case of warranty, the heir shall have, though he hath no land by descent, for the possibility of descent after. 1 Rep. 1.

CHARTER GOVERNMENTS in the British colonies, are in the nature of civil corporations, with the power of making by-laws for their own interior regulation, not contrary to the laws of England; and with such rights and authorities as are specially given them in their several charters of incorporation. The form of government is borrowed from that of England. They have a governor named by the king (or in some proprietary colonies by the proprietor), who is his representative or deputy. They have courts of justice of their own, from whom decisions an appeal (as fome say, in the nature of a reference by way of arbitration) lies to the king in council here in England. Their general assemblies, which are their house of commons, together with their council of state, being their upper house, with the concurrence of the king, or his representative, the governor, make laws suited to their own emergencies. But it is particularly declared, by Stat. 7 and 8 W. III. c. 22, that all laws, by-laws, usages, and customs, which shall be in practice in any of the plantations, repugnant to any law, made or to be made in this kingdom, relative to the said plantations, shall be utterly void and of none effect. These are called charter governments, by way of distinction from the provincial establishments, the constitutions of which depend on the respective charters issued by the crown to the governors, and the instructions attending them; under the authority of which, provincial assemblies are constituted, with the power of making local ordinances, not repugnant to the laws of England; and also from proprietary governments, granted out by the crown to individuals, in the nature of feu-duty principalities, with all the inferior regalities, and subordinate powers of legislation, which formerly belonged to the owners of counties palatine. See farther Blackstone's Comm. vol. 1. p. 108.

CHARTERER is in some places, as Cheshire, used for a freeholder.

CHARTER-HOUSE. See CHARTERHOUSE.

CHARTER-LAND, in law, is such as a man holds by charter, that is, by evidence in writing; otherwise called freehold. This the Saxons called buck land; which Lambard renders, terra ex scripto. See BUCK-LAND.

It was held on more easy conditions than the folk-land, or terra fine scripto, held without writing: the former being hereditaria libera et immunis; whereas the latter confin perstatbam annum, atque officiorum quodam ferocitate erat obigatus. This kind of land was held by deed under certain rents and free services, and in effect was no respect different from free foage lands; and hence have arisen most of the freehold tenants who hold of particular manors, and owe suit and service to the same.

CHARTER PARTY, in commerce, denotes the instrument of freightage, or articles of agreement for the hire of a vessel. This, among merchants and sea-faring men, is commonly called "a pair of indentures," containing the covenants and agreements made between them, touching their merchandize and maritime affairs. 2 Inst. 673.

The charterparty is in writing, and it is to be signed both by the proprietor, or the master of the ship, and the merchant who freights it.

The charterparty is to contain the name and the burden of the vessel; those of the master and the freighter; the price, or rate of freight; the time of loading, and unloading; and the other conditions agreed on.

It is properly a deed, or policy, whereby the master, or proprietor of the vessel, engages to furnish immediately a sound found vessel, well equipped, caulked, and flopped, provided with anchors, sails, cordage, and all other furniture to make the voyage required, as equipage, hands, victuals, and other munitions; in consideration of a certain sum to be paid by the merchant for the freight. Lastly, the ship, with all its furniture, and the cargo, are respectively subjected to the conditions of the charterparty.

The charterparty differs from a bill of lading, in that the first is for the entire freight, or lading, and that both for going and returning; whereas the latter is only for a part of the freight, or at all only for the voyage one way.

The common law confirms charterparties, as near as may be, according to the intention of them, and not according to the literal sense of traders, or those that merchandise by sea: but they must be regularly pleaded. In a case of covenant by charterparty that the ship should return to the port whence she sailed, and not to another place, the Admiralty, by a certain time, "dangers of the sea excepted," and afterwards, in the voyage, and within the time of the return, the ship was taken upon the sea by pirates, so that the master could not return at the time mentioned in the agreement; it was adjudged that this impediment was within the exception of the charterparty, which extends as well to any dangers upon the sea by pirates and men of war, as dangers of the sea by shipwreck, or storm, etc. Stile 132. 2 Rol. Abr. 248. A ship, freighted at a certain premium per month of the time that the ship shall be out, and covenanted to be paid after her arrival in the port of London, is cast away coming up from the Downs, but the lading is all preserved; in this case the freight shall be paid, for the money becomes due monthly by the contract, and the place mentioned is only to ascertain where the money is to be paid; and the ship is entitled to wages, like a mariner that serves by the month, whose executors, if he dies in the voyage, are to be answered to prorata. Mill. de Jur. Marit. 260. If a part-owner of a ship refuse to join with the other owners in the fitting out of the ship, he shall not be entitled to any share of the freight; but by the course of the Admiralty, the other owners ought to give security if the ship perils in the voyage, to make good to the owner standing out, his share of the ship. Sir L. Jenkins, in a case of this nature, certified that by the law marine and course of the Admiralty, the plaintiff was to have no share of the freight; and that it was so in all places: for otherwise there would be no navigation. Lex Mercat. See Freight and Insurance.

The president Boyer says, the word comes from hence, that per medium charter inclusio, & sic ficta charter partia; because in the time when notaries were less common, there was only one instrument made for both parties: this they cut in two, and gave each his portion, and joined them together at their return, to know if each had done his part. This he observes to have been practiced in his time; agreeable to the method of the Romans, who, in their stipulations, used to break a staff, each party retaining a motley thereof as a mark.

CHARTER SCHOOLS are schools in Ireland, of which there are 58, designed for the instruction of the children of the Papists and other poor natives, in the English tongue and the
the principles of morality and true religion; besides two called the "Ranelagh Schools," which admit only the children of Protestants. The excellent Mr. Howard, in his journey to Ireland, examined the state of these schools, and made a report upon them to the committee of the House of Commons in 1738. He has given a particular account of them, with appropriate remarks in his "Account of the principal Lazaretto in Europe," &c. p. 101, &c. See School.

CHARTIER, Alain, in Biography, a native of Bayeux, one of the first French citizens who aspired to elegance, flourished about the year 1430. He was secretary to the kings Charles VI. and VII. and employed in several embassies. His compositions in prose excelled those that were poetical, and he spoke as well as he wrote, so that he was esteemed the father of French eloquence. The following curious anecdote relating to him is recorded. Margaret of Scotland, first wife to the dauphin, afterward Lewis XI., as she passed through the Louvre, observed Alain asleep, and went and kissed him. When her attendants expressed their surprise that the should thus deign to copy a man remarkable for his ugliness, she replied, "I do not kiss the man, but the mouth that has uttered so many charming things."

His works were published by the elder Du Chesne, in 1617, in 4to: the first part consisting of his works in prose, viz. the "Curial," a "Treatise on Hope," the "Laudatologia Inedita" against Edward III.; and others, partly spurious; and the second part containing his poems, which are, for the most part, obscure and tedious. Alain Chartier died at Avignon in 1449. Nouv. Dict. Hill.

CHARTIER, John, brother of the preceding, was a Benedictine monk, and charter of St. Denis. He was the author, at least, the compiler, of a dry work, displaying much credulity and inaccuracy, entitled the "Great Chronicles of France," commonly called "Chroniques de St. Denis," from Pharamond to the death of Charles VII., 3 vols. fol. Paris, 1543. His "History of Charles VII." was published at the Louvre, in 1651, fol. by the learned Godfriedon, who enriched it with his notes and several unedited pieces. Nouv. Dict. Hill.

CHARTIER, René, born at Vendome, where he received the rudiments of his education. He was sent thence to Paris, and having completed his studies, was made doctor in medicine on the 14th of August 1668. He was soon after appointed by the faculty of medicine professor in surgery and pharmacy. In 1612, he was made physician in ordinary to the king, and to the princes of France. With one or other of the princes, in their turn, he visited the courts of Spain, Savoy, and England. Returning at length, and settling at Paris, his whole time seems to have been employed in forming the splendid edition of the works of Hippocrates and Galen, which goes under his name, and in which he is said to have expended so large a sum of money, (five-quantes mille ecus, his biographer says) as to reduce himself nearly to a state of indigence. The work is printed in 13 volumes, though usually bound in 9, and the volumes came out at different times, but not in the order of their numbers. Of the ten volumes, which were published in the lifetime of the editor, the first six, the eighth, and the thirteenth, appeared in the year 1639, the seventh and the eleventh ten years after, viz. in 1649; the ninth, the tenth, and the twelfth volumes, which completed the work, were printed under the care and direction of doctors Blondel and Le Maine, and did not appear until the year 1672. Though the editor spared neither labour nor expense in his endeavours to give perfection to the work, and has arranged his materials so that any of the treatises, by either writer, may be turned to with facility; yet, in the opinion of Fried, and Mack, to which Haller also accedes, the works of Hippocrates, as here exhibited, are more imperfect than in some earlier editions.

Cherchant also edited "Ludovici Dureti Scholia ad Jacobi Hallerii Librum de Mibus internis," Paris, 1614, 4to. "Bartholomaii Perdelius, Universa Medicina," ibidem, 1630, 4to. His son John, who was created doctor in medicine in 1634, published, translated from the Greek, "Palladii de Februbus, concilia Synoposis," 1616, 4to., and in 1611, "La Science du Plomb sacra des Sages, ou de l'Antimonie, on font decrites les rares et particulieres virtus, puissances, et qualites," 4to. This work gave great offence; the faculty of medicine at Paris, with Guy Patin at their head, being particularly hostile to antimonial medicines. To ridicule their foolish prejudices, Chartier placed at the head of his book the figure of an owl, with the following lines:

"Le hibou fait la chante vivifique
Et bien qu'il ait lunettes et flambeaux,
Il ne peut voir les secrets les plus beaux
De l'antimonie, et du vin enemique."

John Chartier was also professor in surgery, and physician in ordinary to the king, in which honour he was succeeded by his younger brother Philip, who was created doctor in medicine in the year 1659. Haller Bib. Med. Eloy Dict. Hill.

CHARTIER, in Geography, a township of America, in the county of Washington and state of Pennsylvania.

CHARTIER, St. a town of France, in the department of the Indre, and district of La Châtre; 1/3 league N. of it.

CHARTIER'S Creek. See CANONSBAY and MORGANZA.

CHARTIS redhendis, a writ which lay against him that had charters of feoffment intrusted to his keeping, and refused to deliver them to the owner. Reg. Oeg. 159.

CHARTOPHYLACIUM, a place where records were kept.

CHARTOPHYLAX, an officer in the church of Constantinople, intrusted with the custody of the archives.

The word is formed from χαρταὶ, and χαρτου, χαστός; and signifies charter-keeper.

Codi calls the grand chartophylax the judge of all causes, and the right arm of the patriarch. He adds, that he was the depositary or keeper of all the charters relating to the ecclesiastical rights; and that he prefigured over matrimonial causes, and was judge of all the clergy. He drew up all the ceremonies and decrees of the patriarch, who signed and sealed them: he prefigured the grand council of the patriarch: he took cognizance of all matters and causes ecclesiastical and civil, whether among the clergy, the monks, or the people.

He took place of all the bishops, though himself only a deacon; and, on occasion, discharged the functions of the priests: he had twelve notaries under him.

The chartophylax was much the same at Constantinople with the chartular in Rome.

There were, in reality, two officers who bore this title; the one for the court, the other for the patriarch; the first was called also registrator, and the latter scriinarius: though the two are usually confounded together. Leunclavius, and others, confounded chartophylax with chartular.

CHARTRAIN, in Geography, a small county of France, so called before the revolution, in the environs of Charent, its capital.

CHARTRE, La, a town of France, in the department of the Sarthe, and chief place of a canton in the district of St. Calais; two leagues E.N.E. of Chateau-du-Loir. The place...
place contains 173, and the canton 10,153 inhabitants: the territory includes 1,5 kilometres and 9 communes.

CHARTRES, a city of France, and principal place of a district in the department of the Eure and Loir, one of the most ancient towns of the country, and before the revolution, the seat of a bishopric, finally the capital of the diocese of Chartres. Its cathedral is esteemed one of the most beautiful churches in the kingdom. It is situated on the Eure, over which is a bridge, constructed by the celebrated Vauban. Its principal trade is in corn. The place contains 14,400, the north canton 16,783, and the south canton 16,321 inhabitants: the territory includes 6764 kilometres and 35 communes. N. lat. 28° 46' 46". E. long. 1° 28' 55'.

Chartres, a fort built by the French on the easterly side of the Milliphi; three miles northerly of La Prairie du Rocher, or the Rock-Meadows, and 12 miles northerly of St. Genevieve, on the western side of that river. It became untenable on account of the constant washings of the high floods of the Milliphi, and was abandoned in 1772. South of the fort is a village which was very inaccessible in 1778; above this is another village, settled by 170 warriors of the Piorias and Mitchigamias tribes of Illinois Indians, who are idle and debauched.

CHARTREUSE, a celebrated monastery of Carthusians; so called from the name of a steep rocky place, in a frightful defart, five leagues from Grenoble in France; where St. Bruno retired from the world, and first instituted the order of Carthusians, which fee.

The name has since passed to all houses of Carthusians; and that near Grenoble is now distinguished by the name of the Great Chartreusse.

That of London, corruptly called Charter-houfe, was before the suppression of monasteries by Henry VIII. a priory belonging to that order, and from the powers by which it was first erected into a hospital, it was denominated *The Hospital of king James." On occasion of a dreadful plague which filled all the common burial grounds with the dead, Walter de Manny, a Fiennish nobleman, purchased in 1549, of the master and brethren of St. Bartholomew's Hospital in Smithfield, 13 acres and a rod of land, denominated *The Siptal Crott," and appropriated the same, after it had been inclosed and concreted, as a common cemetery for the accommodation of such deceased persons as could not have place in their respective parish grounds. A chapel was also erected in the said cemetery by the right honourable proprietors, in which many liberal oblations were made for several succeeding years. In 1571, Manny founded in this place a Carthusian monastery; and the revenues of this convent amounted, at the time of its suppression in 1588, to 642 l. 4s. 4d. per annum, which was conferred upon Sir Thomas Audley, speaker of the House of Commons, and from him descended to Thomas, earl of Suffolck, who disposed of it to Thomas Sutton, esq. by the name of "Howard-houfe," commonly called the "Charter-houfe," consisting of divers courts, a wilderufs, orchards, walks, and gardens, &c. for which he paid the sum of 13,000l. in 1611. By letters patent obtained in this year, the hospital was established, and confirmed by parliament, in 1628.

The charge of the establishment for the admission of pensioners and scholars, together with the original purchase-money, amounted to 20,000l. Besides this sum, Sutton endowed his hospital, called "Sutton's Hospital," with 15 manors, and other lands, to the amount of 4,912 l. 19s. 10d. per annum. After considerable losses, which this hospital sustained in 1633, 1624, and 1649, Sir Richard Sutton, one of the founder's executors, improved the estate belonging to the foundation to such a sum, that in the year 1673, it amounted to 539 l. 12s. 6d. yearly. It has since amounted to about 12,000l. This establishment is to consist of decayed gentlemen, soldiers, and merchants; eighty of whom have a partial maintenance of diet, lodging, and instead of apparel, a gown once in two years, and 4l. per annum, physic, &c. living together in a collegiate manner; and of scholars, or youths, forty of whom are taught, and furnished with necessaries, and each of them are fit for the university (it is thither, with an exhibition of 40l. per annum for the first four years, and 60l. for the four la<s, on condition of constant residence, viz. eight months in the year; the rest are put to trades, with a premium of 40l. each. As a further encouragement to the scholars brought up in this foundation, there are several ecclesiastical préférences in the patronage of the governors, who, according to the constitutions of the hospital, are to confer on them those that were educated in this school.

For the superintendency of this hospital there are sixteen governors, generally of the prime quality; vacancies being supplied by the election of the remaining governors. The ordinary officers are, a master, preacher, regifter, treasurer, school-mater, &c.

CHARTREUX, religious of the order of St. Bruno, called also Carthusians.

CHARTREUX, poudre de. See KERMS mineral.

CHARTULARY, Chartularius, a title given to an ancient officer in the Latin church, who had the care of charters and papers relating to public affairs.

The chartulary preferred in ecclesiastical judgments, in lieu of the pope.

In the Greek church, the chartulary was called chartophylax; but his office was there much more considerable; and none even equaling the chartulary from the CHARTOPHYLAX in the Greek church.

CHARUS, in Ancient Geography, a river of Asia, in that part of the Colchide which was to the right of the Phasis. Strabo says, that the town of Saphalopolis or Disofcuria, was situated near this river.

CHARWELL, in Geography, a river of England, which runs into the Thames, at Oxford.

CHARYBDIS, a tappowed whirlpool in the straits of Messina, between the coast of Calabria and that of Sicily, and thought in ancient times to be very dangerous to navigators. According to the tables of the poets, Scylla (which see) and Charybdis were two sea-monsters, whose dreadful jaws were continually directed to swallow unhappy mariners; the one situated on the right, and the other on the left extremity of the straits of Messina, where Sicily fronts Italy. Thus Virgil describes them:

"Dextrum Scylla latus, levum implicata Charybdis Obfidet, atque imo bernthi ter gurgite vadis Sorbet in abruptum fluctus, rursumque sub auris Linget alternos, et ferdes verbearum undis: At Scyllam cervus exhibet fpiunea laterbris Ora exercentia, et cymbales in fixa trahentem. Prima hominum factus et pulchro peccabo virgo Pute tenuis; podrema immami corpore pritis. Dulphishum caudas utero commissi luperum."

"Far on the right her dogs foul Scylla hides; Charybdis roaring on the left precedes, And in her greedy whirlpool fakes the tides. Then spouts them from below; with fury drive'n The waves mount up, and wash the face of heav'n. But Scylla from her den, with open jaws, The linking vessel in her eddy draws, Then..."
Then dashes on the rocks: a human face
And virgin bosom, hide her tail's disgrace:
Her parts obscure below the waves defend,
With dogs inclo'd, and in a dolphin end."  

Dryden.

Charybdis is situated within the strait, in that part of the sea which lies between a projection of land named "Punta Scossa," and another projection on which stands the tower called "La Panteria," or the light-house; a light being placed at its top to guide vessels which may enter the harbour by night. The ancient and modern authors who have written concerning Charybdis, have all (Spallanzani excepted) supposed it to be a whirlpool. Homer is the first writer who has represented Charybdis as a monster which three times in a day drinks up the water, and three times emits it forth.

"----- ex Χαρυβδίς απαίφθονι μεγὰ ναός,
Τεσί μεγά τ' αὐτὸν ν' ἐπὶ ἑαυτῷ, τεσί διαφῆβον
Δωμαν."  

Hom. Odyss. xii.

Beneath Charybdis holds her haiforous reign
'Midst roaring whirlpools, and absoirs the few:
Thrice in her gulfs the boiling sea subsides,
Thrice in dire thunders she returns to the tide.

Pope.

The description of Virgil, above cited, differs from that of Homer only in placing a deep gulph below. Strabo, Hid- dorus, Tzetzes, Hefychius, Didymus, Euthathius, &c. concur in the same opinion. The Count de Buffon adopts the idea of Homer in full confidence, and places Charybdis among the most celebrated whirlpools of the sea. "Charybdis," says he, "absoirs and rejects the three waters three times in 24 hours." Strabo tells us, (ib. vi.) that the fragments of ships swallowed up in this whirlpool are carried by the current to the shore of Tauromenium (the present Taormina) 30 miles distant from Charybdis. In confirmation of this tradition, an amusing though tragical anecdote is related of one Colas, a Melianus diver, who had acquired, from his being able to remain a long time under water, the surname of "Pêçe" the fish. It is reported, that Frederic, king of Sicily, who came to Messina on purpose to see him, tried his abilities by throwing a golden cup into Charybdis, which, if he brought up, was to be the reward of his re- solution and dexterity. The hardy diver, after having twice astonished the spectators by remaining for a long time under water, plunged into it a third time and appeared no more: but, some days after, his body was found on the coast near Taormina. Spallanzani determined to investigate, by his own observation, the truth of the opinion which had been entertained with respect to Charybdis.

It is distant from the shore of Messina about 750 feet, and is called by the people of the country "Calofaro," from "καλος" and "φαρος," i.e., "the beautiful tower," from the lighthouse erected near it for the guidance of vessels. The phenomenon of the Calofaro is observable when the current is descending: when the current is given from the north, the pilots call it the "descending rema" or current; and when it runs to the south, the "ascending rema." The current ascends or descends at the rising or setting of the moon, and continues for 6 hours. In the interval between each ascent or descent there is a calm which lasts at least a quarter of an hour, but not longer than an hour. After- wards at the rising or setting of the moon, the current enters from the north, making various angles of incidence with the shore, and at length reaches the Calofaro. This de- lay sometimes continues 2 hours. Sometimes it immediately falls into the Calofaro, and then experience has taught that it is a certain token of bad weather. Spallanzani, apprised by the pilots that there was no danger in visiting the Calofaro, approached it in a bark managed by some expert mariners, who assured him of his safety. When he observed Charybdis from the shore, it appeared like a group of tumultuous waters, which became more exccuse and more agitated in his nearer access to it: but upon being carried to the edge he was convinced that what he saw was by no means a vortex or whirlpool. Hydrocyclists teach us, that by a whirlpool in a running water we are to understand that circular course which it takes in certain circumstances; and that this course or revolution generates in the middle a hollow inverted cone, of a greater or less depth, the internal sides of which have a spiral motion. But nothing of this kind was perceived in the Calofaro. Its revolving motion was circumfered within a circle of about 500 feet in diameter, within which limas there was no incarceration of any kind, nor vertiginous motion, but an incessant undulation of agitated waters, which fell, burst, and dashed against each other. Yet these irregular motions were so far placid that nothing was to be feared in passing over the lipot; though his little bark rocked very much from the continual agitation; so that the mariners were obliged constantly to make use of their oars to prevent its being drawn out of the Calofaro. Substances thrown into the stream that were heavier than the water, sunk and were no more seen; those which were lighter remained on the surface, but were soon driven out of the revolving circle by the agitation of the water. Spallanzani, thus convinced that there was no gulph under the Calofaro, because in that case there would have been a whirlpool, which would have carried down into it the floating subfuscions, founded the bottom with a plummet, and found that its greatest depth did not exceed 600 feet. From these facts he concluded, that at the time of his observation, there was no whirlpool in Charybdis; though it might have been different when the sea was tempestuous. In order to satisfy himself concerning this circumstance, he questioned the pilots who had frequently seen Charybdis in its greatest fury, and obtained from them the following account: When the current and the wind are contrary to each other, and both in their greatest violence, especially when the south wind blows, the swelling and dashing of the waves within the Calofaro are much more impetuous and extensive. It then contains three or four small whirlpools, or even more, according to the degree of its extent and violence. If at this time small vessels are driven into the Calofaro by the current or the wind, they are seen to whirl around, rocks, and plunge; but are never drawn into the vortex. They merely sink when filled with water by the waves beating over them.

When vessels of a larger size are forced into it, whatever wind they have they cannot extricate themselves; their sails are useless; and after having been for some time tossed about by the waves, if they are not affailed by the pilots of the country, who know how to bring them out of the course of the current, they are seriously driven upon the neighbouring shore of the Lantern, where they are wrecked, and the greater part of their crew perish in the waves. Spallanzani having evinced the erroneousness of the opinion with respect to Charybdis, that has been transmitted from Homer to the present time, further observes, that Homer was not exact with regard to the situation of Charybdis. The ancient poet, probably mulied by the account which he had received from others, and not having had an opportunity of observing it himself, places Charybdis near Scylla: the distance from one of these rocks to the other being an arrow's flight, which does not at all accord with the present situation of

3 Z 2 of
of Scylla. Although within the present century the strait of Messina has become narrower, yet we know from various and unquestionable testimonies that, long before this event, Charybdis was situated where it is at present, on the side of Sicily, a little beyond Messina. Our ingenious writers proceed to inquire what foundation there is for the popular idea of the

"Incident in Scyllam, euphemis vitae Charybdis," i.e. he who endeavours to avoid Charybdis, dashes upon Scylla; which proverb was applied by the ancients to those who, while they sought to shun one evil, fell into a worse. The Messine pilots informed him, that this misfortune, though not always, yet frequently happens, unless proper measures are taken in time to prevent it. If a ship be extricated from the fury of Charybdis, and carried by a strong southerly wind along the strait, towards the northern entrance, it will pass out safely; but should it meet with a wind in a nearly opposite direction, it will become the sport of both these winds, and, unable to advance or recede, be driven in a middle course between their two directions, that is, full upon the rock of Scylla, if it be not immediately afflicted by the pilots. They added, that in these hurricanes a land wind frequently rises which descends from a narrow pass in Calabria, and increases the force with which the ship is impelled towards the rock. If it be slight, how it happens that Scylla and Charybdis are now less dangerous than they were in former times, as Scylla still remains, as it was in the time of Homer, and Charybdis must at present be more perilous because the strait of Messina is become narrower; the answer is, that the difference arises from the improvement of the art of navigation which, formerly in its infancy, dared not launch into the open sea, but only ventured to creep along the shore; but time, study, and experience, have rendered her more mature, better informed, and more courageous: so that she can now pass the widest seas, brave the most violent tempests, and laugh at the fears of her childhood. See Spallanzani's Travels in the Two Sicilies, vol. iv. Thucydides (lib. xi.), and some other approved historians, use the term Charybdis to signify the whole strait between Sicily and Calabria.

Charybdis, a place of Syria, between Antioch and Aphaena. Strabo says, that the river Orontes is lost in this place, and that it rises again to view about 40 itad. below it.

Charybdis is also a word used by Dr. Plot to express certain openings which he supposes in the bottom of the sea, by which its waters are received and conveyed by a subterranean circulation to the origin of fountains and springs. The fusa mofhenicus, or masthfrine on the coast of Norway, is supposed to be owing to some such subterranean indract; and it is advanced also, that the Mediterranean sea could not be emptied of the vast quantities of waters which it receives, but must overflow the land of Egypt, unless swallowed by some such charybdis, which is either in some part of the bason of that sea, or near the mouth of it; in which case, it may be the occasion of that strong under-current, described by all those who have treated of this sea. An immense charybdis, placed near the strait's mouth, may be hid under the immensity of waters there; but as it would absorb the deep waters continually, and in large quantities, it would necessarily cause such an under-current there. See VAPUX.

Charybdis, in Mythology, was a female robber, who, according to the fable, stole the oxen of Hercules, for which she was struck with a thunder-bolt by Jupiter, and turned into a whirlpool dangerous to navigators.

CHASE, in Agriculture, is a word sometimes employed to denote a row or rank of thorns, &c. Thus, in the planting of quicksets, a single chafe signifies a single row; and a double chafe a row planted below the first, not immediately underneath the upper plants, but under the middle of intermediate spaces or vacant parts.

CHASE, or Chase, in Law, is used for a driving of cattle from any place, to a distant part, &c.

CHASE, or Chase, in a general sense, denotes a great extent of woody ground lying open, and privileges for wild beasts and wild fowl; the beasts of the chase comprehending not only the buck, doe, fox, martin, and roe, but, in a common and legal sense, all the beasts of the forest. Co. Litt. 233. A chase differs from a park in not being inclosed, and also in this particular, that a man may have a chase in another person's ground, as well as in his own; it being indeed the liberty of keeping beasts of chase or royal game therein, protected even from the owner of the land, with a power of hunting them there. Bl. Comm. vol. ii. 38. But if a man have a chase within a forest, and he kill or hunt any flag, or red deer, or other beasts of the forest, he is liable to a prosecution.

Yet the same author adds, that a forest may be granted by the king to a subject, in so ample a manner, as that there may be courts equivalent to a court of attachment, swainmote, and justice-feat. Yet it is of a large extent, and flanked both with a greater diversity of wild beasts, or game, and more keepers, than a park. Crompton observes, that a forest cannot be in the hands of a subject, but it forswrith loses its name, and becomes a chase; in regard all these courts lose their nature when they come into the hands of a subject; and that none but the king can make a lord chief justice in the coire of the prey.

The common law, no person is at liberty to take or kill any beasts of chase, but such as hath an ancient chase or park; unless they be also beasts of prey.

But the same author adds, that a forest may be granted by the king to a subjeet, in so ample a manner, as that there may be courts equivalent to a court of attachment, swainmote, and justice-feat. It is not lawful to make a chase, park, or warren, without licence from the king under the broad seal. See Forest, Game, and Park.

CHASE, belief. See Beasts.

CHASE, or Chase, wild-goat, a term used to express a fort of racing on horse-back. Use formerly, which resembled the flying of wild geese, these birds generally going in a train one after another, not in confused flocks as other fowls do. In this contest, the horse which was nearest in matches, the two horses, after running twelve fere yards, had liberty, which horse sooner could get the leading, to ride what ground the jockey pleased, the hindmost horse being bound to follow him within a certain distance agreed on by articles, or else be whipped in by the trainers or judges who rode by; and whichever horse could distance the other, according to the interval settled when the match was made, won the race. If the horse which at the beginning was behind, could get before that which first led, then he was likewise bound to follow, till he can either get before, or else the match be lost or won. This fort of racing was not long in common use, for it was found inhuman and destrutive to good horses, when two such horses were matched together. For in this case neither was able to distance the other, until they were both ready to sink under their riders, and often two very good horses were both spoiled, and the wagers forced to be drawn at last. The match of this fort of racing first introduced the method now in use, of running only a certain quantity of ground, and determining the plate or wager, by the coming in first at the poll. It is well known that this
this chafe still preserves its name in a common proverb, and
"that many people follow" it, "without knowing" that
they do so.

"Chafe, in Sea-Language, signifies a vessel pursued by
another, apprehended or known to be an enemy. Hence,
to chafe is to pursue a ship; which is called also giving
chafe.

A vessel that chases another ought to have the advantage
of failing; because, if the ship that is chased were as good
a failer as the chaser, she could never come up with her, if
they maneuvered equally and at the same time. It is there-
fore unsafe to chase a ship, with respect to which you have
does not know how to take the benefit of her equality. In
order to ascertain whether or not your ship fails quicker than
your adversary, you must get in the same track, under
the same fails, and keep the same course with the vessel you
wish to chafe, and let her exactly with a compas. If you
fail right, the chafe will soon be drawn a point more at;
but if she has the advantage, you will in a short time bring
her a point farther forward: if you fail equally, the will
remain in the point you left her at first.

In chasing at sea, the following rules are to be observed,
as the ship that is chased is either to windward or leeward
of the chaser. When the chaser is to leeward of the vessel he
means to pursue, he ought to veer on the same tack as
the enemy, till he brings her to bear exactly perpendicular
to his course, if he has not already paffed that point: then
tack, and continue the second board till he brings the chase
again perpendicular to the direction on which he is standing
by the wind, and he must then heave about again; always
continuing the same manœuvre, by tacking every time he
brings the chafe perpendicular to his course on either board.
In this manner, the chaser will, by the superiority only of
his failing, join the other by the shortest method. You
continue on the same tack as the enemy, when first seen, in
order to lofe no time; because you will always bring the
ship you are in chase of right on your beam, when you have
a superiority of failing, whatever may be the tack she is on,
provided you are careful not to pass that point; but, if per-
chance you shou'd, you must get on the other tack with all
possible dispatch. The chafe heaves about as soon as the
vessel he is in pursuit of is on his beam; because he is,
at this time, at the shortest possible distance, if he chases on
the same tack, and heers the same course with the vessel
chased. If the chaser runs on a different tack from the
vessel chased, he is still to tack when the latter is on his
beam, because the distance is the least possible between
them on the different boards they hold. This mode is pref-
erable to all others; it not only being the shortest, but be-
cause you force the chafe to fly from you close upon a wind,
preailing her more and more from the leeward, by never pass-
ing the point at which the distance between the two vessels,
in plying to windward, is the shortest possible. The wea-
ther ship, which flies, will always be joined by the chaser,
for it is granted she does not fail so well as the purifying
vessel. It is therefore her advantage conflatly to keep one
course, without losing time to heave about, as tacking can-
not be so favourable to her as to her adversary, whose fail-
ing is superior. If the chaser should mistakenly stand on a
long way, and tack in the wake of the chafe, the bel't thing
she can do is to heave in flays, and pafs to windward of him
on the other tack, unless you suppose your vessel would have
a large superiority. If the chapey perfils in tacking in the wake
of the other ship, the chase will be very much prolonged.

When the ship you wish to chafe is to leeward, or
when you are to windward of her, keep the ship away, to
cut her off; and, steering continually on that course, you
come at last together at the point where the courses run by
the two vessels interfect each other. This will be exactly
executed by the chasins ship, if, in the course she has
chosen, she constantly keeps chase in the same degree of the
compsas as at the beginning of the pursuit. This prin-
ciple applies equally to all the courses which the retreating
ship fleers; for overtaking can only be obtained by keeping
in a straight line, which is the shortest possible that can be
drawn between any two points. If you take another course
than that which keeps you in the same point of bearing you
were in with respect to the vessel pursued, at the beginning
of the chase, you would fail, by being either too far a-head
or too far a-tack; that is to say, if the chaise keeps his
wind too close, he will be too much a-head, and consequen-
tly prolong the chase; and, if he keeps too much away, he
will be too far a-tack. These are the only two considera-
tions to be regarded for the performance of this manœuvre;
considerations which are cathy observed, and corrected with
an azimuth compas; for when you fee that, at the end of
a certain time, you bring the chase more a-baff than the first
point of bearing, it is evident you keep your wind too
much; if, on the contrary, you draw her forward, it is a
proof that you keep too much away. These errors are
caly corrected, by fleering, for the first fale, so as to
fee that the chafe is always kept exactly on the same degree of
the compas; and, for the second, you keep your wind a
little more, till you fee that you ret in the same point of
bearing with respect to one another. Then, it is evident
you chase by the shortest and most certain method, since
you reach the chase, in running on a straight line.

The vessel that is to leeward, and chased, ought to run in the
course that will carry her most immediately from the chafier.
Some veffels have greater advantage in going large than others:
some with the wind right aft; and others again are to be
found which go bett clote-hauled. Attention should there-
fore be paid to the known qualities of a ship, in order to
take the most advantageous and most convenient directions
able of effecting a retreat. It is however almost certain,
that if the chase does not fail at least at an equal rate with
the chafe, whatever manœuvre the may practive, the ve-
will at length be overtaken by a skillful chafe adhering to prin-
ciples. If the chase be found right a-head, and fo to the
chafier be put to a flem-chafe, then the bell failer shal1 carry
is, if there be sea-room and day-light. Being come up clote
with the chafe, endeavour to crofs her fore-foot; and by
that means you will both hinder her way, and avoid the
fury of her ordination (except thofe in her chase), and tile
your own, if required, to more advantage; and that as well
your chafe-pieces, at your first getting up within reach, as
your broad-side and quarter-pieces, as you pafs thwart her
hawse, and fcor her decks from flern to flern. If the
makes away from you, ply your guns, as many as possible,
at her fais, yards, masts, and general tackling; and, being
near, fpare not your cafe-shot, or crofs-bar-shot, to make
the greater damage.

Chafe, fern, is when the chafier follows the chased a-
ftern, directly upon the fame point of the compas.

To lie in a ship's fore-foot in a chase, is to fail, and meet
with her by the nearest distance, and fo to crofs her in her
way, or to come accru her fore-foot.

A ship is said to have a good chafe, when she is so built
forward on, or a-ffern, that she can carry many guns to
shoot forwards, or backwards; according to which, the she
is said to have a good forward, or good fern-chafe.

Chafe-guns, are such whole ports are either in the head
called bow-chafes (and then they are used in chasing of others);
or in the fern, called *fern-bafes*, which are only useful when they are purified or chafed by any other flip.

**Chase of a gun. See Cannon.**

**Chase of small, fillets, and girdle. See Cannon.**

**Chase of land.** In Agriculture, is such fort of waste land as was formerly in the state of chase. There are still large tracts of this fort of land in different parts of the kingdom, though much within these few years has been cleared and brought into a state of cultivation. It has been observed by the author of the Middlesex Agricultural Report, in speaking of a tract of this fort of land, in the vicinity of London, that lately been attempted to be brought into a state of improvement, that it abounded with trees and bushes, which rendered it necessary for the cultivators to dig up the soil and flood out the roots, before any of the ordinary operations of husbandry could take place. These were works which not only required, he says, much labour to effect, but also as usually a large expenditure of money, for which there was no immediate prospect of return. Oats was the only article which found a ready sale. The very unusual and extraordinary supply of flack-wood and bavins, to far exceed the demands for these articles, that the price fell far below the woodman's labour. Inexperienced farmers became alarmed at these circumstances, and in consequence set themselves about trying confined, partial, and penurious experiments, certainly very ill-calculated to succeed on a raw crust soil, which had from the earliest ages been shufet up by a thick foliage in an excess of damp, excluded from the benign influence of the solar rays, and every other power of evaporation. It is added, that the wood in the first instance, being only cleared away from small patches of land at a time, such cleared ground was necessarily still left surrounded on all sides by woods, which by the redundancy of damp they occasioned, continued the disorder under which the soil naturally laboured. Again, the flooding up the roots, and digging the soil, as before-mentioned, would unavoidably bury a great part of the surface mould, which was by much the best, and in its stead turn up a worthless clay, a perfect enemy to the whole vegetable world: or at least it would mix so much bad soil with the small portion of good, as to produce together a new surface, certainly much inferior to the one destroyed by this operation. It ought not therefore, he thinks, to excite surprise, that, "under all these disadvantages, the soil should, as it were full and reluctantly, yield back again even so much as the seed town. In fact, it could not otherwise happen till such time as the woods being more generally cleared, the superabundant water drained off, and the excessive damp evaporated, the soil should obtain a proper degree of dryness. Nor even then could great returns be expected, without the application of some stimulating ingredient, as turf-ashes, lime, marl, &c., to correct the natural acidity and crudeness of the soil. But in order to make it permanently productive, manure should have been dealt with a liberal hand.

At length, however, the fire-wood being grubbed, and marketed in less quantities, increased its price; and by the money it produced opened the way for a more extended clearing of the soil. The half-yard wood, which was originally given as a recompence to the labourer for clearing the ground, now yielded to the proprietor seven shillings a flack; the spikes twenty-four shillings; the bavins, when drawn to town, from sixteen to twenty-four shillings per hundred; and the spire, being made up into what they called pimps, several shillings profit.

The account between the proprietor and the labourer therefore now flood thus, viz.

<table>
<thead>
<tr>
<th>To one flack of half-yard wood</th>
<th>£ 1. 6. 0</th>
<th>£ 3. 15. 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 feet long, 3 feet high, and 3</td>
<td>4 0</td>
<td>0 16 0</td>
</tr>
<tr>
<td>feet wide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ditto yard wood ditto</td>
<td>0 2 0</td>
<td>0 16 0</td>
</tr>
<tr>
<td>To 100 spikes</td>
<td>0 1 6</td>
<td>0 6 0</td>
</tr>
<tr>
<td>To 100 bavins</td>
<td>0 2 0</td>
<td>0 8 0</td>
</tr>
<tr>
<td>Roots, and collier's ware, per</td>
<td>0 8 0</td>
<td>0 12 0</td>
</tr>
<tr>
<td>flack, the same measure as the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>half-yard wood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ditto, rough roots</td>
<td>0 7 0</td>
<td>0 11 0</td>
</tr>
<tr>
<td>Pimp per hundred</td>
<td>0 1 6</td>
<td>0 6 0</td>
</tr>
</tbody>
</table>

Together £ 1. 6. 0 £ 3. 15. 0

On this it is well remarked that this rise in the value of the above articles plainly evinced, that, though under a parmi-
nous management the soil refused to repay the toils and expense of husbandry on the produce of grain, it would, at least for a short time, yield, in the value of fire-wood, sufficient to answer the demands of the crown. This circumstance no doubt was the means of its being cleared from wood. But unfortunately, the occupiers not knowing how to cultivate this kind of soil to advantage, and without being apprehensive of incurring a considerable loss by any mistake in the management of it, let it lie in a state of waste for several years; and it would probably have continued so till this time had not the more spirited and well-directed exertions of a few enterprising and intelligent individuals thrown the way to success." And it is stated as a matter of some doubt, "whether the best mode of improving such a soil as that of this chase, was then known in this part of England; but it is certain that it was not practised. It is also clear to demonstration, that unless a well-
digested system be pursued, the profit must be precarious, and the success of the undertaking uncertain.

It is added, that "if the parties concerned in the culti-
vation of it had set out upon a liberal and judicious plan, in the first instance, and began by tilling the timber in the proper season, and diving off it at the belt market; next pared the old fawd, and flowed out all the roots; and, as soon as they were dry burn the roots, bushes, and fawd, into ashes; then ploughed these ashes in with a very thin furrow (in order to avoid bringing up to the surface the wretched sub-
soil); after this, spreading lime, and barrowing it in; had, he says, this method been adopted by the first cultivators of the chase, he thinks he may venture to assert, that he should not now have heard complaints against the soil, or that it would be called fallen and unproductive. At least, it would have grown tares and perhaps cole, which should have been eaten by flock on the land which produced them. This should have been annually repeated, and the land plentifully supped with manure brought from town, (if nigh such) and the farm-yard, until the soil had acquired a sufficient degree of richness to be laid down to permanent grasses." The land of this chase is, he says, in its nature too flubborn to answer in a course of aration; particularly as it is so nigh the metropolis, and where the expense of horse-keep and men's labour are so high that they would consume all the produce of such land. It should therefore be only pared, burnt, ploughed, drained, limed, and manured, and then laid down clean and in good heart, to permanent grasses. Indeed, wherever there is a clean skin of good plants already, it will be sufficient that it be well drained and manured, in which case the grasses will be sure to improve, and in a few years become good meadow."
These remarks flew the vast importance of beginning upon a good plan in the cultivation and management of this fort of waste land, as it is only in this way that advantage can be gained, or encouragement hold out to the cultivation of such ground.

CHASIDENS, or ASIDEANS, in Ancient Geography, so called on account of their great zeal for the law, and their voluntary engagement to observe it more rigidly than other men, were a valiant people of Judea, who, after the settlement of the Jewish church on the return of the Jews from the Babylonian captivity, super-added to the law the constitutions and traditions of the elders, and other rigourous observances, to which, by way of supererogation, they voluntarily devoted themselves; and who, from the superior degree of holiness to which they aspired, were called CHASIDIM, i.e. the Pious. These perfons were distinguished for their valor, and joined Mattathias and his companions when they fled from Jerusalem to the mountains and desarts of Judea, in order to avoid the persecution of Antiochus. The Chassidees reckoned it one of the chief points of that piety which they professed, to fight zealously for their religion, and the defence of the temple and its worship, which had been profaned by the Heathens. They concerned with Mattathias in his efforts for purging the land of the idolatry which the persecutors had imposed upon it, and re-establishing the true worship of God.

CHASING, a method of working, or enriching, gold, silver, &c. properly called cleansing.

CHASIRA, in Ancient Geography, a town of Asia in Armenia Minor, according to Ptolemæus.

CHASLEU. See CIsLEU.

CHASLUHM, in Ancient Geography. See CASLUSH.

CHASM, XAXUX. See Grotto and Hiatus.

CHASME, or CHASMS, among Ancient Physicians, denotes oblation or gaping. Hippocrates informs us that long respiration is a cure for continual obturation.

CHASPHON, CHASPHORA, or CHASBONA, in Ancient Geography, a town of Palæstine, in the country of Gaulad, according to the book of Macchabees and Josephus. It was taken by Judas Maccabæus.

CHASSAIR, or CASAIR, in Geography, a town of Africa, in the kingdom of Morocco, about 6 leagues from mount Atlas, near which are mines of lead and anthumony, which the inhabitants dispose of at Fex.

CHASSE, in Military Language, a charge of powder roughly bruised, which is put at the bottom of a cartouche, the better to force and throw out the materials with which it is filled.

CHASSE-COQUINS. See BANDOLIER.

CHASSE-CRAPAUD, in Ornithology, the European goat-fucker, caprimulgus Europeanus, is determined under this name by Salomon de Boodt.

CHASSELAY, in Geography, a town of France, in the department of the Rhône and Loire, and district of Camp de Lyone; 2 leagues N. of Lyone.

CHASSENEUIL, a town of France, in the department of Angoulême; 11 miles N.W. of La Rochefoucault.

CHASSENEUX, Bartholomew de, in Biography, an eminent lawyer, was born at Ippe-Féveques, near Autun, in 1480; and after finishing his studies with a view to the law in Italy, was made master of requests to Charles d'Amboise, governor of the Milanese, who employed him at the court of Rome. In 1531, he was appointed counsellor of the parliament of Paris, and in the following year president of the parliament of Provence. He occupied this post in 1540, when this body inflicted its fanguous decree against the Vaudois of Merindol and Cabrieres. These people, whose general character appears under another article, incurred, for deviating in their sentiments, worship, and practice from the precepts of the church of Rome, the charge of being pelihtetous heretics, and it was determined to extirpate them by fire and sword. Chasseneux, it is thought, did not in his judgment approve these exertions, though he was officially obliged to figu the parliamentary decree. He contributed, however, by a variety of humane artifices to delay the execution of it, whilst he lived; and his death, in 1541, has been ascribed to those who wished to see the commencement of the bloody persecution. The works of Chasseneux are, "A Latin Commentary on the Cumborns of Burgundy, and of almost all France," fol. printed five times during his life, and more than fifteen times since; the last edition being that of president Behmer, at Paris, 1717, 4to.; "Catalogus Oloriae Mundi," Lyons, 1529, fol. "Conflilia," Lyons, 1531, fol. "De Epìstaphis des Rois de France, jufque à Francois I. en vers, avec leurs Efligies," and the name in Latin. Nov. Dict. Hist.

CHASSENSAL, in Geography, a river of France, which runs into the Ardche, not far from its source.

CHASSER L'ENEMI, in Military Language. This phrase is of the same import as the word déjouer, to drive an enemy before you, forcing him to quit a post that he occupies.

CHASSERADES, in Geography, a town of France, in the department of the Lozère, and district of Mende; 8 miles N. of Villefort.

CHASSEURS. See CAVALRY.

CHASSIFERS, in Geography, a town of France, in the department of the Ardche; 10 miles W. of Viviers.

CHASSIRON, Tower of, a light-house on the north point of the island of Oleron, near the coast of France, which has two fires by which it is distinguished from the tower of Cordovan.

CHASSIS DE GALLERIE, in Military Language. These are flat beams, or polls of different heights, which the miners make use of for supporting the earth, in proportion as they advance in the gallery. These support other pieces of timber laid transversely upon them, which hinder the tumbling down of the earth; and this is what is called chapeau du mineur, or the miner's hat.

CHASTE-TREE, in Botany and Gardening. See VITEX.

CHASTELAIN, Claude, in Biography, was born at Paris in 1639; and occupied the office of canov in the cathedral of his native city. With a view of studying the usages peculiar to each church, he travelled through France, Italy, and Germany, and acquired an extensive acquaintance with liturgies and religious rites and ceremonies. Accordingly Harsy, archbishop of Paris, placed him at the head of a commission for preparing a formulary for the use of his diocese, and he was also employed by other bishops in correcting and altering their breviers and church books. He likewise composed the offices for several religious orders. The "Hagiological Dictionary," which he published, was furgested by Menage in his etymologies of the French tongue; and he bears this testimony to his profound and various knowledge; viz. "Cæsareum faculm non intellexit;"—His own age did not comprehend his merit; and an intelligent person, who visited Rome 17 times, affirmed that Chastelain knew him more curiously, and taught him more facts than he had gained any knowledge of in all his other visits. In 1705, Chastelain published his "Roman Martyrology," translated into French, &c. 4to.; containing...
ing only the two first months of the year. In 1709, he published "An Universal Martyrology," upon the same plan. The Bollandists who wrote the lives of the saints, were thus led to seek his acquaintance, and they dedicated to him one volume of their work. He died in 1712, leaving among various other works in MS. a journal of his own life.

CHASTELLET, Gabrielle Emilie de Breteuil, marchioness of, was born in 1706; and became celebrated both for the beauty of her person, and the culture of her mind. In the course of her education, which was of a superior kind, she acquainted herself with the best ancient and modern authors; but her attention was more particularly directed to mathematics and natural philosophy. She began her literary career, with an institute of the philosophy of Leibniz, under the title of "Institutions de Physique," 1707; but the afterwards transferred her respect from the reveries of the German philosopher to the discoveries and realizations of Newton. Accordingly, she translated the Principia, and added a commentary; which were published after her death under the superintendence of the celebrated Clairaut. She died in 1749, at the palace of Luneville. Although she was a mathematician and philosopher, she was far from being a recluse; for she conversed with persons of her own rank with such a degree of freedom and ease, and partook to much of their pleasures. that even the ladies who had the honour of associating with her had no reason to suspect that she was the commentator of Newton. Her memory was singularly retentive, her eloquence ready and impressive, her taste for poetry correct and lively, and she manifested that indifference to popular applause, which is the usual characteristic of a great mind. But notwithstanding these various mental qualities and attainments, it is generally admitted, that she had no pretensions to the character of chaliness. "Nous. Dict. Hill."

CHASTELET, in Geography, a town of Germany, in the circle of Wolfsburg, and bishopric of Liege, situate on the south side of the Sambe, 30 miles S.W. of Brabant, and 30 W.S.W. of Liege.

CHASTELLAN, a town of Savoy; 3½ miles N.E. of Chambly.

CHASTELLUX, Le Chevalier de, in Biography, brigadier des armes du roi at the time of the revolution, was born 1774, and received in the French Academy in 1775. He had early in life a strong passion for poetry and music. His professional employment, as a military officer, has never impeded the successful cultivation of those talents. Many of his comedies, written for private theatres, and heard with transports, would have been sure of success if represented on a public stage, had he had courage sufficient to make the experiment. But his "Essay on the Union of Poetry and Music" is the chief production which entitles him to a place here as a musical writer. This little book, which first appeared in 1765, is but a pamphlet of about 90 or 100 pages 12mo. Yet next to Roufseau's "Lettre sur la Musique Francaise," it is the best piece of musical criticism in the French language. It called the attention of persons of taste to Italian poetry and music, which the abbé Armand and M. Saard had attempted before; but we think with less knowledge of the subject and more parts-spirit. M. de Chastellux luckily produced his treat before the Gluck and Piccini factions had birth, and seems to write from feeling and zeal for the musical drama, apart from all contention for victory over writers of opposite opinions. He has many ideas concerning ancient as well as modern music, which were new, at least in France, when his treat appeared, and which have been since adopted by subsequent musical writers, and rendered common such as symmetry of air, not only in the number of bars, but in the general cast of each bar, which is a rule of much the same tendency as Roufseau's "Unity of Melody." In speaking of ancient music, the author thinks, though inferior to the modern, that the great effects of its modes were produced by their being severely confined to particular keys and measures. If a whole nation were to hear a particular melody in a particular key only on occasions of religious ceremonies, and another was confined to military purposes, their effects would be greatly heightened. If, for instance, in the midst of a tumult, a band of good musicians was to play a religious air in its usual key, it would excite piety and respect in the most turbulent. And if, during a religious ceremony, a military air unexpectedly to be performed in its original key, there can be little doubt but that the people would immediately fly to arms. The effect of the ancient Greek music must greatly have depended on its appropriation; as in China, from time immemorial, particular musical airs have been confined to particular purposes. This is only applicable to instrumental music; but for vocal, the author wishes poets to become musicians, and musicians poets, otherwise they have different interests, and mutually injure and degrade each other. On this subject, he says, most truly, that the lyric poet should never forget that he is writing for music; that he should sacrifice wit and point to sentiment and effect. Though there is a confluent jealousy between poetry and music, he says it is impossible to deny that music is the principal object in an opera. Metastasio, whose dramas were justly admired and respected as poetry, never was jealous of the applause which composers and singers acquired, or thought it was at his own expense. The French perhaps do wisely in allowing few airs in their operas, and those, short, easy, and simple; having no fingers capable of performing bravura, and still less airs in a grand style of cantabile; but why Italy, and all Europe who have Italians, or singers of the Italian school, capable of performing in all styles, should conform to the present plan of French operas, and banish good singing from their lyric theatres, or be accused of ignorance of the true style of dramatic music, we know not. That a people just emerging from barbarism in music of all kinds, should arrogantly dictate to nations long polished, refined, and accustomed to perfection, gives but too just grounds for imagining, that presumption, though confined to individuals in some countries, is, in others, a national vice.

The chevalier Chastellux seems the first writer in the French language (after Roufseau) who truly comprehended the merit of Italian vocal music and performance, and felt the merit of Metastasio. He seems to have a correct idea of dramatic poetry, and words to be set to such music as will display the abilities of a composer as well as singer. He says very truly, that to obviate, or at least to soften, the radical evil of mixing long with declamation, the poet, in going from speech to song, can only render the contralto and more parts-spirit more bearable by increase of interest or passion, which seems to excite for a different expression. He should avoid the introduction of airs, in cold and uninteresting situations; or in the midst of a dialogue, before the characters are sufficiently animated; and by this means avoid the being too loud of those airs which should be retained for occasions of passion, and the termination of scenes.

CHASTISEMENTS, or Corrections, in the Romans, are the severe and rigorous effects of the aids; for when the aids are given with severity, they become punishments. See Correction.

CHASTITY, a virtue defined by the Romans. On the reverse of a medal of Paulina the younger, it is represented sitting,
CATAMARAN, or CATAMARAN, in Ancient Geography, a people of Germany, who formed part of the Catata. They are mentioned by Tacitus, Strabo, and Ptolemy.

CHASZAVENICA, a place which had a Roman garrison, under the orders of the commander of Armenia, mentioned in the Not. Imp.; but the situation is not ascertained.

CHAT, Cape, in Geography, a cape on the south coast of the river St. Lawrence. N. lat. 49° 10'. W. long. 66°.

Chat, Cut, in Gunnery, a piece of iron with one, two, or three very sharp prongs or claws, which, when it has three of them, are arranged in a triangular form or flake. This piece of iron is fixed to a flint or handle. It is used for searching and examining a piece of ordnance. By being introduced into the bore, it shews or discovers whether it is honey-combed, damaged, or otherwise defective. There is another sort of chat, that differs a little from this. It consists of two branches of iron fixed to one end of a piece of the same metal, which have each of them two fixed prongs. One of these branches has a hinge with a spring so fixed, that when the chat is put into the bore, the smallest cavity releases the spring, and the defect is immediately discovered. This invention does credit to the inventor. Founders who do not like it, call the common chat the diable, or the devil, and the one with two branches la malice du diable, the malice of the devil.

Chat, Allo a fort of tower, that anciently was made use of in France for carrying soldiers at the besieging of places.

Chat, in Zoology. See Cat and Felis canis.

Chat-bizam of Volmer, &c. See Viverra tigrina.

Chat cerver, the lynx. See Felis Lynx.

Chat/Pfajgern of Riddingor, and Chat de Conflantimpe. See Viverra geneta.

Chat-buont, in Ornithology, the brown owl, Strix sibirica, Linn. Chat-buont is also the common name of owls in general.

Chat manoul, in Zoology. See Felis manoul.

Chat-pard. See Pardus.

Chat rocher, in Ichthyology, the name given by Bruenfey et others to the greater cat-fish. See Squalus belaricus, Linn.

CHATA, in Geography, a town of America, in the Tennessee government; 22 miles S.S.W. of Knoxville. Vol. VII.

CHATABOUCHEE, or CHATABUTHS. See Chatauca.

CHATA-HATCHI, or HATCHI, a river of America, the largest which falls into St. Rois's bay in West Florida. It is also called Pea River, and runs from N.E. entering the bay by several mouths, but so shoal, that they can only be palled by a small boat or canoe. About 25 leagues up this river, Mr. Hutchins found a small settlement of Cussis Indians. The soil and timber on its banks very much resembles those of Elzamia.

CHATAIGNERAIE, l.A., a town of France, in the department of Vendee, and chief place of a canton in the district of Fontenay-le-Comte; 15 leagues S.E. of Nantes, and 3i N. of Fontenay-le-Comte. The place contains 1645 and the canton 15,066 inhabitants; the territory comprises 350 kilometres and 24 communes.

CHATAISK, a river of Siberia, which runs into the Enfici, near Turunkanch.-Also, a town of Siberia, on the east side of the Enfici, 156 miles N. of Turunkanch.

CHATANGA, a river of Russia, which runs into the Frozen sea; extending itself by the addition of many rivers into a large gulf at its mouth. N. lat. 74° 40'.

CHATAS, a name given to one fort of banks employed on the river Charlie in America, tho' of the other fort are called bongos. See Chagre.

CHATAUCHE, or CHATABOUCHE, in Geography, a river of America, which rives in the Apalachicola mountains, on the borders of the Tennessee government, traverses the state of Georgia, and uniting with the Flint in N. lat. 37°, forms the Apalachicola, which feeds. It is about 30 rods wide, very rapid, and full of shoals. The soil on its banks is light and sandy, and the clay of a bright red colour. The lower creeks are filled in dispersed claus and villages from the head to the mouth of this river. Their huts and cabins resemble, by the colour of the clay, cloisters of new-burn'd brick-kilns. The distance from this river to the Tappofo river is about 70 miles, by the war-path, which crooks at the falls, just above the town of the Turkabache.

CHAUTAGUHF, a lake of America, in the county of Ontario and state of New York, about 18 miles long and 3 broad. It is connected with Aleighgy river by the river Conewango, which runs a 5 S.E. course. This lake serves to form an easy communication between lake Eric and the Ohio; there being water sufficient for boats from fort Franklin in the Alleghamy, to the N.W. corner of this lake; and from thence there is a passage of nine miles to Chautagoune harbour in lake Eric. Over ground capable of being made a good waggon road. This communication was once used by the French.

CHAT-TCHEOU, or Qua-ctcheou, a town of Asia, in the country of Thibet; 160 miles S.E. of Hami. N. lat. 45° 22'. E. long. 95° 19'.

CHATE, in Botany, Alp. See Cucumis chat.

CHATEAU, in Military Language, a place fortified either by nature or art, in a town or city, or in a district or tract of country, the passage through which is wished to defend. A castle, unless it be naturally strong and peculiarly situated, cannot at present make much resistance. Castles, however, are still preferred in certain places, as being like citadels to furnish retreats for prolonging capitulations, or overrating towns in cafes of popular sedition.

CHATEAU Arnoux, in Geography, a town of France, in the department of the Lower Alps, and district of Silleron; 5 miles S. of Silleron.

CHATEAUBELAIR, a bay on the west coast of the island of St. Vincent in the West Indies. N. lat. 13° 14'. W. long. 61° 17'.

4 A CHATEAU.
CHATEAU-BOURG, a town of France, in the department of the Ille and Vilaine, and chief place of a canton in the district of Vitre; 2½ leagues W. of Vitre. The place contains 1243 and the canton 7555 inhabitants; the territory includes 1024¾ quarters of land and 10 communes.

CHATEAUBRIANT, a town of France, in the department of the Loire, and principal place of a district; 11 leagues N. of Nantes, and 9 S.S.E. of Rennes. N. lat. 47° 43'. E. long. 1° 29'. The place contains 3049 and the canton 7668 inhabitants; the territory comprehends 157¾ kilometres and 4 communes.

CHATEAUBRUN, John Baptist Vienne De, in Biography, was born at Angoulême in 1689, and became steward of the household to the Duke of Orleans, member of the French Academy, and a writer of tragedy. His first publication in 1714, was a piece entitled "Mahomet II." His best work, written soon after, was "Les Troadennes," which was not acted for 40 years, and the reason he alleged for delaying the exhibition of it, was the fear of giving offence to the devout prince, his master. He also wrote the tragedies of "Philoctetes" and "Alcyone," which, though feeble in poetry, abound with sentiment, and are conducted with skill. He was admitted into the Academy in 1753, and died in 1755. His taste was formed by the study of the Greek and Latin poets. His private character was that of a true philosopher, mild, virtuous, tolerant, and disinterested. Nouv. Dict. Hist.

CHATEAU-CAMBRESIS, in Geography. See CA-
TEAU CAMBRESIS.

CHATEAU-CHALONS, a town of France, in the department of Jura, and district of Poligny; 2 leagues N. of Lons-le-Saunier.

CHATEAU-CHINON, a town of France, in the department of the Nièvre, and principal place of a district, situate near the source of the Yonne. It has a considerable trade in cloth, leather, wood, and wool; 11 leagues E. of Nevers, and 5¾ W.N.W. of Autun. N. lat. 47° 3'. E. long. 3° 49'. The place contains 3156, and the canton 12837 inhabitants; the territory includes 395 kilometres and 14 communes.

CHATEAU-CORDONET, a forrest of the island of Guernsey.

CHATEAU-DAUPHIN, a strong forrest of Piedmont, in the marquiture of Saluzzo, ceded to the duke of Savoy by the treaty of Utrecht. It was taken by the combined armies of France and Spain in 1744; 15 miles W. of Saluzzo, and 30 S.S.W. of Turin. N. lat. 44° 33'. E. long. 6° 58'.

CHATEAU-DUN, a town of France, in the department of the Eure and Loire, and principal place of a district; 25 miles S. of Chartres. N. lat. 48° 40'. E. long. 1° 15'. The place contains 6146, and the canton 13467 inhabitants; the territory includes 3024 kilometres, and 19 communes.

CHATEAU-PORT, a town of France, in the department of the Seine and Oise; 1 league N.E. of Cinevreuve.

CHATEAU-GAY, a town of France, in the department of the Puy-de-Dôme; 1 league S.W. of Riom.

CHATEAU-GERARD, a town of France, in the department of the Yonne, and district of Tonnerre; 12 miles S.S.E. of Tonnerre.

CHATEAU-GIRONS, a town of France, in the department of the Ille and Vilaine, and chief place of a canton, in the district of Rennes; 2½ leagues S.E. of it. The place contains 1413, and the canton 11561 inhabitants; the territory includes 1574 kilometres, and 10 communes.

CHATEAU-GOMBERT, a town of France, in the department of the mouths of the Rhone, and district of Marseilles; 4 miles N.E. of Marseilles.

CHATEAU-GONZI, a town of France, in the department of Mayenne, and principal place of a district, seated on the Mayenne. It has a manufacture of linen and woollen. The place contains 4656, and the canton 17776 inhabitants; the territory includes 250 kilometres, and 17 communes. It is distant 5 leagues S. from Laval, and 5 W. from Saile. N. lat. 47° 57'. W. long. 0° 49'.

CHATEAU-D'IF, a fortres and three small islands near the coast of France, in the Mediterranean; about 3 miles W.S.W. of Marseilles.

CHATEAU-JOUX, a fortres, in the department of the Doubs, near Pontarier.

CHATEAU-LANDON, a town of France, in the department of the Seine and Marne, and chief place of a canton in the district of Fontainebleau; 25 leagues S. of Nmours. The place contains 1303, and the canton 8935 inhabitants; the territory comprehends 2924 kilometres, and 16 communes.

CHATEAU-MAILDRE, a town of France, in the department of the North coast, and district of St. Brieuc; 25 leagues N.W. of St. Brieuc. The place contains 869, and the canton 13083 inhabitants; the territory includes 1321 kilometres, and 9 communes.

CHATEAU-LIN, a town of France, in the department of Finisterre, and principal place of a district. The place contains 3172, and the canton 13583 inhabitants; the territory includes 2074 kilometres, and 11 communes. This town has a considerable trade in flutes for tilling houes; and in its vicinity are a medicinal spring, and some mines of copper and iron. It is four leagues N. of Quimper. N. lat. 48° 11'. W. long. 4° 01'.

CHATEAU-DU-LOIR, a town of France, in the department of Sarthe, and chief place of a canton, in the district of St. Calais. The place contains 2652, and the canton 13082 inhabitants; the territory includes 1375 kilometres, and 14 communes. A considerable quantity of claret-wine is manufactured in the vicinity of this town. It is distant 7 leagues N.N.W. from Tours, and 7 S.S.E. from Le Mans. N. lat. 47° 32'. E. long. 6° 26'.

CHATEAU-LOMBARDY, a fortres of Alsatia Lombardy, in the province of Caramania.

CHATEAU-EN-MARCHE, a town of France, in the department of the Lower Seine; 2 leagues N. of Montvilliers.

CHATEAU-MEILLANT, a town of France, in the department of the Cher, and chief place of a canton, in the district of St. Amand, having an ancient castle, which is said to have been built by Julius Caesar. The place contains 2235, and the canton 9107 inhabitants; the territory comprehends 325 kilometres, and 13 communes. It is 104 leagues S. of Paris. N. lat. 46° 34'. E. long. 2° 0'.

CHATEAU-NUEF, L' Abbe De, in Biography, author of an agreeable little book on the music of the ancients, entitled "Dialogue de la Musique des Anciens," published anonymously in 1725, but feebly written about 1705; during the heat of the controversy between the exclusive admirers of the ancient and modern literature, and not long after "The Battle of the Bards." The interlocutors are composed of Erages on both sides, and the author seems to have affirmed the office of Mediator.

CHATEAU-NUEF, in Geography, a town of France, in the department of the Higher Alps; 10 miles S. of Serres.—Hilo, a town of France, in the department of the Charente, and chief place of a canton, in the district of Cognac; 10 miles W.S.W. of Angoulême. The place contains
contains 2184, and the canton 9931 inhabitants: the territory includes 165 kilometres, and 18 communes.—Also, a town of France, in the department of the Cher, and chief place of a canton, in the district of St. Amand. The place contains 1719, and the canton 6999 inhabitants: the territory includes 230 kilometres and 12 communes.—Also, a town of France, in the department of the Côte d'Or, 17 miles S.W. of Dijon.—Also, a town of France, in the department of the Évre and Loire, and chief place of a canton, in the district of Dreux: the place contains 1271, and the canton 10,744 inhabitants: the territory includes 272½ kilometres, and 29 communes.—Also, a town of France, in the department of the Ille and Vilaine, and chief place of a canton, in the district of St. Malo: 7½ miles S. of it. The place contains 539, and the canton 6929 inhabitants: the territory includes 12½½ kilometres, and 7 communes.—Also, a town of France, in the department of Loiret, and chief place of a canton, in the district of Orleans: 12 miles E. of it. The place contains 3127, and the canton 7444 inhabitants: the territory comprehends 267½ kilometres, and 10 communes.—Also, a town of France, in the department of the Mayne and Loire: 13 miles N. of Angers. The place contains 916, and the canton 9085 inhabitants: the territory includes 265 kilometres, and 15 communes.—Also, a town of France, in the department of the Saone and Loire; 3 leagues E.S.E. of Mâcon.—Also, a town of France, in the department of the Upper Vienne, and chief place of a canton, in the district of Limoges: 17 miles S.E. of it. The place contains 1136, and the canton 9039 inhabitants: the territory includes 262½ kilometres, and 10 communes.—Also, a town of France, in the department of the Var, and district of Graffe; 3 miles N.E. of Graffe.

CHATEAUNEUF du Pig, a town of France, in the department of Finistère, and chief place of a canton, in the district of Châteaulin; 16 miles N.E. of Quimper. The place contains 2163, and the canton 13,596 inhabitants: the territory includes 330 kilometres, and 11 communes.

CHATEAUNEUF de Galaur, a town of France, in the department of the Drôme; 13 miles N. of Romans.

CHATEAUNEUF de Marsen, a town of France, in the department of the Drôme; nine miles N.N.E. of Montelimar.

CHATEAUNEUF du Pape, a town of France, in the department of the Mouches of the Rhône; 3 leagues N. of Avignon.

CHATEAUNEUF de Randon, a town of France, in the department of the Lozère, and chief place of a canton in the district of Mende; 4 leagues N.E. of it.

CHATEAUNEUF de Rhône, a town of France, on the E. side of the Rhône, opposite Viviers.

CHATEAUNEUF-au-Val de Bargis, a town of France in the department of the Nièvre; 10 miles N.E. of La Charité.

CHATEAU d'Oleron, a town of France in the department of the Lower Charente, and chief place of a canton in the district of Marans. The place contains 2116 and the canton 5151 inhabitants; the territory includes 1024 kilometres, and 3 communes.

CHATEAU-PONSAAC, a town of France in the department of the Upper Vienne, and chief place of a canton in the district of Bellac; 18 miles N. of Limoges. The place contains 3920 and the canton 10,207 inhabitants; the territory includes 185 kilometres and 7 communes.

CHATEAU-PORCIEN, a town of France, in the department of the Ardeche, and chief place of a canton, in the district of Relhèl: 2 leagues W. of it. The place contains 1972 and the canton 8695 inhabitants; the territory includes 230 kilometres and 17 communes.

CHATEAU-REGNAULT, a town of France, in the department of the Indre and Loire, and chief place of a canton in the district of Tours; 5 leagues N.E. of Tours. The place contains 2518 and the canton 2534 inhabitants; the territory comprehends 297½ kilometres, and 17 communes.

CHATEAU-RENARD, a town of France, in the department of the Loiret, and chief place of a canton in the district of Montargis; 4½ leagues E. of it. The place contains 2888 and the canton 9454 inhabitants; the territory includes 296 kilometres, and 10 communes.—Also, a town of France, in the department of the Mouches of the Rhône, and chief place of a canton in the district of Tarascon; 9 miles N.E. of Tarascon, and celebrated for its excellent white wine.—Also, a town of France, in the department of the Ardennes; 10 miles N.W. of Sedan.

CHATEAU-ROUX, a town of France, in the department of the Higher Alps; 5 miles N. of Embrun.—Also, a town of France, in the department of the Indre, and principal place of a district; seated on the Indre in a fruitful country, and having a large woollen manufacture. The place contains 8148 and the canton 14,666 inhabitants; the territory includes 302½ kilometres, and 11 communes. N. lat. 46° 49'. E. long. 1° 35'.

CHATEAU-SALINS, a town of France in the department of the Meurthe, and principal place of a district, deriving its name from its extensive salt-works; 5 leagues N.E. of Nancy. N. lat. 48° 49'. E. long. 6° 24'.

CHATEAU-THIERRY, a town of France, and principal place of a district, in the department of the Aisne; seated on the Marne, and having in its vicinity a medicinal spring. The place contains 4160 and the canton 12,018 inhabitants; the territory includes 187½ kilometres and 21 communes. N. lat. 49° 3'. E. long. 3° 18'.

CHATEAU-VAUZIERE, a town of France, in the department of the Indre and Loire, and chief place of a canton in the district of Chinon; 5 leagues N. of Langeais. The place contains 686 and the canton 10,692 inhabitants; the territory comprehends 240 kilometres, and 16 communes.

CHATEAU-VILLAIN, a town of France, in the department of the Upper Marne, and district of Chauxmont, 5½ leagues W.N.W. of Langres.—Also, a town of France, in the department of the Ile; 16 miles E. of V. Island. CHATEEEN, a town of Little Bouchardia. CHATEL, or CHATE, a town of France, in the department of the Ardennes; 5 miles S.E. of Grandpré.

CHATEL, a town of France, in the department of the Vosges, and chief place of a canton in the district of Épinal. The place contains 1165 and the canton 9178 inhabitants; the territory includes 257½ kilometres, and 28 communes.

CHATEL-CENSOY, a town of France, in the department of the Yonne, and chief place of a canton, in the district of Avalon; 4 leagues W. of it.

CHATEL-GUION, a village of France, in the department of Puy-de-Dôme, celebrated for its mineral water; one league N. of Riom.

CHATEL-DE-NEUVE, a town of France, in the department of the Allier, and district of Moulins; 10 miles S. of Moulins.

CHATELARD, a town of France, in the department of Mont Blanc, and chief place of a canton in the district of
Chambery. The place contains 1060 and the canton 10,412 inhabitants; the territory includes 237½ square miles, and 13 parishes.

CHATELDON, a town of France, in the department of Puy-de-Dôme, and chief place of a canton in the district of Thiers; 6 leagues E.N.E. of Riom. The place contains 1587 and the canton 6,728 inhabitants; the territory comprises 157½ square miles, and 6 parishes.

CHATELLET, was anciently a small chateau or fortress, and the officer who commanded it was called chatelain.

The word is a diminutive of chateau, formed from cafel, tum, a diminutive of cafrum; or from caffellatum, a diminutive of caffel, eagle. The term in later times has been used at certain courts of justice established in several cities of France; the grand chatelat in Paris, v. gr., was the place where the prud'hommes, or ordinary court of justice of the prevôt of Paris was kept; consisting of a presidial, a civil chamber, a criminal chamber, and a chamber of policy. The term signifies the same at Montpellier, Orleans, &c.

The little chateau at Paris was an ancient fort which served as a prison.

CHAT, chatel, 3. E. in Geography, a town of France, in the department of the Seine and Marne, and chief place of a canton, in the district of Melun; 2 leagues E. of Melun.

The place contains 1004 and the canton 8970 inhabitants; the territory includes 237½ square miles, and 16 parishes.

CHATELLERAULT, a town of France, in the department of the Vienne, and chief place of a district, seated on the Vienne; and principally employed in the manufacture of clocks and cutlery. The place contains 8426, and the canton 12,725 inhabitants; the territory includes 157½ square miles and 8 parishes.

CHATELLET, a town of France, in the department of the Cher, and chief place of a canton, in the district of St. Amand; 2 leagues N.N.E. of Chateauroux-Millitant. The place contains 1107, and the canton 5202 inhabitants; the territory comprises 180 square miles and 8 parishes.

CHATELUX, a town of France, in the department of the Creuse, and chief place of a canton, in the district of Boufflaç; 4 leagues S.W. of Boufflaç. The place contains 776 and the canton 836 inhabitants; the territory includes 18½ square miles, and 12 parishes.

CHATELUX-LE-MARCHIEUX, a town of France, in the department of the Creuse, and district of Bourganeuf; 5 miles N.E. of it.

CHATENAY, a town of France, in the department of Paris; 2 leagues S. of Paris.

CHATENOIS, a town of France, in the department of the Vouge, and chief place of a canton in the district of Neufchatel; 2 leagues S. of it. The place contains 1379 and the canton 9839 inhabitants; the territory includes 175 square miles, and 20 parishes. Also, a town of France, in the department of the Lower Rhine; one league W. of Schelstadt.

CHATHAM, in Geography, a town of Kent, England, is celebrated for its naval arsenal; and is joined to the ancient city of Rochester. This town has been mostly built since the reign of queen Elizabeth. The houses united with those of Rochester, and the village of Stroud, make one long street, of more than two miles in length, through which the high road passes from London to Dover. Many of the houses extend along the banks of the river; and, like most sea-ports, the streets are narrow, disagreeable, and ill built.

The viscounting-office, some officers' houses in the dock-yard, two breweries, and a few private houses, are however commodious and handsome. At the east end of the town is the parish workhouse, which was built on a large and extensive plan in 1725; but the principal objects of this place, and from which it has obtained its present population and importance, are the docks, viscounting-places, and other naval establishments. Among the first is a foundation called the Chest of Chatham, which was instituted in 1758, when the seamen in the service of queen Elizabeth agreed to allow a portion of each man's pay for the relief of their fellow-sailors, who had been wounded in the battle with the Spanish armada. The same custom has been continued to the present time, and many wounded sailors have derived temporary relief and comfort from this fund. See Chest. Here are two docks respectively denominated the Old Dock, and the Royal Naval Dock. The former, with its connected wharf, forehouses, &c., are the places of deposit for royal stores and ordnance. The guns belonging to the royal shipping are collected and ranged on this wharf in long tiers, and large pyramids of cannon-balls, shells, &c., are accumulated here to be ready for service. In a continued range of forehouses are deposited the cartridges for the guns, and almost every other article of naval stores. In one apartment is a small armory furnished with muskets, pistols, cutlasses, pikes, pole-axes, and other warlike instruments, classed and arranged in regular order. The whole of this department is under the management of a forekeeper, who has a good house, a clerk of the survey, and clerk of the cheque, who have each handsome salaries, and separate offices. Befide these, here are two extra clerks and some inferior officers, laborers, &c. The Royal Naval Dock-Yard connects with the former, and ranges along the eastern bank of the river for nearly one mile in extent. The increase of the navy during the reign of Elizabeth occasioned these docks to be enlarged, and in the subsequent reigns of James and Charles I. they were considerably extended; within the last fifty years, they have been greatly enlarged and improved; and within the fortified walls are now concentrated almost every requisite for the fitting out, repairing, &c., of a fleet. The forehouses, shops, and most of the buildings are extremely spacious and commodious; whilst those belonging to the commissioner and other principal officers are provided with every comfortable and elegant accommodation. One of the forehouses is fix hundred and sixty feet long; and the sail-loft, where sails are made, is two hundred and nine feet in length. A new rope-house measures 1440 feet in length; in this the cables are manufactured, some of which are one hundred and twenty fathoms long, and twenty-two inches round. Some of the masts made here are one hundred and thirty-six feet in length, and thirty-six inches in diameter. Here are two spacious basins of water, where the timber for masts, &c., is kept continually floating till wanted for use. The smith's shop contains twenty-one forges, which are almost constantly in use, in making anchors, &c. Some of these weigh nearly five tons each. In this yard are four spacious docks for docking and repairing vessels belonging to the royal navy; in these there are fix slips or launches, on which ships are continually building. Among the large vessels that have issued from this yard are the Victory of 110 guns, the new Royal George of 100 guns, finished in 1788; this was the first ship of that rate ever launched from a slip; the Royal Charlotte of 100 guns was launched here in 1740, and the Ville de Paris of 110 guns, with some others of larger dimensions, have been fini-
ed here since that period. The whole of this yard, except on the side of the river, is guarded and enclosed by a high thick wall; it is entered through a large handsome gateway, which is flanked by two towers. In time of war every stranger is precluded access within the walls, unless he has a satisfactory passport.

The buildevs of this yard is transacted by a commissioner, who has three clerks under him; a clerk of the cheque, storekeeper, master-shipwright or builder, clerk of the survey, and two master-attendants, master shipwrights' affilrients, master caulker, clerk of the rope-yard, master ropemaker, a boatwain, purveyor, surgeon, and several other inferior officers. To provide greater security to this national arsenal, two acts of parliament were obtained in the reign of queen Anne for vesting certain lands and tenements in truists, for the purpose of fortifying and giving additional security to this dock; among others, a large quantity of contiguous land, with many houses, was accordingly purchased for the crown; but nothing further was done till 1758, anno 31 George II. when the French having threatened to invade this country, it was deemed necessary to put these acts in force relating to the dock-yards. Another act was however passed that year for purchasing more lands, &c. and extensive lines of fortifications were immediately formed round the land side of this dock, with ramparts, palliades, and a deep broad ditch. These extended from the river above the old dock, to the same again below the dock at Gillingham, about one mile in length. Large and commodious barracks were also erected within the lines sufficient to accommodate five regiments of soldiers, and a battalion of artillery, which have been constantly quartered here; these fortifications have been progressively augmented and repaired; a new redoubt has been made, and other collateral works have been added. Another act was passed in 1762, for vesting other lands on the south side of the town in the crown.

At the entrance of Chatham from Rochester, is the Vic-tualing Office, containing a cooperage, pickling, baking, cutting, slaughtering, and store, houses. A new wharf has been added to it, and additional buildings have been erected for the convenience and service of this department of the navy.

In digging for the fortifications round the dock, various Roman coins, paterae, &c. were found. The present church was erected in 1788, and is constructed mostly with brick. Chatham and the contiguous hamlets are extremely populous. Here is a large market on Saturdays; and two annual fairs of three days each. Chatham is 30 miles E. from London; it contains 1729 houses and 10959 inhabitants. Halded's History of Kent, 12 vols. 8vo. 1758, vol. iv.

Chatham, a maritime township of America, in the county of Barnstable and isle of Massachusetts, seated on the exterior extremity of the elbow of Cape Cod, conveniently for the fishery, in which the inhabitants have usually about 40 vessels employed. It has 1840 inhabitants, and lies 95 miles S.E. of Boston. See Cape Cod.—Also, a township in Grafton county, New Hampshire; incorporated in 1767 and 1795, containing 58 inhabitants.—Also, a flourishing township in Middlesex county, Connecticut, on the eastern bank of Connecticut river and opposite Middleton city; it was a part of the township of Middleton till the year 1767.—Also, a township in Essex county, New Jersey, seated on Passaic river; 13 miles W of Elizabeth town, and nearly at the same distance from Newark.—Also, a township of Columbia county, New York. By the late census in 1796, 280 of its inhabitants were electors.

Also, a county in Hillsborough district, North Carolina, about the center of the state. It contains 5221 inhabitants, of whom 1632 are slaves; the chief town is Pittsburg. The court house is a few miles W. of Raleigh, on a branch of Cape Fear river.—Also, a town of South Carolina in the Cheraws district, situated in Chesterfield county on the west side of Great Peeee river. Its situation, in a highly cultivated country and at the head of a navigable river, promises to render it a place of great importance.—Also, a county in the lower district of Georgia, lying in the north east corner of the state, having the Atlantic ocean on the east, and Savannah river in the north-west. It contains 10,769 inhabitants including 8201 slaves. The chief town is Savannah.

Also, a large bay called Penjiio bay, on the west side of the south end of the promontory of East Florida. It receives North and Delaware rivers.

Chatham Island, a small island in the Indian ocean, within the harbour of the island of Andaman on which is situated the settlement of Port Cornwallis; the utmost length of this small island does not exceed two miles, and its breadth is little more than half a mile; the southern extremity terminates in a narrow neck of land, fordable at low water to the main.

Chatigan, a town of Asia, in the kingdom of Bengal, on the most calmer branch of the river Ganges; which is now a mean place, although it was the first in which the Portuguese established a settlement. It has a few cotton manufactures, and furnishes excellent timber. The inhabitants are so falacious of each other, that they always go armed with a sword, pithol, and blunderbuss. It is subject to the Great Mogul. N. lat. 23°. E. long. 91° 10'.

Chatillon, a large town of France, in the department of the Côte-d'Or, and principal place of a district, built on both sides of the Seine, and having iron forges in its vicinity. The place contains 37,000, and the canton 14,577, inhabitants: the territory comprehends 450 kilometres and 20 communes; 38 miles N.W. of Dijon.—Also, a town of France, in the department of the Dôme, and chief place of a canton in the district of Die; 34 leagues N.W. of Lyons. The place contains 1380, and the canton 6533, inhabitants: the territory includes 255 kilometres and 10 communes.—Also, a town of France, in the department of the Indre, and chief place of a canton in the district of Châteauroux; 3 miles S.W. of it. The place contains 2699, and the canton 8139, inhabitants: the territory comprehends 247 kilometres and 10 communes.—Also, a town of France, in the department of the Marne, and chief place of a canton in the district of Reims; 9 miles W.N.W. of Epernay. The place contains 1002, and the canton 7702, inhabitants: the territory includes 165 kilometres and 21 communes.—Also, a town of France, in the department of the Seine; 15 leagues S.W. of Paris.—Also, a town of Savoy, in the department of Leman, and district of Geneva; 3 miles S.E. of St. Julian.—Also, a town of Piedmont, in the duchy of Aosta, seated on the Doria Baltis; 9 miles S.E. of Aosta.

Chatillon-en-Bazois, a town of France, in the department of the Nièvre, and chief place of a canton in the district of Château-Chinon; 8 miles N.W. of Moulins. The place contains 663, and the canton 9138, inhabitants: the territory includes 532 square kilometres and 16 communes.

Chatillon-sur-Chalaronne, a town of France, in the department of the Ain, and chief place of a canton in the district of Trevoux. The place contains 3169, and the canton 16,876, inhabitants: the territory includes 187 square kilometres and 15 communes.

Chatillon-sur-le-Côtes, a town of France, in the department
The inhabitants: The league which, people whereas the town, vantages.

But, district and canton of the district of Montargis; 4 leagues S. of it. The place contains 1996, and the canton 849, inhabitants: the territory comprehends 3724 kilometres and 15 communes.

Chatillon-sur-Loing, a town of France, in the department of Loiret and chief place of a canton in the district of Gien; 3 leagues S.E. of it. The place contains 1985, and the canton 6735, inhabitants: the territory includes 2275 kilometres and 6 communes.

Chatillon-sur-Saulx, a town of France, in the department of the Valois; 3 leagues S.S.E. of La Marche.

Chatillon-du-Bois, a town of France, in the department of the Two Sevres, and chief place of a canton in the district of Thouars; 7 leagues W. of it. The place contains 512, and the canton 6842, inhabitants: the territory includes 3173 kilometres and 13 communes.

Chatillon-en-Vendelais, a town of France, in the department of the Ille and Vilaine, and district of Vitre; 2 leagues N. of Vitre.

Chatimens Militaires, military punishments. These, generally speaking, consist in the execution of sentences pronounced by courts-martial on military delinquents. But, in our service, military punishment more particularly means the inflicting of a certain number of lashes upon a reduced non-commissioned officer or on a private man. Military punishments have been different in different ages, and in different countries, as they are at present. The Romans had some institutions respecting them; which, though they are truly admirable, have not been adopted by any of the moderns. The Turks never inflict them but in the night. A judge sometimes pronounced death is delivered up into the hands of civil justice, and the person is never tried, but taken from the registry of the corps, who pretend to be exempt from the ignominy of punishment. Those in our service are simple, and in general very summary, particularly with regard to officers. In some foreign services it is customary to fend officers, found guilty of certain offences, from their regiments to garrisoned towns for certain periods, during which they lose all the advantages of promotion. Hence the phrase être envoyé en garrison, to be sent into garrison, implies a species of military chastisement.

A judicious application of punishments contributes much to the preservation of discipline, a punctual obedience of orders, and the success of military operations, both in garrison and in the field.

Chatonnay, in Geography, a town of France, in the department of the Ile, and district of Vienne; 5 leagues E. of it.

Chatramis, a country of Arabia Felix, over against Persia.

Chatrammite, a people of Arabia Felix, on the borders of the Erythrean sea. Ptol.

Chatres, in Geography, a town of France, and principal place of a district in the department of the Loiret, which has a woollen manufacture, and carries on a large trade in cattle. The place contains 246, and the canton 1442, inhabitants: the territory includes 4625 kilometres and 24 communes; 6 leagues S.S.E. from Chateauroux. N lat. 46° 35', E long. 1° 53'.

Chats, in Agriculture, a term employed in some districts to signify the keys of the ash, sycamore, and some other trees.

Chats, Lake, in Geography, a lake of Lower Canada, on the north side of the river Ulusaw, between the Grand Calumet and the lake Des Chaudières. At the extremity of the latter is the "Portage des Chats," over which the canoes and lading are carried with great difficulty 274 paces. The river is here barred by a ridge of black rocks, rising in pinnacles, and covered with wood, which, from the small quantity of soil that nourishes it, is low and riddled. The river makes its way over these rocks, in numerous channels, falling 15 feet and upwards. From hence two trips are made through a serpentine channel, formed by the rocks, for several miles, when the current slackens, and is accordingly called the "Lake des Chats."

Chatsworth, a town of America, in the state of Virginia; 4 miles S.E. of Richmond.

Chattel, in Ancient Geography, a people of Germany. Ptol.

Chattentia, a country of Arabia Felix, near the Erythrean sea, attributed by Steph. Bz. to the Gerrans.

Chattelles, Catalis, Callata, in Law, a Norman term which primarily signified only baits of husbandry, or (as we still call them) cattle; but in its secondary sense comprehended all moveable goods. In the grand coutumier of Normandy, (c. 87.) a chattel is described as a mere movable, but at the same time it is set in opposition to a fief, or feud; so that not only goods, but whatever was not a feud, were accounted chattels.

Spelman defines chattels to be bona quaequeque mobilia & immobilia; propriis tantum et honorum pars, quae in animalibus conquit, est quorum capitibus res tiba, alias capita, alias capitalia dita sunt.

In the modern sense of the word, chattels are all sorts of goods moveable or immovable, except such as are in nature of freethold, or parcel thereof: and they are either personal or real.

Chattels personal, are such as do either belong immediately to the person of a man, as his horse, sword, &c. or such things as being injuriously withheld from him, a man has no way to recover but by personal action: or, strictly speaking, they are things moveable, which the owner may carry with him from one place to another; such as animals, household furniture, money, jewels, corn, garments, and every thing that is capable of being removed.

Chattels real are, immediately upon the death of the testator, in the actual possession of the executors; whereas chattels real are not in his possession till he hath made an entry, or recovered them. An owner of chattels is said to be possessed of them; but a person is said to be seiz'd of a freethold. See Property.

Chattels real, are either such as do not appertain immediately to the person, but to some other thing, by way of dependence; or such as necessarily issue out of some immovable thing to a person; as a lease, or rent for years.
Sir Edward Coke observes (1 Inf. 118.) that chattels real are such as concern, or favour of, the reality: as terms for years of land, Wardships in chivalry, (while the military tenures subsisted), the next presentation to a church, chattels by statute-merchant, statute-dapple, elegant, or the like: these are called real chattels, as being interests issuing out of, or annexed to, real estates; of which they have one quality, viz. immobility, which denominates them real; but want the other, viz. a sufficient, legal, indeterminate duration, and it is this want that constitutes them chattels. The utmost period for which they can be held is fixed and determinate, either for such a space of time certain, or till such a particular sum of money be raised out of such a particular income: so that, in the eye of the law, they are not equal to the lowest estate of freethread, a leaf for another's life. Their tenants were considered upon feodal principles, as merely bailiffs or farmers: and the tenant of the freethread might at any time have destroyed their interest, till the reign of Henry VIII. (See Estate for years.) A freethread, which alone is a real estate, and feems to answer to the fief in Normandy, is conveyed by corporeal investiture and livery of feitt; which gives the tenant the freedom of a hold of the land, that it never after can be wrested from him during his life, but by his own act of voluntary transfer or forfeiture; or else by the happening of some future contingency, as in chattels "per autre vie," and certain determinable free-holds. (See Estates for life, and Freethread.) And even there, being of an uncertain duration, may by possibility last for the owner's life; for the law will not presuppose the contingency to happen before it actually does, and till then the estate is to all intents and purposes a life-chattel, and therefore a freehold interest. On the other hand, a chattel interest in lands, which the Normans put in opposition to fiefs, and we to freehold, is conveyed by no feitt or corporeal investiture, but the possession is gained by the mere entry of the tenant himself; and it will certainly expire at a time prefixed and determined, if not sooner. Thus, a lease for years must necessarily fail at the end and completion of the term; the next presentation to a church is satisfied and gone the inftant it comes into possession, that is, by the first avoidance and presentation to the living; the conditional estates by statute and elegant, are determined as soon as the debt is paid; and so gatherings in chivalry expired of course the moment that the heir came of age. And if there be any other chattel real, it will be found to correspond with the rest in this essential quality, that its duration is limited to a time certain, beyond which it cannot subsist. Blackf. Com. Book III.

CHATTERER, in Ornithology: the Bohemian or Waxed chatterer, AMPHIS garrulus of LINNEUS. This bird is about eight inches in length. It is distinguished by having the hind part of the head crested, and the fide necky quill-feathers tipped with red and brown appendages. This is an inhabitant of Europe, America, and the north of Asia.

CHATTERPOUR, in Geography, a town of Hindooftan, in the country of Allahabad; 212 miles S.S.E. from Agra, 159 miles S.W. from Allahabad, 237 from Banares, 747 N.E. from Bombay, 603 N.W. from Calcutta by Moorhead's, 628 by El Bonn, 623 N.N.E. from Hy- drabad, 776 S.W. from Lucknow, 975 N. from Madras. Lat. 25 4 E. long. 80 2.

CHATTERTON, THOMAS, in Biography, a youth of very extraordinary genius, was born after the death of his father, at Bristol, on the 25th November, 1752. The life of this young man was short but eventful: it began and terminated in Indigence and misfortune. His mother, by the loss of a husband, was left in poverty, and the son, owing to the same unfortunate event, was deprived of that attention which might have conducted his early years through all the difficulties of circumstances, and an untoward disposition to the attainment of knowledge. He could not be induced to learn his letters, till he fell in love, as Mrs. Chatterton expressed herself, with the illuminated capitals of a musical manuscript in French; the afterwards taught him to read from an old black-lettered Bible. When he was about eight years old, he was admitted into a charity school, where he might learn the elements of reading, writing, and common arithmetic. The first years of his residence at this seminary passed without notice, and with scarcely any effort on his part. When he was about ten years of age, he acquired a taste for reading, which became from that period a kind of ruling passion, and out of the tribute allowed him by his mother for pocket-money, he began to hire books from a circulating library. His disposition as well as his taste differed much from what was observable in other children. He was grave, penive, and not unfrequently of a melancholy cast. At times he seemed lost in contemplation, and for days together fearfully spoke to any one. His intimates in the school were few, and those of the most serious cast. Before he was 12 years old, he drew up a catalogue of the books which he had read, and which amounted to more than 70; soon after this, it is certain that he had composed some verses, and he now began to exhibit that ardour of mind by which he was afterwards so strongly characterized. At fifteen he was bound apprentice to arewen of Bristol, in which situation his leisure allowed him ample time to follow his literary pursuits. He had not continued in this course of life for more than a year, before he began to attract public notice, by the publication of an article in the Bristol Journal.

In the church of St. Mary Redcliffe, Bristol, which was founded or re-built by W. Cannyge, an eminent merchant, during the reign of Edward IV, there is a room containing several large chests, in one of which, called Cannyge's chest, were deposited some title-deeds: these, about the year 1725, were wanted, and an order was given to break open the chest. The deeds were taken, but the other manuscripts were left exposed as of no value. Many of them were carried away, but Chatterton's father, who was nephew to the sexton, removed several bibles full of parchments, which he put to no better use than that of covering copy-books and bibles for the school over which he presided. Young Chatterton, soon after the commencement of his apprenticeship, was struck with one of these parchments converted into a thread paper; he soon got possession of all that were left of the board, and from this period, at last, he seems to have formed the design of converting them into a system of literary forgery. Upon the opening of the new bridge at Bristol, an article appeared in Farley's Bristol journal, in 1758, entitled, "A Description of the Poet's first passing over the Old Bridge, taken from an Ancient Manuscript." This was traced to Chatterton, who, after much equivocation, avowed that it came from the old chest. He next caused a rumour to be propagated, that certain ancient pieces of poetry had been obtained from the same place, the authors of which were Thomas Cannyge, and the friend of Sir Thomas Rowley, a poet. The report gained credit, and he was applied to by some respectable inhabitants of Bristol, whom he presented, without any kind of reward, with various poetical pieces, under the name of Rowley.
In 1770 he wrote to the Hon. Horace Walpole, offering to furnish him with accounts of several eminent painters, who had flourished in early times at Bristol, including in the same packet, two specimens of the old poems, with a relation of their discovery. By the poets Mason and Gray, to whom they were shewn, these were instantly pronounced to be forgeries, and, after a considerable lapse of time, returned.

Chatterton, prior to this, had commenced a correspondence with the Town and Country Magazine, and had inserted in that work various articles relative to antiquity, of extracts from the pretended Rowley, and of pieces entitled "Saxon Poems, written in the Style of Offian." He also became a writer of Satire, particularly of the poetical kind, in which he did not spare even those who had been his friends. His character began now to be developed, and it did not appear in the most favourable light. The confidence which he felt in his own powers rendered him proud and impatient of control. Whatever plan he adopted he entered upon with an almost unexampled eagerness. Poetical enthusiasm was never more strongly exhibited than in Chatterton. He fancied he could write with effect, only at particular seasons, and the full of the moon was the time when he imagined his genius was in perfection; at this period, as if the immediate presence of that luminous added to the inspiration, he frequently devoted a considerable portion of the night to composition.

London was become the first object of his views, the only proper place, as he thought, for the display of his talents: yet he knew not how to free himself from his indigence. At length, having avowed himself an unbeliever in the Christian religion, he threatened to put an end to his life, on Easter day, 1770; his master, on learning this fact, immediately diffified him from his service. Chatterton now set out for the metropolis, and in an answer to some inquiries from a friend, was given an exposition of his plans. "My first attempts," said he, "shall be in a literary way: the promises I have received are sufficient to dispel doubt; but should I, contrary to my expectation, and myself deceived, I will, in that case, turn Methodist preacher. Credulity is as potent a deity as ever, and a new feat may be easily devised. But if that should fail me, my last and final resource is a pillot." From a young man of 17, who could deliberately avow such sentiments, much moral worth was not rationally to be expected. A contempt for the truths of revealed religion is almost always succeeded by a laxity of principle very injurious to real and progressive improvement. Upon his arrival in London he engaged in many projects with the bookellers; a history of England, and another of the metropolis; essays in a magazine, and in the newspapers, and fongs for places of public entertainment were among his projected plans.

He was particularly attached to party politics, and connected himself with what was deemed the popular side of the question; he was introduced to the Lord Mayor Beckford, who received him kindly, but from whom, it appears, Chatterton was not able to get any remuneration for his exertions in the cause which his heart conformed. Stung with disappointment, he observed, that he must be a poor author who could not write on both sides. Upon this maxim he acted; but prosperity was not the attendant upon his dereliction of principle. For some time indeed he indulged the most fantastic hopes of attaining to distinction, and even influence, by the exertions of his pen; and to his honour he is spoken, with these pretensions in anticipation, gave him more pleasure than the hope of being able to afflIf his widowed mother and beloved sisters in their need. From his first earnings, scanty as they were in comparison of what he had fancied they would provide, he devoted a part for presents to his relations at Bristol. Within a very short time after he had boasted of his prospects with regard to the future, he experienced some change in his expectations. The reverse was suddenly, and the dream of hope was speedily converted into the anguish of despair. The particular cause of this depression of spirits has never been exactly ascertained. He perhaps perceived that he had nothing to hope from the patronage of the great; and he felt, that a subsistence depending on bookellers must be scanty, and hardly earned. He had anticipated celebrity and influence; he had a taste for dilapidation, and public amusements seemed necessary as food to his exactions: ill prepared, therefore, he was for regular and habitual industry. His pride was mortified, and he was disillusioned with the labours of a literary life. He determined to quit the scene of his disappointment, and made an indelible attempt to be sent out a forger's mate to the coast of Africa; his last hope was blasted; and from this time he fell into a state of extreme indigence, which cannot be accounted for but on the presumption that he preferred death to the moderate exercise of those talents with which he was endowed. He was reduced to the want of necessary food; yet his pride even at that period was too great to allow him to accept of a dinner from the person with whom he lodged, the day before his death. In these desperate circumstances, his mind reverted to what he had been accustomed to regard as his last resource: on the 24th of August 1770 he swallowed a quantity of arsenic in water, which proved fatal to him in a few hours. He was interred in the burying-ground belonging to the workhouse in Shoe Lane. Thus terminated the life of the unfortunate Chatterton, before he had completed eighteen years. What multiplied our regret for this rafli flip, is, the circumstance, that Dr. Fry of Oxford went to Bristol within two or three days of the unhappy catastrophe, in order to search into the history of Rowley and Chatterton, and to patronize the latter if he appeared to deserve and stand in need of assistance—when alas! all the intelligence he could procure was, that Chatterton had, within a few days, destroyed himself.

The authenticity of the poems ascribed to Rowley was at first defended by persons of considerable rank in the antiquarian literary world; but the advocates for this opinion have long since been silenced, and Chatterton is almost universally admitted to be the author; and the measure of his reputation, as an author and a poet, is taken from them. They consist of pieces of all the principal classes of poetical composition: tragedies, lyric and heroic poems, pastoral, epistles, ballads, &c. &c. Many of them abound in sublimity and beauty, and display wonderful powers of imagination and facility of composition. They are however very unequal in merit; yet, after all their defects, they must ever be regarded as very extraordinary productions for a mere lad of 15 or 16 years of age. The other writings of Chatterton display many excellencies, but they are inferior to these. The perfon of Chatterton, like his genius, was premature. He had a manliness and dignity beyond his years; and there was about him something remarkably prepossessing. He had an uncommon ardour in the pursuit of knowledge, and a great facility in the attainment of it. His ruling passion, that which governed his whole conduct, was the desire of literary distinction. This passion intruded itself in his letters, and in his conversation it seemed to absorb all his attention. It was his favourite maxim, that "man is equal
to anything, and that every thing might be achieved by diligence and abstinence.” His ambition was evident to all who knew him, from his earliest youth. His melancholy was extreme on some occasions, and then he was ever eager to argue in favour of suicide. The natural gloomines of his disposition was probably increased by the principles of scepticism which he had unfortunately imbibed; and to these may be attributed his death. He has been charged with licentious conduct, and with indulging strong refractions against those who had offended him. His faults have been probably exaggerated; at any rate, they are much exceeded by the good qualities that have been fairly attributed to him. His temperance was exemplary: he was a lover of truth from the earliest dawn of reason; but the most amiable feature in his character was his generous attachment to his mother and relations. Every favourite project for his advancement in life was accompanied with promises and encouragement to them. In this respect his whole conduct is deserving the imitation of those in more fortunate circumstances, and under the influence of better principles than this unfortunate young man cherished. Biog. Brit.

CHATUGA, in Geography, a town of America, in the Tennessee government; 3 miles S.W. of Tellico.

CHATUS, in Middle Age Writers, a kind of gold coin.

Chatus was also called, by some French writers, maillot sabchat.

Du Cange makes it a question, whether the chatus was the same coin as the cahotens, and supposes that the latter might be formed from chati Pititavenepes; in French, chat de Payot.

CHATZAN, in Geography, a town of Aifa, in the Moulten country, W. of the Indus; 90 miles W. of Moulten. N. lat. 31° 8', E. long. 69° 45'.

CHAVABEDA, a principality of Arabia Duferta, whose chief towns are Chavaheda, Tangia, Merah, and Megiarah. This principality, and also that of Arcia, are in all respects unknown to us, except in the Arabian tables.

CHAVALINES, a town of France, in the department of the Maine and Loir; 4 leagues S. of Angers.

CHAVANAY, a town of France, in the department of the Rhone; 7 leagues S. of Lyons.

CHAVANGES, a town of France, in the department of the Aube, and chief place of a canton, in the district of Arcis-sur-Aube; 6 leagues S. of Arcis. The place contains 974, and the canton 5871 inhabitants: the territory includes 1524 kilometres, and 14 communes.

CHAVANNE, a town of France, in the department of the Ain, and district of Bourg; 8 miles W. N.W. of it.

CHAVARIGHTS, a seat of Mahometans, who deny that God ever sent a prophet that was infallible; and who had a commission to give a law to mankind: they pretend likewise that if such an office should ever become necessary, it would not be confined to a single family, but that every man of probity and virtue would be capable of that honour.

CHAUBI, in Ancient Geography, a people of Lower Germany, placed by Strabo near the ocean, between the Brusteri and Sicambri.

CHAUCER, Geoffrey, in Biography, the earliest English classic poet, was born, it is generally supposed, in the year 1328. Of his parentage and early youth little is known, except that he was born and brought up in London. It should seem, from circumstances discovered by his biographers, that he was exposed to the inconvenience of a narrow fortune, but that he received all the instruction which the metropolis could then afford. It is admitted that he flourished in both the English universities, first at Cambridge, then at Oxford, and probably at Paris also. It is evident, from his various writings, that he acquired a large acquaintance with the scholastic learning of the age. To him the Greek classics were inaccessible; but he successfully studied the Latin, French, and Italian. Virgil was his favourite author. The adventures of romance and the songs of the minstrels Chaucer listened to with avidity. Tales of chivalry, of enterprise, and heroic adventure, had a double interest with him, because he knew that, when he went forth into the world, the men of whom he read, a race now extinct, would be the objects of his observation and intercourse. The whole word was then romantic, fanciful, and sublime. This was the age of reformers and troubadours. Pilgrimages and crusades invited the conquest of the pious. Chaucer had also a particular turn for subjects of humour. At college he contracted a friendship with Gower and Strype, two young Oxonians of great learning and talents, and upon his return from the continent, whilst he went for improvement, by travels through France and the Low Countries, he is supposed to have studied the law at the Temple. He was, for a short time, a soldier as well as a lawyer, but he quitted each of these professions after a short trial, and his final destination was the court, where he first obtained the post of valetutus, or yeoman to Edward III. He had already distinguished himself as a poet, a quality that was likely to recommend him to a prince who was the patron of letters. Chaucer was a courtier in the best sense of the word, not depending upon ministers, but associating with princes; he seems, however, to have placed the chief hopes of his fortune on the friendship of John of Gaunt, duke of Lancaster; with whose family he formed an intimate connection, though not of the most creditable kind. The duke entertained as governors to his children, Catherine, the widow of Sir Hugh Swynford. This lady was also the favourite mistress of John of Gaunt, by whom he had several children. She had a richer, to whom the duke and duchesses were also attached, who recommended her to Chaucer for a wife. He married her in 1366, and from that time he speedily advanced at court. He received the gift of a house almost contiguous to the royal palace at Woodstock; and he was garrisoned with an annuity from the Exchequer of 200 marks, which sum was doubled on his being appointed gentleman of the king’s privy-chamber. In 1373, he was sent, with other persons, as a commissioner to Genoa, on a matter of public concern; and it is affirmed by Froissart, that Chaucer was the principal in the unsuccessful attempt to negotiate a marriage for Richard, prince of Wales, with a daughter of the French king. He was made comptroller of the customs, and various other lucrative employments were conferred upon him, which enabled him to live in a dignified style. It was the custom of that age for the great public officers to keep their own accounts, and Chaucer was enjoined to perform the duties of his office with his own hand. He was rarely absent from his office, for one and only written leave of absence to him for a month is formally recorded upon the patent rolls. Of himself, he says, that he had no opportunity for the pleasures of study, "till he had made an end of all his reckonings," and the buxiness of the day was concluded. He did not, however, renounce the pursuits of literature, for several of his poems were written during the period of his prosperity and attendance upon the court. Still he regarded the duke of Lancaster as his peculiar patron, whose political schemes he felt himself bound to promote. The duke having espoused the cause of Wickhille, Chaucer employed his pen in exposing the vices and ignorance of the clergy. On the succession of Richard to the crown, the duke of Lancaster
for a time obtained a chief share in the administration of affairs; and a renewal of some of the grants to Chaucer was among the arrangements in this reign; but he seems to have been deprived of his most lucrative office as comptroller of the customs. His affairs soon fell into disorder, and he was obliged to have recourse to the sovereign's protection against his creditors.

In a few years the duke, his patron, became unpopular, both in and out of the court, by his adherence to the followers of Wickliffe, who were considered as the authors and abettors of the commotions that disturbed the kingdom. London itself was divided into two parties, one favouring the reformation, the other adhering to the established clergy. Chaucer sided with the former, and thereby rendered himself obnoxious to the officers sent to suppress the disturbances, and he would have been apprehended had he not escaped first to Hainault, and thence to Zealand, where he lived in concealment till his difficulties forced him back to London. He was, however, immediately seized and sent to prison, where he was treated with the greatest severity. As in exile he was nearly delirious of all the necessaries of life, so in prison he experienced the savage triumph of his enemies, and was probably the witnes of many barbarous executions. The terms upon which he was liberated from confinement, after five years of oppression and difficulty, were such as no honourable man ought to have complied with. For the sake of pardon he deposed all he knew of the design of the party whose cause he had formerly defended; thus did Chaucer obtain his liberty, accompanied with a heavy load of merited obloquy. Upon his restoration to liberty Chaucer was appointed clerk of the works, a situation which he occupied only a very short time: he was in truth reduced to such a state of penury, that he sold his penfions and retired to Woodstock. Here he calmly employed himself in revising and correcting his various writings, and of applying to practical purposes those fluos of philosophy which study and reflection had enabled him to accumulate.

In this retreat, after he was sixty years of age, he planned and composed his Canterbury Tales, which have been deemed one of the most extraordinary specimens of active genius and various talent that England has produced. The two last years of his life he spent at Donnington castle. The return of the duke of Lancaster to court, and his marriage with Catharine Swynford, his old mistress, were favourable circumstances to Chaucer, who obtained a renewal of his annuity, and a grant of a pipe of wine annually, from the customs of the port of London. Chaucer lived to see his sovereign deposed, and the son of his patron John of Gaunt usurp the government. In addition to his former grants, were conferred upon him 40 marks per annum during life: but it is to the praise of Chaucer, that as he was too old to oppose the pretensions of the usurper, or to contribute to redress the wrongs which he deplored, yet all the benefits of the new king, and all his connections with, and obligations to, the father of that monarch, could not extort from him a line of congratulation. Soon after the commencement of the new reign, his own affairs required him to visit the metropolis; but he was too old to bear the fatigues attendant upon the journey. He died in a house that he had hired at Weilminster, October the 25th, 1400, at the age of seventy-two. His remains were interred in Weilminster-abbey.

From this sketch Chaucer appears to have been a man of the world as well as a scholar, and to the variety of the scenes in which he engaged, is to be ascribed the varied character of his writings. As a courtier, a traveller, and a man of pleasure, he acquired an air of gallantry, and a talent for rich and elegant description, which distinguishes him from all other writers of that period: at the same time a kind of serious reading, joined to the impressions which the scenes of adversity had made upon his mind, rendered him well calculated to sustain the part of the moralist and philosopher. His works are numerous; his fame ranks high as an original poet, and his industry is no less conspicuous as a translator and imitator from the French and Italian writers. He enriched his native language by new forms of diction and verification; but there is nothing in which he excels his contemporaries more than in profifiting that true poetical character of which they were almost wholly void. In many of his tales are to be found fine figures and splendid imagery displayed in glowing and elegant language. The most considerable and celebrated work of this poet is his "Canterbury Tales", which are a set of stories connected by the fiction of their being told by a company met at an inn in Southward, for the purpose of a pilgrimage to the shrine of St. Thomas-a-Becket, at Canterbury. These tales are various in their subject; heroic, and romantic; satirical, humorous, and moral; and the prologue by which they are introduced, is one of the most curious memorials of the age. It contains a description of all the personages forming the company, among whom are individuals of the most remarkable characters both male and female, of which society is composed. These are delineated with a strength and precision that can scarcely be surpassed, and form a group highly interesting to the observer of human nature; in short, they exhibit a view of the private life of the fourteenth century. The Canterbury Tales have been handomely published by Mr. Tyrwhitt in five volumes 8vo., but the editions of Chaucer's other works do not equal the value of the former edition. They are highly indispensable to the lovers of ancient English poetry. B. E. B. Godwin's Life of Chaucer.

CHAU-CHEW, in Geography, one of the 10 jurisdicitions into which the province of Quang tong or Canton, in China, is divided, and also a city of that jurisdiction.

CHAU CHOO FOO, or CHAO-CHOW-FOO, the second city of the province of Canton, in China, situate at the confluence of the river Pe-kiang, with another considerable stream proceeding from the N.W. The environs of this city are pleasant and romantic. The plains are fringed with rice and tobacco, and the rising grounds are planted with cotton and the jute plant. The palaces are covered with numberless flocks, and the coasts teem with fish. The boats which ply from one part of the city to another, are chiefly managed by females, who are generally young and neatly dressed, with an evident intention of attracting the attention of passers. At this city the concurrence of two navigable rivers occasions a concourse of male strangers. The small females in the boats had not combined this double occupation, after having quitted their parents, or on being abandoned by them on account of their misconduct; but the parents themselves, taking no other interest in the chastity of their daughters than as it might contribute to an advantageous disposal of them to wealthy husbands, feel little reluctance, when no such prospect offers, to devote them to one employment with a view to the profits of another. The distinction which this city has acquired is owing to a celebrated monastery of the Bonzes which is in its vicinity. Its situation is singularly delightful: from the middle of a mountain called Nan-hoa, where it stands, there is a charming prospect of a defert, stretching out into an immense plain, which is bordered with hills, on the summits of which fruit trees are planted in regular order, interspersed here and there with groves, the foliage of which is always green. The country about the town belongs to the monastery, the
origin of which is traced back 3 or 500 years. The Donces pretend that its founder practised the most edifying austerity, an example, however, which they do not chuse to follow, as they abandon themselves to every kind of debauchery. The people who formerly visited this place as pilgrims, complained much of their theft and robberies; but these abuses have been corrected, and the devotees of the province may now visit the place in safety. The air of this city, however delightful its situation, is infalutibles; and contagions distempers, generally prevailing here from the middle of October to the beginning of December, sweep off every year a great number of inhabitants. This city has under its jurisdiction 6 cities of the third class; near one of which grows a kind of black reed, of which various instruments are made that cannot be distinguished from those that are made of real ebony. Emb. to China, vol. ii. Groffer's Descript. of China, vol. i.

CHAUCI, CAUCI, or CAUCI, in Ancient Geography, a people of Germany, whose territory commenced with the Friiri, occupied part of the sea-coast, and had behind it the Chaumavi, Angrivarii, Dulbigini, &c., according to Tacitus. This author, as well as Ptolemey and Pliny, distinguished them into great and small. Strabo says, that Drufus Germanicus was the first of the Romans who, crossing the sea, penetrated into their territory, after having gained a naval victory over the Anfibari, and subdued the Frithii. Tacitus says, that the Thibaravi and Batavi, who, according to Tacitus, were of the Roman empire under the empire of Claudius; but were defeated by Gabinus, who hence obtained the appellation of "Caucian," according to Suetonius. Tacitus says, that they routed their neighbours, the Anfibarians, under the empire of Nero, and during the troubles of Vitellius's reign, they united with the Batavi and Frithii, and spread themselves over the empire; but they were again restored to favour. They remained in tranquillity till the reign of Aurelius, when they invaded the territory of the Batavi, but Didius Julianus repelled their progress.

CHAUDER, in Law, according to its proper etymology, denotes an affair that happens in the beat of blood or passion. See CHANCE-MEDLEY.

CHAUNDEBREG, a village of France in the department of the Mofelle, near Thionville, celebrated for its medicinal waters.

CHAUD,DE-AIGUES, a town of France in the department of the Cantal, and chief place of a canton in the district of St. FLOUR, deriving its name from its medicinal springs, and trading chiefly in ikins and glue; 12 miles S. of St. FLOUR. The place contains 2049, and the canton 8150 inhabitants; the territory comprehend 340 kilometres and 14 communes.

CHAUDIERE, a river of Canada, which rises in Lincolm and Hancock counties in the district of Maine, and joins the river St. Lawrence, about 7 miles above Quebec. The fall in this river is not half that of Montmorenci, or about 120 feet high; but it is no less than 250 feet broad. However the scenery round this cataract is in every respect much superior to that in the neighbourhood of Montmorenci. The banks of La Chaudiere are covered with trees of the largest growth, and amidst the piles of broken rocks which he scattered about the place, you have some of the wilder and most romantic views imaginable. As to the fall itself, it grandeur varies with the season; when the river is full, a body of water rushes over the rocks in a manner that amazes the observer; but in dry weather, and, indeed, during the greater part of the summer, the quantity of water is inconsiderable. The carrying place from boatable waters in the Chaudiere to similar waters in the Kennecac, is not more than five miles.

There are several portages on the north side of the river Utawas, in Lower Canada, called Portages de Chaudiere; at the first portage of this name, the body of water falls 25 feet, over craggy excavated rocks, in a wild and romantic manner. At a small distance below, is the river Rideau on the left, falling over a perpendicular rock near 40 feet high, in one sheet, assuming the appearance of a curtain; from which circumstance it derives its name. To this extent the lands have been surveyed, and are very fit for culture. Many loyals are settled upon the river Rideau, and have thriving plantations. Some American families, preferring the British territory, have also established themselves along a river on the opposite side, where the soil is excellent; and it is apprehended, that at no very distant period, the lands will become settled from this vicinity as far as Montreal. Over this portage, which is 635 paces long, the canoe with its whole laden is carried. The rock is so steep and difficult of access that it requires 12 men to take the canoe out of the water; it is then carried by 6 men, two at each end on the same side, and two under the opposite gunwale in the middle. From hence to the next is but a short distance, in which they make two trips over the second Portage de Chaudiere, which is 700 paces, to carry the loading alone. From hence to the next and last Chaudiere, or Portage des Chenes, is about 6 miles, with a very strong current, where the goods are carried 740 paces, the canoe being towed up by the line, when the water is not very high. The next remove is to the Lac des Chaudiere, computed to be 30 miles in length; but though it is called a lake, it hasa strong draught downwards, and its breadth is from 2 to 4 miles. At the end of this is the Portage des Chats. See CHATS.

CHAUDIERES, of CHAUDIERES DE MAGASINS, are vessels made use of in military magazines, to boil pitch in for various purposes. They are necessary in all places and particularly during sieges.

CHAUDRON, in Geography, a town of France in the department of the Maine et Loire; 15 miles S.W. of Angers.

CHAVES, a town of Portugal, in the province of Tramondos, near the confines of Spain, defended by a castle, walls, and bastions, seated on the Tagus, and founded by the emperor Trajan; several traces of its ancient magnificence still remain; 12 leagues W. of Draganda. N. lat. 41° 47' W. long. 6° 31'.

CHAUFFAGE MILITAIRE, in Military Language, is an allowance of fire-wood regulated by particular orders or ordinances to officers and soldiers whether they are in barracks not, during the continuance of cold weather.

CHAUFFAILLES, in Geography, a town of France in the department of the Saone et Loire, and chief place of a canton in the district of Charolles, 4 leagues E. of Mardyj; the place contains 2155, and the canton 7292 inhabitants; the territory includes 142½ kilometres and 9 communes.

CHAUFE. A spot where the wood is collected and burnt in a foundery. The chasse is three feet below the furnace, over every part of the inside of which the flames spread, and by their intense heat dissolve the metal.

CHAUPE-WAX. See CHAUFE-WAX.

CHAU-CHOU. CHAO-CHING, or CHAO-KEWING, in Geography, one of the 10 capital jurisdictions into which the province of Quang-chow, or Canton in China is divided; and also the chief city of the jurisdiction, and the residence of the viceroy. See CHAO-KEWING.

CHAУ-
CHAUKUNDA, a town of Africa, near the river Gambia, in the kingdom of Jemarow.

CHAUL, a town of Hindooftan on the coast of Malabar, with a good port, and defended by a citadel, taken in 1550 by the Portuguese; 6 leagues S. of Bombay.

CHAULIEU, William Anove De, Abbé, in Biography, a favourite French poet, was born at his father's seat at Fontenay, in 1639, and became by means of his natural genius, excellent education, and lively disposition, the delight of elegant society, and the esteemed friend of the great Duke of Vendome, and of his brother the grand prior of Malta. Entrusted with the management of their concerns, he was recommended by several valuable penates; which, added to the lordship of Fontenay, enabled him to gratify his inclination by pursuing a life of pleasure. His apartments at the temple in Paris were the resort of learned friends, who were charmed by his amiable qualities and lively conversation. The poetry in which he excelled was a mixture of the voluptuous and sentimental, blending with the gaiety of Amoreon, the philosophical good-humour of Horace. Chapelle was his model, whom he imitated in the easy negligence of his verse and the occasional use of double rhymes; and as a poet he deferves to be ranked with the careless men of genius, rather than with the maisters of the art. Notwithstanding several fits of the gout, this lively Epicurean lived to his 81st year; dying at Paris in 1739. The most esteemed of the several editions of his works are that of Amsterdam in 1733, and that of Paris, in 1744, each comprised in 2 vols. 8vo. Nouv. Dict. Hist.

CHAULIDONTA, from χαλάς, I put forth, and θης, tooth, among Ancient Naturalists, is applied to those animals, the teeth of which grow to a great length out of their mouths, as the boar and the elephant.

CHALMES, in Geography, a town of France, in the department of the Seine and Marne, and district of Melun; 7¼ leagues S.S.E. of Paris.

CHALNES, the Duke de, in Biography, a peer of France, distinguished as an astronomer and mathematician, was born at Paris in 1714, and manifested, in early life, a strong propensity for the study of the sciences. In the tumult of armies and camps he cultivated mathematics, astronomy, mechanics, &c. In 1743 he was named honorary member of the academy; and, at the meetings of this illustrious body, which he regularly attended, he produced various conjectures and corrections of instruments in astronomy and dioptrics, and particularly of achromatic telescopes. The result of these researches was a new parallelic machine of an improved kind, and the mode of applying the micrometer to telescopes, and of accurately measuring the parts of that instrument. Whilst he was prosecuting similar speculations and experiments for the improvement of science, his career was terminated by death in 1769. The Memoirs of the Academy of Sciences contain a variety of his communications. In the volume for 1755, we have observations on some experiments in the 4th part of the 2d book of Newton's Optics: in that for 1765, observations on the platform for dividing mathematical instruments; also a determination of the distance of Arcturus from the sun's limb at the summer solstice; and observations on some means of perfecting astronomical instruments: in that of 1767, observations on some experiments relating to dioptrics; in 1768, the art of dividing mathematical instruments; in 1769, observations on the transit of Venus in that year; and a new method of dividing mathematical and astronomical instruments.

CHALNES, in Geography, a town of France, in the department of the Somme, and chief place of a canton in the district of Péronne; 7 miles S. of it. The place contains 1243, and the canton 10,022 inhabitants. The territory includes 160 kilometres and 23 communes.

CHAU, in Ancient Geography, a mountain of Peloponnese, in the Argolid, in which, according to Pausanias, was the source of the river Eraus.

CHAUHERGY, in Geography, a town of France, in the department of the Jura, and chief place of a canton in the district of Dôle; 5 leagues W. of Poligny. The place contains 306, and the canton 4851 inhabitants: the territory includes 874 kilometres and 17 communes.

CHAUROUETTE, Anthony, in Biography, a surgeon of eminence, was born at Puy, a town on the banks of the Loire, in France, in the early part of the 18th century. In his preface to his Enchrydium Chirurgicum, he informs us, he was first sent to Montpellier, where he studied medicine under Roudeletis, and that he went thence to Paris, and having completed his education in anatomy and surgery under Sylvius, he returned to his native country, where he appears to have been in great request. In 1560 he published an abridged practice of phycie, to which he added a treatise on the lues venera; in which he strongly recommends the use of mercurial frictions, which had succeeded, he tells us, when all other methods and medicines had failed. This gained to his work such popularity, that in the space of about thirty years from its first appearance at Paris, editions of it appeared in almost every country in Europe. The title of the work is, "Enchrydium Chirurgicum, externarum morborum remedia, tum universalia, tum particularia brevissima complectens." Quibus morbi venerea curandi methodus probabilissima accedit." Parisis, Eloy. Diet. Hist. Bib. Cl.

CHAMONT, in Geography, a town of France, in the department of the Ardeennes, and chief place of a canton, in the district of Rethel; 9 miles N.N.W. of it. The place contains 965, and the canton 1287 inhabitants: the territory includes 202.5 kilometres and 21 communes.

CHAMONT, a town of France, and principal place of a district in the department of the Upper Marne, seated on a mountain near the river Marne. It has a manufacture of coarse woollen cloth, and considerable trade in deer and goat's skins. N. lat. 48° 7'. E. long. 5° 2'.

CHAMONT, a town of France, in the department of the Oise, and chief place of a canton in the district of Beauvais; 13 miles S.S.W. of it. It derives its name from an artificial mountain, on which was erected a fortress, which served as a boundary of France when the English possessed Normandy. The place contains 1085, and the canton 1277 inhabitants: the territory comprehends 273.5 kilometres and 39 communes. N. lat. 49° 15'. E. long. 1° 47'.

CHAMONT, a town of Savoy, in the Genevois, near the frontiers of France; 6 miles N.E. of Stifell.

CHAMONT, a town of France, in the department of the Forêts and district of Neufchatel; 6 miles S. of Baillouge.

CHAMONT sur-Tharonne, a town of France, in the department of the Loire and Cher, and chief place of a canton, in the district of Romorantin; 17 miles N. of Blois. The place contains 1194, and the canton 7424 inhabitants: the territory includes 41.5 kilometres and 7 communes.

CHAUMERT, See CHAMPART.

CHAUSSAY, in Geography, a town of France, in the department of the Indre and Loire; 12 miles S. of Loches.

CHAUSSAY, a town of France, in the department of the Marne, and district of Neufchâteau; 6 miles S.W. of Reims.

CHAUSSAY, a town of France, in the department of the Somme, and chief place of a canton in the district of Péronne; 7 miles S. of it. The place contains 1243, and the canton 10,022 inhabitants. The territory includes 160 kilometres and 23 communes.
CHAUNAY, a town of France, in the department of the Vienne, and district of Civray; 2 leagues N.W. of it.

CHAUNCY, Sir Henry, in Biography, a topographical writer, was born of an ancient family of Hertfordshire, in that county, and educated at Caius College, Cambridge. In 1649 he entered the Middle Temple, pursued the study and practice of the law, was knighted by Charles II. in 1681, and in 1688 was appointed a Welsh judge. He died in 1700. His "Historical Antiquities of Hertfordshire," though burdened with pedantic diffusions, and depreciated by mealy-executed engravings, is a work in good estimation. Biog. Brit.


CHAUNITOR, chaunter. See Chantor.

CHAUNTRY, or Chantry, was anciently a church, or chapel, endowed with lands, or other yearly revenue, for the maintenance of one or more priests, daily faying or singing masses for the souls of the donors, and such others as they appointed. These chantries were dissolved by 1 Ed. VI. cap. 24.

Hence, channer-riots, are rents paid to the crown by the tenants, or purchasers of channer-lands.

CHAUNY, in Geography, a town of France, in the department of the Aisne, and chief place of a canton in the district of Lons-le-Saunier, placed by Ptolemy on the other side of the Imaus.

CHAURIAT, in Geography, a town of France, in the department of the Puy-de-Dôme; 4 miles N.W. of Bollon.

CHAURINA, in Ancient Geography, a town of Asia, in Aria. Ptol.

CHAURUS, or Chorus, among the Romans, the north-west-wind, or that which blew between the wind called Scythia and the north.

CHAUS, or Snaus, in Geography, the most easterly and extensive province of Fez; in general mountains, rocky, and unfruitful; but in some parts fertile, and capable of feeding numerous herds of cattle.

CHAUS, in Ancient Geography, a river of Asia, towards Pthidia, and near the town of Erissa, according to Livy.

CHAUSSE, Michael Angelo De La, in Biography, an able antiquary of Paris, went to Rome at an early age, and fixed in that capital. His "Museum Romanum," published at Rome in 1569, fol. and in 1575, 2 vols. fol. contains a large collection of engravings of inedited antiquities, and is indebted to Gravius's collection of Roman antiquities. He published also "A Collection of Antiquities," Rome, 1707, 4to, with Italian explanations; and "Picture Antiques, Cataraman et Sepulchri Nasanum," 1738, fol. All his works display erudition and fragacity, and are esteemed by those who are led to study the subjects which they comprehend. Nouv. Dict. Hist.

CHAUSSE, trape, in Conchology, the French name of the Linnaean Murus tribulus.

CHAUSSET, trape, or Culiropus, in Military Languages, are what we call crows-feet. They are iron instruments with four or more spikes, each of them made in such a manner, that whatsoever way any of them may fall, it will always lie with one of their spikes uppermost. They are well calculated for defending breaches and parapets. For when thrown up and driven them, they are very troublesome to the foot that mount the breaches, or to the enemy's horfe that would pass along some narrow places or ditches. There are three sorts of them, viz. small ones, with spikes about three inches long; middling ones, with spikes four inches long; and great ones, with spikes four inches in length.

CHAUSSE, or Res de chauffe, an old term for the level of the field, or of the plain ground.

CHAUSSET, in Geography, a town of France, in the department of the Jura, and chief place of a canton in the district of Dôle; 3 leagues S. of it. The place contains 1107; and the canton 7461, inhabitants: the territory includes 190 kilometres and 23 communes.

CHAUTLAN, a town of North America, in the country of Mexico, and province of Chiaapa; the inhabitants of which carry on a considerable trade in cocoa, pottery, felt, and dates.

CHAUVEAU, Francis, in Biography, was born at Paris in 1651; and, as his father left his fortune by gaming, he was constrained, after a liberal education, to apply the knowledge of the arts, which he had acquired as a polite accomplishment, to his own support and that of his illegitimate mother. He was instructed in the art of design by Laurent la Hire, and began with the use of the graver, but soon quitted it for the point, which was better suited to his taste, and the celebrity of his execution. He commenced the exercise of the profession which he had assumed at the early age of 15 or 16; and his first essays were copies of the performances of his master; but such was the fertility of his invention, that he soon abandoned this servile labour, and sketched out his own thoughts on paper, as fast as they occurred, and executed his designs in etching with aqua fortis, which he wrought with such rapidity as force and spirit; he seldom corrected or expunged any part of them afterwards, so that his works are often faulty, and unequal to each other. His house became the resort of some of the first wits of the time; and about the year 1630, they were accommodated to assemble there in order to converse on various subjects. These meetings gave occasion to the establishment of the French Academy. Chauveau was admitted into the Royal Academy of Painting and Sculpture in 1665; and in 1664, he was employed by the king to engrave the friezes of plates of the Caroussel; displaying in the attitudes of his men and horses an admirable variety and animation. By this work he obtained a pension for life. Many of his designs for the romances of the day were executed by way of amusement after supper; the stories were read to him by his children, and fixed upon some of the most striking subjects, he traced his designs upon the plate, and so far completed them as to make them fit for the aqua fortis next morning. The number of his works is almost incredible; sometimes they amounted to 3000; others say that he engraved 4000 with his own hand, and mostly from his own designs, and that more than 1400 were engraved by other artists after his designs. His small plates, lays Mr. Strutt, are executed in a style much resembling that of Le Clerc, founded upon that of Callot. In his large prints, he approaches near to tint coarse, dark style, which was adopted by his tutor, La Hire. He furnished drawings not only to painters and engravers, but to chased, embroiderers, and various other artists. He excelled in painting to such a degree, that Le Brun admired his pictures, and bought several of them. He engraved from Le Brun and many other masters. Among the sets of prints, executed from his own compositions,
compositions, are those for the “Bible History,” the
“History of Greece,” the “Metamorphoses of Ben-
erade,” the “Jerusalem of Tasso,” the “Fables of La
Fontaine,” a “Aria,” or “Rome conquered,” and
several romances. Among the prints, engraved from other
masters, are “Christ with the Disciples at Emmaus,” from Titian,
a “Concert,” from Domenichino, the “L. I. C. of St. Bruno,”
from Le Sueur, “Apollo and Daphne,” from N. Poussin,
“A Virgin and Child, with St. John and little Angels,”
finely etched and finished with much taste, and “Meleager
presenting the Head of the Boar to Atalanta.” This
artist died at Paris in 1676. Moreri. Strutt.

CHAUVEAU, René, the youngest son of the preceding, was
also an eminent artist, resembling his father in the vivacity
of his imagination and facility of his execution. He was born
at Paris in 1663, and being left an orphan, he was placed first
with a carver in wood, and afterwards with Caïfere, the
sculptor, by whom he was employed in modelling trophies
for the king. In this situation he attracted the notice and
engaged the patronage of Colbert, and several succeeding
comptrollers-general of the buildings; and at the age of 25
or 26 was reckoned the first of sculptors for models and
etchings. After his marriage, a lodging was assigned to him
at the Louvre, but on being deprived of it on some pretext,
he was so much offended that he accepted an offer of going
to Sweden in the service of Charles XII. under the protection
of the baron Toffin. Here he continued few years, and
in his way to France, in 1700, he executed some works
at Berlin. Several of the nobility of his country employed
him in sculptures and decorations about their seats, and
in various works for churches and chapels. Many of his
compositions, exhibiting great taste and elegance, were engraved.
From several of his employers he received munificent rewards;
and particularly from the bishop of Metz, who kept
him at work for eight years at his seat at Frecati. Being
questioned twice in one day by his late employer, the marquis
of Torci, what he expected for his day’s work, he was so
much piqued, that, without making any reply to a question
so degrading, he fuit out immediately on foot for Paris.
Fatigue and chagrin, together with vexation at a loss he sustained
by bank-notes, occasioned an illness, which terminated in his

CHAUVIN, in Geography, a town of France, in the
department of Vienne, and chief place of a canton in the
district of Montmorillon; seated on the Vienne, 4 leagues
E. of Poitiers. The place contains 1608, and the canton
7347 inhabitants: the territory includes 217 3/4 kilometres
and 11 communes.

CHAVIS, in Ancient Geography, a town in the interior of
the Tauric Chersonesus, according to Strabo.

CHAUD, in Geography, a town of France, in the
department of the Charente; 20 miles S.W. of Angou-
leme.

CHAUDON, a large and beautiful village of
Switzerland, in the principality of Neuchâtel, situated in a
broad valley which reaches to Franche Comté, and connected
with Léde, by a continued range of delightful cottages,
that skirt both sides of the road, and are likewise scattered
over the country. La Chaux de Fond and Lode, together
with the districts belonging to them, are supposed to contain
about 6000 inhabitants, distinguished for their genius,
industry, and skill in the mechanical arts. They carry on an
extensive trade in lace, stockings, cuttery, and other articles
of their own manufacture; and they particularly excel in
watch-making, and every branch of clock-work. All sorts of
workmen necessary for the completion of this business,
such as painters, enamellers, engravers, and gilders, are
found in these villages, where, upon an average, about
40,000 watches are yearly made. On these mountains every
individual is sure of obtaining a comfortable maintenance;
and as the people have a prospect of sink placing their
children in a way of procuring a decent subsistence, they marry
early. Not many years ago, the greater part of the valleys
was almost one continued forest; but the powers of industry
have changed the scene into flourishing villages and fertile
parks. Besides the natural effect of frequent and early
marriages in contributing to the increase of population, every
farmer, who brings a certificate of his good behavior, is
at liberty to fell, and follow any trade without the least
restraint. Here no apprenticeship is necessary, nothing
is court-hand, and industry exerts itself untaught. The origin
of watch-making in these parts is traced to the year 1679,
at which time one of the inhabitants brought a watch from
London, when an ingenious artist employed to repair it,
examined its mechanism, and after a whole year spent in invent-
ing and finishing the necessary instruments, and six months
more in the work itself, completed a watch after this model.
Several inhabitants of Chaux de Fond and Lode are well
skilled in other branches of mechanical science, besides those
already mentioned, and have invented useful mathematical
and astronomical instruments. Several automatical figures
of a very singular and surprising construction may be enumerated
among the inventions of this district, for which the curious
are indebted to Jacques Droz and his son: one of these played
upon the harp-chord, another drew landscapes, and a third
copied any word presented to it, and wrote down whatever
was dictated by any of the company. The inhabitants apply
their ingenuity to convert the flames and torrents, de-
fering from mount Jura, to useful purposes. Accordingly
in the midst of the subterraneous channels formed by these
waters, they have erected mills, which they serve to put in
motion; they have also contrived wheels, where I seemed
scarce practicable, invented new modes of scatting, and
various other contrivances for the accomplishment of their
object. The natives are very courteous to strangers, and,
in general, well informed in various branches of knowledge;
and as they spend their leisure hours in reading, many of the
villages contain circulating libraries. The houses are plaf-
ted and white-washed; though small, they are commodious
and well-built, and furnished with a degree of neatness, and
even elegance, peculiarly striking in these isolated
mountains. We shall only add, that these people are placed
through these mountains to such a degree, as to exclude poverty
and the distress attending it; and thus they afford a pleasing
view of the valuable effects of industry under a mild and equitable
government. Cox’s Switzerland, vol. ii.

CHAW-STICK, in Botany. See GOAUNIA.

CHAYANTAS, in Geography, one of the jurisdictions
belonging to the new viceroyalty of Buenos Ayres in South
America, lying about 50 leagues N.W. from the city De la
Plata, and extending in some parts about 45 leagues. This
country is famous for its gold and silver mines. The former
are not at present wrought, though the old subterraneous pa-
pages are still open; and the river Grande, which waters the
province, has in its land considerable quantities of gold dust,
and grains of this metal. The silver mines are still wrought
to great advantage. According to the statement of Halls, it
has 2 gold mines, 3 of silver, 1 of copper, 1 of tin, and 1 of
lead. The cattle of this province are barely sufficient for the
inhabitants.

CHAYOTA, in Botany. Jacq. See SECCINUM.

CHAZA, in Ancient Geography, a town of the interior of
Africa, belonging to Ethiopia, near the Nile.

CHAZAUNI, CHAUPANISH, or CHAUNAHI, a people
of Scythia, according to Ptolomy.

CHAZET, in Geography, a town of France, in the
department
CHE, the department of the Indre, and district of Chateauroux; 7 miles S.S.W. of Argenton.

CHAZELLES, John Matthew, in Biography, an eminent mathematician and engineer, was born at Lyons in 1657, and educated in the Jesuits' college of his native place, where he removed to Paris in 1675. M. Du Hamel, secretary to the Royal Academy, introduced him to Cassini, and he was placed in the observatory, where he learned the practical part of astronomy. He afterwards affiliated in forming the geographical planisphere, 27 feet in diameter, and in continuing the meridian line of France towards the south. After remaining five years with Cassini, he became tutor in mathematics to the duke of Montemart, for whom he obtained the post of geography-professor to the galleys at Marcellas, and in this situation he made many plans of the sea coast; and he performed various other services as hydrographer and engineer, as well as in the astronomical department. He also made a voyage to the Levant, measured the pyramids of Egypt, and ascertained that the position of the four sides of the largest pyramid exactly faced the four cardinal points of the compasses. Upon his return, he reported the particulars of his travels to the Academy of Sciences, and was admitted, in 1695, a member of their body. The memoirs of the academy previous to the year 1708, contain many of his communications. He died at Marcellas in 1716. Elage par Fontenelle. Gen. Bio.

CHAZELLES for Lyon, in Geography, a town of France, in the department of the Drôme, and chief place of a canton in the district of Montbrison; 7 leagues W.S.W. of Lyons. The place contains 2564 and the canton 13,441 inhabitants; the territory comprehends 2328½ square miles, and 21 communes.

CHAZEN, in Ancient Geography, a country of Asia in Mesopotamia, placed by Strabo in the vicinity of Adiabene.

CHAZINIZARIANS, or Chatzinizaris, a feat in Armenia in the seventh century.

The word is formed of the Armenian chazin, cros. In the Greek text of Nicephorus, they are called Chatzinizaris, Narcacesius.

They are also called Staurolutes, which, in Greek, signifies the same as Chazinizaris in Armenian, viz. adores of the cros; they being charged with paying adoration to the cros alone.

In other respects they were Neflorians; and admitted two persons in Jesus Christ. Nicephorus, lib. xvi. cap. 54, ascribes other singularities to them, particularly their holding an annual feast, in memory of the dog of their false prophet Sergius, which they called Arzicharres.

CHE, in Geography, a town of China, of the third rank, in the province of Ho-nan; 12 leagues W.N.W. of Shantung.

CHEADLE, a town of England, in the county of Stafford, situated in a country abounding with coal, and surrounded by copper and brafs works. It has a weekly market on Friday; 15 miles N.E. of Stafford, and 146 N.N.W. of London.

CHEAPA, a river of America, which runs into the bay of Panama; 30 miles E. of Panama.

CHEAT, a river of America, which rises in Randolph county, Virginia, and after pursuing a N.N.W. course joins Monongahela river 3 or 4 miles within the Pennsylvania line. It is 200 yards wide at its mouth, and 100 at the Dunkards settlement, 50 miles higher, and is navigable for boats, except in dry seasons. There is a portage of 57 miles from this river to the Potomack at the mouth of Savage river.

CHEATS, in Law, are deceitful practices in defrauding, or endeavouring to defraud, another of his known right by some artful and dishonest device; as by playing with false cards or dice, by fraudulently obtaining the execution of deeds and trusts, by suppressing wills, by raising money under false pretences, &c.

If any one cheats with false cards or dice, or by false weights and measures, or by selling one commodity for another, an action on the case lies against him for damages, upon the contract which the law always implies, that every transgression is fair and honest. 10 Rep. 56. In contracts likewise for false, it is constantly understood that the seller undertakes that the commodity is his own; and if it proves otherwise, an action on the case lies against him, to exact damages for this deceit. In contracts for provisions, it is always understood that they are wholesome; and if they be not, the name remedy may be had. Also if he that selleth any thing doth, upon the false, warrant it to be good, the law annexes a tacit contract to this warranty, that if it be not so, he shall make compensation to the buyer: also it is an injury to good faith, for which an action on the case will lie to recover damages.

Any deceitful practice, whether in trade or otherwise, is punishable with fine, imprisonment, and pillory. 1 Hawk. L. C. 108. And by the Statutes 52 Hen. VIII. cap. 1. and 52 Geo. II. cap. 24. if any man defraud another of any valuable chattels by any false token, counterfeit letter, or false pretences, or pawns or dispossee of another's goods without the consent of the owner, he shall suffer such punishment by imprisonment, fine, pillory, transportation, whipping, or other corporal pains, as the court shall direct. And by 9 Anne, cap. 14. if any person cheats at play, and at one time wins more than 10l. or any valuable thing, he may be indicted thereupon, and shall forfeit five times the value to any person who shall sue for it, and (in case of cheating) shall be deemed infamous, and suffer such corporal punishment, as in case of wilful perjury. Blackfi. Com. vol. iv. p. 158, and 173.

CHEBIB, or Tallitz, in Geography, a mountain in Africa. in the province of Fez, on which are many towns.

CHERRECHIN, a town of Poland, in the palatinate of Bellaw; seated on the declivity of a hill. The walls are watered by the river Werip, which afterwards falls into the river Bog. The Jews in this place are very rich. N. lat. 52° 25'. E. long. 23° 51'.

CHEBUCTO, a bay and harbour on the S.E. coast of Nova Scotia. Near the head of this bay on the western side, stands the city of Halifax, the capital of the province. N. lat. 44° 40'. W. long. 63° 31'.

CHECAYA, in Turkish Affairs, is the second officer of the janizaries; and synonymous with lieutenant, or the second in any office.

CHE-CHEOU, a town of China of the third rank, in the province of Hau-quang, seated on the river Yang-tse; 11 leagues E.N.E. of Pong.

CHECHMEBAND, a town of Persea, in the province of Begelcan; 70 miles N.E. of Zarko.

CHECHURMAT, a town of Persea, in the province of Adurbatan; 200 miles N.E. of Taurus.

CHECK, in Commerce, a draft or bill on a banking-house, paid at sight to the bearer.

CHECK, a term in the game of cheats, used when one party oblige the other either to move or guard his king.

CHECK-mate denotes a movement on the chess-board that kills the opposite men, or hinders them from moving.

CHECK-roll, a roll, or book, containing the names of such as are attendants, and in pay to the king, or other great persons; as their household servants. Stat. 19 Car. II. cap. 1. It is otherwise called the chequer-roll, and seems to take
its etymology from the exchequer. 14 Hen. VIII. c. 13. See Roll.

Check, clerk of the, in the king's household, has the check and controlment of the yeomen of the guard, and all the others belonging to the royal family; allowing their absence or defects in attendance, or diminishing their wages for the same, &c.—He, also, by himself, or deputy, takes the view of those that are to watch in the court, and has the setting of the watch. 33 Hen. VIII. c. 12.

Check, clerk of the, in the king's dock-yards, is also the name of an officer, who keeps a muster or register of all the men employed aboard his majesty's ships and vessels, and of the artificers and others in the service of the navy, in the port to which he belongs.

Check, in Falconry, is where a hawk forfakes her proper game, to follow rooks, pies, or other birds that crosses her in her flight.

CHECKER. See Exchequer.

CHECKER-course, in Brick-Making. See Brick.

CHECKY, in Heraldry, is where the shield, or a part thereof, as a bordure, &c. is chequered, or divided into chequers, or squares. Where there is but one row of squares, it is not properly called checky, but counter-compartment.

Checky, according to Colombiere, is one of the most noble and ancient figures in all armoury; and ought never to be given, but to persons who have distinguished themselves in war: for it represents a chess-board, which itself is a representation of a field of battle. The pawns and men, placed on both sides, represent the soldiers of the two armies; which move, attack, advance, or retire, according to the will of the two gamellers, who are the generals.

Checky is always composed of metal, and colour. Some authors, however, would have it ranked among the sorts of turs. When the whole effutcheon is chequered, it should ordinarily contain five ranges; there is no need of blazoning to express them; only it must be observed, to begin to blazon by the first square in chief on the dexter side. So that if that be or, and the next gules, the houf, or family, is said to bear checky, or, and gules.

When the whole shield is not chequered, but only the chief, a bend, crofs, or the like, the number of ranges should be expressed.

CHECO, KECIO, or TONG-TOW, in Geography, a town of Asia, and capital of the country of Tongtius, situate on the river Songkoi; 100 miles from its mouth.

CHEC-ONG, a town of China, of the third rank, in the province of Set-chuen; 10 miles S.E. of Tong-tchouen.

CHECY, a town of France, in the department of the Loire, and chief place of a canton, in the district of Orleans. The place contains 1,533, and the canton 10,087 inhabitants; the territory includes 305 kilometres, and 15 communes.

CHEDABUCTO, or MILFORD-HAVEN, a large and deep bay on the easterly extremity of Nova Scotia, at the mouth of the gut of Canoe. Opposite to its mouth is Ille Madame, Salmon river falls into this bay from the west, and is remarkable for its very great fisheries. N. lat. 42° 25', W. long. 61° 10'.

CHEDDER, a village of England, in the county of Somerset, about 5 miles N.W. of Wells; which though only a village deserves particular mention. This village is situated under the S.W. side of Mendip hill, and yet much elevated above the level of the moor, so that the contrast between the lofty brows of the hills on one side, and the fertile flats on the other, is singularly striking, and seems to render this village and its adjacent scenery peculiarly romantic. The chasm by which the cliffs of Cheddar are formed does not disclose itself until we approach a null turned by a rapid brook that gushes out near the entrance and soon afterwards loses itself in the Av. Proceeding along the side of this brook, we are filled by a grand view, in the side of the mountain, of the extent of which we at first form an erroneous idea, because the rocks project one behind another so that they seem to prevent further progress. After many deceptions, it is at length discovered that this stupendous chasm extends quite through the S.W. ridge of Mendip, from top to bottom; the length being at least 2 miles, at the end of which it divides into two branches, so as to allow an easy ascent, in a winding direction, nearly from S.W. to N.E. to the top of the hill. In several points the cliff rises perpendicularly to the height of 200 feet; some terminating in bold pinnacles, others in irregular fragments like shattered battlements of huge cakes, and others inclining with a dreadful aspect on the observer passing under them; protecting yews growing in several of the fissures, form shady canopies; and long mantles of ivy covering some of the rocks, and contrasted against the craggy nakedness of others, heighten the picturesque effect of the scene. On the right hand, the cliffs are much steeper than on the left, and for the most part inaccessible; but, in general, the slanting angles on one side correspond with the recipient ones on the other. Every circumstance indeed serves to impress a belief that the mountain must have been evidently rent asunder. The inclination of the cliffs, from one foot to three feet in thickness, is nearly to the S.W., their general direction being from N.W. to N.E.; this is the course of the hills, the height of which seems to increase northward, and particularly near the village of Loxton, where is a prodigious eminence called Crook's Peak.

The rocks of Cheddar are on a much grander and boldier scale than those of Dover's cliff, which resemble them; though they have not the advantage of a beautiful stream, like the Dour, dividing them. Stupendous as those are, there is a contiguous part of Mendip, which is some hundred feet higher, flowing from the top with a grandal descent, and commanding particularly to the W. and S. a most extensive prospect. The Cheddar cliffs produce several of the rarer plants, particularly the Dianthus caucalis, (Chedder pink.), D. arenarius, and Thalictrum minus. The first of these plants, the history of which is somewhat perplexed, is distinguished by the flowers being mostly single-flowered, the scales of the ovary round, and short; the petals notched and bearded; and the leaves rough on the margin; this elegant plant it is said, has never yet been found except on the cliffs of Cheddar, where it was first gathered by Mr. Brewer in the time of Kay. The flowers make their appearance in July, and very luxuriantly decorate the rocks. Mason's Observations relative to the Natural History of the Western Counties of England, made in 1749 and 1756.

Cheddar is famous for its adjacent paturages and a large kind of cheese. In this place it is common for 3 or 4 dairies to join their milk, in order to make one great cheese, which generally weighs from 150 to 200 pounds weight, and which is often sold at a very high price.

The goodness of Cheddar cheese is chiefly owing to the land in which the cows feed, as the method of making it is the same with that which is purveyed throughout Somersetshire, and the adjoining counties. Thus all the land in the north parts of Wilts have a surpising effect both on the butter and cheese.

CHEDUBA, or SANDIA, an island in the bay of Bengal, near the coast of Ava, said to be about 45 miles long and 9 wide. Cheduba and Ramaree, called by the Birmans, Ma
Although about this island, which belongs to the Birman government, yields abundance of rice, and is governed by a chekey, or lieutenant, who is subject to the maywoon of Arracan. The channel between this island and the main is annually navigated by large trading boats, but does not afford a safe passage for shipping.

Cheego Hills, hills of Hindoolan near the fourth coast of the country of Gutch.

Cheek, in Anatomy, that part of the face situated below the eyes on either side.

Cheeks, wounds of. See Suture and Wound.

Cheeks, a general name among Mechanics, for almost all the pieces of their machines and instruments that are double, opposite to, and perfectly alike to each other.

The cheeks of a printer's table, are two long pieces of wood, between which are placed the puppets, which are either pointed, or otherwise, serving to support the work, and the mandrils of the workman. These two pieces are placed parallel to the horizon, separated from another by the thickness of the tail of the puppets, and joined with terrors to two other pieces of wood, placed perpendicularly, called the legs of the table.

Cheeks of the glazier's voice, are two pieces of iron joined parallel at top and bottom; in which are the axis, or lipndites, little wheel, cullions, &c. whereof the machine is composed.

In the construction of gun-carriages, the term cheeks is used to denote the flrong planks which form their sides. See Carriage.

Cheeks of a mortar, or Brackets, in Artillery, are made of strong planks of wood, bound with thick plates of iron, and are fixed to the bed by four bolts; they ride on each side of the mortar, and serve to keep it at what elevation is given to it by the help of strong bolts of iron which go through both cheeks, both under and behind the mortar, by which they are traversed to the right or left.

Cheeks, in Ship-Building, are two pieces of timber, fitted on each side of the masts, at the top, serving to strengthen the masts there, and to fulfil the frame of the top and top-mast. The uppermost bail or piece of timber in the back of a ship, is called the cheek. The knees which fall on the back-head to the bow of the ship, are called cheeks; and the sides of any block, or the sides of a ship's carriage of a gun, are called cheeks.

Cheeks, upper and lower, are those pieces of timber on each side of the trail-board.

Cheen, in Geography, an ancient name of the kingdom of Pegu, as we learn from the Ayen Akbery, (vol. iii. p. 7.) As this country borders upon Ava, where M. Gofhein, in his Geography of the Greeks analyzed, places the Vol. VII.

Great promontory, the resemblance of names may seem, perhaps, to confirm his opinion, that since Metropolis was situated on this coast, or not so far east as the kingdom of Cochín-China, where M. D'Arville places it.

Cheesadam, a lake of North America, on the E. end of Slave lake, in the territory of the Hudson's bay company; about 35 miles long, and the same in breadth. N. lat. 63° 15'. W. long. 106°.

Cheese, in Rural Economy, a well known kind of food prepared from milk by means of coagulation with rennet, and separated from the serum or whey, by prelude in vats for the purpose, being then dried for use. See Dairying.

The use of cheese seems to have been adopted more generally, and at a much earlier period than that of butter. Hippocrates, who was almost contemporary with Herodotus, speaking of the method practised by the ancient Scythians of skaking the milk of their mares in wooden vessels, says, that the heavy and thick part, which subdues, when the fat part rises to the surface, and the whey or serum remains in the middle, being kneaded and properly prepared, is, after it has been dried, known by the name of "hippice," which evidently denotes cheese made of mares' milk. It is not improbable, that the Scythians hardened the separation of the caeseous part from the whey by warming the milk, or by the addition of some substance proper for that purpose. Hippocrates, in another place, expressly says, that the Scythians drink mares' milk and eat cheese made of it. Although the word butter does not occur in Aristotle, and his allusion to that substance has even been doubted, yet we find that he gives very proper information respecting milk and cheese which indicates careful observation; and in one place he ascribes to milk only two component parts, viz. the watery and the caseous; but elsewhere he mentions also a fat substance in milk, which, in certain circumstances, resembles oil. Lucullus, in his History of Ethiopia, acquaints us, that the Habennians or Ethiopians made both butter and very good cheese; and the Roman writers, who give an account of the ancient Germans, and say that they lived principally on milk, disagree in one circumstance; viz. whilst many of them inform us, that they used cheese, others affirm that they were not even acquainted with the method of preparing it. Cic. de Bell. Gall. iv. 1. vi. 22. Strabo, lib. iv. Fliny, however, says, (l. xi. c. 41.) that they did not make cheese, but butter, which they used as a most pleasant kind of food. But the oxygala of which he speaks was evidently a kind of cheese, the preparation of which has been defended by Cohnella, (l. xii. 8.) In order to make it, sweet milk was commonly rendered sour, and the ferrum was always separated from it. Fliny also mentions, under the above name, a kind of cheese formed from the caseous parts which remained behind in the butter-milk, and which were separated from it by acids and boiling, and were mixed and prepared in various ways. It is not possible from any data that remain to determine whether Tacitus (De Mor. German. c. 23.) by "lac concerum," which he says, was the most common food of the Germans, meant cheese, or butter. The term "biesus" or "besus," compounded of "bius," ex, or "bues," and "ciesus," seems to intimate, not only that cheese was known at a much earlier period than butter, but that the Grecian and Roman authors considered butter as a kind of cheese, because "bius" once signified any coagulated full substance. See Butter.

Cheeses are of different qualities and forms, in different districts, and according to the methods in which they are made. Thus, the Cheshire cheeses are mostly thick, and of a fine sharp or piquant flavour, while those of Gloucestershire are mostly small, thin, and of a pleasant mild taste.
The double Gloucester is a cheese that pleases almost every palate: the best of this kind (say Mr. Hazard of Stoney-Littleton,) is made from near, or, as it is called in that and the adjoining counties, "covered milk," an inferior sort is made from what is called "half-covered milk," though, when any of these cheeses turn out to be good, people are deceived, and often purchase them for the best "covered milk cheeses;" but farmers who are honest have them flapped with a piece of wood in the shape of a heart, by which they may be distinguished.

It will be every farmer's interest (if he has a sufficient number of cows) to make a large cheese from one meal's milk; this, when brought in warm, will be easily changed or turned with the rennet; but if the morning or night's milk be to be mixed with that which is fresh from the cow, it will be a longer time before it turns, nor will it change sometimes without being heated over the fire, by which it often gets dull, or foot; nor should I forget to place (says this writer) which is true to give the cheese a very disagreeableavour.

When the milk is turned, the whey should be carefully strained from the curd, which curd should be broken small with the hands; and when it is equally broken, it must be put at a little time into the vat, carefully breaking it as it is put in, which vat should be filled an inch or more above the brim, that when the whey is prefled out it may not shrink below the brim; if it does, the cheese will be worth very little. But first, before the curd is put in, a cheese-cloth, or filerain, should be laid at the bottom of the vat, and this should be so large, that when the vat is filled with the curd, the end of the cloth may turn again over the top of it; when this is done, it should be taken i to the pref, and there remain for the space of two hours, when it should be turned, and have a clean cloth put under it, and turned over as before; it must then be prefled again, and remain in the pref six or eight hours, when it should again be turned, and rubbed on each side with salt, after which it must be prefled again for the space of twelve or fourteen hours more; when, if any of the edges project, they should be pared off; it may then be put on a dry board, where it should be regularly turned every day.

It is a good way to have three or four holes bored round the lower part of the vat, that the whey may drain fo prefectly from the cheese as that not the least particle of it may remain.

The prevailing opinion of the people of Gloucestershire and the neighbouring counties is, that the cheeses will spoil if they are not scraped and washed when they are found to be muddy; but I know this (says Mr. Hazard) to be erroneous, and that suffering the mould to remain mellows them, provided they are turned every day; or if they have the mould off, it should be removed with a clean dry flannel, as the washing them is only a means of making the mould (which is a species of fungus rooted in the coat) grow again immediately.

Some people scald the curd, but this is a bad and mercenary practice; it tastes the cheese of its fats and, can only be done with a view to raise a greater quantity of whey butter, or to bring the cheeses forward for sale, by making them appear older than they really are.

As most people like to purchase high-coloured cheese, it may be right to mix a little rennet with the milk before it is turned; no cheese will look yellow without it; and though it does not in the least add to the goodnes, it is perfectly innocent in its nature and effects.

Cheshire cheese is much admired, and yet no people take less pains with the rennet than the Cheshire farmers; but their cheeses are so large as often to exceed teetles weight each; to this, and also to the age to which they are kept, the richness of the land, and their keeping such a number of cows, as to make such a cheese, without adding a record milk's milk, their excellence may be attributed; indeed, they kill the curd (which may make a difference), and keep the cheese in a damp place after they are made, and are very careful to turn them daily.

In other counties they likewise vary greatly in these different respects, as well as in form other.

Besides the cheeses already mentioned, there are different sorts of cream cheeses, as thick and thick, the former known under the name of Cotentin, and the latter more that of Stilton cheese.

The Stilton cheeses, called the Parmeian of England, are usuall: made in square vats, and weigh from six to twelve pounds each. Immediately after they are made, they should be put into square boxes made exactly to fit them, as they are so extremely rich, that, without this precaution, they would be apt to bulge out, and break atunder. In these boxes they should be duly turned, and kept two years before they are mellowed for sale. Some make them in a net, like a cabbage-net, so that they appear when made like an ample head, but when broken, the cheese acquires a thicker coat, and wearing the rich flavour and mellowres of the others. The manufacture of these cheeses is not confined to Stilton and its neighbourhood; as many other persons in Huntingdonshire, and also Rutland and Northampton shires, make a similar fort, sell them for the same price, and give them the name of Stilton cheeses.

It is observed by Mr. Hazard that, though the farmers about Stilton are remarkable for the cleanliness of their dairies, they take very little pains with the rennet; for if they did, they would not have so many faulty and unsound cheeses. The inhabitants of other counties might make as good cheese as that of Stilton, if they would adhere to the same plan, which is this. They make a cheese every morning, and to this meal of new milk they add the cream taken from that which was milked the night before. This, and the age of their cheeses, it is said, are the only reasons why they are preferred to others, their land not being in any respect superior to that of other counties.

Excellent cream cheeses are made in Lincolnshire, by adding the cream of one meal's milk which is already broken to another of a thicker coat, and wearing the rich flavour and mellowness of the others. The manufacture of these cheeses is not confined to Stilton and its neighbourhood; as many other persons in Huntingdonshire, and also Rutland and Northampton shires, make a similar fort, sell them for the same price, and give them the name of Stilton cheeses.

There is also a fort of green or sage cheese. And we have a cheese brought from abroad under the title of Parmesan. The Parmesan cheese is so called, because Parma and Piacenza were once the countries in which the belt was made, though now the district of Lodi is the highest repute for this kind of cheese. The method of making it is described, from their own observation, by Mr. Benjamin Pyece, in the 7th volume of the Bath Society's papers, (see also Letters on Agriculture, vol. vii., and Reptrory, vol. iv.,) and by Mr. Arthur Young, in the 2d volume of his Travels in France. These cheeses, how much sooner exalted, are made entirely of skimmed milk: that of the preceding evening, mixed with the morning's milk: the former having flood for 15 or 17 hours, and the latter about 6 hours. At 10 o'clock in the morning, 1 2/3 brecks of milk, each breck being about 20 quarts, were put into a large copper, which turned on a crane, over a slow wood-fire, made about two feet below the surface of the ground. The milk was ferred from time to time; and about 11 o'clock, when just like-warm, and considerably under a blood-heat, (about 81/2 of Fahrenheit, the atmosphere being at the same time 70 Fahrenheit, Young,) a ball of rennet, as big as a large walnut,
walnut, was squeezed through a cloth into the milk, which was kept stirring. This rennet was to have been purchased of a man at Loch, famous for the composition; but it seemed to have principally consisted of the same part of the calf as we use in England, for the same purpose, mixed up with salt and vinegar, (spices and oil, Young,) and alle, as Mr. Praye apprehends, with old cheese. The proportion of rennet, he conceives, was of much greater consequence than the rennet itself. By means of the crane, the copper was turned from over the fire, and let stand till a few minutes past 12; at which time the rennet had sufficiently operated. It was now stirred up, and left to stand a short time, for the whey to separate a little from the curd. At 1 o'clock, says Mr. Young, the cazarro, or dairyman, (for this is not women's work in Italy,) examined the coagulation, and finding it complete, he ordered his sata cazarro to work it, which he did with a stick armed with croas-wires; this operation served instead of cutting and breaking the curd, in the manner it is done in England, free from the whey. When he has reduced it to such a fineness of grain as satisfies the cazarro, it is left to subside, till the curd being quite firm, the whey is nearly clear on the surface. Part of the whey being taken out, the copper was again turned over a fire sufficiently hot to give it a triumphant heat, but below that of boiling; a quarter of an ounce of sal ammoniac put in to give it a little colour; but not so unnaturally high as some cheeses in England are coloured; and it was well stirred from time to time, with a wood machine to keep it from burning; the cazarro examining it from time to time, between his fingers and thumb, to mark the moment when the right degree of fineness and solidity of grain was attained. The heat was 124½ Fahrenheit; but it is often 151½ Fahrenheit. When the small, and, as it were, granulated parts, felt rather firm, which was in about 1½ hour, the copper was taken from the fire, and the curd left to fall to the bottom. As soon as a certain degree of subfinence had taken place, the cazarro emptied about 2½ lbs. of the whey, in order the better to command the curd. He then pours three or four gallons of cold water around the bottom of the cauldron, to cool it sufficiently for handling the curd; and then by a formal kind of operation, he flies a coarse cloth under the curd, and thus brings it up and places it in a tub to cool. When sufficiently drained, it was put into a box, and about half an hundred weight laid upon it for about an hour; after which the cloth was taken off, and the cheese placed on a shelf in the same hoop. At the end of two, or from that to three days, it is sprinkled all over with salt. The same process is repeated every second day, for about 40 to 45 days, (or 32 or 40 days, according to the seasons; 30 in summer and 40 in winter, Young,) after which no further attention is required. Whili saltmg, they generally place two cheeses one upon another; in which state they are laid to take the salt better than singly. When these operations are completed, the cheeses are scraped clean, and after that rubbed and turned in the magazine every day, and rubbed with a little infected oil on the coats, in order to preserve them from all sorts of infects. They are never sold till they attain the age of six months, and the price is 90 livres per 100 lb. of 28 oz.

The morning's butter-milk is then added to the whey, and heated; and a stronger acid used for a fresh coagulation, to make whey cheese, called here "Makhopino." Little ones are kept in wooden cafes, in the smoke of the chimney.

In Scotland there is likewise a sort of cheese made from the milk of cows, which is rich and of a sharp flavour. It is usually known under the title of caw cheese.

Dunlop Cheese, so called from the parish of Dunlop, in Ayrshire, where it was first made, has been long known and distinguished over Scotland, insomuch that all the cheese made in the country around is known by that name, and gives a higher price and finds a readier market than any other. The practice of making facec milk cheese, as it is called, was first introduced into the parish of Dunlop, by one Barbara Gilsour, whole great grandson is still living, and proprietor of the same farm. Having gone to France to avoid the persecutions which people were then exposed to on account of religion, she is said to have brought the art with her; when she returned about the time of the revolution. Since that period the sort of cheese has been the great and almost only business of Dunlop. So much that their situation was more favourable for this than any other purpose, the people believe this to be the great advantage. They have inclined all their ground, and have but a third or fourth of it in tillage, which is more owing to the custom of the country than the will of the farmer, (as throughout the whole of Ayrshire there can be no more land in each farm in that state than one third;) and the rest in pasture, which is always a plentiful crop and of the full quality. They are very attentive to the breed of their cows, which are rather small than otherwise, and generally of their own rearing. They are fed in incomeliness, and never brought under a roof, except for milking, from the beginning of May till the end of harvest; the quantity of milk they give is very great and of the full quality.

The process for making the cheese is extremely simple. The cows are milked twice a day, at six in the morning, and at the same hour in the afternoon. At each of these hours the whole milk, while warm, is collected in a large vessel and thickened or warmed; after it is congealed into a curd, it is then cut in different directions, and the whey gently pressed out; the curd, after it has acquired sufficient consistency by the pressure of the hand, and by the application of weights over it, is next cut very small by an instrument for the purpose, and salted. For the further compreheison of the cheese, various contrivances are used, the most common is a large hewn stone, probably a ton weight; this is fitted to a frame, and lifted up and let down by a screw. Others use levers of various contructions, and thus by the application of a few pounds weight they give any degree of pressure that may be deemed necessary.

Where farms have only a few cows and where it would not be worth while to make a cheese twice a day, two milkings or sometimes more are put together; this may be done two ways: 1st, the milk which has flood over is first creamed and then warmed to the temperature of the new milk, and the whole is congealed together; the cream is afterwards added, and thoroughly mixed with the two milks. Each mode has been tried, but this is thought to be the most effective in making good cheese; or 2d, the curd of the first milk is reduced to the consistency proper for salting, and thus set aside till a second milking be brought to the same state; when the two are mixed together, and salted and finished in the usual way. It may be proper to observe, however, that there is no cheese to good as that made directly from new milk: it was this kind which was first known by the name of Dunlop cheese. The subtlest practice of colouring is not known, except by a very few, who make it in imitation of English cheese. From a dozen of good cows a farmer will make from a hundred and fifty to a hundred and sixty stones (provincial weights of cheese, that is, something more than a ton,) and a half this, in the markets of Edinburgh, Glasgow, and Paisley, will bring from 10 to 12 shillings per stone, or from twenty to eighty pounds sterling, for the produce of the feast. From the whey after it is pressed out, the most delicious...
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butter in Scotland is produced. It is also the practice in other places, and particularly in Cheshire, to make butter of the cheese whey.

For the form of the instrument used for cutting the curd before salting, see Plate 8. 

In the preparation or making of cheese a variety of different circumstances are necessary to be considered by the dairy farmer, such as the season of the year and the mode of conducting the curd into milk, the properties of the milk, the manner of giving the necessary colour, the method of preparing the rennet, the mode of breaking and gathering the curd, the management of the cheese in the presses, the process of salting, and the treatment afterwards requisite in the cheese-room, as well as some other circumstances of less importance. All these, as well as many other parts of management that appear of consequence in the process of cheese-making, will be fully considered in speaking of the nature of Dairy ing. See Dairy ing.

It has been observed by Dr. Anderson, that "it is generally supposed that the goodness of cheese depends almost entirely upon its richness; by which is meant the proportion of oily matter, whether natural or adventitious, that it contains: nothing, however, is, he says, more certain, than that this is not the case. If, says he, the sapor, the pleasant relish to the taste, be adopted as the rule for ascertaining excellence, nothing can be more certain, than that this does not depend upon this circumstance. Parmesan cheese is, he observes, in general, deemed in respect to sapor, among the belt kinds of cheese that are made; but it contains no remarkable proportion of oily matter. To many palates, the small round Dutch cheeses are very pleasing to the taste; yet these are, he affirms, made entirely of skimmed milk. And if softness to the feel, and that kind of consistence which appears meadowed and butyrous, be the rule for ascertaining the riches of cheese, neither will this, says he, be found to depend necessarily upon the proportion of oily matter that they contain. He has seen cheeses made of skimmed milk, that are exactly like the finest kind of cream cheese, which approaches to the taste and consistency of butter; and he has seen cheeses made entirely of cream, which had much less of that buttery tallow and appearance than the other. In short, much more, he thinks, depends upon the skill and dexterity of the operator, than on the quality of the materials. Many cheeses are made in England of as rich milk as the Stilton cheeses, which seem not to contain nearly the same proportion of cream; and he had lately occasion to notice, that a great many cheeses are made of the same kind of milk with the Suffolk cheeses, which have nothing of that hoary hardness and indigible quality for which these are remarkable." It is further remarked, "that if the taste and consistence of the cheese acquires when set out by heat in the process of salting, be affirmed as a criterion for judging of its richness, neither will it be found that this depends upon the proportion of cream that enters into their composition. He has seen very indifferent cheese, that has been made of skimmed milk, which, when toasted, was richer to the taste, and more soft in consistence than Stilton cheese. And he has at this moment in his house a round Dutch skim-milk cheese, that, when toasted, appears richer and more pleasing to the palate of most persons who have tasted it, than very excellent North Wilts hire cheese, which is deemed among the best kinds that are made in this island. From these facts, and many other considerations, he is satisfied, that what we call the riches of cheese depends more upon the particular process adopted in the management, than upon the materials of which the cheese consists. The taste of Gloucester and that of Cheshire cheeses are very different from each other, though the quality of the milk of which they are made varies very little. The same may be said of Stilton and Parmesan cheeses, though the vanity of man, desirous to conceal his own weaknesses, is, he says, for ever disposed to attribute these peculiarities to folly, or perverseness, or other circumstances, that seem to throw the blame of want of success off from off his shoulders. And this he conceives to be the case in many other instances, as well as that of cheese.

It is observed, that any vegetable or mineral acid, put into milk, will produce a coagulation; with this difference, that the mineral acid affords its cheese or curd than the vegetable; and the various substances used to cause coagulate milk may perhaps act merely by virtue of the acid they contain. The coagulum which is added in all these cases contains a substance of the nature of gluten, which forms the cheese; and another of the nature of oil, which forms the butter. When cheese is prepared for the table, the butter is not separated, because it renders it milder, and more agreeable. The caustic alkalies diffuse cheese by the influence of heat; but it is not held in solution by an alkali in milk. If one part of cheese newly prepared, and not dried, be mixed with eight parts of water highly acidulated by a mineral acid, and the mixture be boiled, the cheese will be dissolv'd, though it would not have been sufficiently acted upon by a vegetable acid. This is the reason why the vegetable acids separate a much greater quantity of curd from the same quantity of milk than the mineral acids do. The caustic alkalis, galls, sugar, &c. coagulate milk may be deduced from the greater affinity of the water with these bodies than with the cheese. The earth of cheese is a phosphatic of lime, according to Scheele. No substance has a stronger resemblance to cheese than the white of egg boiled. Scheele thinks that the coagulation of white of egg, lymph, and cheese, is owing to the combination of carbonic acid. Ammoniac diffuses cheese more effectually than fixed alkalies. If a few drops be poured into coagulated milk, it quickly causes the coagulum to disappear. Concentrated acids likewise diffuse it. Nitric acid diffuses it. Nitrates and nitrites engage nitrogen. Chapter's Elem. of Chem. vol. iii.

Cheese of every kind is liable to putrefaction; and, by reason of this quality, it approaches to the nature of animal substances. This opinion is confirmed by the consideration that the matter of which it is formed, is, like animal substances, coagulated by acids, alcohol, and heat. It is also said to yield, in distillation, a volatile alkali; though this is a disputed fact. Upon the whole, we may conclude, that as milk contains a portion of animal matter, and as the milk of animals feeding wholly, or for a great part, on vegetables, partakes of their quality, cheese must be an aliment of an intermediate kind between vegetable and animal. However, cheese employed in diet is of very different kinds, partly owing to the state and quality of the milk that is employed, and also of the rennet, and partly to the various processes employed in preparing it, such as the different circumstances of the coagulation, the management of the coagulum or curd, the pressure given to it, the salting and drying of it, and the manner in which it is afterwards preferred. The cæ忪 or coagulable part of milk contains a great, if not the greatest part of the nourishment which milk affords; and, therefore, taken by itself, must be considered as a very nourishing matter. When the coagulum has the whey separated from it, it then becomes a more nutritious substance than the milk from which it was taken, but probably of more difficult digestion. Cheese, in its dried state, made from milk previously deprived of its cream, may still be very nutritious, but it is of very difficult digestion, and fit only for the most debilitated persons; and even the difficulty of digestion may diminish...
Cheese.

Cheese made of entire milk must be a still more nourishing substance, and, as Dr. Cullen conceives, of much easier digestion; and cheese made of entire milk, with a portion of cream taken from other milk added to it, will be still more nourishing, and hardly of less easy digestion, as the oily parts are the materials that are here opposed between the parts of the gluten milk, and the adhesion of this lye firm. As cheese is often made of cream alone, the qualities of this will be readily understood from what has been just now said. Cheese is often made of the milk of cows or goats, and often of a portion of the milk of ewes added to cows’ milk. In all these cases, as the milk of cows and goats contains a larger proportion of the oily and caesious parts, so in proportion as these are employed, the cheese becomes more nutritious, but at the same time more difficult digestion. As cheese is employed not only when recent and fresh, but also under various degrees of corruption, it becomes more acid and indigestible, partly from the acrimony it has acquired by corruption, and partly by the great number of infects that are very constantly generated in it in that state. In this corrupted condition, cheese can hardly be taken in such quantity as to be considered as alimentary; and with regard to the mode or degree in which, as is commonly supposed, it becomes a condiment influencing the digestion of other food in the stomach, Dr. Cullen professes himself unable clearly to explain. Cheese is often eaten, after having been toasted; or when a portion of its oil is evaporated, whilst the other parts are united more closely together. Many persons are able to digest this food pretty well; but it is certainly not easily digested by weak stomachs; and for those who can be hurt by indigestion, or heated by a heavy supper, it is a very improper diet. Cullen’s Mat. Med. vol. i. pt. i. c. 2.

Cheese, when new, is found to load the stomach, by reason of its moisture and viscidity; and when too old, it heats and inflames it by its fats. The physicians advise it to be eaten in small quantities: hence that Latin verfe,

Cafeus ille bonus, quem dat avara manus.

Dr. Quincy says, it cannot be too old: it is certain, the more it abounds with fats, the more will it contribute to digestion, and the clearing of the stomach of other food. Indeed some condemn all use of cheese: sheltering themselves under that ancient maxim, “Caeus est nequam, quia concoqit omnium fe quam.”

The Laplanders make a fort of cheese of the milk of their rein-deer, which is not only of great service to them as food, but on many other occasions. Scheffer’s Hist. of Lap.

Cheese-board, a circular piece of board, about an inch, or an inch and a half in thickness, upon which the newly made cheeses are placed in the cheese-room. Cheese-boards should be made of such parts of wood as are the least liable to warp, and be planed smooth on both sides, being of sufficient thickness to reflect the effects of heat as much as possible.

Cheese-cloth, the cloth in which the cheese is placed in the presses, in order to undergo the operation of squeezing out the whey.

Cheese-colouring, is the material employed to give colour to cheeses, in order to their being more faceable. It is a substance used to be obtained from the skin or pith of the kernel of the bixa of South America, or of the shrub when cultivated in our gardens. See Bixa. Of the proportion of this matter from the red pulp which covers the seeds, the following account is given by Mr. Miller. The contents of the fruit are taken out and thrown into a wooden vessel, where as much hot water is poured upon them as is necessary to suspend the red powder or pulp, and this is gradually washed off with the assistance of the hand, or of a spatula or spoon. When the seeds appear quite naked, they are taken out, and the wash is left to settle; after which the water is gently poured away, and the sediment put into shallow vessels to be dried by degrees in the shade. After acquiring a due coagulation, it is made into balls or cakes, and kept dry in an airy place until it be perfectly firm. Some persons first pound the contents of the fruit with wooden paddles; then covering them with water, leave them to steep six days. This liquor being passed through a coarse sieve, and afterwards through three finer ones, is again put into the vat or wooden vessel, and left to ferment a week; it is then boiled until it be pretty thick, and then cool spread out to dry, and then made up into balls, which are usually wrapped up in leaves. And when of a good quality, it is of the colour of fire, bright within, soft to the touch, and capable of being dissolved in water. But the substance mostly made use of, and which is purchased from the druggists, is a preparation made by them, in which madder is probably a principal ingredient; it is of a brick colour, and a hard compact texture.

In regard to the method of using the soft or genuine fort, it is simply by dissolving such a quantity as is necessary, in a small portion of milk, allowing such particles as will not dissolve to settle to the bottom. The milk thus coloured is then poured off, and mixed with that which is to be made into cheese. But when the hard preparation is used, pieces of it are frequently used under the necessity of being rubbed against a hard smooth even-faced pebble or other stone, being previously wetted with milk to forward the emulsion, and to collect the particles as they are loosened. For this purpose a dish of milk is generally placed upon the cheese-ladder; and as the stone becomes loaded with emulsified matter, the pieces are dipped in the milk from time to time, until the milk in the dish appears to be sufficiently coloured. The stone and the “colouring” being washed clean in the milk, it is flared boldly about in the dish, and having stood a few minutes for the suspended particles of colouring to settle, it is returned into the cheese-cowl; pouring it off gently, so as to leave any sediment which may have fallen down in the bottom of the dish. The grounds are then rubbed on the bottom of the dish, and fresh milk added; until all the finer particles be suspended: and in this the skill in colouring principally consists. If any fragments have been broken off in the operation, they may remain at the bottom of the dish: hence the superiority of a hard, closely textured material, which will not break off or crumble in rubbing. The price of this material is usually about ten-pence an ounce; which will colour about twenty thin cheeses of from ten to twelve pounds each. The colouring therefore costs about a halfpenny a cheese, or a little more.

Cheese-cowl, the name of the milk cooler or vessel in which the curd is formed.

Cheese-knife, a large fork of knife or spatula made use of in some dairies, for the purpose of cutting or breaking down the curd while in the cheese-tub, in order to its being placed in the vat to undergo pressure.

Cheese-press, an engine or press employed in cheese dairies, for the purpose of forcing the whey from the curd when in the cheese vat, by means of prejudice. It is observed by the author of the “Rural Economy of Norfolk,” that in making cheese much depends on the construction and power of
of the press, the excellence of which arises from its pressing level. If it have too much play to us to incline and become tottering or leaning one way or another, and do not keep perpendicular upon the cheese-board, one side of the cheese will frequently be much thicker than the other; and, what is still worse, one side will be thoroughly pressed, while the other is left lopsided and lop-sided. The power of this machine may be given in different ways, as by the screw, the lever, or by a beam weight; and it ought always to be proportioned to the size and thickness of the cheese. The author just mentioned, found one that was constructed on these principles, highly useful and convenient, the power of which was a dead weight of 150 pounds contained in a cubical box moving in grooves, to be kept at a horizontal plane; the medium weight, one hundred weight and two quarters, but regulated by the frame agreeably to the thickness of the cheese or cheeses to be pressed. In the vale of Gloucester, he says, the presses are mostly loaded with gravels in cubic boxes, rated by rollers, and made to fall horizontally on the cheeses. At Maberley where they use, he observes, a double press; each division of it holding six or eight of these cheeses. A press of the most general kind is represented in Plate VIII. $f. 1$ in which $a$ is the press, $e$ and $f$ levers moveable about the pivot $d$. $e f$ by applying the hand at $e$, the frame or weight, and $f$ the plate to the rack. And a press upon a somewhat elevated plan may be seen at $f g a$, by which the press is given with greater ease and expediency.

Cheese-rack, a sort of contrivance made for the purpose of receiving and containing such cheeses as have become sufficiently firm and coated. These racks may be constructed in different ways and forms, but Mr. Marshall thinks that the plate-rack form, with four or five tiers one above another, is the best for this purpose. If the cheeses intended to be placed in it be nearly of one size, the rack should be made of the same width at the top as the bottom; but if they be of different sizes, it ought to be made narrower at the top than at the bottom, and if they be of different thicknesses as well as of different diameters, the spaces for the respective cheeses should likewise be varied. A small rack may be flung with a rope and pulleys at each end of the cheese-room, so as to be drawn up and lowered down at pleasure; but a large one is difficult to fling in a common room, in that manner; it ought therefore to stand on legs about two feet high, with a broad base broad projecting over the legs, so as to prevent vertical or climatic shake to this rack; this kind faces much labour, he says, in tuning and collecting the cheese into a final compact, and putting it out of the way of vermin.

Cheese-running or Rennet, in Botany. See Galium verum.

Cheese-Run or Runnet, in Rural Economy. See Rennet.

Cheese-Room, a room appropriated for the reception of cheeses while they remain in the hands of the maker. Rooms of this kind are frequently fitted up with shelves; and in some an entire living is put round the walls, with a flag or two in the middle, gangways being left wide enough to pass conveniently between them. In one dairy in North Wiltsire, Mr. Marshall says, he remarked an admirable arrangement of cheese-rooms. The shelf-room was immediately over the dairy-room, and the laits over the shelf-room with trap-doors in each floor, to hand the cheeses through. This, he observes, is a plan which faces much awkward carriage, and which might be adapted with advantage in every way which will admit of it. These rooms should always be sufficiently aggregate and situated conveniently for the dairy.

Cheese-Tangy, a sort of wooden frame placed occasion-
life among the Cordeliers, and having completed his studies at Paris, commenced preacher in his own country. In the exercise of this office he acquired reputation, and in 1562 became provincial of his order in Brittany. At Rome, whether he afterwards removed, he was guardian of his province, and teacher of divinity in the convent of Ara Coeli. In 1571 he was chosen general of his order, and as such conducted himself during 8 years with great zeal and prudence. Pope Gregory XIII1, created him archbishop of Carthage in 1579; and having remained in that diocese for 7 years, he took a journey to Flanders; and at Antwerp converted many heretics by his preaching, and confirmed others that were wandering. Under a charge of deviating from found orthodoxy, he repaired to Rome in 1587, for the purpose of vindicating his character; and though his peculiar opinions were never formally examined, he was treated with respect by five successive popes. At length he died in a convent at Rome, in 1595, at the age of 63.

Cheifontaines, during a great part of his life was a hard student; he understood 5 languages besides his native Bas Breton, and was well acquainted with the theology and philosophy of his time. He reasoned strongly and wrote in a good style. One of his chief works was a letter in French, afterwards translated into Latin, in defence of free will; but his most curious treatise was entitled "De necessaria Theologiae scholasticae Correctione," in which he discusses the question whether the words "this is my body, this is my blood," were those by which our Saviour consecrated the bread and wine at his last supper. Having previously alleged in a sermon that the repetition of these words by the priest was insufficient for the consecration of the elements in the eucharist without benediction and prayer, he had incurred the charge of heterodoxy. His other works it is now needless to recite. Du Pin.

CHEGGIO, in Botany, a name given to a fort of liliaceous plant, common in Cambay. It is reported by authors and by the people of the country, that those knobs and beards of this plant which grow facing the north, are a very noble medicine in the cure of apoplexy and other acrimonious disorders, but that those knobs and beards of the same plant which look southward are poisonous. Redi proved some of this famous plant, and gave it several fair trials, but found the history of its nature and effects wholly false.

CHEGIASAR, in Geography, a town of Persia, in the Isak-Agemi; 130 miles W.S.W. of Amadan.

CHEGOMEGAN, a point of land about 60 miles in length, on the south side of Lake Superior; about 100 miles W. of this cape a considerable river falls into the lake; upon its banks virgin-copper is found in great abundance.

CHEHAW, a town of America, in the State of Georgia; 165 miles W.S.W. of Augusta.

CHEILOCACE, in Surgery, literally signifies the lip-civil. It is a swelling of the lips, to which the inhabitants of northern countries, especially children, are liable to be very subject; particularly those in England and Ireland, if we may credit Castellus.


Gen. Ch. Calys perianth four-leafed; leaflets ovate-oblung, concave, erect, parallel-converging, deciduous; two outer ones gibbous at the base. Cor. four pelted, cruciform; petals roundish, longer than the calyx; claws the length of the calyx. Stam. filaments five, awl shaped, parallel, the length of the calyx; two of them gibbous within, the leaflets of the calyx a little shorter; anthers erect, bident at the base, acute, and reflexed at the tip; a metatarsiferous gland surrounds the base of the shorter flaments on each side. Pet. germ prismatic, tetragonal, the length of the flaments, marked on each side with a tubercle; style compressed; stigma oblong, two, three, or four-cleft, thick, in, permanent. Flores filique long, compressed, the two opposite angles obliterated, and marked with a small tooth, two-seeded, two-valved, terminated by the style. Seeds several, pendulous, alternate, somewhat egg-shaped, flat.

Che. Germ furnished on each side with a small glan-dular tooth. Calyx closed; two of its leaflets gibbous at the base. Seeds flat.

Ob. The little tooth on each side of the germ, in some species, becomes nearly evanescent, in others increases in size.

wallflower. "Leaves lanceolate, acute, smooth; branches angular; stem fleshy.\ characters of the species. Stems foot and a half high, branched; branches rather upright. Leaves scattered, rather narrow, entire, smooth, greenish. Flowers yellow; calyx commonly tinged with a reddish brown or violet colour. Seeds with a membranous edge.

This species has long been cultivated, and is universally esteemed for the beauty, durability, and fragrance of its flowers. These, as they appear under the head of cultivation, are single or double, larger or smaller, pale or deep yellow, ferruginous, yellow, or bloody; varieties which are perpetuated chiefly by cuttings or slips. A native of Europe. 7. C. fistuliformis, Linn. Mant. 94. Smiths Prof. 587. Brit. (C. chiri, Linn. With. R. & Sib. Lecoumum lutanum, vulgo cheiri, Rai. Syn. 261. L. lutanum minus furcatus, Barcel. l. tab. 1228.) Wild wallflower. "Leaves lanceolate, acute, greyish underneath; pubescence quite simpler, pricked close down; stem fleshy; branches angular.\" Root perennial. Stem much branched; branches erect, leafy, greyish, bearing flowers near their summit. Leaves crowded, petioled, acute, generally quite entire, green above; lower ones somewhat serrated. Flowers yellow, sweet-scented; calyx purplish; petals emarginate. Silique erect, roundish, greyish; style short; stigma emarginate. Seeds without a membranous edge. It differs from the preceding in having acute leaves, greyish underneath; smaller petals; and recurved, rather rigid, not falcate, loosely dependent capsules. Dr. Smith. A native of old walls in England and other parts of Europe. 8. C. calyptrae, Mart. 5. Willd. 7. Linn. jan. Supp. 236. "Leaves lanceolate, entire, callous; stem angular, fleshy.\" A native of the Cape of Good Hope. Thunb. 59. C. fruticosus, Mart. 4. Willd. 8. Linn. jan. Supp. 296. "Leaves linear, acute, smooth; stem fleshy, erect.\" Thunb. A native of the Cape of Good Hope. 10. C. tenuifolius, Mart. 20. Willd. 9. Hort. Kew. ii. p. 395. L'Herit. Strip. i. p. 9. Narrow-leaved fleshy, fock-gilliflower. \"Leaves filiform, quite entire, somewhat fiky; stem fleshy; branches.\" Root perennial. Stem a foot and half high. Leaves very narrow, spreading, acute; younger ones greyish. Flowers yellow; petals obtuse. Silique linear, erect, terminated by the thick style; stigma obtuse, capitate. A native of Madeira, flowering in May and June. 10. C. mutabilis, Mart. 21. Willd. 15. Hort. Kew. ii. p. 395. L'Herit. Strip. i. 92. Bot. Mag. Pl. 193. Broad-leaved shrubby rock-gilliflower. \"Leaves lanceolate, acuminate, sharply serrated; stem fleshy; filices pedunculate. Root perennial. Flowers, at their frill opening, white; sometimes inclined to yellow; in a few days becoming purple. A native of Madeira, flowering in March and April. 12. C. arius, Willd. 11. \"Filipid, leaf-lanceolate, somewhat toothed at the base; filices erect.\" Root perennial. Whole plant fleshy, but the apericophilus. Stems several from one root, about seven inches high, quite simple, somewhat woody. Leaves rather obtuse, sometimes quite entire. Flowers purple, peduncles spreading. Siliques stiff, smooth, linear, terminated by the thick style and two lobed stigma. A native of Siberia. 13. C. Chius, Linn. Sp. Pl. 3. Mart. 3. Willd. 12. (Hesperis chia; Lam. 15. Tourn. Cor. 16. Dill. Elth. tab. 143. fig. 178. Lecoumum thapsocus falcet; Herm. Par. tab. 193.) \"Leaves inver by egg-shaped, veinless, emarginate; filices aw-shaped at the tip.\" Root annual. Stems slender, much-branched, diffuse, prostrate at the bottom, oblique above, zig-zag, hairy. Leaves generally entire, sometimes a little serrated, fimbrious about the edge. Flowers small, reddish, purple, or purple-violet, in terminal racemes; claws of the petals a little longer than the calyx; expansion short, emarginate. Siliques slender, cylindrical, beflret with short close-preflved hairs. A native of Greece, Barbary, and Spain. 14. C. maritima, Linn. Sp. Pl. 4. Mart. 4. Willd. 13. Bot. Mag. 166. (Hesperis maritima; Lam. Tourn. Infl. 223. Lecoumum; Pluk. phyt. 432. fig. 252.) Mediterranean rock, improperly called Virginia rock by the English gardeners. "Leaves elliptical, obtuse, naked, roughish; stem diffuse, rough.\" Root annual. Stems much branched, from five to seven inches high, divaricated, diffuse, rather rigid, rough with two close-preflved hairs. Leaves obtuse, somewhat re- flaxed at the tip, green, rather rigid and rough, on long petioles; upper ones nearly toothed. Flowers lively red, changing to blush purple, in a terminal raceme; calyx close, even; petals inversely heart-shaped; anthers in the throat of the flower. A native of the coast of the Mediterranean. This humble species continuing long in flower, is often used as an edging to borders, and is sometimes sown in patches with other annuals on the beds of the flower-garden, which it enlivens with the splendour of its blossoms. If sown in the autumn, it will come up early in the spring, and by varying the time of sowing it may be made to flower almost the whole summer. 15. C. parviflorus, Willd. 14. \"Leaves lanceolate, repand-toothed; filices fllife, horizontal, dilated, forked at the tip.\" Root annual. Stem about seven inches high, erect, branched. Leaves green, pubescent, with flattened hairs, narrowing into a short petiole. Flowers pale violet, small, in a very long raceme. Silique two inches long, round, terminated by two long awns with the short obtuse stigma between them. A native of Morocco; described by Willdenow from a living plant. 16. C. incanum, Linn. Sp. Pl. 6. Mart. 11. Willd. 17. (Hesperis volaria; Lam. Lecoumum incanum major; Eanth. pin. 202. Viola; Lob. le. 129. Stock-gilliflower. \"Leaves lanceolate, quite entire, obtuse, hoary; filices truncate at the tip, compressed; stem rather fleshy.\" Root perennial, sometimes biennial. Stem from fifteen to eighteen inches high, branched; branches cylindrical, straight, hoary. Leaves fleshy, long, soft, cloathed with a short down. Flowers pale or bright red, variegated or pure white, easily becoming double by culture. sweet-scented. A native of the seacoast in France and Spain, but cultivated from a very early period in the English gardens for the beauty and splendour of its flowers. Numerous varieties have in consequence been produced. The principal ones mentioned by Miller are the queen's rock-gilliflower, the Brompton rock, the white rock, and the white wall-flower. 17. C. fascinulis, Linn. Sp. Pl. 5. Mart. 12. Willd. 13. Jacc. Hort. 2. tab. 173. (Hesperis fascinulis; Lam.) \"Leaves crowded in heads, recurved, waved; stem undivided.\" Scarcely more than a variety of the preceding. Root biennial. Stem six inches high or more, fleshy, perfectly sene the first year, but afterwards divided at the top into two or three straight cylindrical branches. Leaves broader and shorter than those of the preceding. Flowers smaller and less sweet-scented. Native country unknown; first sown in the Uphal garden in 1753. It received its trivial name from its peculiar fleshy from the blades of grasses. 18. C. salinus, Linn. Mant. 93. Mart. 10. Willd. 15. (Hesperis salina; Lam.) \"Leaves lanceolate, obtuse, quite entire; stem erect; anthers included.\" Root perennial. Similar to C. incanum, but eight times smaller. Whole plant smoothly tomentous. Stem erect, enduring several years. Flowers purple with a yellowish throat; stigma obtuse, thickish, bid, by no means slender. The scent of C. incanum. A native of the salt marshes of Siberia and Tartary. 19. C. bifolius, Willd. 16. (Hesperis orientalis)

**Cheiranthus.** See *Hesperis hiera.*

**Cheiranthus turbinates, barbati-foliat et paniculatus, Lam.** See *Erysimum cheiranthoides, barbati-foliat et repentum.*

**Cheiranthus Gron. syl.** See *Arabis syriaca.*

**Cheiranthus Africana.** Comm. See *Manuela cheiranthus.*

Obf. The essential character of this genus, like that of most of the other genera in this natural order, is by no means well-defined. *Linnaeus* makes it chiefly consist in the glands on each side of the germ. *Lam.* considers this particular as too inconsiderable, and too uncertain to constitute a genus; and ascertains, that two distinct sects of plants are improperly united by *Linnaeus* under his *Cheiranthus.* He therefore pays no attention to the glands, and includes under his genus only those species which have yellow flowers and four-cornered siliques, removing to *Hesperis* those which do not possess these characters, and admitting some of *Linnaeus's* *Erysimum.* Ventenat and *Du Tour,* in *Nouv. Dict.* add to the character of *Cheiranthus,* "feeds with a membranous edge," which, according to them, is not to be found in the true *Hesperis.* *Du Tour,* in consequence of this decision, determines the colour of the flowers to be of no consequence; and replaces among the *Cheiranthi,* the *incanus,* *fendritical,* and *annuus,* which have such a feed; and suffers the *falcatus,* *maritimus,* and others, to remain under *Hesperis,* because their feed have no membranous edge. But in so doing, he falsely separates plants which nature has closely united. In the present state of the science, it appears to us most eligible to adhere to the arrangement of *Linnaeus.* The confusion cannot be removed till some master-hand shall undertake a thorough investigation of the whole family.

**Cheiranthus.** In *Gardening,* comprehends plants of the ornamental kind, as the wall-flower and Stock-gilliflower.

There is a great number of species; but those mostly cultivated for ornament are the common wall-flower (*C. eheiranthus*); the queen's buck gilliflower (*C. incanus*); the chuter-kaved dwarf gilliflower (*C. fendrical*); the annual dock gilliflower, or ten week dock (*C. annuus*); and the dwarf annual stock gilliflower, or Virgin dock (*C. maritimus*).

The first sort has tough fibrous roots and a woody upright, short stalk divided into many erect angular branches, forming a bulky head from one to three feet in height, furnished with green spear-shaped leaves, and terminating in numerous spikes of flowers, varying in colour in different varieties. It is a native of Switzerland.

The chief varieties are, the common dwarf yellow with a low bulby head; the large yellow with a branchy firm forming a bulby head; the large yellow, bulby with a branchy head; the true bloody, with a branchy firm; the flowered flax-coloured; the variegated-leaved yellow; the winter; and the white, having a very branchy greenish stem, and bulby-headed: the flowers in each variety single or double.

The second sort has a naked white root, an upright strong abiding woody stem from one to three feet in height, branchy at top, with spear-shaped oblong hoary leaves, and the stems and branches terminated by spikes of flowers. It is a native of Spain. The flowers vary in their colour; some being of a pale red, others of a bright red, and some curiously variegated, but those of the bright red are generally held in the highest esteem. And there are likewise other varieties, as the scarlet *Brompton* flower, with a strong upright single stem, from one to three feet high, crowned by a cluster of long thick leaves and erect spikes of large scarlet single and double flowers: the *solite* *Brompton* flower, with the same stem and long erect spikes of large elegant flowers: the *purple* or *Tr wettenham* *stock,* which has a thick stem a foot and a half or two feet high, very branchy upwards, and all yellow, erect spikes of purple single and double flowers, purple blue-spotted single and double flowers, variegated purple and white flowers: the *small flowered or shrubby* *stock,* which has a shrubby firm stem from a foot to a yard high, dividing into many short branches, forming a bulby head, all terminated by erect spikes of pure white single and double very fragrant flowers, which feed in double flowers, which feed with a membranous edge, with a white flower, or feebly red spotted flowers.

The third sort has a shrubby firm stem from six to eight inches in height, and nearly of the thickness of the little finger, straight, rigid, round, being covered with leaves, hairy with nap, dividing at the top into two or three very short alternate branches; the leaves are feebly petialous, linear-lanceolate, bending this way and that; the flowers alternate, nearly the size of those in the common *stock,* of a purple colour; they appear from May to July.

The fourth species rises with a round smooth stem about two feet in height, dividing into several branches at the top, the leaves lanceolate hoary, rounded at the end, nearly opposite or alternate, or three or four together of unequal sizes; the flowers produced in loose spikes at the ends of the branches, placed alternately. It is a native of the south of Europe. And of this sort there are varieties with red, purple, white, and striped single flowers, as well as with double flowers of the same colours.

The fifth species has the habit six or eight inches in height,
CHEIRANTHUS.

height, very much branched, divaricated, somewhat fluff, rugged, with twin appressed hairs; the leaves ovate lanceolate, somewhat reflected at the tip, green on rather long petioles, five-fifths, obscurely subnerved in the upper ones; the branches terminated by spikes of red flowers, turning purple. It is a native of the sea coast of the Mediterranean. It is sometimes improperly termed Virginia fcock.

Method of Culture. These plants are all capable of being raised without much trouble of difficulty.

Method of Culture in the Wall-flower Kind. These plants may be easily increased by leafs, slips, or layers; but, in order to have good flowers, very great care should be taken to have the seeds collected from the bell plants; as such as are purchased from the seeds-men can seldom be fully depended upon for the purpose. The seed in this fort is left liable to produce double flowers than in the succeeding kind.

The seed should be sown in the spring season, as in April or the following month, either in the situations where the plants are to remain, or on beds of earth that have not been enriched by manure, being covered lightly in; but the first is the better practice. When the plants appear, frequent waterings should be given to them in dry weather; and when they have attained sufficient growth, where the bed method is practised, they should be thinned out during a wet season in the latter end of summer or beginning of autumn, and be replanted in the situations where they are to flower, or be pricked out in nursery beds, nine inches distant, to remain till the following spring, to be removed with balls of earth about their roots to the places where they are to flower; but the first is the most advisable method, as they do not succeed so well by removing. The bed method is chiefly in use with the market-gardeners, who cultivate the flowers for sale in large quantities. The slab mode of raising the plants is chiefly practised in perpetuating the fine double flowers. The slips are made from the side-shoots that have no flowers, which, after being divested of their lower leaves, are planted in the situations where they are to remain, or in beds, to the depth of three or four inches, any time from April to May, flight waterings and shade being given. In the autumn these in the beds should be removed into separate pots, to have the occasional protection of a frame in the winter, where the weather is very severe.

The young, tender, and more pliable branches may be laid down into the ground in the usual manner any time from May till the end of June, a little water being occasionally given when the weather is dry. They should afterwards be taken off when they are well rooted, and be planted out either where they are to remain, or in pots; or, what is the bed practice, in both ways.

These two last methods, however, seldom afford plants that have good flowers as those raised from seed, being mostly weaker and furnished with shorter spikes of flowers. They should therefore be chiefly confined to those varieties that cannot be raised with certainty from seed.

When these plants are intended for the purpose of ornamenting and adorning variety on walls, ruins, and other places of this sort, the seed should constantly be sown upon them in the autumn or very early spring, covering it with in with a little earth to the depth of half an inch. They will afterwards propagate themselves by shedding their feed, and continue for a great length of time in such places.

Where they are cultivated in the vicinity of large towns, for the purpose of sale, it is the practice, especially with the market-gardeners around London, to prick the young plants out of the feed-beds into nursery rows at the distance of ten or twelve inches, and nine or ten from plant to plant; and where they grow too luxuriantly in these situations, they are again removed about August, in order to check their too full growth, and by that means render their heads more bushy. They are usually exposed for sale, with small balls of earth about their roots, when full beginning to put forth bloom, so that their colours and the properties of their flowers can be discerned in some degree.

And where a blow of the double feeding sort is desired, they should be placed in pots, with balls of earth to their roots at fo as their double flower-beds appear, giving them a little water and proper shade, till they become established again in the earth or mould.

These plants in general succeed well and continue long, where the soil is of the poor and rather calcareous kind. In rich soils they soon decline and go off.

Method of Culture in the Stock Gillyflower Kind.

In all these plants the work of raising them may be performed exactly in the same manner as in the wallflower sort; only the seed should always, as much as possible, be sown where the plants are to remain, or the plants be pricked out into them while they are very young, as in their more advanced growth they never succeed well when removed, or are of 15 long duration: as their roots are nice and but thinly provided with fibres. When the removal of the plants is practised at a late period, it should constantly be done with large balls of earth to their roots, or else they are very apt to be destroyed.

And in the slab or layer methods, as practised for the different varieties, the plants seldom grow so freely or become so fine as those raised from seed. The foils on which they are found to succeed bell, are such as are fresh, and which have not been enriched by manure. In rich soils they soon disappear.

But both these species and their varieties, in order to have a good show of flowers, and the bell and most perfect plants, should be raised annually in the different modes, as, in whatever way they are increased, they always afford the finest flowers the first season of their complete flowering, continuing to decline afterwards.

And such of the double sorts of the different kind as have been potted, should be protected during the winter season, either in frames for the purpose, or some other contrivance, a free supply of fresh air being always admitted when the weather is suitable.

In order to have good flowers of this sort, great care should be taken to remove all the small and imperfect flowers from the feed-beds at the time of setting the plants out.

Method of Culture in the Annual Stock Kind.

In these sorts of plants the work is accomplished by sowing the seeds at suitable times, as to produce succession of flowers during the summer and autumn, from the beginning of February till the latter end of May, covering the seed in lightly. The first and second sowings should be made on a very gentle hot-bed, or in pots placed in it, or in frames, to be protected in the night; but the others may in general be performed in the places where the plants are to flower, or in beds, to be afterwards pricked out or removed into pots, or where they are to remain and blow. The former is, however, the best practice where it can be employed, as removing always injures the growth of the plants. And in sowing and planting them out in the borders, or other parts of pleasure grounds, it is usual to put them in, in patches, of five or six in each patch, desposing them in a varied manner, in different parts of them.

The plants of the early sowings will mostly be in a state to be planted out in pots or on the borders in the beginning of May, a little water being given at the time, when the
weather is dry. They are always proper to be set out when they have attained three or four inches growth, and have several leaves, and should never be delayed much longer.

In cafes where these plants are raised by themselves for show, it is the practice to plant them in rows in beds four feet wide, ten or twelve inches apart each way; care being taken to keep them clear from weeds, and duly watered in dry weather afterwards.

In order to have these plants to flower in the autumn and winter, some of them should be potted about the latter end of July, and placed in a warm situation, occasional watering being given, and in the beginning of autumn be removed under the protection of the green-houfe, or good garden frames; due supplies of fresh air being admitted when the weather is suitable.

Much caution is also necessary in the culture of these flowers, not only to chufe good feed, but to remove all the bad and imperfect plants as soon as possible from the beds, or other places where they are grown, as without this the plants are seldom good.

And in the fourth species the plants may likewise be increased by fowing the seeds at different times, as in the above fort, chiefly in the place where they are to flower, and a few in pots to be set out with others of similar growth.

The fifth fort may be raised and managed in the fame methods as the two firft.

It is advised, in order to provide good feed of the three firft species, that great attention should be paid to have it collected from thole flingle plants which have the largest flowers, with the defteft and brightest colours. Some fuppofe it advantageous to take it from fuch plants as have rather a tendency to the double kinds. The branches should be feparated when dry, as the feeds become perfectly ripe, and be tied up in small bunches, and hung up in a dry airy situation, till the feed is fit to be rubbed out and put up for ufe, which should always be done as soon as it is in a fit state.

But in the two laft species nothing further is necessary but to take it, when perfectly ripe, from the best plants of the repective kinds.

All the species and varieties of these plants are highly ornamental, but particularly the double flowering forts, being introduced not only in the more open exposures of the clumps and borders of the pleafe-grounds and gardens, where variety is wanted; but in other places contiguous to the house, for the delightful smell they afford while they are in blow, which is a coniderable length of time.

And the laft species is sometimes made ufe of as an edging, and the third as an ornamental plant in the windows of bed-chambers, and other places where plants in pots are necessary.

CHEITO, in Geography, a town of Persia, in the province of Farfihan; 120 miles S. of Shiras.

CHEITORE, a town of Hindoostan, in the province of Oudipour, confidered by major Rennel as fynonymous with Cheitore, fubject to the Rana, or chief prince among the Raj-poors, and reckoned the firft among the Raj-poot fates. The whole of this province, and the adjacent tract of country in the foab of Agimere, confift of high mountains divided by narrow valleys; or of plains environed by mountains, accessible only by narrow paffes and defiles; and, in effect, one of the strongest countries. It has, however, an extent of arable land fufficient for the fupport of a numerous population, and is bleffed with a mild climate, being between the 24th and 28th degrees of latitude. It is repreffented as a country likely to remain for ever in the hands of its prefent poifieurs, and to prove the fylum of the Hindoo religion and fufpicions. Notwithstanding the attacks that have been made upon it by the Gznnavde, Patan, and Mogul emperors, it has never been more than nominally reduced; and fuch are the strength of its fortresses and the independent spirit of its inhabitants, that every war made on thole people, even by Aurungzebe, ended in a compromise, or defeat, on the part of the affailants. It firft fell into the hands of the Mahrattas in 1750, when Alla had pollifhon of the throne of the Mogul, and began his plan of conqifit by the reduction of Gujarat.

Cheitore was the capital of the Rana in the days of his greatest; it was then a fortex and city of great extent, situated on a mountain; but it has been in ruins ever fince the time of Aurungzebe in 1681; and had once before experienced a like fate from the hands of Achar, in 1567. Ren nel places it in N. lat. 25° 21'. E. long. 74° 56'. It is 300 miles S.W. of Agra; 76 S. of Agimere; 651 W. of Benares; 547 N. of Bombay; and 1768 by Moorehead, and 1663 by Bulbom, N.W. of Calcutta.

CHEIWAN, a town of Arabia; 49 miles S. of Saade.

CHE-KANG, a town of China, of the third rank, in the province of Kiang-nan; 11 leagues E.S.E. of Tchikchou.

CHEKAO, in Natural History, the name of an earth found in many parts of the East Indies, and sometimes ufed by the Chinefe in their porcelain manufactures. It is a hard and fmony earth, fomewhat like alum, and the manner of uifing it is this: they firft confine it in an open furnace, and then beat it to a fine powder. This powder they mix with large quantities of water, and fliring the whole together, they let the coarser part fliftide, and pouring off the ref, yet thick as cream, they leave it to fettle, andufe the matter at the bottom, which is found in form of f. f. paff, and will retain that humidity a long time. This supplies the place of the earth called boache, in the manufacture of that elegant fort of China-ware which is alU white, and has flowers which seem formed by a mere vapour within its furface. The manner of their uifing it is this: they firft make the vefiil of the common matter of the manufacture; when this is almoft dry, they paint upon it the flowers, or whatever other figures they pleafe, with a pefcil dipit in this preparation of the chekao; when this is thoroughly dry, they cover the whole vefiil with the varnish, in the common way, and bake it as usual. The confequence is, that the whole is white; but the body of the vefiil, the figures, and the varnish, being three different fubftances, each has its own particular white; and the flowers, being paint ed in the fecond white of all, are diftinctly feen through the varnish upon the vefiil, and feem as if traced by a fine vapour only. The boache does this as well as the chekao, and has beside this the quality of faving for the making of the porcelain ware, either alone, or in the place of the kaolin: the chekao has not this property, nor any other fubftance beside this boache, which appears to be the fame with our flateaft or faw-fap. See Porcelain.

CHEKE, John, in Biography, a very learned writer, and an eminent promoter of learning in England, was born at Cambridge, June 16, 1714; he received his grammar learning under Mr. John Morgan, and was admitted into St. John's college about the age of 17, where he was greatly distinguished for his application to study, and particularly to the Greek language, which was then almost universally neglected. At the recommendation of Dr. Butts to Henry VIII, he was made king's foiliar, and supplied with money for his education, and for his charges in travelling into foreign
foreign countries. At the age of 26, Mr. Cheke was appointed Greek professor at Cambridge, in which situation he endeavoured to render the study of that language more popular, and to reform the pronunciation of it, which was become almost barbarous. In both attempts he incurred the opposition of that party who set their faces against improvements of every kind. Gardiner, bishop of Wincheliter, was his chief and most violent opponent: he raised an edict, commanding a strict and rigid adherence to the old and received modes. Cheke justified his own conduct upon the authority of Erasmus, but the bishop adhered to his former resolution. In spite, however, of episcopal mandates, the improved pronunciation gradually made its way into the schools and universities of the kingdom. The reputation of Cheke was so high that, in 1544, he was sent for to court, to assist in the education of prince Edward, and he appears to have had some share in the literary infusions of the princes Elizabeth. When his royal pupil Edward VI. succeeded to the crown, he was rewarded with an annuity of 100 marks, and a grant was made to him of several parcels of land and mansions: he was also, by royal authority, made provost of King's college, Cambridge. His interest, at particular periods, seemed to decline at court; he, nevertheless, continued in his post as tutor to the king, who was greatly indebted to him for the knowledge and virtuous principles by which his short life was so honourably distinguished; he became also the patron of religious and learned men, both of his own countrymen and foreigners. In 1551, the king conferred on him the honour of knighthood, and gave him a considerable estate for the maintenance of his rank in life. In the same year he acted as one of the disputants on the Protestant side of the question, at two conferences on the subject of transubstantiation; he at other times displayed his controversial talents, and at the close of the young monarch's reign he had ever succeeded as to be clerk of the council, secretary of state, and privy counsellor. The death of Edward was a fatal blow to the confederation of Cheke: he was anxious to have the crown transferred to lady Jane Grey, to whom, and to her council, he acted as secretary. Upon the accession of Mary to the throne of these realms, he was committed to the Tower, and indicted for high treason; but being flipp'd of the greater part of his property, he was pardoned and set at liberty. Unable, however, to conform to popery now re-established, he obtained leave to travel in foreign countries for a limited time. He went to Switzerland, and from thence to Padua, where he affiliated some of his young countrymen in their studies, and read with them the orations of Democritus in the original. He afterwards settled at Strasburgh, where the Protestant forms of worship were openly maintained. His not returning home at the period appointed, afforded his enemies a pretext for condemning what remained of his estate, so that for maintenance he was obliged to read Greek lectures at Strasburgh. In the beginning of 1556, by the invitation of his former friends, lord Paget and sir John Maiton, who had become converts to the new order of things, he was induced to go to Brussels, where his wife was. Disturbing the infancy of his old friends, he had recourse to the arts of astrology, to the follies of which he was addicted: these assured him that the intended journey would be prosperous. He was, however, way-laid by orders from Philip II., and carried to the Tower of London, where he was detained a close prisoner till the terrors of a cruel death induced him to recant, and make submission to the pope's legate, cardinal Pole. This humiliation was not sufficient: he was compelled to make a formal renunciation of all his errors in the presence of the cruel queen, and more cruel and revengeful court. His lands were now restored; but with these no power could restore that peace which rarely attaches itself to those, who, from whatever motives, submit to a dereliction of principle. In many infinences he was forced to witness the conviction of Protestants who exhibited that constancy in a good cause which he knew ought to have been shewn by himself. He became a prey to remorse, when he probably, but too late, recid ed the feelings of those who expired at the stake, and died at the age of 43, leaving behind him three sons.

Sir John Cheke was an accurate and elegant scholar; his most celebrated work is entitled "De Superfluiti, ad Regem Henriicum," written to excite the king to a complete reformation in religion. He endeavoured to correct the orthography and diction of the English language, and would admit of no words but the genuine English of Saxon and Teutonic origin. Hence he objected to the received version of the Bible, and undertook a new one. He finished the gospel of St. Matthew as a specimen, which is deposited in the library of St. Benet's college, Cambridge. Sir John was an excellent statesman, a sincere Christian, and an ardent friend to the reformation, though he wanted courage to die in its defence. He was benevolent and charitable, and the country is greatly indebted to him for his successful endeavours in reforming the pronunciation of the Greek and Latin languages.

CHE-KIANG. See Cheh-Kiang.

CHEKOUTOMIES, in Geography, a nation or tribe of Indians, situat near the south bank of Sanguenai river in Upper Canada.

CHELA, has several significations. It imports a forked probe, mentioned by Hippocrates, lib. ii. De Morbis, used in extricating a polypus of the nose. But in Ruffius Ephesius, cap. iv. ebela denote the extremities of the cilia, which touch each other when the eyes are shut. But the most frequent significiation of ebela is clums, particularly those of the crab.

Cheke further signify filasses in the heels, fest, or pudenda.

CHELE, in Ancient Geography, a place seated on the mountain coast of the Exuine sea, at the distance of 20 stadia from the small island of Apollonia, or Daphnusa, and 124 from the mouth of the river Sangar, according to Arrian.—Also a part of the Thracian Bosphorus, on the coast of Aila Minor, was a temple of Diana Dictyne.—Also, two promontories, mentioned by SliusItellia, supposed by Orosius to be the two promontories of Apollo and Mercury, which comprehended the gulf of Carthage.

CHELADNIIUM, in Middle Age Writers, is used for a kind of velvett or stuff. It is also called elcodivus, elcodius, elchandra, falandra, and falandria, and by the Byzantine writers 25x7/4x. It is mentioned by Ditmar as a velvett of great length, carrying ears, and 150 ferman. It seems to have resembled an Italian galley.

CHELADURUS, a small kind of chelidium.

CHE-LAOU, in Geography, a town of China, of the third rank, in the province of Chou-fi: 14 leagues S.W. of Fuen-tchen.

CHELAIJUM, a name used by some authors for a moveable tubercle in the eye lid, commonly called in English a flitte or fbee.

CHELIDON, in Ichthyology, a name by which many of the old Greek writers, writing with the Latin word Triglo birende, or tub-fish of Ray. See Triglo birende.

CHELIDONIA, among the Romans, a name given to the wind more commonly called Fraxinus.

It was only called chelidonia for a fortnight in the middle...
of February, because at that time the swallow makes its first appearance.

*Celidonia*, in Antiquity, a festival celebrated at Rhodes, in the month Bear, during which the boys went from door to door begging and singing a long song called "Celidonium," because it began with an invocation of the chelidion, or swallow. It is said to have been composed by Chrobus the Lindian, as an artifice to get money in a time of public calamity.

*Celidonia*, in Botany, C. B. Smith. See Ranunculus foetina.

*Celidonia* Insulce, in Ancient Geography, rocks of the Mediterranean sea, upon the coast of Lyca, in Asia Minor, according to Ptolemy. Strabo places them at the commencement of the coast of Pamphyia, and he says there are three mountains on the island, about five itadia from one another, and six from the land. M. d'Anville has placed them to the south of "Sacram Promontorum."

*Celidonia*, a people of Libya.


Gen. Ch. Cal. two-leaved; leaves roundish, concave, caducous. Cor. Petals four, roundish, flat, spreading. Stem. Filaments numerous (from twenty to thirty), shorter than the corolla; authors oblong, compressed, crept, two-celled. Dph. Germ cylindrical, the length of the flammis, superior; style none; stigma bilabiate. *Peric. *Capsule reeling a filike, many-seeded, one or two celled, two or three-valved.

Fif. Ch. Stigna not more than bifid or trifid. Capsule flander, linear, reeling a filike. Sp. 1. C. major, Linn. Sp. Pl. 1. Mart. 1. Lam. 1. Wild. 1. Bauh. Pin. 143. Thurn. Ind. 231. Flor. Dan. tab. 542. Linn. Ill. tab. 430. Woodv. Med. Bot. Supp. tab. 263. Eng. Bot. pl. 1781. (Papaver chelidiona dictum. Rai. Syn. 509.) Common or great chelidion, so called in contradiction to Ranunculus ficaria, which was called by the old botanists the liver celandine. "Peduncles in umbles." C. C. Fluctuat. Dill. in R. Syn. 529. Millier. pl. 92. fig. 2. Flor. Dan. tab. 676. "Leaves resembling those of the common cow." The whole plant yields a yellow or sialon-coloured, acid juice. Root. Root pernnial, spindle-shaped. Stem near two feet high, branched, terete, sometimes a little hairy. Leaves green above, glaucous beneath, alternate, large, fott, unguiculately winged, lobed, and notched; petioles hairy. Flowers yellowish, in axillary and solitary umbelis; general and proper peduncles hairy. Capsules about two inches long, slender, somewhat tapering at each end, one-celled, two-valved. Seeds small, black, shining, oblongately crowned, with a white, compressed, glandular cret, which, when fallen off, leaves an oblong scar; receptacle Eliated, placed at the junction of the valves on each side, and furnished with a double row of teeth. A native of hedges and uncultivated grounds, among rubbish and under walls in the neighbourhood of villages in England, and other parts of Europe. The variety 8 is very hairy; its leaves are divided into long, narrow, segments, deeply jagged at their edges; and, what is most remarkable, its petals are lacinated or cut into several parts. La Maree thinks it a distinct species. It is mentioned by Cluibus, Bauh. and several other of the old botanists, was found plentifully in the former part of the last century, among the ruins of the Duke of Leab's fort at Wimblidcn, and, as we learn from La Maree, was cultivated in the royal garden at Paris, a little before the French revolution. Both kinds agree in their sensible qualities. The whole plant has a taint, unpleasant smell, and a durable, bitter, acid taste, which is considerably stronger in the root than in the leaves. Both water and rectified spirit extract nearly the whole of the poisonous matter. The juice of the leaves is yellow, and gives a green tincture to rectified spirit; that of the root is of a deep brown-colour, and tinges the same menstruum with a brownish-yellow. Its pungency is not of the volatile kind, little or nothing of it rising in distillation either with water or spirit; it is nevertheless greatly abused by drieding the plant itself, or by infusing with a gentle heat the spirituous or watery infusions. Its virtues have been highly extolled by some of the modern, as well as by the ancient physicians, in the removal of obstructions of the liver and the other visera, in promoting expectation and curing intermitents, but though they have gained it a place in the EdinburghPharmacop-eia, t. Sacrum have been greatly overrated; its use, in the jaundice, in particular, was probably suggested by the old absurd doctrine of signatures. The juice, however, certainly possesses active powers, and may be employed with advantage to destroy warts, cleanse foul ulcers, and remove obstructions of the cornea. See Woodville's Medical Botany. 2. C. japonicum, Mart. 3. Wild. 2. Thumb. Jap. 321. "Peduncles one-flowered; leaves petioled, winged, egg-shaped." Stem herbaaceous, upright, weak, fibrous, smooth. Leaves alternate, petioled, unequally winged, leaflets three or five, opposite, on short petioles, ovate, more or less oblong, acute, gashed, unequally serrated with coarse ciliated ferratures, smooth, pale underneath, an inch or an inch and a half long, the terminal lobe always longer. Flowers yellow, axillary; peduncles calcarious, nearly the length of the leaves; calyx smooth; corolla a little larger than the calyx: four times the length of the flammis. A native of Japan. 3. C. glaucinum, Linn. Sp. Pl. 2. Mart. 2. Lam. 2. Wild. 3. Flor. Dan. tab. 787. Engl. Bot. pl. 8. (Glacieium flore biso.) Tourn. Ind. 234. G. Hove. Fl. Crpt. 1. Sp. 1. Venture. 1:766. Vent. 3. 92. Smith. Flor. Brit. 2. 753. Papaver corculimentum; Bauh. Pin. 171. Loc. ib. 753. Scia Celadine, or yellow horned-poppy. "Peduncles one-flowered; leaves embracing the stem, foliated; stem smooth." Whole plant glaucous. Root perennial. Stem several, near two feet high, branched, weak, spreading, on an even furface. Leaves alternate. A little flabby, rough with short hairs; root ones lyrate-pinnatid. Flowers yellowish, large, axillary and terminal; calyx hispid. Capsules from ten to twelve inches long, slender, curved, often rough with tubercles, two-valved, two-celled; partition gomous, produced by an enlargement of the receptacle. Seeds numerous, seared in deep excavations within the substance of the partition or receptacle; pitted. A native of the seacoast in England and other parts of Europe. 4. C. pharecon, (C. communis; Linn. Sp. Pl. 5. Mart. 3. Lam. 3. Wild. 3. Glacium pharecon; Tourn. 2. 244. Grass. 2. 167. tab. 115. Smith. Flor. Brit. 2. 154. Eng. Bot. pl. 142. Curt. Lond. fade. 6. tab. 31. Papaver. Bauh. Pin. 151.) Scarlet horned-poppy. "Peduncles one flowered; leaves foliaceous, pinnatifid; stem hispid; capsule brilify." Root annual, spindle-shaped. Stem two feet high, branched, cloathed with horizontal hairs. Leaves glaucous, hairy; root ones lyrate-pinnatifid; stem ones deeply pinnatifid, jagged and toothed, half embracing the stem. Flowers teartal, half the size of those of the preceding species. Cap-
false rough with longish rigid close bristles, two-valved, two-celled with a partition or receptacle resembling that of the preceding species. Seeds pitted. A native of Germany and the south of France. It’s right to be received as a British plant rests entirely on the authority of Stillingfleet, who sent it from Norfolk to Hudon, but it has not been found there by any other person. In Chelsea garden it has come up as a weed from time immemorial. 5. C. fulvum. (Glaucescens fulvum; Smith. Exot. Bot. tab. 7.) “Peduncles one-flowered; stem-leaves rounded, valved, capitate rough; flowers nearly sessile.” Raised by Dr. Smith from seed originally obtained from the Cambridge garden by the name of C. conicum, and presumed to be a native of the north of Europe. Whole herb of a more blue cast. Root annual. Flowers orange, twice as large as those of C. thunbergianum. 6. C. violaceum. (C. hybridum; Linn. Sp. Pl. 4. Mart. 4. Lam. 2. Willd. 5. Eng. Bot. pl. 20.) Glaucescens violaceum; Juss. 236. Smith. Flor. Brit. vol. 2. p. 565. Papaver; Bauh. Pl. 172. "Peduncles one-flowered; leaves pinnatifid, with linear segments.” Root annual. Stem a foot high or more, slender, branched smooth, green. Leaves twice or thrice pinnatifid, deep green, smooth. Flowers rather large, violet, with a darker spot at the base of each petal; stigma triqued. Capsules two or three inches long, three-valved, one-celled; receptacles three; fixed to the valves, but not so far extended as to render the capsule three-celled. Seeds pitted. A native of Spain and the south of France. It has been found nowhere in Great Britain but in Cambridgeshire and Norfolk. Linnaeus supposed it to be a hybrid plant between Papaver Argemone and some species of Chelidonium; but there does not appear any sufficient reason for the opinion. Obf. The Chelidonium of Linnaeus comprehends the Chelidonium and Glaucescens of Tournefort, which were separated from each other by that great botanist, partly on account of the difference in the number of the cells of the capsule, but chiefly because the petals of Chelidonium majus, his only species, appeared to him to be properly cruciform, whereas those of the other species are rather roflacens, and therefore according to the principles of his system, belong to a different class. Gartner, Jussieu, Ventenat, and Dr. Smith, all agree in reordering Tournefort’s original genera, principally on account of the different number of cells; their Chelidonium being only one, and their Glaucescens two. But unfortunately their Glaucescens violaceum, which cannot be separated from their G. luteum and phacenum, has only one cell, in direct contradiction to the generic character. Ventenat, who seems to have felt this difficulty, has dropped all consideration of the number of cells in his essential character of Glaucescens, observing that the capsule of Phacenum and Luteum (Chelidonium corniculatum and Glaucescens of Linnaeus) appears two-celled, because the space between the two receptacles is filled with a thick fungous substance. It is indeed so different in its constitution from the usual disposition or partition, that Jussieu could scarcely prevail upon himself to call it by that name. Its form in C. violaceum sufficiently demonstrates its true nature, and affords a connecting link between C. majus and the other species. It is with much difficulty that we differ from such high authorities; but for the reason acknowledged, we cannot but think Linnaeus fully justified in uniting Tournefort’s two genera. The effect of this introduction by Gartner and Dr. Smith into their essential character of Chelidonium; and the capitule itama introduced by Ventenat into that of Glaucescens, are, we apprehend, separately considered, of too little consequence to constitute generic distinctions.

**Chelidonium majus canadensis;** Can. Moril. Ray. See **Sanguinaria canadensis.** **Chelidonium minus.** See **Ranunculus ficaria.** **Chelidonium Promontorium,** in *Ancient Geography,* a promontory of Asia, in Pamphylia; probably the same with the Sacrum Promontorium. **CHELIDONIUS.** In *Natural History,* a stone pretended to be found in thedomes of young swallows; much esteemed by some for the falling sickle. The word is formed from Xalx, a *swallow stone.* **Swallow stone.**

**CHELLIFER, in Entomology,** a generic name assigned by Guettard and De Geer to the *Acmeons Cramerosot of Linnaeus; Helium Cramerosot of Seopoli and Gamlin;* which latter see.

**CHELLES,** in *Geography,* a town of France, in the department of the Seine and Marne; 4 leagues W.S.W. of Meaux.

**CHELLUS,** in *Ancient Geography,* a town of Paleltine, mentioned in the Apocryphal book of Judith.

**CHELM,** in *Geography,* a town of Poland, in Red Russia, and capital of a patrimony of the same name; the seat of a Roman bishop, suffragan of Lemberg, and a Greek bishop, suffragan of Kiev. The patrimony is partly subject to Russia and part to Anhia. The town is in a state of decay; 108 miles S.E. of Warsaw and 396 E. of Brillan. N. lat. 51° 10’ E. long. 24°.

**CHELMER,** a river of England, in Essex, which runs into the sea a little below Malden.

**CHELMIEZ,** a town of Lithuania, in the patrimony of Minik; 50 miles E. of Mozyr.

**CHELMON,** in *Ancient Geography,* a town of Paleltine, over-agained Efraelon, according to the book of Judith. Holofermes encamped before this city when he went to besiege that of Bethulia.

**CHELMSFORD,** in *Geography,* the shire town of Essex, England, is pleasantly situated near the centre of the county, at the confluence of the rivers Chelmer and Can, from the ancient ford over the former of which it evidently derives its name. Camden, without any authority but its diligence from the supposed site of the Roman station of Camalodunum, which lies places at Malden, fixes Canumon here, though every circumstance, it is observed by Mr. Gough, "is against assigning such antiquity to this town; there was not even a road near it till Henry the First’s time, when Maurice, bishop of London, to whose see it always belonged till Bonner’s time, built a bridge over the Chelmer." Maurice posished the episcopal dignity about the year 1300, and to his bridge this town owes its importance, as it occasioned the great road which before passed through Writtle, a village two miles to the west, to be brought to Chelmsford; and from that time the latter increased in buildings and population. In the first year of king John, William de Sancta Maria, bishop of London, procured the grant of a weekly market, and other privileges; these were afterwards confirmed by Edward I. In the eleventh of Edward III, four members were sent from Chelmsford to a council held at Westminister. The town is chiefly formed by four respective streets. Near the centre is the shire-hall, an elegant, commodious, and well-defined structure, erected at the expense of the county, from designs and under the immediate direction of J. Johnson, architect, who having completed it to the satisfaction of his employers, and at a less expense than the original estimate, was presented, in purdiance of a vote paid at the quarter sessions in 1792, with an elegant silver cup. The front of the building.
building is of white stone with a reddish Inferior, and is connected with four tare square columns supporting an ap- plan. The corn exchange, apartments for the courts of 
C. Glabra, Linn. Sp. Pl. 1. Excluding part of the 
fons, an admiralty room, and other convenient 
lish, are within the walls of this building. Contiguous 
to it is a neatly furnished court, to which the water is 
brung from a spring about a quarter of a mile distant. 
When the original conduit was built is unknown; the pre- 
sent was erected a few years ago chiefly from subscrip- 
tions of the inhabitants, to which the Sun and Royal Ex- 
change offices contributed £52 each. The church is a spa- 
cious handsome building, dedicated to St. Mary; the body 
is modern, and was erected from designs by Mr. Johnson, in 
place of the more ancient part, which fell to the ground on the 
night of January 17th, 1800. At the well end is a 
square fiant tower with pinnacles. When the original church 
was founded is uncertain; but from an inscription which 
was placed on the south side of the centre aisle, it appears 
to have been repaired by subfcription, anno 1624. In this 
town is a free grammar-school, founded and liberally endow- 
ed £52 by Edward VI., on the petition of Sir William Pe- 
tre, knight; Sir Walter Mildmay, knight, then one of the 
general supervisors of the court of augmentations: Sir 
Henry Tyrrell, knight; and Thomas Mildmay, esq. The 
government was at the same time constituted a body corpo- 
rate. The church was at first a chapel, 1782: by R. Tenant 
itself, then acting governor, on the site of a more ancient one, 
which was erected by Sir John Tyrrell, bart. The educa- 
tion of youth is further provided for by two charity schools 
supported by voluntary subscription; one founded August 
17, 1713, for fifty boys: the other in April 1714, for twenty 
girls. The school-house stands at the north end corner of 
the church-yard; adjoining to it are three almshouses for 
decayed families. The bridge, erected by bishop Maurice, 
over the Chelmer, having greatly decayed, was rebuilt with 
one arch in 1787 from a design by Mr. Johnson. This 
bridge unites the hamlet of Moulham with Chelmsford. 
Near it, on the Moulhain side, stands the county-gaol, a 
spacious and well-arranged stone building, which was com- 
menced in 1772, by an architect named Hyland, but has 
since been much improved and completed by Mr. Johnson. 
The front is formed by a commodious house occupied by 
the gaoler; from which, westward, extends a large paved 
yard, terminated by the hospital or ward for female crimi- 
nals, and a very neat and convenient chapel. On the north 
side, next the north door of the church, 1782: by R. Tenant 
improvements, appropriated to the use of the convicts employed in picking 
Oakum and making ropes. On the south side, extends a 
range of separate cells for condemned criminals, behind 
which, on the opposite side of a paved yard, are apartments 
for debtors, conveniently d'f f. Every yard is provided 
with excellent spring water, which, with the general atten- 
tion to cleanliness, greatly contributes to the health of the 
prisoners. The population of Chelmsford as returned under 
the last act was 3755, the houses 653. The surrounding 
country is extremely pleasant and fertile: the soil consists 
 principally of a deep rich loam, interspersed with veins of 
gravel. Several flourishing plantations of hops are es- 
lahished in the neighbourhood. Within the last seven years, 
twelve extensive ranges of barracks, with accommodations for 
upwards of 4900 troops, have been erected in this parish; 
the largest at the west end of the town, the other on the 
southern side. At a small distance well of the latter begins 
a line of embankment for defending the approach to the 
metropolis, consisting of ear batteries and parapets. It has 
been carried a considerable way in a south-ea direction, 
but is not yet completed to the extent proposed. This line 
is one among the numerous works now carrying on in this 
county to protect the metropolis in case of invasion. 
Chelmsford is 19 miles from London; has a weekly market 
on Fridays and annual fairs. About one mile from 
this town, Mr. Allen's hall, the seat and manor of the 
Mildmays, which, prior to the Norman conquest, was parcell 
of the possessions of the abbey church of St. Peter's, Wiln- 
imster. Morant's History of Essex, 2 vols. fol. Salmon's 
History of Essex, 6 vols. 8vo. 

Chelmsford, a township of America, in the county of 
Middlesex and state of Massachusetts, situated on the south 
side of Merrimack river, 26 miles N.W. from Boston, and 
containing 11,114 inhabitants. This town is connected with 
Dracut by a bridge over the river at Pawtucket falls, of 
ingenuous construction. The course of the Middlesex canal, 
design'd to connect the waters of Merrimack with those of 
Boston harbour, will be afterwards the seal part of 
Chelmsford.

Chelone, in Botany, (from Chelone, a tortoise) Linn 
gen. 75,689 Spec. 100, Wild. 1719, 14:2 Jott. 17. Vent. 
Ephemer. Jott. 17.

Gen. Ch. &.L Periarch, permanent, one leaf'd, five leaf'd; 
fig. the same. Cor. monospermatous, ringshaped: 
tube-cylindrical, very short; throat inflated, oblong, 
with a few villous hairs. Stam. 4. Anther 

Sp. 1. C. glabra, Linn. Sp. Pl. 1. Excluding part of the 
fynomys, Mart. 1. Lam. 1. Wild. 1. (C. acalcula flore 
also; Torn. Act. 1706. tab. 70.) White Chelone, or 
Humming-bird tree. Leaves petioled, lanceolate, 
obliquely serrated; uppermost ones opposite. "Roots 
perennial, thick, fibrous, creeping. Stem some feet high, 
covered with small, cylindrical, or oblong four-angled, 
earlyforked, green, flaxen, on short prickles. Flowers white, 
about fifteen in short close terminal spikes; upper leaf 
valved: the back of a tortoise, whence the generic name. 
Species surrounded with a membranous bristle. A native of North 
tab. 8.) C. glabra 2. Lam. 1. Flor. 3. Colours rose 
dama. (Gart. 15,18. Gaunt. Fr. Clas. and Ord. 
1. Leaves petioled, lanceolate, oblique, deeply 
serrate; uppermost ones opposite. "Roots 
perennial, creeping. Flowers bright purple. A native of Virginia 
and Carolina. flowering in August. La Marek affirms, contrary 
to all other authors, that there is not the root of a 
barren arther in either of the two preceding species. 
Comment. Gaert. 9, p. 35. (Oursia; Jull. 100. Comment.) 
4. Leaves petioled, egg-shaped, serrate; uppermost ones 
opposite, embracing the stem; peduncles long, calyxes 
clawed.)
Rudiment fragments upper people denfe differing cle chium, cles hyx nial. of ated. " Hand, genus neived. violet. 242. Ol'f. fig. Stem pmfer, nodding, in a terminal panicle; partial peduncles two, three, or four-flowered: segments of the calyx obtuse; lower lip of the corolla with three acute reflexed segments; inner part of the throat cloathed with a dense yellow pubesence. A native of Mexico. ** Barren filament, bearded near the top. 5. C. pubescens. C. PentSTEMon, Linn. Sp. pl. 2, Mart. 415. Lam. 2. Illus. pl. 228. PentSTEMon, Mitch. gen. 14. PentSTEMon pubescens, Wild. 2. Dra-ereo,calamus, Morif. Hill. 3. tab. 21. fig. 2, 3. Cyecromium, Pluk. Mant. 62.) " Stem pubescent; leaves embracing the fium; panicle dichotomous. " Root perennial. Stem a foot and half high, cylindrical, branched in its upper part. Leave opposite, lanceolate, entire, or very obscurely toothed; lower ones narrowing into a petiole. Flowe-er purple, whifht about the throat in a terminal panicle with opposite ramifications; tube the length of the calyx; upper lip fhort, obtusely bifid, reflexed; lower lip three-lobed, reflexed at the fides; barren filament broader toward the top, longitudinally bearded. Seeds without a membranous border. A native of Virginia. It varies in having broader or narrower leaves. 6. C. birrata. Linn. Sp. Pl. 2. Mart. 3. Lam. 3. (PentSTEMon hisnita, Wild. 1. Digitalis Virginianna, Pluk. Mant. 64.) " Stem and leaves hairy." According to Miller nearly allied to C. glabra, differingchiefly in the hairiness of the item and leaves, and superior whiteness of the flowers. Linnmus, on the other hand, infpects it to be a variety of the preceding. 7. C. lovgata. PentSTEMon lomigata, Wild. 3. Chelten-ham, Ar-doit. Spec. tab. 3. Digitalis perfoliata, Morif. Hill. 2. tab. 8. fig. 6.) " Stem smooth; lower leaves quite entire." Root perennial. Lower leaves ovate-acuminate, petiolated; upper ones embrancing the item, lanceolate, toothed. Flowers violet. A native of North America. 8. C. campanulata, Mart. 5. Cavan. ic. 1. tab. 20. (C. campanuloides, And. Repos. tab. 40. PentSTEMon campanulata, Wild. 4.) " Stem smooth; leaves lanceolate, acuminate; all sharply serrated. Root perennial. Leaves opposite, filiform, or embracing the item, green above, paler underneath. Flowers purple or violet, in a long loofe terminal spike; peduncles axillary, fingle; lower ones two-flowered. A native of Mexico. Olf. The PentSTEMon of WilIedenow differs from his Che- lone in nothing but the bearded barren filament, a charac-ter certainly too trifling to constitute a generic distinction. Every one must be glad to get fairly rid of 10 harsh and in-determinating a name. CHELONIA, in Ancient Geography, a promontory of the ifland of Cos, so named by Paufanias. CHELONIDES, a mouth of Africa in interior Libya, according to Ptolemey. This was a lake formed by the river Gir. CHELONISSCUS, in Zoology, the name given by Co-Vol. VII. lumin to the species of Armadillo, called Doyipus quadr- cinnus by Gmelin, which fee. CHELONITES, in Ancient Geography, a promontory of the Peloponnesus, in the territory of Elfe, according to Pto-lemey. Strabo calls it Chelomitas. It is suppos'd by some to be the present Cape Tornef. CHELONITES Sinus, a gulf placed by Ptolemey on the western coast of the Peloponnesus; commencing at the promontory Labrys, and terminating at Parthena. CHELONITES, a lone found to be in the Indian tortoises, and to have the faculty of refting poison. The word is formed from gelium, a tortoise. Some confound the chelomites with the bunionites, or tooth-foles. CHELONITIDES, of Captathia, in Ancient Geo-graphy, two small iflands of the Red Sea, according to Pto-lemey: who places them above the port called 'Theon So-teron.' CHELONOPHAGI, a people of Arabia, inhabiting the deferts that lie between Egypt and the Perian gulf, according to Mela. Strabo says that they call their dead into the fea. -Alfo, a people of Asia, who inhabited a corner of Caramania, according to Pliny and Ptolemey. -Alfo a people of Ethipia, who not only used the fkin of tortoises for food, but likewife covered their huts or cottages with the fells of these animals. As in size and figure these fkins resembled a small fishing velifl, the Cheloonophagi employed them as boats on some occasions. CHELSEA, in Geography, a large and populous village of England in the county of Middlifex, fituate in the vicinity of London on the north fide of the Thames, and famous for its college or hospital. See Hospital. CHELSEA, called by the ancient natives "Winnifmet," a town of America, in Suffolk county and the flate of Massachufetts, containing 472 inhabitants. Before its incorpo-ration in 1758 it was a ward of the town of Boflon. It is fituate north-eallly of the metropolis, and separated from it by the ferry across the harbour, called Winiifnet. -Alfo, a township of Orange county in the flate of Ver- mont, having 239 inhabitants. -Alfo, a district of the town of Norwich in Connecticut. See Norwich. CHELTENHAM, a town of Glouceffershire, England, more celebrated for the fublimity of its medicinal water than for any other circumstance, is fuppofed to have derived its name from the river Chilt or Chelt, which flows on the fourth fide in its paffage to the Severn at Wim- lode. By a peculiar circumftance of the manor confirmed by act of parliament, though lands defcend as by common law, yet the eldest female inherits freely. The fituation of Cheltenham is extremely pleafant: open to the vale on the fouth and west; but sheltered on the north-eall by the immense amphitheatre formed by the Cotwold hills, which terminate abruptly at the distance of two miles to the north-eall. The houses are principally ranged in one freet, which extends nearly a mile in length. Since the commencement of the last centfly, when the fanfitive qualities of the springs were firft noticed, the buildings have progreffivey improved, both in appearance and numbers, and especially within the falt twelve years. Many neft mantlees have also been erected in the vicinity, the principal of which is Baye-Hill Lodge, an elegant building, erected for the late Earl of Fauconberg, in the year 1781; and dillinguifhed as the residence of their præfent majeftries during their visit to Cheltenham in the fummer of 1788. The Spring or Spa, as it is called by way of distinction, was firft obferved to poiffes medicinal virtues in the year 1716: the discovery of its qualities appears to have arisen from accident, but the immediate caufe is uncer- 4 E thin.
taine. It rises about six feet below the surface of a meadow, which is about half a mile south of the town; and according to the experiments of Dr. Short, the water is "a neutral, purgative chalybate." It continued open for two years from its discovery, but was then nailed in; and in 1724, was let by the then owner, Mr. Mafon, for the sum of 614, per annum. In 1738 it became the property of Captain Hilliscornc, in right of his wife, the daughter of Mr. Mafon: this gentleman erected a brick pavilion or dome, on four arches, over the well; formed several contiguous walks, and built a commodious room for the reception of the company. About the same time a long avenue of lime trees was planted. Several similar improvements have been since made. The beneficial effects of this spring have proved an increasing source of wealth to the town; its visitors, however, have been so numerous, that it was feared the waters would not have been sufficient to supply the increasing demand. In 1788, at the depth of about 50 feet, a spring was discovered, and was found to possess all the specific medicinal qualities of the other, and to be much more copious: a circumstance which enabled the proprietor to afford a more abundant supply for every necessary occasion. A new spring was discovered, in 1803, by Dr. Thomas Jamefon, who has described the water as somewhat resembling that at Harrowgate, in Yorkshire, and containing rather a greater proportion of sulphureous gas than the other wells. The ameliorations of Cheltenham are similar to those of most places of public resort: the fever is from May to the end of November. The assembly-rooms are spacious and handsome; and a new theatre has been lately completed on an enlarged plan, under the direction of Mr. Watfon. The hotel and principal lodging-houses are handsomely and conveniently fitted up. The church, situated near the center of the town, on the south side, is a large and elegant fabric dedicated to St. Mary, and for the most part, of the architecture of the middle ages. An hospital for sick poor men and women, and a free school, were founded here, in the year 1574, by Richard Pate, Esq. Queen Elizabeth increased the endowments. By a subsequent benefaction, two scholars educated at the free school are sent to Pembroke college, Oxford. Some other schools are also established in this town; and a peculiar charity was instituted, about the year 1800, called the "Cheltenham repository, for the reception and sale of works of ingenuity and Industry, for the benefit of the sick and indigent poor." This establishment originated with the fair, and is principally managed by a committee of females. The population of this parish was stated in the late return to be 3574: the number of houses 710. Cheltenham is 94 miles N.W. from London, has a market on Thursdays, and three annual fairs.

About two miles from Cheltenham, in the parish of Bishop's Cleeve, is Southam House, a venerable and far-famed mansion, now the property of Thomas Bagliott de la Berc, Esq. whole father, William Bagliott, Esq. of Prebury, claimed the name la Berc, in pursuance of the will of his uncle, Kynard de la Berc, Esq. who, dying without issue in 1735, bequeathed to him this estate. Leland mentions this house as recently built by Sir John Huddlstone, at the time he made his survey by command of Henry VIII.; and it yet retains as much, or more, perhaps, of its original form, as any other domestic building in England of that era. Atkins's History of Gloucestershire, fol.

CHILVA, or XELLA, a town of Spain, in the province of Valencia; 6 leagues S.W. of Segorba.

CHELUM, a river of India. See Debh.
CHE

Chollet. The place contains 3122, and the canton 10,346 inhabitants; the territory includes 310 kilometres, and 10 communes.

CHEMIN, Couvert, Covert, or Covered Way, in Fortification, is a space five or six foiles broad, adjoining to the counterscarps of the ditches, and going quite round the works at a fortification. It is covered by the inner part of the glacis, which serves as a parapet to it, and is raised from 6 to 7½ feet high. The glacis terminates in an easy slope towards the field, at the distance of about 20 foiles from the crest of it. The covert way is generally pallidised throughout its whole extent; has traverses to prevent its being exploded from without, and has places of arms in its re-entering angles.

CHEMIN Creux, a hollow way. See Ravin.

CHEMIN des Ronds, a space left between the rampart and the upper part of the revetement of masonry in a fortified place, as a passage for the rondes or rounds. The old works at Portsmouth, to wit, those round the town, having a complete revetement, have also a chemin des rondes: whereas the new works round the Common and the Dock-yard, having only a demi-revetement, have no chemin des rondes.

CHEMIN, in Geography, a town of France, in the department of the Vara, and chief place of a canton, in the district of Dôle. The place contains 242, and the canton 69,573 inhabitants; the territory includes 130 kilometres, and 16 communes.

CHEMINAIS, Timoleon, in Biography, a celebrated French preacher, was born at Paris in 1592, and entered among the Jesuits in 1667. After having taught the languages and rhetoric for some time in their school at Orleans, he gained great applause by preaching at Paris and Versailles; and before the appearance of Malcham, was reckoned the most pathetic of the French preachers. But his health declined at an early period of his life; and when he was unable to preach, he went every Sunday, as long as he was able, into the country, for the purpose of inculcating the poor. His course of service, however, was terminated in his 58th year. After his death, three volumes of his sermons were published by Bretonneaux, and have been several times reprinted. He also wrote "Les Sentimens de Piété," 1691, 12mo.; and he is said to have had a talent for light and familiar poetry. Nouv. Dict. Hist.

CHEMINON, in Geography, a town of France, in the department of the Marne; 10 miles E. of Vitry-le-François.

CHEMISE, Shirt. This word is not much in use as a military term; but when it is employed as one, it most frequently denotes a thin wall or revetment against the inner slope of a work, to prevent the earth from tumbling down. The same word is also used sometimes for expressing the exterior revetment of the rampart of a work.

CHEMISE de coup de main de furprise, a number of flirts of linen, or cloth well whitened, which a general or commanding officer sometimes makes use of for his troops, when he attempts a coup de main, or surprize, in order to enable them, in a mixture or mêlée, to distinguish one another from the enemy.

CHEMISE de feu, a French fca-term, employed to denote several pieces of old fail of different fibres, which, after they have been well pitched and thoroughly laked in other combustible matter, as oil of petrol, camphor, &c. may be nailed to an enemy’s ship on boarding her, and when let on fire to consume her.

CHEMISE de mailles, or de mailles, a shirt of mail, or a sort of body-lining made of several scales or rings of iron, which was worn under the coat as a kind of defensive armour to protect the body of a man. To this chemise they also gave the name of gallotte.

CHEMISTRY. The science of chemistry may be defined, a knowledge of those attractions which take place at insensible distances between the heterogeneous particles of matter. The attraction of gravitation takes place not only between heterogeneous but homogeneous bodies, between malleus as well as particles, between bodies that are at a distance from each other as those that are in contact: hence magnitude, form, and distance, or, in other words, the elements of mathematical investigation must be the basis of all inquiry into the phenomena of gravitation. The case is very different with regard to chemical inquiries: the subjects of these are particles of matter, both the magnitude and form of which, and the distances within which they act on each other, are wholly incapable, on account of their extreme minuteness, of being appreciated. The elements, therefore, of mathematical calculation cannot be applied to this branch of knowledge.

The science of chemistry is comparatively of late origin, although many chemical arts, such as metallurgy, pharmacy, cookery, the preparation of vinous liquors, dyeing, tanning, glass-making, &c. can boast of a very high antiquity. Neither among the ancient Egyptians, Greeks, or Romans, till after the age of Constance, are there any traces of chemistry, unless some obscure and idle speculations about the four elements, as entering into the composition of natural bodies, may be dignified with this appellation. For this a double cause may be assigned: in the first place, it was not the habit of the age to make experiment precede theory; and in the second place, hardly any of the agents that are even the most indispensible in chemical inquiries were as yet discovered. None of the acids were known except the acetic; and of the alkalies, soda was the only one of which even a very imperfect knowledge had as yet been obtained. The conquests of the Saracens, in the seventh and eighth centuries, destructive as they were to the religion and civilization of those countries which they occupied, appear to have given the first ferous impulse to the study of chemistry in the west. Rhazes, Avicenna, Geber, and other Arabian physicians, introduced to the notice of Europe many pharmaceutical preparations, both vegetable and mineral, and made great improvements in the mode of conducting processes, particularly distillations. The three mineral acids were discovered, the vegetable and mineral alkalies were distinguished from each other, the preparation of alcohol was made known, the activity of the newly-discovered menhirs was directed upon the metals, and the golden age of alchemy commenced.

The conversion of the bafer metals into gold was now the object that for the most part occupied the attention of chemists for several centuries, and an immensity of time, labour, and ingenuity was wasted in this visionary pursuit: it was attended, however, with this incidental advantage, that a considerable dexterity of operating was thus acquired, and many new substances and valuable facts were discovered, which perhaps, without this strong incentive, would have remained much longer in obscurity. In the 15th century, when the ardour of alchemy began to decline, a fresh motive for chemical pursuits began to be developed, by the happy application of them to the improvement of medicine. This was chiefly owing to a German monk, of the name of Basilius Valentine, who, in his "Cursus Triumphalis Antimonii," communicated to the public a number of valuable antimonial medicines, and discovered the volatile alkali. The speculators attending these new preparations, the controversy which they occasioned, and the recent discovery of the art of printing,
printing, all contributed to give a vigour to chemistry which it had never felt before; and from this period its progress was rapidly accelerated. Isaac Hollandus, though deeply tincted with alchemical notions, eminently contributed to direct the attention of his contemporaries and successors to the improvement of metallurgical processes, and cleared the way for George Agricola, whose masterly work, "De Re Metallica," liberated metallurgy for ever from the trammels of alchemy, and may be considered as the basis of all the splendid discoveries by which this branch of chemical art has since been illustriated. Among the immediate successors of these three able men occur the memorable names of Lezzuros Ercker, Wolfair, Glaser, Caius, Potters, Van Helmont, Kunckel, Glauer, Kircher, and Conringius, to whom is owing the discovery of a multitude of new substances, principally among the classes of compound facts, as well as many improvements of apparatus, and of those arts, such as glass-making, which are more strictly chemical. A similar praise is due to Beccher, who is still further worthy of notice as the author of certain speculations on inflammable earth, which suggested to Stahl the first hint of that theory which has rendered his name immortal in the annals of chemistry.

A multitude of chemical facts had been by this time discovered, but, from the state of disorderly confusion in which they were, their real value was much misunderstood, and their mutual connexion, as parts of a system, had not even begun to be appreciated. The first traces of a philosophical arrangement of chemical facts occur in the "Exercitium Chemicum" and "Chemia Philoica" of Parner, the latter published in 1675, and the former in 1689, which long continued to be the text books of lecturers in chemistry, in the most celebrated schools of Europe. In 1675, Stahl, professor at Leipsic, wrote a valuable treatise, shewing that the prevalent opinion of acid and alkaline ferments was insufficient to account for a large number of chemical phenomena, and therefore could not be received as the foundation of a philosophical theory of this science; and in 1679, Wedel published a work, entitled "Non Entia Chemica," also with the view of explaining some of the most popular Platonic notions with which chemistry was at this time infected. The way being thus in some degree cleared, and the spirit of experimental investigation gaining ground rapidly, the illustrious Stahl propounded his theory of phlogiston or inflammable earth, in his "Specimen Becherianum," published in 1703, and still more fully in his "Fundamenta Chemiae," in 1723, and thus established himself for nearly 80 years as the acknowledged head of the chemical world. A few modifications of the Stahlian theory, of no great importance, were successively introduced by Boerhaave, Junker, and Machy, and with these chemists rilled content, till the discovery of the gasses and the foundation of pneumatic chemistry by Hales, Black, Scheele, Cavendish, Priestley, Bergman, and Berthollet. An immense crowd of new and highly interesting facts was now offered to the attention of chemists, many of which appeared wholly irreconcilable to the phlogistic theory; and the philosophic geniuses of Lavoisier, demonstrating the falsehood of the popular system, founded a new and more comprehensive one on the affinities and combinations of oxygen with the various substances in nature, which, after a reasonable discussion, has been generally acquiesced in, as explaining a great number of phenomena in a manner much more consonant to the general mass of chemical facts than any other, though by no means entirely free either from difficulty or error.

The system of Lavoisier has been represented by many of his zealous partizans as a general theory of the science; and oxygen, in one form or other, has been considered as the great agent of chemical composition and decomposition. It is manifest, however, that this substance has nothing to do with the mutual action of the metals, the earths, the alkalies, and the simple inflammables, into some of which oxygen enters as an ingredient; not to mention some of the acids and compound inflammables, in which the presence of this principle is rather inferred than demonstrated. It is, therefore, to the higher and more abstrait itquires concerning chemical affinity that we must have recourse for the philosophy of the science, the general principles applicable to the chemical action upon each other of all the substances in nature.

The above sketch is not intended as a history of chemical discoveries, for to give any satisfactory account of these would require more minute detail than would be proper in this place: we have accordingly distributed this part of the subject among the several chemical articles contained in this work, by which much repetition has been avoided, and the historical notices respecting each particular subject and substance have been brought together in one point of view.

The subjects of chemical science are so prodigiously extensive as to require some classification, in order that we may be duly aware of their very magnitude. They may be conveniently arranged under the following heads:

1. General Chemistry, both theoretical and practical. The theoretical includes the philosophy of chemistry, or chemical affinity, and those extensive, but not, properly speaking, general systems, by which ingenious men have at different times, and with various success, endeavoured to link together a large number of chemical phenomena. The practical part comprehends, in general, the action of all the simple substances on each other.

2. Pneumatic Chemistry, the investigation of which requires a peculiar set of apparatus, and includes all the particulars relative to those substances that exist in a state of elastic fluidity.

3. Metallurgical Chemistry, which treats of the alloy of metallic ores, and their reduction to the requisite state, both in the small and great way.

4. Mineralogical Chemistry, or the method of analysing minerals, including under this term both the stony minerals and mineral waters.

5. Animal Chemistry, including the analysis and properties of all the products of animalization, and the consideration of those vital functions which, like respiration, appear to be for the most part decidedly chemical.

6. Vegetable Chemistry, comprehending not only an acquaintance with the products of vegetation, but with such parts of the physiology of plants as can be explained or illustrated by the chemical action of their food, and those atmospheric influences to which they are exposed.

7. Meteorological Chemistry, including the chemical analysis of the atmosphere, and the whole subject of endimometry, as well as the connection of chemical agency, with all the meteoric phenomena.

8. Technical Chemistry, or the principles and processes of those arts and manufactures which are for the most part purely chemical, such as dyeing, bleaching, the manufacture of glases, porcelain, and pottery, tanning, and the preparation of spirituous fermented liquors.

Before a reference to each chemical substance, for the history of its discovery, and the particular theory connected with it, we beg leave to direct the notice of the reader, who wishes for further and more general information, to the articles Acids, Affinity, Chemical, Alchemy, Earths, Gas, Heat, Metals, and Metallization, Oxygen, and Philogiston.
CHEMMIS, in Ancient Geography, a town of Egypt, situated on the eait bank of the Nile, and at a full half league from it. The Greek name is Panopolis, and Chemmis, the Egyptian name, still subsists in that of Berkumin or Achnimin. The remains of the ancient city are yet to be seen to the eaiiflard, and near the walls that surround the modern town. An ancient mosque is still the object of the veneration of the Chriftians, who pretend that it was formerly one of their churches. The Copts fafely affert that it had been built upwards of 1500 years; but the edifice is falling, and its unfafe construction sufficiently proves, that it is not the workmanship of a period when buildings profefled greater solidity. The temple is fafpace, and has feveral entrances; its periphery is faftened by a line of contiguous windows. The interior, like that of all the mosques in this country, is a large, empty, and naaked clofure: but the fafnall granite pillars by which it is supported, and which were taken from among the ruins of Panopolis, excite admiration. This town in its preient state, like all those of Egypt, contains a crowd of pifflefees addicted to the moft diffiguifhing fenfuality, and who, like our street-walkers in Europe, make a trade of felling the famblance of pleasure. The Niles, fays Sommiini, in the vicinity of this town, furnishes fish in great abundance. That which is moft common is the faftetive, a fpecies of Silurus, which grows to a great size without acquiring any addifional flavour. See Achmim.

CHEMNITZ, Martin, in Biography, an eminent Lutheran minifter, was born in 1522, at Britzen in the Marche of Brandenburg, and educated under Melchthon at Wittemberg, after whose death he became the moft celebrated divine of the Auguftian confeflion. Besides his fkill in theology, he was also well acquainted with mathematics and astronomy. His counfel and services were much sought by the Protfeftants princes in all ecclefliallial affairs. His "Examination of the Decrees of the Council of Trent," publifhed at Frankfort in 1583, was held in elevantion as a histo-rical and theological work. He alfo composed a "Harmony of the Gofplets," and feveral other works. At Bruflinweick, where he died in 1586, he was 30 years a profeflor. Mohiheim, E. H. vol. iv.

CHEMNITZ, Bogelfaus-Philip, grandfon of the pre- ceding, was born at Stettin in 1605, followed the profeflion of arms, and having entered fielf into the service of Holland, and afterwards into that of Sweden, was raised by his merit to the post of counfeller of flate and hitlographer. Queen Chriftina emobded him, and prefented him with the eattle of Holinfeld in Sweden, where he died in 1678. His prin-cipal work was a "Hiftory of the Swedifh Wars in Germany," 2 vols. fols. 1648 and 1653, bringing down the his- tory to 1676, and much eelerted, particularly the second volume, which was compiled from materials furnifhed by count Oxentifiem. To Chemnitz is attributed another work entitled "De Ratione Status Imperii Romano-Germanici," printed at Stettin in 1649, under the feigned name of Hippolytus a Lapiide, and impugning the claims of the Houfe of Austria. Moreri.

CHEMNIKT, in Geography, a town of Germany, in the circle of Upper Saxony, and marquisate of Meifen, containing three churches and an hospital; 36 miles W.S.W. of Drefden, and 22 S.W. of Meifen.

CHEMNITZ. See KAMNITZ.

CHEMOSH, in Mofes, an idol of the Moabites, mentioned in Scripture. St. Jerom fuppofes that Chemosh and Baal-Peor, (which fce) were both names of one and the fame idol, not very different from Priapus, which is inferred from the indecent ceremonies used in their worship. Others, however, deny this charge. Dr. Hyde derives Chem-

moh from the Arabic hamaf, which signifies green, (though in the particular dialect of the tribe of Hodali,) oppofing it to have been an althegorical talisman in the figure of a goat, made to drive away thofe infects: and Le Clerc, who takes this idol for the Sun, deduces it fromČamofka, a root in the fame tongue figuring to be ferec.

CHEMOSIS, in Surgery, an inflammation of the eye, accompanied with an effusion of feinous fluid, &c. under the tinea conjunctiva, which confecns the white of the eye, as it were, to overtop the transparent cornes; and thus to produce a force of flux or gap, at their place of union. Galen calls this defect a red and fliely inflammation of the cornes, as it seems to be, when the blood-veffels are greatly dilated.

Lightly afftringent and fadetive applications fhould be employed in this cafe, and, if the veffels be very turrid, it may be proper to puncture them freely with a lancet, or even to remove a portion of the protruding membrane. Dr. Burghart, in a Chemufa where the cornes was burnt, dilated the opening, and extracted the cryftalline lens, which had come forward before the iris. The elevation of the tinea conjunctiva will sometimes be fo confiderable, as absolutely to prevent the flutting of the eyelids. See OPHTHALMIA.

CHEMPSWALLAN, in Geography, a beautirul city of Mexico, fittuated on the coaft of the gulf of Mexico, and remarkable for being that by which the Spaniards entered the Mexican empire.

CHEMUNG, a name sometimes given to the western branch of Susquehanna river. See TIOGA river.

CHEMUNG, a township of Tioga county in the State of New York. It has Newton W. and Oswego E., about 150 miles N.W. from New York city. By the late census in 1796, 51 of its inhabitants were felectors.

CHEN, in Ancient Geography, a town, which according to Steph. Byz., was the country of Myron, or Mifon, one of the seven wife men of Greece. He placed it in the Peloponnessus, in Latiunia.

CHENALOPEX, in Ornithology, the name given by Moching to the great Auk, Alca impennis of Linnaus, Alca major of Briflion, and Grand Pingouin of Buffon. — This bird has the bill fufetted and comprefled, and an oval fpat of white on each fide of the head before the eyes. It is about three feet long, and inhabits Europe and America.

CHENAY, in Geography, a town of France, in the department of the Two Sevres, and chief place of a canton, in the district of Melle; 8 miles S.E. of St. Maixent. The place contains 1036 and the canton 6475 inhabitants: the territory includes 205 kilometres and 14 communes.

CHENCE, in Old Customs, feems to be much the fame as AMBYR.

CHENCOUR, or CHEMCOU, in Geography, a town of Armenia, on the frontiers of Kurgifan, which has a beautirul cafe, grand caravansaries, and feveral mosques; 106 miles N.E. of Erivan.

CHENDI, or CHANDI, a large village of Abyflinia, the capital of its district, in the province of Atbara, the governor of which is called in difcoure Mck El Jaheleen, prince of the Arabs of Beni Korsh, who are all settled about the bottom of Atbara, on both fides of the Magri- ran. In this place there is a tradition, that a woman, whole name was Hendaqne, once governed all that country; whence one might imagine that this was part of the kingdom of Candace; for writing this name in Greek letters, it would be no other than Hendagque, the native, or metrefs, of Chendi or Chandi. This was once a town of great refori, being the place of rendezvous for all the caravans of Shennar, Egypt, Suakem, and Kordofan, especially since the Arabs have cut off the rood by Dong-

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gola, and the desert of Bahiouda. Here every thing is cheaper and better than at Sennar, the article fuel excepted, for wood is much dearer here than in any part of Athbara, so that the people burn camel’s dung; but fire, indeed, would be unnecessary, if it were not for dreeing victuals, for the heat is so great that in the month of October the thermometer was once so high as 115°; and in the months of August and September, the weather was so sultry that many pertons dropped down dead with heat, both in the town and the villages round it. Chendi has about 250 hones, two or three of which are tolerable, but the rest are miserable hovels built of clay and reeds. The men of Chendi are called the most beautiful in Athbara, and the men the most renowned. N. lat. 16° 30' 35'. E. long. 3° 24' 45'.
fiie, ovate-lanceolate, obtuse, with a fleshy point, flat above, convex underneath, fiddle-like; upper ones imbricated. *Flowers* axillary, solitary, or in pairs, fleshy in the axil of every leaf towards the top of the branches. A native of the Cape of Good Hope, on the low coast, flowering in August and September; cultivated by Miller in 1728.

CHENONCEAU, in Geography, a town of France, in the department of the Indre and Loire; 2 leagues S.E. of Amboise.

CHENOPODIE, in Botany, the name given by Ventenat to that natural order which Jussieu calls Atriplices. It consists of plants which are most commonly herbaceous, sometimes shrubby, with fleshy roots. *Stems* almost always upright. *Leaves* generally alternate. *Flowers* always hermaphrodite; calyx one-leafed, often deeply divided; flammes of a determine number, inserted into the base of the calyx; germ simple, superior; styles commonly more than one, of a determinate number; stigma one to each style, rarely two. *Seed* generally one, either naked, or covered by the calyx, or enclosed in a pericarp; peripetal fruit, carnosous, central, surrounded by the embryo, which is circular or rolled up in a spiral; radicle inferior. Ventenat places under it the following genera. 1. Funt a berry; *phytolacca*, Mart. 2. *teeth*; *raceme*. Linn. 3. *calyx*; *panicles*. Mart. 4. *stamens*; *rhamnus*. Linn. f. In this volume.


Gen. Ch. Cal. piscians five-leaved, concave, permanent. Cor. none. Stam. filaments five, awl-shaped, opposite to the leaves of the calyx, and of the same length; anthers roundish, didymous. Ptl. germ superior, obicular; style short, bifid, or trifid; stigma obtuse. Peric. the closed calyx, with five compressed angles, deciduous. Seed solitary, len- ticular.

Eff. Ch. Calyx five-leaved, finally shutting close, and becoming a five-angled pericarp. Corolla none. Seed one.

Species.

*With angular leaves.*


teeth above. A native of Chili. It is generally cultivated in Peru, where the leaves are eaten as spinach or forced, and the seeds, as millet. Mixed with the latter, it makes a pleasant kind of beer. Dombey, on his return from Peru, was lavish in its praise as a valuable elixir, and took great pains to naturalize it in France. The seeds which he brought into Europe failed; but the Spaniards are said to have imported some in a better state of preservation, which are likely to gratify the wishes of the public-spirited naturalist.


** Leaves entire.

branched, whitethin. *Leaves* alternate, petiolated, small, covered, especially underneath, with a whitish unctuous meal. *Flowers* small. A native of waife places in England and other parts of Europe, especially near the sea shore; common about London and Yarmouth; flowering in August. The whole plant in its recent state has a nauseous smell, and a strong offensive smell, resembling that of prunted felt fish, and the hands after touching the herb.

To this remarkable factor its medicinal qualities are ascribed by Dr. Cullen, who says that it has been employed with advantage in Scotland as a powerful antispasmodic, and particularly in hysterical affections. He adds that, as it loses all its sensible qualities when it becomes dry, it can be used only in its recent state, when the most convenient formula is that of a conserve. It can, therefore, be only occasionally procured, and in many situations is altogether unattainable.

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Peace, Saskatchewan, and Athabasca rivers, and live altogether on venison, have a less healthy appearance than those whose fullness is obtained from the waters. At the same time the savages is wholly unknown among them. In the fall of the year the natives meet the traders at the forts where they barter the furs or provisions which they may have procured; they then obtain credit and proceed to hunt the beavers, and do not return till the beginning of the year, when they are again fitted out in the same manner, and come back the latter end of March or the beginning of April. They are now unwilling to repair to the beaver hunt until the waters are clear of ice, that they may kill them with fire-arms, which the Chepewyas are averse from employing. The greater number of the latter return to the barren grounds, and live during the summer with their relations and friends in the enjoyment of that plenty which is derived from numerous herds of deer. But those of that tribe who are most partial to these do-farms, cannot remain there in winter, and they are obliged, with the deer, to take shelter in the woods during that rigorous season, where they contrive to kill a few beavers, and feed them by young men, to exchange for iron utensils and ammunition.

Till the year 1782, the people of Athabasca sent or carried their furs regularly to Fort Churchill in Hudson's bay; and some of them have, since that time, repaired thither, although they could have provided themselves with all the necessaries which they required. The difference of price paid on goods here and at that factory, made it an object with the Chepewyas to undertake a journey of 5 or 6 months, in the course of which they were reduced to the most painful extremities, and often lost their lives from hunger and fatigue. At present, however, this traffic is in a great measure discontinued, as they were obliged to expend in the course of their journey that very ammunition which was its most alluring object. See the next article.

**Chepewyas, or Chipewan**, a numerous tribe of Indians, in North America, who consider the country between the parallels of N. latitude 60° and 65°, and W. longitude 105° to 110°, as their lands or home. They speak a copious language, of which Mr. Mackenzie (abs infra) has given a specimen, very difficult to be attained, and furnishing dialects to the various emigrant tribes which inhabit the immense tract of country, the boundary of which is as follows. It begins at Churchill and runs along the line of separation between them and the Klallamenas, up the Mississippi to the ile a la Crofe, passing on through the Buffalo-lake, River-lake, and Portage la Loche; from thence it proceeds by the Elk river to the lake of the Hills, and goes directly W. to the Peace river, and up that river to its sources and tributary waters; from thence it proceeds to the waters of the river Columbia, and follows that river to N. latitude 52° 24', and W. longitude 112° 54', where the Chepewyas have the Atnah or Chin nation for their neighbours. It then takes a line due W. to the sea-coast, within which the country is possessed by a people who speak their language, and are consequently defended from them, so that there is no doubt of their progress towards the east. A tribe of them is even known at the upper establishments on the Saskatchewan, and they also follow the Rocky mountains to the east. The number of those who trade with the English does not exceed 500 men, and they have a flattering of the Klallamenas tongued in which they carry on their dealings. Those who inhabit the coast of the Lake Superior and the islands in that lake furnished about 50 years ago 1000 warriors. Other tribes of their nation inhabit the country round Saginquam or Sagara bay and lake Huron, the Pau bay, and a part of lake Michigan.

Of the number of the Chepewyas it is not possible to form a just estimate; but it bears no proportion to the immense extent of their territories, which may, in some degree, be attributed to the ravages of the small-pox. These people entertain singular ideas of the creation. They conceive, that, at first, the globe was a vast ocean, inhabited merely by a bird of large size, whose eyes were fire, whose glances were lightning, and the clapping of whose wings was thunder. On his descent to the ocean, and touching it, the earth instantly rofe, and remained on the surface of the waters. This omnipotent bird called forth the whole variety of animals from the earth, except the Chepewyas, who were produced from a dog; and this circumstance occasioned their aversion to the flesh of that animal, as well as to the people who eat it. The great bird, having finished his work, made an arrow, which was to be preferred with great care, and untouched; but the Chepewyas carried it away, and thus enraged the bird to such a degree, that he has never since appeared. They have also a tradition among them, that they originally came from another country, inhabited by very wicked people, and that they had traversed an extensive lake, narrow and full of islands; and that in their voyage they had encountered many hardships from ice and deep snow, as it was always winter. Upon their first landing at the Copper-mine river, the ground was covered with copper, under a bed of earth, to the depth of a man's height. They further believe, that their ancestors lived till their feet were worn out with walking, and their throats with eating. They describe a deluge, where the waters spread over the whole earth, except the highest mountains, on the tops of which they preferred themselves. It is their opinion, that immediately after death, they pass into another world; and that, when they arrive at a large river, they embark in a canoe of flone, and are carried with a gentle current to an extensive lake, in the centre of which is a most beautiful island; in the view of which they receive that judgment for their conduct during life, which decides their final and unalterable fate. If their good actions predominate, they are landed in the island, and commence an eternal happiness, consisting in the enjoyment of sensual pleasures and carnal gratifications. But if their bad actions weigh down the balance, the flone canoe sinks at once, and leaves them up to their chins in water, to behold and regret the reward enjoyed by the good, and eternally struggling, with ineffectual efforts, to reach the blissful island, from which they are for ever excluded. They have also some faint notion of the transmigration of the soul.

The Chepewyas are sober, timorous, and vagrant, with a selfish disposition, which has occasioned fupicions of their integrity. With regard to their stature, they are seldom corpulent, but sometimes robust. Their complexion is swarth, their features coarse, and their hair lank, but not of a dingy black; nor have they universally the pleasing eye which generally animates the Indian countenance. The aspect of the women is more agreeable than that of the men; but they acquire an awkward gait, from their being accustomed, for nine months in the year, to travel in snows, and to drag fedges from 2 to 400 lbs. in weight. To their husbands, who are sometimes jealous, they are very submissive; and yet, for trivial caufes, the brutal men treat them with such cruelty as sometimes to occasion their death. They are frequently objects of traffic; and the father poififies the right of disposing of his daughter. However, they do not sell them as slaves, but as companions to
those who are supposed to live more comfortably than themselves. The men, in general, extract their beards; though some prefer a bushy black beard to a smooth chin. They cut their hair in various forms, or leave it to its natural long flow, as capriole or fancy juggles. The women wear their hair of great length, and well arranged; unless the jealousy of their husbands cause them to depil it of its tresses, which they consider as a worse punishment than manual correction. Perfoms of both sexes have blue or black bars, or straight lines, from one to four, on their cheeks or forehead, by which they distinguish the tribe to which they belong. These marks are either tattooed, or made by drawing a thread, dipped in the necessary colour, beneath the skin. Their dres in winter is composed of the skins of deer and their faws, and prepared with as much care as the chamois leather in the hair. In summer, their apparel to the same, except that it is prepared without the hair. When they are completely drenched, they will lie down on the ice in the middle of a lake, and repose in comfort; though the following morning they find some difficulty in disengaging themselves from the snow which has drifted on them in the night. When they are in want of provision, they cut a hole in the ice, and seldom fail of catching some trout or pike, the eyes of which they scoop out, and then eat as a great delicacy; but if their appetite is not satisfield, they finish their meal with the fish in its raw state; though they generally prefer the dressing of their victuals, when circumstances admit the necessary preparation: but the want of wood for fuel sometimes reduces them to this exigency, though they generally dry their meat in the sun. The provision called "pemican," on which the Chepewyans, as well as the other savages of this country, chiefly subsist in their journeys, is prepared by cutting the lean parts of the larger animals in thinlices, and placing them on a wooden grate over a flow fire, or exposing them to the sun or to the frost. When the flesh is dry, it is pounded between two flones; and it may then be kept with care for several years. The fat of the indike, and of the rump, is melted and mixed, in a boiling flate, with the pounded meat, and then put in barrels, for the convenience of carriage. This becomes a nutritious food, and is eaten without any further preparation. Another fort is made, with the addition of narrow and dried berries, which is of a superior quality.

The women, when they are travelling, carry their infants on their backs within the folds of their loose garments, in a position convenient for being suckled; nor do they difcontinue to give their milk to them till they have another child. They have a singular custom, when they are delivered, of cutting off a piece of the navel filling of the new born child, and hanging it about their necks, and they decorate it with porcupines' quills and beads. The women, though absolutely subject to the men, are always consulted, and posses a considerable influence in the traffic with Europeans, and other important concerns. Plurality of wives is very common among these people; and marriage is a very simple ceremony. The girls are betrothed at a very early period to those whom their parents think best able to support them; nor is the inclination of the female considered. When a separation takes place, it altogether depends on the pleasure of the husband. In common with the other Indians of the country, they have the custom of excluding women in their pericidal flate from society; they are not allowed in travelling to keep the same path as the men; and it is considered as highly indecorous for a woman in such circumstances to touch any utensils of manly occupation. The subsequent ufe of such defiled utensils would, in their apprehension, be followed by certain mischief or misfortune.

The Chepewyans are not remarkable for their activity as hunters, which is owing to the cafe with which they larme deer and spear fissh. They make war on the Elquiamaus, who cannot relive their superior numbers, and put them to death, as it is a principle with them never to make prisoners. Nevertheless, they hare a vast number of them, who are not fo numerous as themselves, when they treat them as enemies. As these people are not addicted to spirituous liquors, they always posfess a degree of understanding, which enables them to perceive and to pursue their own interest, and this disposition occasions their being sometimes charged with fraudulent habits. They submit with patience to the moat severe treatment when they are conscious of deserving it; but they will never forget or forgive any wanton or unnecessary rigour. Mr. Mackenzie represents them as the most peaceful tribe of Indians known in North America. They have among them conjurers and high privlgs, who operate by their ceremonies on the imaginations of the people in the cure of certain disorders. Their principal maladies are rheumatic pains, the flux, and consumptions. The universal complaint is also very common: and though its progress is slow, it gradually undermines the constitution, and brings on premature death. For the cure of these disorders they have recourse to superstition, and charms are their only remedies, except the bark of the willow, which, being burned and reduced to powder, is strewn upon green wounds and ulcers, and places contrived for promoting perspiration. Of the ufe of simples and plants they have no knowledge; as their country does not produce them.

Although they have no regular government, every man being absolute lord in his own family, they are influenced more or less by certain principles which conduce to their general benefit. In their mutual quarrels they rarely proceed to any greater degree of violence than is occasioned by blows, wrangling, and pulling of the hair; and their abive language conflicts in applying the name of the most offensive animal to the object of their displeasure, and adding the term ugly, and chivy, or ill born.

Their arms and domestic apparatus, besides those which they procure from the Europeans, are spears, bows and arrows, fishing nets, and lines made of green deer-skin thongs. They have also nets for taking the beaver as he endeavours to escape from his lodge when it is broken open.

Their snow-shoes are of superior workmanship; the inner part is straight, the outer one is curved, and it is pointed at both ends, with feet in front turned up. They are also very neatly lined with thongs made of deer-skin. Their fedges are formed of thin strips of board turned up in front, and are highly polished with crooked knives, in order to slide along with facility. The belt wood for this purpose is that which is close grained; but theirs are made of the red or swamp spruce fir-tree. The chief vegetable substance produced by the thin soil of their country is the mea, on which the deer feed; and a fort of rock-mofs, which, in times of scarcity, prefers the lives of the natives. When boiled in water, it diffuses into a clammy glutinous sub stance, that affords very sufficient nourishment. Notwithstanding the barrenness of their country, these people, with proper care and economy, might live with great comfort, as their lands abound with fish, and their hills are covered with deer. However, in the dead of winter, they are under the necessity of retiring to their feasty sheltered woods. To the westward they might find the mulk-ox, but they do not recur to it as an article of subsistence. They have also
also large hares, a few white wolves peculiar to their country, and several kinds of foxes, with white and grey stripes, &c. The beaver and moose-deer they do not find till they come within 60° of N. latitude; and the buffalo is known to frequent an higher latitude to the westward of their country. These people find on the surface of the earth a beautiful variegated marble, which is easily wrought, leaves a fine polish, and hardens with time; it also endures heat, and is manufactured into pipes or calumets, as they are very fond of smoking tobacco, a luxury which was communicated to them by the Europeans.

Their amusements are few. Their music is so inharmonious, and their dancing so awkward, that they seldom practice either. They shoot at marks, and play at the games that are common among them; but they prefer sleeping to any recreation, and their time is spent either in procuring food or in reeling from the toil that is necessary for obtaining it.

Their disposition is querulous; and they express their complaints by a constant repetition of the word "cudly," it is hard, in a whining and plaintive tone of voice. They are extremely superstitious; and almost every action they perform, however trivial, is influenced by some whimsical notion. Mr. Mackenzie never observed among them any particular form of religious worship; but as they believe in a good and evil spirit, and a state of future rewards and punishments, he thinks they cannot be altogether without religious impressions.

The Chepways have been accused of abandoning their aged and infirm people to perish, and of not burying their dead; but these, says Mr. M., are melancholy necessities which proceed from their wandering way of life; and they are by no means universal. In their own country they cannot bury their dead, because the ground never thaws; but when they are in the woods, they cover them with trees. Besides they manifest no common respect to the memory of their departed friends, by a long period of mourning, cutting off their hair, and never making use of the property of the deceased. Nay, many frequently destroy or sacrifice their own, as a token of regret or sorrow. The baronesses of their country might be supposed to lead them to the horrid practice of cannibals; but this is a supposition from which Mr. M. amply vindicates them. "In all my knowledge of them," says he, "I never was acquainted with one instance of that disposition; nor among all the natives which I met with in a route of 5000 miles, did I see or hear of an example of cannibalism, but such as arose from that irreducible necessity which has been known to impel even the most civilized people to eat each other." Mackenzie's Voyages, &c. Introduction.

CHE-PING, a town of China, of the third rank, in the province of Koei-tchenou; 5 leagues W. of Tchi-yaen.—Also, a city of China, of the second rank, in the province of Yoon-nan; 410 leagues S.S.W. of Peking. N. lat. 25° 49'. E. long. 105° 24'.

CHEPO, CHEPO, or ST. CHRISTOVAL DE CHEPO, a small Spanish town of South America, in the country of Terra Firma, and province of Darien, seated on a river of the same name; 1 league from the sea, and 9 E. of Panama; N. lat. 10° 42'. W. long. 77° 50'.

CHEPSTOW, a town of Monmouthshire, England, is seated partly in a deep hollow, and partly on the steep side of a hill, shelving to the river Wye. This river makes a considerable curve here, and at the distance of about two miles, south-west, unites with the Severn. The situation and scenery of Chepnot are extremely picturesque and romantic. From some eminences the marts and falls of

vehicles seem to rise in the midit of an immense quarry; which, with the town crouching in a deep dell, and rising a precipitous hill, form a singularly interflecting mixture of buildings, vehicles, cliffs, water, and woods. The natural features of this place are described by Mr. Coxe in the following terms: "The eminences which tower over the town are thickly overcast with wood; among which the rich groves of Pechfield strikeComparison. The romantic cliff of the Wye are here extremely picturesque, particularly the ridge which forms the left bank of the river below the bridge; it is lofty, perpendicular, of a concave shape, and tinted with various hues; white, grey, red, and yellow are beautifully blended, while green is superadded by the foliage of the oak that skirts the top and shades the sides, or by large clusters of ivy flattering from the crevices at all heights, and twining in all directions. The ponderous remains of the castle form a grand and permanent feature in this diversified scenery; they cover a large tract of ground, and stretch along the brow of the perpendicular cliff which impends over the Wye."

The Romans probably occupied the site of Chepnot as a position commanding for several miles the only passage of the Wye, and we may infer from its name that it was not overlooked by the Saxons. But this part of Monmouthshire, which was then included in the county of Gloucester, came, soon after the conquest, into the possession of the Normans, and the castle of Eltrigionel or Strigul, by which name Chepnot was then known, was erected by William Comes, who is supposed by Camden and Dugdale to be William Fitzalborn earl of Hereford. He was killed in 1070; and his third son, the heir to this castle, being doomed to perpetual imprisonment, it was probably transferred to the illustrious house of Clare, in whose possession we find it in the reign of Henry I. Isabella, the daughter and heiress of Richard Strongbow, earl of Pembroke, conveyed, on the death of her father in 1176, the castle and manor of Strigul, with all his other possessions, to her husband William, earl marshall of England, who, on the death of king John, became protector of the realm, and was created, in right of his wife, earl of Pembroke and Eltrigol or Strigul. By this illustrious nobleman, who, in a period of warfare, exhibited the most heroic prowess, and in an age of rebellion the most unbroken loyalty, the tottering crown of John was supported, the confedecacy of the barons who had sworn allegiance to the Dauphin was dissolved, young Henry was fixed on the throne of his ancestors, and his distracted country blessed with peace. The Earl's five sons dying without issue, his eldest daughter Maud transferred the castle and borough of Strigul to her husband Hugh Bigod earl of Norfolk. But their grandson Roger having surrendered to the crown all the honors and estates of his family, they were granted by Edward II. to his brother Thomas de Brotherton; after whose death the castle and manor of Chepnot defended to the Normans, and were sold by John, duke of Norfolk, to William Herbert, earl of Pembroke, with whose other estates they were conveyed by marriage to Sir Charles Somerset, and are now in the possession of his descendant the duke of Beaufort.

The town of Chepnot was formerly fortified; and the ruined walls, which were strengthened by round towers, reach from the bank of the river below the bridge to the castle, which, at one period, surpassed, in extent as well as importance, any fortress in this part of Great Britain. Its ruins stand on a precipice which overhangs the well bank of the Wye; the northern side, being built close to the edge, appears part of the cliff, and the ivy by which the walls are overgrown.
overlooked, twines and clusters about the unwieldy fragments, and down the perpendicular side of the rock: towards the land a moat defended it, and it was flanked with lofty towers. A very considerable space is occupied by the area, which is divided into four courts: the first contains the shells of the kitchens, grand hall, and other numerous apartments; from the second, which is now a garden, a passage leads into the third, and to a building called the chapel; there was formerly a communication from the third, which is also a garden, to the fourth, to which now the only access is by creeping through a folly-port in the wall. The characteristic style of the architecture appears, from a general survey, to be Norman; the shell seems to have been constructed on one plan and at the same period; but the other buildings have been altered and enlarged by later proprietors. Great importance attached to this fortress during the civil wars, when it was at first garrisoned for the king, till Colonel Morgan, aided by the mountaineers, took possession of the town, and forced the castle to surrender. It was recaptured by the loyalists under Sir Nicholas Kenneys, who, with only 160 men, made a courageous stand against the assaults of Cromwell; but after a laborious siege, it was stormed, and Sir Nicholas and forty of his brave adherents, perished in the attack. At the south-eastern extremity of the first court of the castle is a tower, remarkable as the prison of the celebrated regicide Harry Marten. An early adherent of republican principles, he zealously co-operated with Cromwell in the abolition of monarchy; and on the trial of the king he sat as one of the judges. From the dissolution of the long parliament until the restoration, he remained in obscure retirement, when he surrendered on the king’s proclamation: he was arraigned and condemned for high treason, but his sentence was commuted for perpetual imprisonment, and he was removed to Chepstow castle, where he was treated with great lenity, was allowed the possession of his whole property, and the privilege of visiting the neighbouring gentry. In the twentieth year of his abode here, an apoplexy terminated his confinement and life, at the age of seventy-eight. He was buried in the chancel of the church of Chepstow, where a stone with an inscription of his own writing, was placed over his remains; but the zeal of the vicar not suffering the monument of a regicide to pollute the vicinity of the altar, it has since been removed into the body of the church.

Chepstow is about three miles from the passage over the river Severn at Auft ferry; five from the new passage at Black Rock; fifteen from Monmouth; sixteen from Bristol, and 133 from London. The tide of the Wy flows with great rapidity up to the town. It frequently rives at the bridge to 56 feet, and in January, 176S, it rose about 70 feet; a phenomenon occasioned by the projection of the rocks at Beachley and Auft, which turns the tide with great violence into this river. The floor of the bridge, constructed similar to that of Caerleon, is level; and was formerly supported by wooden piers, about the height of 40 feet, which the counties of Gloucester and Monmouth jointly contributed to keep in repair. They remain in their original state on the Glocestershire side, but those piers have been substituted on the opposite shore. Part of it belongs to the county of Glocester, and part to Monmouthshire.

Chepstow contains no manufactories; but supplies Herefordshire and this part of Monmouthshire with the necessary imports by the Wy, and exports the native productions, which are principally timber, grain for the Bristol market, coal, grind and mill-stones, iron, oak-barks, and cider. A considerable foreign trade is carried on during peace, and some vessels are built here. An alien priory for Benedictine monks (of which scarcely any traces remain) was founded here soon after the conquest, by one of the proprietors of the castle. The parish church was part of the priory chapel, and displays a curious specimen of Norman architecture. Its western entrance is a magnificent portal, enriched with the mouldings peculiar to the Saxon and Norman styles. In the neighbourhood are the remains of several religious houses. A pleasant eminence to the west of the town was occupied by St. Kyemark’s priory; the walls of which, still visible, enclose the garden and yard of a farm-house, called St. Kyemark’s farm. The foundations of St. Lawrence’s chapel may also be traced. The traveller, in passing to this spot along the fliere Newton road, and along the fields, commands a singular and beautiful prospect of Chepstow and its environs. The remains of several other chapels still exist. In the garden belonging to a house in Bridge-street, is a well remarkable for good water, which at high tide becomes perfectly dry: a little before which it begins to subside, and soon after the ebb it returns; neither wet nor dry weather affects it, but its increase and decrease regularly correspond with the tide. The well, which is thirty-two feet deep, has frequently fourteen feet of water.

About two miles north of Chepstow is Llerefield, a seat of much celebrity, and a just theme of a descriptive encomium with the tourists and topographers of Monmouthshire. The grounds are extensive, and embrace much diversified scenery of wood, lawn, rock, and river. Stretching along the irriguous banks of the Wy, from the castle at Chepstow, to a lofty perpendicular rock called the Wynd-cliff, is a walk of about three miles in length: the prospects from which, and its accompanying scenery, are described in the following terms by Mr. C. X. “On entering the grounds at the extremity of the village of St. Arvans, and at the bottom of Wynd-cliff, the walk leads through plantations, commanding on the right a distant view of the Severn, and the surrounding country; it penetrates into a thick forest, and conducts to the Lover’s Leap, where the Wynd-cliff is seen towering above the river in all its height and beauty, and below yawns a deep and woody abyss. It waves almost imperceptibly in a grand outline, on the brow of the majestic amphitheatre of cliffs impending on the Wy opposite to the peninsula of Llanwit, then crosses the park, runs through groves and thickets, and again joins the Wy, at that reach of the river which stretches from Llanwit to the castle of Chepstow. From the Lover’s Leap the walk is carried through a thick mantle of forests, with occasional openings, which here not the result of art or design, but the effect of chance or nature. This bowery walk’s connection to the genius of Piozchel; the screen of wood prevents the uniformity of a bird’s eye-view, and the imperceptible bend of the amphitheatrical conveys the spectator from one part of this fairy region to another without discovering the gradations. Hence the Wy is sometimes concealed, or half obscured by overhanging foliage, at others wholly expanding to view is seen sweeping beneath in a broad and circuitous channel; hence at one place the Severn spreads in the midst of a boundless expanse of country, and on the opposite side to the Wy; at another, both rivers appear on the same side, and the Severn seems supported on the level summit of the cliffs which form the banks of the Wy. Hence the same objects present themselves in different aspects, and with varied accompaniments; hence the magic transition from the impervious gloom of the forest to open groves; from meadows and lawns to rocks and precipices,
pieces, and from the mild beauties of English landscape to the wildness of Alpine scenery."

The house erected on this estate is a magnificent pile of building, of freestone, and stands nearly in the centre of the park. Piercefield was long the property of the Waters family, till the year 1756, when it was sold to Colonel Morris, father of Valentine Morris, Esq. who afterwards possessed it, and to whose taste and liberality it is indebted for its chief artificial beauties, and its long established celebrity. In 1784, it was bought by George Smith, Esq. who again sold it in 1794 to Colonel Wood, formerly chief engineer at Bengal. This gentleman has recently disposed of Piercefield to -- Wells, Esq.

For the most recent account of this feat, of Chepeflow, and this county, see Coke's "Historical Tour in Montgomeryhire." 2 vols. 4to.

CHEQ., CHEF, or SHERRIFE, the prince, or high-priest of Mecca; sovereign pontiff of the Mussulmans; and owned by each as such by all the sects into which they are divided.

The grand signor, sophies, mogolas, khanas of Tartary, &c. fend him yearly presents; especially tapestry, to cover Mahomet's tomb, and treats for himself: for the cheq. has a tent near the mosque of Meccan, wherein he lives during the seventeen days of devotion in pilgrimage to Mecca. The tapestry and tent are changed every year, and pieces thereof sent to the princes who furnish new ones.

His dominions are extensive; and his revenue is very considerable, consisting of presents made by the Mahometan princes, and pilgrims, to the mosque of Mecca and Medina. See Sherrife.

The cheq. subsists all the pilgrims during the seventeen days of devotion; on which account he is every year furnished with a very considerable sum of money from the grand signor: the better to obtain this, he makes them believe, that there are constantly, during this time, seventy thousand pilgrims; and that, should the number fall short, the angels, in form of men, would make it up.

CHEQUETAN, or SEGUITANEO, in Geography, a town of North America, on the coast of Mexico, in the province of Mechochan, 7 miles W. of the rocks of Seguitaneno. Between this and Acapulco towards the east is a sandy beach, 18 leagues in extent, against which the beating of the sea is so violent as to prevent boats from landing; nevertheless there is a good anchorage for shipping at a mile or two from the shore, during the fair seasons. The harbour of Chequetan, though hard to be traced, is very important to vessels that cruise in these seas; as it is the most secure in a vast extent of coast, yields plenty of wood and water, and may be defended by a few men. When lord Anfon touched here, the place was uninhabited.

CHER, a river of France, which rises near Auzouze, in the department of the Cerefe, pannes by Mountluqon, Aimay-le-Vieux, St. Amand, Chatcaunef, St. Florent, Vierzou, Meneton, Villefranche, Chabris, Selles, St. Aignan, Montsche, Biere, &c. and joins the Loire a few miles below Tours.

CHER, a department of France, deriving its name from the river Cher, which traverses a part of it, and bounded on the north, by the departments of Loire and Cher. Loiret and Nievre; on the east, by that of Niort, from which it is separated by the Acher; on the south, by those of Creuse, Allier, and Indre; and on the west, by those of Indre, Indre et Loire, and Indre and Cher. This department is formed of part of the province of Berry, and its capital is Bourges. The territorial extent comprehends 7785 kilometres, or about 740,125 hectares, or 1,450,134 square acres; and is distributed into three districts, contain-

ing 29 cantons and 327 communes. The population was estimated in the 11th year of the French era at 2,193,957 persons; its contributions to various purposes amounted to 1,732,073 francs; and the expenses charged upon it for administration, justice, and public instruction, were 265,025 francs 79 cents.

CHEREA, a river of South America in the province of Quito, in Peru, passing near Colan, and supplying Paota with its fresh water.

CHERELUS, in Ancient Geography, a small town of Lower Egypt, situated upon the Nile, from which a canal passed to Alexandria, that served to discharge the water of the lake Moeris.

CHERAMIS, in Antiquity, a medical measure. According to Eroton on Hippocrates, it was the hollow of a shell-fish called myas, and took that name from myasos, which signifies a hollow plate. It frequently occurs in Hippocrates, and seems not much different from the chema, which in Galen's Exegeysis is expanded by it. Cornavus also explains cheramis by the measure of a chema; and Calvus on another passage expands it by a pugil.

CHERASCO, in Geography, a town of Italy, in the principality of Piedmont, and capital of a county of the same name, on the borders of that of Afti, seated on a mountain, at the confluence of the Stura with the Tanaro. It is said to have been built by some inhabitants of Alba, Maenza, Miana, &c. who were expelled their towns by the tyranny of their lords, and surrounded with walls. It was afterwards fortified in the modern manner with bastions, fosses, and out-works, by order of Crislina of France, duchess of Savoy. Since that time it has been considered as the key and bulwark of the estates of Savoy, being situated on the frontiers of Piedmont, Montserrat, and the duchy of Milan, and strong both by nature and art. It was at first a republic, governed by its own laws, but professing dependence on the emperors of Germany. Cherasco continued in this flourishing state till the year 1265, when its allegiance was transferred to Charles I. of Anjou, king of Naples and Sicily; and it remained subject to that crown till the reign of Jane I. queen of Naples, when, left destitute of her protection, it was voluntarily surrendered to Amadus VI. count of Savoy, and Jacques de Savoy, prince of Achala. In a few years it became successively subject to other powers, till at length it was possessed by Charles V., who gave it, in 1538, to Charles III. duke of Savoy, lamed the Good, in consideration of his marriage with Beatrice of Portugal. After having been taken in the same century by the Austrians and the French, it was restored by the peace of Cambray, in 1559, to Emanuell Philibert, son of Charles. Victor Amadeus gave it the title of city, and made it the capital of a province and residence of a governor. It has, together with the whole of Piedmont, at a late period, fallen into the hands of the French. See Piedmont. This town is in the diocese of Alii, and has 7 parish churches, 4 within the walls, and 3 without. The county, of which it is the capital, is about 9 miles in diameter; the land is fertile; the plains produce great plenty of corn, and the hills of various heights yield good wine for exportation. It is 20 miles S.E. from Turin, and 15 miles E. from Saluzzo. N. lat. 44° 33'. E. long. 7° 41'.

CHERAW HILL, a mountain of North America, in the state of South Carolina; 40 miles N.N.E. of Charleston.

CHERAWS, a district in the upper country of South Carolina, bounded on the north and north-east by North Carolina; on the south-east by Georg-town district; and on the south-west by Lynche's creek, which separates it from Camden district. Its length is about 87 miles, and its breadth 63; and it is subdivided into the counties of Darlington,
ten, Chafferly, and Marlborough. By the census of 1791, the number of inhabitants appeared to be 10,706; of whom 7,616 were whites, and the rest blacks. It tends to the flat
legibility, fix representatives and two senators, and in con-
junction with George town district one member to Congress.
This district is watered by Great Pedie river and other
smaller streams; on the banks of which the land is popu-
larly cultivated and well cultivated. The chief towns are
Gren-
ville and Chatham.

CHERBOURG, a sea-port town of France, in the de-
partment of the Channel, and chief place of a canton in
the district of Valognes; situated at the bottom of a large bay,
between Cape Barfleur and Cape Hogue. The place con-
tains 11,189 and the canton the same number of inhabitants.
The territory comprehends 175 square kilometres and one commune.
Before the revolution, Cherbourg was the seat of a governor
and an admiral. The chief employment of the inhab-
itors consists in building small vessels, and manufacturing
wooden flints. In 1758 this town was taken and plundered
by the English; the port destroyed, and the ships burned in
the harbour. The French have always considered this port
of great importance in the navigation of the English Chan-
nel; and they have expended immense forces on the erection
of piers, deepening and enlarging the harbour, and erecting
fortifications. The value of 900 tons can be admitted in high-
water mark, and in low-water thole of 270 tons. N. lat. 49° 38' 26". W. long. 1° 38' 11".

CHERCHESENE, a town of Arabic Turkey, in the
province of Cudilian; 62 miles S. of Kerkuk.

CHEREM, or SHARIF, a title assumed by the emperors
of Morocco.

CHEREM, among the Jews, is used to signify a species
of Annihilation.
The Hebrew word cherem signifies properly to destroy, ex-
terminate, devote, anathematize.

CHEREM is sometimes likewise taken for that which is con-
secrated, vowed, or offered to the Lord, so that it may no
longer be employed in common or profane u ses. There are
some who assert, that phenons thus devoted were put to
death; whereof, they say, Jephtha's daughter is a memor-
able example. Judg. xi. 29, &c.

CHEREM is also used for a kind of excommunication in use
among the Jews. See Ninou.

CHEREN, in Ornithology, the Arabian name of the
king-fisher, Alcedo Ipida.

CHEREN (Athanar., in Geography, a town of ChinefeTar-
tary. N. lat. 41° 32'. E. long. 116° 31'.

CHERIDON, one of the four empires or kingdoms into
which the island of Java is divided: the other three are
Bantam, Jacatra, and Socofhoenam. Cheridon is under
the dominion of three different princes, who are independent
of the Dutch, and fojourn in their respective districts.
Whilst the company possessed power in the island, the princes
of Cheridon were their allies, and bound, by treaty, to sell
the whole produce of their territory exclusively to the com-
pany, and not to permit any other nation besides the Dutch,
to enter their dominions. For the due maintenance of which
conditions, the company took care to guard and garrison
their sea-ports. The company, on former occasions, has ex-
ercised a kind of despotic power over these princes; de-
throne one, and establishing another in his room. An in-
stance of this kind occurred in the commencement of the
year 1760; when one prince was dethroned and banished to
the island of Amboyna, and the elevated prince constrained to furnish a certain sum of money an-
nually, for the support of his imprisoned predecessor.

CHERIC, in Ornithology: the Gmelinian Motacilla Ma-
dagascariensis is so called by Buffon; named by Latham the
white-eyed Warbler.

CHERI-KIAMEN, in Geography, a port of Chinefe Tar-
tary; 15 miles S.E. of Petour Hoton.

CHERI-OUJOU, a town of Chinefe Tartary; 8 miles
S. of Chou.

CHIAPPE, an inconsiderable village of S. America, in
Terra Firma, which furnishes the weekly market of Pa-
uma with provisions.

CHIERNAY, in Ornithology. See Falco.

CHLILLA, in Botany, (so called in honour of J.
Henry Cherler, Linian-in-law and ajistant to John Bauhin,
88. Juss. 301. Vent. vol. 3. 234. Clas and order, dec-
Gen. Ch. Cal. Perianth five-leaved; leaves lanceolate, con-
erved, keeled, flat, expanding. Cor. Petals none, Hall.
Linn. Lam. Smith. (five, strap-shaped, green, Segn.) Nect-
taries five, very small, exarinate scales. Stam. Filaments
five; attached to the scales of the nectary; five alter-
ating with the calyx-leaves, inserted into the receptacle be-
tween the scales. Pelt. Germ superior, 5yles three. Peric.
Capsule egg-shaped, twice as long as the calyx; three-
valved, three-celled, with three seeds. Linn. Lam. &c. (one-
celled, with many seeds, Smith.) Seeds angular.

Eff. Ch. Calyx five, in-flower; stamens 5; stigmas 5, emer-
ginate; capsule superior, three-valved.

tab. 12. fig. 8. Sedum montana; Morif. Hift. tab. 4.
fig. 14.) Root perennial, long, somewhat woody, much
divided. Stems forming a tuft, an inch long, thickly
bent with leaves. Leaves awl-shaped, obtuse, thre-
ethreaded underneath. Flowers yellowish, green, erect.
Petals equal, axillary, towards the top of the inflo-
remulous; inflorescence, flowering in July and August.
First observed in Great Britain by some of Dr. Hope's travelling pupils.

CHERMANSICK, in Geography, a town of Arabic
Turkey; in the province of Nataoa; 50 miles N.N.E. of
Miilts.

CHERMES, in Entomology, a genus of hemipnerous
insects. The snout is placed in the breast, and contains three
inflected bristles; antennae cylindrical, and longer than the
thorax; wings four, deflected; thorax gibbous; posterior
legs formed for leaping.

There are many species of the chermes genus, some of
which are peculiar to particular plants, while others inhabit
a variety of plants indiscriminately. The females are fur-
nified with a sharp tubular instrument at the extremity of
the abdomen, with which they pierce the leaves of the
willow, ash, oak, fir, and other trees, in order to deposit
their eggs beneath the surface, and by these punctures oc-
cur the swellings or excrescences of various fleshes, which
are commonly known by the name of tree-galls. These galls
contain the infant brood of chermes, both in the larva and
pupa, as well as egg flate: the larva has fix feet, and is ge-
nerally covered with a kind of hairy or woolly subfusce,
and the pupa is distinguished by two protuberances of the
thorax which contain the embryo wings. In the perfect or
winged state the chermes leap or spring with great agility.
Geoffroy, who names several of this tribe of insects Pfylia, ob-
erves, that both in the larva and pupa they eject from the
vent a fugar-like subfusce of a white colour, and much re-
sembling
fleeting manna: sometimes this matter occurs in the form of small white grains upon the leaves of plants, and is often seen attached to the posterior extremity of the insect's body. The galls occasioned by these insects are useful for various purposes. Some late French writers comprehend the two Limenian genera, cermes and coccus, under one, denominated Kerme.

[Species.]

GRANIVIS. Found on grasses, particularly the atra favo- 
ofis, Linn. Inhabits Europe.

ULM. On the atri flavofinis, Linn. In the emerald leaves of this tree.

CERASTH. On the leaves of the american, ferracum, Linn. 

PYR. On the leaves of the petrus communis, Linn. In- pects. Cermes pravi of Deguer. This is of a brownish-green colour, with inky spots and bands; it has the wings spotted with brown.

SORE. On the Sorbus aucuparia. Fabr. Above varied with black lines and characters; beneath greenish; thorax yellow; with two dots in front, and four black lines behind.

PERIC. On the amygdaes ferosa, Fabr. Cermes ferosa oblongus, Geoffr. Le cermes oblong du ynier. This is chiefly on the branches of the mygdales picus; the body is oblong and ferruginous.

CALYX. On the flowers of caltha palustris, Fabr. Antenna black at the tip; thorax rufous with three black curved wings white, with yellow veins and a brown dot.

BUX. On the box, and other ever-greens, Fabr. This is of a green colour, with facetous antenna, and the wings yellowish brown. The punctures of this insect make the leaves bend in towards each other at their extremity, forming a hollow knob in which the larvae are enclosed.

URTICA. On the urtica dioica, Linn. Inne. Suce. This is of a green or fuscous colour with the sides of the abdomen spotted with white.

BETUL. On the branches of the betula alba, Linn.

ALNI. On the Ithaca alni, Linn. Cermes alni lanata viridus, Deguer. Verris ffloridae alni, Frisch. The antennae are variegated with white and black; front white tipped with black; body whitish; wings white with brown veins.

'QUECUS. On the oak, Linn. Inne. Suce.

FAG. On the fagus sylvatica, Linn. Inne. Suce.

ACEIETIS. On the branches of Ipinacatis, Linn. et Cappon, &c. Iphisa pallida: ferrina ovula fufa, als agris, Geoffr. Iphisa tendue, ferrina ovula fufa, als agris, Geoffr. Iphisa tendue, ferrina ovula fufa, als agris, Geoffr. Pitcairp. Chin. This species occasions by its puncture enormous fleshy swellings or protuberances at the end of the branches of the pine.

SALICIS. On various species of Salix found in Europe, Fabr.

TRAUX. On the fraxinus excelsior, Linn. This is of a black colour varied with pale yellow.

AVCRIS. On the branches of acer platanoides, Linn. The body is yellowish, beneath green; tail andapplied and brownish.

FICUS. On the ficus carica. Fabr. The body is brown; antenna thick and hairy; wings brown, nerved.

LICHERIS. On various species of lichens, Gmel. &c. This is of a fuscous colour dotted with black, and has the antennae longer than the body; the wings are spotted with brown.

PISI. Linn. Inhabits pines. It is not perhaps distinct from C. abietis.

CASTANEA. Fuscous; antenna facetous and smooth; wings nervous, Geoffr. &c. Inhabits various plants.

PUBERS. Red; wings nervous, Geoffr. Inhabits various plants.

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CHERSA, called also *fcula*, in some medical writers, signifies a root reduced to a farinaceous powder. This way of preparation is said to be of the highest antiquity, and is recommended by Galen, and other ancients.

CHERSATUM, in *Old Caftoria*, is used for *churnerettes*. See CHURCH-SCOT.

CHERSUS, in *Ancient Geography*, a river placed by Ptolemy in Phoenicia; the mouth of which, according to him, lay between Dora and Cefarea of Strabo, which were towns of Palæstina.

CHERSO, in *Geography*, an island of the Adriatic, on the coast of Croatia, about 150 miles in circumference. It is mountainous and rocky: nevertheless it yields much wood, cattle, wine, oil, and honey. It belongs to the Venetians, who send a nobleman as governor every two years, with the title of count or captain, who resides at the capital, situated in the centre of the island, which has the same name, and contains about 2500 inhabitants. N. lat. 43° 14'. E. long. 14° 26'.

CHERSON, or KHERSON, a town of Russia, in the province of Catherinefief, seated on the Dnieper, about 14 versts below the mouth of the Inglitza, and a little above the mouth of the Bog, in the neighbourhood of the Liman, a swampy lake, the entrance of which is guarded by the fords of Kinburn, and is about a mile over. This lake has depth sufficient for the reception of large vessels; but they very quickly decay in it, as the water is fresh. The ancient city of Cherfon was situated some miles to the south-west of the spot, where the Russians have built Swatopul. The present Cherfon was founded by Catherine II. in 1778: it is chiefly built of hewn stone, and the completion of it was much accelerated by the activity of Prince Potemkin. It was intended to be the principal mart for all the commodities of export and import; but if an extensive trade should take place in this quarter, the great depotary for the merchandise would be more conveniently fixed on some spot below the bar of the Dnieper, and 12 miles S. of Cherfon. In 1783 Cherfon contained 40,000 inhabitants within its walls: and from its dock were launched not only vessels for the purposes of commerce, but ships of war destined to strike terror into the Ottoman empire. A new town, however, called Nicolai, now the principal dock, was built by Potemkin, on the confluence of the Inglitza and the Bog. The port and city of Cherfon have not perhaps been equalled with regard to celebrity, prosperity, and importance, if we consider its recent building, by any colony of modern times. Artisans, manufacturers, and merchants, have poured into it from all quarters, and the trade seems not to be so great as when it shall rank as the second port in the extensive empire of Russia. Its commerce was, if we may be allowed the expression, guaranteed and secured to the emperors by the cession of Kinburn, which lies opposite to Czakow, at the mouth of the Dnieper. Cherfon is celebrated as the place where the empress Catherine principally resided during her memorable journey to the Crimea, when the Turkish faction of the provinces conquered from Turkey, and where she was visited by the emperor Joseph II. It is also on record as the place where the illustrious Mr. Howard closed his career of humanity and benevolence on the 20th day of January 1750. It is distant about 10 leagues from Oczikow and 2500 versts from Petersburgh. N. lat. 46° 40'. E. long. 33° 57'.

Chersonesus, *Nisusov*, of *Nisos*, land, and *mors*, island; which signifies the same, in Geography, as peninsula; or a continent almost encompassed round with the sea, only joining to the main land, by a narrow neck, or isthmus.

This term is used by the moderns, in compliment to the ancients, who called all their peninsulas by this name: accordingly such places as were hereby distinguished among them retain the name among us: as the Cherfonesus of Peioponnesus, of Thrace, Cherionesus Cimbrice, Aurea, &c. Chersonesus Aurea, the golden Cherfonese, in *Ancient Geography*, a peninsula delineated by Ptolemy as if it stretched directly from north to south, and having at its southern extremity Sabana Emporium, the latitude of which he fixes at three degrees beyond the line. To the east of this peninsula he places what he calls the Sinus Magnus, or great bay; and in the most remote part of it, the flaton of Catigara, the utmost boundary of navigation in ancient times, to which he affixes no less than 84° of southern latitude. Beyond this he describes the earth to be altogether unknown, and affirms that the land turns thence to the westward, and stretches in that direction till it joins the promontory of Prafilum in Ethiopia, which, according to his opinion, terminated the continent of Africa. M. D'Anville, who has attempted to bring order out of the confusion in which this part of the geography of Ptolemy is involved, assigns to the peninsula of Malaca the position of the golden Cherfonese of Ptolemy; but, instead of the direction which he has given it, we know that it bends some degree towards the east, and that cape Romania, its southern extremity, is more than a degree to the north of the line. This geographer considers the gulf of Siam as the great bay of Ptolemy; but the position on the east side of that bay, corresponding to Catigara, is actually as many degrees to the north of the equator as Ptolemy supposed it to be south of the line. Major Rennell has given the function of his approximation (Intro. p. 39,) to the geographical ideas of M. D'Anville, and they have been generally adopted. But M. Goellin has lately published "The Geography of the Greeks analyzed, &c." in which he differs from M. D'Anville, with respect to many of his determinations. According to M. Goellin, the Magnus Promontorium, which M. D'Anville concludes to be cape Romania, is the point of Brugia (which see), near to which he places Zab, supposed by M. D'Anville to be situated on the strait of Sincapura or Malaca. The Magnus Sinus of Ptolemy he maintains to be the same with the gulf of Marathan, and not the gulf of Siam; and the position of Catigara corresponds, as he attempts to prove, to that of Mergui, a considerable port on the west coast of Siam. Thins or Sima Metropolis, which M. D'Anville removes as far as Sin-hua in the kingdom of Cochlin-China, is situated, according to M. Goellin, on the same river with Mergui, and now bears the name of Tana-ferrum. The city of the infola of Ptolemy, which M. D'Anville determines to be Sumatra, is, by Goellin's arrangement, one of that cluster of small islands which lie off this
this part of the coast of Siam. M. Gueffelin conceives, that the ancients never sailed through the straits of Malacca, had no knowledge of Sum ter, and were altogether unacquainted with the eallem ocean. With regard to the golden Chersonese of Ptolemy in particular, he observes that what chiefly characterizes it is the mouth of a large river, which there divides itself into three branches before it joins the sea. Thudie chain is so considerable that each of them bore the name of a river, the Chryseos, the Panderan, and the Attabas. It does not appear that Ptolemy knew the source of this river, or that he had any knowledge of the interior of this country, as he does not determine the position of any place. Without detailing the other arguments of M. Gueffelin, we may observe, that upon comparing Ptolemy’s map with that of the country, there seems little reason to doubt that the golden Chersonese is the southern part of the kingdom of Pegu, which may be considered as inhabited. In the southern part of the Malayan peninsula, which has hitherto been regarded as the Golden Chersonese, the river John is so small a stream, that it is about the size of one of the streams noted by Ptolemy; and his delineation of the country of the Sinu, stretching along a western sea, palpably corresponds with Tana-ferim; while M. D’Anville’s map so much contradicts that of Ptolemy as to place the sea on the east of the Sinu, and proceeding towards the north instead of the south. Moreover, the rivers laid down by Ptolemy, between the mouths of the Ganges and the Delta of the golden Chersonese, amount to three; of which three appear in our maps, but we are ignorant of the southern part of Arraca, which probably contains the other two. The three chief mouths of the Jrawaddy, in the map of Mr. Dalrymple, feebly correspond, even in the form and manner of division, with those in the golden Chersonese of Ptolemy; and the bay to the south of Dalla Isims is the Perimulous Sinus of the Greek geographer, the small river to the east of which is that of Sirian or Pegu. If the Malayan peninsula had been the golden Chersonese of the ancients, the ancient geographer could not have been wholly ignorant, as he seems to have been, of the straits of Malacca, and of the northern part of the great land of the emperors. Many have thought, but without sufficient reason, that the Ophir of Solomon was situated in the golden Chersonese. See ORMIN.

CHERSONEUS Cimbria, a peninsula of Europe to the north of Germany, fappende to have derived its appellation from the Cimbri who came from thence, and now called Jutland; which see. From this peninsula, bounded by the river Elbe on the south, by the German ocean on the west, and by the Baltic sea on the north and east, those people came into Britain, from whom the great body of the English nation is descended. When the unhappy Britons formed the fatal resolution of calling in foreign auxiliaries to preserve them from that destruction with which they were threatened by the Scots and Picts, they could find none nearer than the inhabitants of this peninsula, who were likely to afford them necessary succour and protection; for they were their nearest neighbours and natural allies, the Gauls, who spoke the same language, and professed the same religion with themselves, were in no condition to give them any assistance; having been invaded, and almost conquered by the Franks, another German nation. The country above-mentioned, to which the Britons directed their views for relief in their distresses, was at that time inhabited by three nations, which were called Saxons, Angles, and Jutes; who sent armies into Britain, and here obtained settlements. From these three nations the English in general derive their origin; though several other nations, particularly Danes and Normans, have since mingled with them in very great numbers. See ANGELS, JUTES, and SAXONS.

CHERSONEUS Magna, a port of Africa, in Marmarica, near the port called Phuthus. Sclavas places it opposite to the island of Crete. The great Chersonesus of Ptolemy is supposed to be the present Cape Raccalldino in the kingdom of Barea; so called because it forms a peninsula. M. D’Anville places it on the coast N.W. of Marmarica, at some distance S.E. from the pr montary Drepanum.

CHERSONEUS Taurica, a port or castle of Egypt, mentioned by Ptolemy and Strabo; and placed by the latter at the distance of 75 stadia S.W. from Alexandria, on a part of the coast which formed a small promontory.

CHERSONEUS Taurica, Græca, a considerable peninsula of Europe, lying between the Euxine sea, the Palus Maccot, and the Bolphorus Cimmerus; extending, according to Sir John Chardin, 67 leagues from east to west, and about 35 from north to south; and joined to the continent by a narrow promontory called the Bolphorus or Bosphorus. In very remote times this peninsula was governed by its own sovereigns. Its most ancient inhabitants were the Tauri, or Tauroctythes, as Phus and Ptolemy call them, and from them it derives its appellation. The mythologists refer to these remote times the first voyage of the Greeks into Taurica. In process of time the Greeks traded here and founded cities. Mithridates, king of Pontus, possessed the peninsula, and it is said, drew from it annually a tribute of 2,263,300 measures of grain, and 200,000 talents in silver. It was conquered by the Romans, and given by them to the kings of Dolporus. Some of the easter tribes of Asia, known to us by the name of Huns, established themselves here, and many of them remained till the time of the emperor Julian. It afterwards passed to the princes of the family of Genghizian. The cities of note in former times were Taphor or Taphphas on the illiumis, where Przekop or Przecop now stands; Cherfonesus, or Chefon; Theodorus, afterwards called Cafs, but now known by its ancient name; Nymphza, Lagryza, and Cimlux, seated on the Euxine sea, and Pantopcaura on the Bolphorus or Bosphorus.
the opinion of the oracle, which they had consulted. Upon this, Miltiades engaged a number of the Athenians to accompany him to the Cheironion, and the Delphics immediately invited him with the foreign power. He began his reign with erecting the wall which separated the plain from the continent. At his death, he bequeathed the sovereignty to his nephew Stilacoras, who was infallitated; and when this disastrous event occurred, the Phitalatrices sent Miltiades, the son of Canon, and brother of Stilacoras, in take possession of the government of the Cheironion. At length the Athenians lost this peninsula; and under the kings of Macedon, after Alexander, it belonged to Thrace, and made part of their kingdom.

CHERBSDUS, Χέρσος, an amphibious serpent; so called, because it lives first in watery places, whence it is called hydros; after which it shifts its habitation, and lives on dry ground, and thence has its compound appellation cherbysdrus.

CHERT, in Mineralogy. See Horn floss.

CHERTBALUS, in Ancient Geography, a town of Upper Pannoni, situated near the Danube.

CHERTSEY, in Geography, a town of England, in the county of Surrey, situated near the banks of the Thames; 20 miles W.S.W. of London. This town was formerly the residence of some of the Saxon kings, and the first burial place of Henry VI, who was afterwards removed to Windsor. Here was formerly an abbey, founded in 1064; of which, only part of the walls now remains. It has a weekly market on Wednesday.

CHERUB, or Cherubim, a celestial spirit, which, in the Hierarchy, is placed next in order to the cherubim. The word is formed of the Hebrew דְּכָרְבָּא, cherub; the plural whereof is cherubim. In Hebrew, this term is sometimes taken for a calf or an ox. In Syraic and Chaldean, the word cherub signifies to till or plough, which is the work of oxen. It also denotes strong and powerful, implying the strength of an ox. According to Grocyn, the cherubim were figures resembling a calf. Doctart and Spencer think they were similar to the figure of an ox. Josephus mercy says, that they were extraordinary creatures, whose figure was unknown to mankind. Clemens of Alexandria is of opinion, that the Egyptians imitated the cherubism of the Hebrews in their sphinxes and hieroglyphical animals. The figure of the cherubism was not always uniform, since they are differently described in the shapes of men, eagles, oxen, lions, and in a composition of all these figures put together. Moses likewise calls these symbolical or hieroglyphical representations, which were reprented in embroideries upon the vails of the tabernacle, cherubim of costly work. Such were the symbolical figures which the Egyptians placed at the gates of their temples, and the images of the generality of their gods, which were commonly nothing but figures composed of men and animals.

There were two cherubim that covered the mercy-seat are represented by Moses as extending their wings on both sides, and looking upon one another with their faces turned towards the mercy-seat, which covered the ark. It would afford our readers little instruction or entertainment to introduce in this article the fanciful conjectures of the Hachtschiera, with regard to the form or import of the Hebrew cherubim; or to detail the result of the researches of Mr. Parkhurst, in his Hebrew lexicon, which this writer, who has minutely traced in the cherubim figures emblems or representations of the three persons in the Trinity. That the cherubim were hieroglyphical or emblematical figures, composed of the various parts of different animals, is unquestionable. Each cherub had four heads or faces; viz. those of a man, of a lion, of an ox, and of an eagle. Their bodies, at last in the upper part, resembled the human form. The prophet Ezekiel describes the cherub as having four wings: the seraph of Isaiah had six wings. They had four hands or arms; and their wing part from the rim of the helm downwards was composed either of human thighs, legs, and feet, to which were appended behind, the body and hinder legs of an ox; or, more probably, the body and four legs of an animal which the human part seemed to refer; so that the wings below the rim of the body was in the form of an ox, and that above this the body was human. As to the services which they were designed to perform, it has been suggested (see Fragments annexed to the last edition of Calmet's Dictionary) that, as the vision of Ezekiel and also of Isaiah was that of the likeness of a movable throne or chariot of immovable fize, in which the conductor was supposed to sit, the wheels annexed to it were such as were joined to the royal travelling or military thrones of the Persian kings, and the four cherubim occupied the places of four horses for drawing this capacious machine. As to the eyes in the wheels and the cherubim it has been conjectured, that they were spots or streaks embellished with brilliant colours. After all the figurations and conjectures of ingenious and learned persons, it still remains to be determined, what these emblematical figures were intended to represent. It is certain that they are very ancient, and that they have been adopted in other countries besides in which they were originally introduced. Symbolical figures resembling cherubim embellished part of the palace of Petepolls; and they are thus described by Sir John Chardin. In the front of each pillar is a figure of monstrous size, whole head and feet stand out in whole relief, and make the front of the pillar. The relief is two inches high. These figures, which look towards the plain, have their faces in mutilated, that it cannot be known, whether they represented horses, lions, rhinoceroses, or elephants. These figures which look towards the mountains are more entire; and represent monstrous creatures, whose body is, e.g. that of a winged horfe, with the head of a man covered with a high cap, having a crown upon it. The figures delineated by Chardin have at least three parts of the cherubic composition, the bird, the ox, and the man.

CHERUB, in Heraldry, a child's head between two wings, or between three pair of wings. We shall here observe, that the word דְּכָרְבָּא, formed of דְּכָרְבָּא, or רֶבְעָא, and נִנָּה, a child, denotes a child.

CHERUBIM, was also the name of an ancient military order in Sweden, otherwise called the order of Skarhima. It was institutted by Magnus II. in 1334. in memory of the siege laid to the metropolita city of Upfal, and abolished by Charles IX. upon the change of religion which happened in Sweden; but it was revived Feb. 11th, 1748; by Frederic I. king of Sweden. It took its denomination from the golden figures of cherubim, whereof the collar of the order was composed.

The habit of the order is a white satins jacket, trimmed with black lace, and lined with black; white breeches, flaps, and Hockings, trimmed with black, and black ribbons; a black flat short cloak lined with white, and a black cape, trimmed with black lace; a hat of black satin, bound with white, having on the left side four white ostrich feathers, the other set in the middle of a black feather. Upon the left breast of the cloak is a titer of white embroidered in silver; and upon the jacket on the same side is the like, far, somewhat less in fize. The collar of the order is composed of four golden heads of Skarpus, with wings expanded, and in blue patriarchal crosses, enamelled in gold, all joined with chains of
the last. To the collar is suspended the ensign of the order: viz. a fليف of 8 points, enamelled white, the centre blue, with the arms of Sweden, and the initial letters I. H. S., over the H. a cock; the arms enclosed with a border of Seraphs, as in the collar; in the arms, under the bottom crown, the passion-nails. The Seraphs heads are between the double points of the f岘, and over the upward point is the royal crown of Sweden, by which it is pendant to the collar. The ensign is also pendant to a brooch sky-blue watered ribbon, worn scarf-wise, and brought over the right shoulder, and under the left arm.

CHERUBIN, Father of Olears, in Biography, an astronomer and philosopher, concerning whom little is known. He flourished about the year 1592. Having acquired a competent knowledge of the languages, he was admitted a captain in the convent at Orleans. His large work, entitled, "De Septem Oriente," on the theory, nife, and mechanism of telescopes, is adorned with engravings of instruments designed by himself, and was printed at Paris 1675, fol. Another work, suppoted by some to be an enlargement of the former, and entitled, "La Vision Parfaite," was published in 2 vols. fol. in 1677 and 1678. Morea.

CHERVES, in Geography, a town of France, in the department of the Charente; one league N.W. of Cognac.

CHERVEUX, a town of France, in the department of the Two Sevres, and district of Niort; 24 leagues N.E. of it.

CHERVIL, in Botany. See Scandix cerefolium, Christophylum styphar, and Tamulentum.

CHERUSCI, in Ancient Geography, a powerful people of Germany, who were situated near the Hercynian forest. They had the Cauchi to the south, and were separated from the Catti by the fole Bacau. Tacitus and Cesar mention them.

CHESAPEAK, in Geography, one of the largest and fairest bays in the United States. Its entrance is nearly E.N.E. and S.S.W. between Cape Charles, N. lat. 37° 12', and Cape Henry, N. lat. 37°, in Virginia, 12 miles wide; and it extends 370 miles to the northward, separating Virginia from Maryland. Its breadth is from 7 to 13 miles, and general depth about 9 fathoms: it affords many convenient harbours, as well as a safe and easy navigation. It has many fertile islands, particularly along the eastern side, and some on the western shore. A number of navigable rivers, and other streams, discharge themselves into it: the chief of which are the Sufquannah, Patapoco, Patuxent, Potomack, Rappahanonck, and York, all which are large and navigable. This bay has also many excellent fisheries of herring and flad, as well as of very good crabs and oysters. It is the resort of swans, and of species of wild duck, called a Canvasback, much admired for its richfens and delicacy. In a commercial view, Chesapeake bay is of very considerable advantage to the neighbouring states, and particularly to Virginia.

CHESELDEN, William, in Biography. By the assistance of Mr. Bowyer's biographical anecdotes, we are enabled to give a pretty distinct account of the life of this celebrated surgeon and anatomist. He was of a respectable family in Rutlandshire, and born at Burrow-on-the-Hill, in Leicestershire, in the year 1688. After such acquisitions in Latin, as might be picked up at a neighbouring grammar school, he was put apprentice, in 1703, to Mr. Wilkes, a surgeon at Leicester, and at the end of his apprenticeship, he came to London, and was admitted a pupil in St. Thomas's hospital, under Mr. Fern, whom he afterwards succeeded. In anatomy he was instructed by Cowper, at whose house he resided. The progress he made under these preceptors was so considerable and rapid, that he commenced lecturer in surgery and anatomy as early as the year 1711, when he was only 22 years of age. The same year he was elected fellow of the Royal Society. In 1713, he published his "Anatomical Description of the Human Body," in 8vo, with plates, to which were added some select cases in surgery, and a syllabus of his lectures. Cheeselden had the pleasure of seeing this work pass through six editions, each more improved than the former one. To the fourth and subsequent editions the author added an appendix, in which he gave a short history of the operation of cutting for the stone in the bladder. He performed the operation in the manner recommended by Dr. James Douglas, on nine patients in St. Thomas's hospital, with success; but failing in some subsequent trials, he returned to the mode recommended by Ruq, which he so much improved, that the first 27 patients, whom he cut by that method, all recovered. Notwithstanding the conduct with which Cheeselden had acknowledged the improvements made by Dr. Douglas in the method of performing the high operation, yet he did not escape censure: an anonymous pamphlet, supposed to have been written by the Douglas, being addressed to him, under the title of "Lithotomus castratus." But his character, both as a lithotomist and as a surgeon in general, was too well established to be injured by so trifling an attack. To the same edition of his anatomy he added some curious observations, made by a patient, who had been blind from his infancy, and whom he restored to his fight. The case was first published in the Philosophical Transactions. In 1729, he was elected a corresponding member of the Royal Academy of Sciences at Paris; and in 1732, he was made foreign associate to the Royal Academy of Surgery, then newly instituted. He had before been appointed principal surgeon to queen Caroline, to whom he dedicated his splendid work on the stones, published in 1733, in folio. The bones are given on a large scale, and are beautifully, and the large ones correctly, delineated. Some errors in delineating the small bones of the head, drew upon him the censure, much too severe, of his opponent and rival, Dr. Douglas. In 1738, Mr. Samuel Sharp dedicated to him his treatise on the operations in surgery, acknowledging the great improvements he had made in the art. Cheeselden had the year before been appointed surgeon to Chelsea hospital, to which place he retired, to enjoy a comparative state of leisure, from the hurry and battle of public practice. Besides the works we have mentioned, some of his lucubrations on subjects of anatomy and surgery, were published in the Philosophical Transactions, and he furnished 21 valuable plates, and some useful observations, to Gataker's translation of Le Dran's treatise on the Operations in Surgery. Towards the end of the year 1751, he was seized with a stroke of palsy, which induced him to go to Bath, where he appeared for a time to have received some benefit, but this was of short duration, as he died in a fit of apoplexy, on the 11th of April, in 1752, aged 64 years.

Cheeselden was strongly attached to his profession, and was always ready with his advice, and assistance, to young practitioners. He was of a social and chearful disposition, and among other acquaintances was intimate with Mr. Pope, who appears to have had a great esteem for him. To his patients he was tender and humane, and he said he had to live a considerable duration of spirits, when about to perform an operation, but this never proceeded so far as to occasion any trembling, or indescripts of his hand, which the success of his practice, and the high character he enjoyed, abundantly testify. It was probably to cure himself of this weakness, that he became a frequent attendant at the places where
where prize-fighting and other athletic exercises were performed. With so much acknowledged ability, that there should be mingled some portion of vanity, and being allowed to decide on subjects or surgery, that he should sometimes expect the same attention to be paid to his opinions, on subjects with which he was not so well acquainted, should excite no surprise. Some stories of the kind, which we shall not contribute to propagate, have been handed down. He left only one child, a daughter, who had been married to Charles Coates, M. D. of Woodcore, in Shropshire, member of parliament for Tamworth, in Staffordshire. She became a widow in 1748, and removed to Greenhithe, in the parish of Swancombe, in Kent, where she died several years after her father, leaving no issue.

CHESELETH-THABOR, or ARTHARA, in Ancient Geography, a town of Judaea, in the tribe of Zabulon. Joshua gave it to the Levites of this tribe, who were of the family of Merari. It was situated on the side of Mount Tabor. Ezechias and Jerom call it Cafalus or Exalas, and place it 10 miles E. from the S.W. part of Decapolis.

CHESHAM, in Geography, a small but populous town of England in Buckinghamshire, situated in a pleasant and fertile valley, and consisting of three streets, which are principally occupied by lace-makers and shoe-makers, and the manufacturers of wooden articles, in the respective branches of round, hollow, and Tunbridge ware. The turnery goods produce a considerable sum annually; and the number of shoes made every week has been computed at a thousand pair. The inhabitants are for the most part dissenters; and the town has 4 places of worship, besides the parish church. There is also a free-school for the education of the children of the poor. Chesham has a weekly market on Wednesday. It is 29 miles W.N.W. from London.

CHESHIRE, one of the western counties of England, was included by the Romans in the division named Flavia Caesaris; but on the final departure of that people from the island, it reverted to the Britons, who continued in possession till about the year 607, when it was conquered by Ethelfrith, the Saxon king of Bernicia, who defeated the army of Broochmal Ychthore, king of Powys, near Chester. On this occasion, Ethelfrith is said to have slain 2000 defeated monks, whom Broochmal had called from the neighbouring monastery of Bangor, and stationed on a neighbouring hill, in order to defend himself with their assistance. It was afterwards wrested from Bernicia by the Mercians, and continued a part of their kingdom till the reign of Egbert, who united it with the other Saxon states under one government. Canute the Dane, who obtained this division of the kingdom by his famous partition treaty with Edmund Ironside, invited the administration of this county in the ears of Cheler; three of whom enjoyed that dignity prior to the conquest; Leofric the son of Leofwin; Algar, his son; and Edwin, his son of the latter; in whom ended the race of the Chelmsford earls of Saxon blood. On the conquest, the provinces of Britain which had hitherto been governed by a few great men, were divided into lesser portions, and distributed as rewards among the followers of the Norman king. Chelmsford was bestowed on Gherbod, a valet Fleming; and after him on Hugo de Aurange, better known by the name of Hugh Lupus. To him the monarch delegated a fullness of power; made this a county palatine, and gave it such a sovereign jurisdiction, that the ancient earls kept their own parliaments, and had their own courts of law, in which any offence against the dignity of the sword of Chelmers was as cognizable as the like offence would have been at Westminster against the dignity of the royal crown; for William allowed Lupus to hold this county "tam liber ad gladium, sicet ipse rex tenebat Angium ad coronam." The favor with which he was invested is still to be seen in the British Museum, inscribed Hugo Comes Celestii. As soon as Lupus was firmly established, he began to exert his regal prerogatives. He formed his parliament by the creation of eight barons, who were obliged to pay him attendance, and to repair to his court to give it the greater dignity. They were bound in all wars between this county and Wales, to find, for every knight's fee, a horse with caparison and furniture, or two without furniture, for the division of Chelmsford. Their knights and freeholders were to have corselets and lances, and were to defend their lands with their own bodies. This species of government continued from the conquest till the reign of Henry III., a period of 171 years, when in 1237, on the death of John Scott, the seventh earl of the Norman line, without male issue, Henry took the widow into his own hands, and gave the daughters of the late earl other lands in lieu; unwilling, as he said, that so great an inheritance should be parcelled out among dailiffs. The king bestowed the county on his own son Edward, who did not assume the title, but afterwards conferred it on his son Edward of Carnarvon. Since that time the eldest sons of the kings of England have always been earls of Chelmsford as well as princes of Wales. The palatinate was governed by the earls of Chelmsford as fully and independently for nearly three centuries after this period; as it had ever been by the Norman earls; but Henry VIII. by authority of parliament, made it subordinate to the crown of England. Yet notwithstanding this restraint, all pleas of lands and tenements, and all contracts within the county, are to be heard and determined in it; and all determinations out of it are deemed void, "et coram non judice," except in case of error, foreign plea, and foreign voucher; and for no crime but treason can an inhabitant of this county be compelled to try out of it. Thus being solely under the jurisdiction of its own earls, and confirmed in a certain degree as a separate kingdom, representatives to the national parliament were never sent, either for the shire or city, till the year 1549, the third of Edward VI., when upon the petition of the inhabitants, two members were summoned from each.

Cheshire is bounded on the north by the rivers Mersey and Tame, which separate it from Lancashire; on the east by the counties of Derby and Stafford, the division between which is chiefly marked by chains of hills and by the rivers Goyt and Dane. The southern side unites it with Shropshire and Flintshire; and the western border is skirted by Den- bighshire, Flintshire, and the estuary of the Dee. The dimensions of the county are estimated by Mr. Wedge, in the "General View of the Agriculture of Cheshire," at about twenty-two miles and a quarter, on a medium, in width, and nearly forty miles in length from W.S.W. to E.S.E. Its form is rather oval, with two projecting necks of land; one about twenty miles in length, and six in breadth, running out into the Irish sea, between the estuaries of the Dee and Mersey, and called the Wirral. The other forms part of Maclesfield field, and extends about fifteen miles in length from Stockport, between the counties of Derby and York; but rarely exceeds four miles in width. Alfred divided this county into seven hundreds, exclusive of Chelmsford which is a county in itself; it contains one city, twelve towns, 670 villages, about 35021 houses, and 191,751 inhabitants.

Cheshire is in general a flat country, though some considerable hills rise near its eastern borders, and connect with those of Derbyshire and Staffordshire. These ex-
terd about twenty-five miles in length from Congleton to the north-eastern corner of the county. An in-
terrupted ridge of high ground also crost it from north to south, on the western side, beginning near Frod-
ham, where a bold promontory overhangs the Mersey. After crossing the large tract of heath, called Delamere
Forest, it exalts itself in the towering rock of Becon, near the middle of the county. About Macclesfield are
a few other hills, and one on the Shropshire side. Another
chain runs north and south through the populous of Wirral.

The soil of the county is nearly level; and the principal
part of it consists of arable, meadow, and pasture land.
A variety of soil is found in this county; but clay, sand,
black moor, or peat, seem to predominate; and the under
soil is commonly clay, or marl. The red grit rock is the
most prevalent stone of the county, and of this most of
the towns and villages are built. There are few large woods
in the county; yet, as the generality of farms abound with
hedgerows, a considerable quantity of timber is produced,
and particularly a great number of oak trees, from which
the tanners derive a supply of that invaluable antiseptic, oak
bark. Cheshire was formerly distinguished for its numerous
yeomanry; and though they have decreased for the last
hundred years, they are still very considerable. In the
vicinity of manufacturing towns, and particularly on the
borders of Lancashire and Yorkshire, many parcels of land
have been pur chased by tradesmen and appropriated to small
farms; but the greater portion of the county is retained
and cultivated by gentlemen who reside on their own estates.

The evil of commingling agriculture and manufactures
extended into Cheshire; and the post-farms that furnished
supply and gave independence to several families, have been
thus confined to one. The tenure is almost universally
freehold; yet in the manors of Macclesfield, Halton, and
some others, there are a few copyholds, or what may be
denominated customary freeholds, paying fines and rents
certain. Leasing for lives, which was formerly a very con-
stant and general practice, is yet continued by a few land-
holders; but the most common term of leases is eleven years,
with a restriction on the tenant to a certain quantity of
rable (usually about one-fourth of his farm) and a particu-
lar rotation of crops. The extent of farms is, on the average,
from 150 to 500 acres; but some few contain upwards of
500.

The Dairy is the principal object of attention with the
Cheshire bullocks; yet it is rather a singular fact, that
though the county is well adapted for its climate, it was formerly a celebrated for its cheese. It is stated
that when both flourished, the milk was very abundant, and the whey skimmed off. This process is repeated till
when the whey is nearly dry, and the curd is placed in a vat, and occasionally sprinkled with salt. Some dairy women use about three
hundred to a cheese, and make it a rule to put the greatest quantity near the middle. The vat is filled very full, and
the whey repeatedly skimmed out before it is placed in the
vat; as it is very material to expel all the whey, and also
to keep the vat quite full of curd. The cheese is commonly
taken twice or thrice from the vat, to place fresh cloth, pare
off the edges, and turn it; and sometimes it is immersed in
hot whey, which is supposed to harden its coat. After re-
maining in the vats two or three days, it is next conveyed
to the lathing house, where it is placed in a lathing-tunnel
or tub, in which it continues about three days longer, and is next
placed on the benches for about eight days, being well lathed
over, and turned every day. After this process it is
turned twice daily for five or seven days, and then washed
in warm water, and wiped dry with a cloth; and when dry,
immerged over with whey butter, and placed in the warmest
part of the cheese-room, where it is left to assume its proper
age and confidence.

The principal general productions of Cheshire are silk and
coal. Of the latter, a considerable quantity is found on the
collieries, and some is obtained from the hound of Wirral.
The former is more abundant in this county than in any other
part of England. The immense trade carried on in this article,
and the vast revenue derived from it,render it an object of con-
siderable local and national importance. The principal colli-
eries are at Nantwich, Middlewich, Winsford, and North-
wich. See NANTWICH and SALT.

The cotton factories, next to the manufacture of silk, seems
to be the most considerable. This flourishing branch of trade
has lately been extended from Lancashire, and some of the
bordering counties, over many parts of Cheshire. Exclusive
of

summer seasons. The annual quantity of cheese made from
each cow varies from 50 to 500 lb. and upwards; the pro-
duce being governed by the nature of the herd, the quality
of the cattle, the weather, and the season of the year.

On the whole, the average produce may be rated at
about 200 lb. from each animal. The quantity of milk, ac-
cording to the estimation, yielded daily by each cow, during
the milking season, is about eight quarts, which is commonly
supposed to produce one pound of cheese. The Cheshire
cheese is generally made with two meals' milk; though
often, towards the latter end of the season, which commences
nearly twenty-two weeks, with four, five, or six: for as the
cheeses are usually made very large, it is necessary to have
a sufficient quantity of milk to make one at a time; though
in some of the dairies two are made in a day. The most
common size for a cheese is sixty pounds; a weight suf-
cceptible of every excellence to be found in the cheese of this
county. It is usual to preserve the evening's milk till the
next morning, when it is skimmed, heated, and incorporated
with the new milk; and after being mixed in a large tub,
together with the cream, the dairy woman puts in a proper
quantity of rennet and coloring, and leaves it for about
an hour and half to coagulate or curdle. The coloring
should be Spanish arnuto; but, from the high price of that
article, an adulterated coloring is often substituted. In
making cheese of the bell quality, the milk used is as pure
as it comes from the cow, not robbed of any cream; though
the practice of making a certain quantity of fresh butter
weekly, frequently occasions an appropriate benefit to the
cream. After the cheese is "come," or when the milk is properly
cogulated, the dairy-maid breaks the curd into very small
particles, which are then left to fimbre, and the whey
skimmed off. This process is repeated till the whey is nearly
dried, when the curd is placed in a vat, and occasionally
sprinkled with salt. Some dairy women use about three
hundred to a cheese, and make it a rule to put the greatest
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of these, manufactures of leather, ribbon, thread, gloves, buttons, and throes, are carried on at Nantwich, Macclesfield, Congleton, Knutsford, and some other places.

Most of the rivers and streams which wind through this country direct their currents northward, and empty themselves into the Mersey or the Dee. The former divides Cheshire from Lancashire for a course of nearly 62 miles, about 35 of which, from Liverpool to the mouth of the river Irwell, are navigable for vessels of considerable burthen. The Mersey derives its course from a conflout of small streams at the junction of the county with Derbyshire, and flowing in a westerly direction, receives in its course the waters of the Goyt, the Dane, the Bolin, the Irwell, and the Weaver. After its junction with the latter, it swells into a broad estuary, and taking a north-westerly course, soon meets with the Irish channel. The Dee was held in great veneration by our British ancestors, and its waters regarded as sacred and purifying. It derives its origin in the mountainous districts of Merionethshire, and after forming the large lake of Pembridge, passes through a series of picturesque and grand scenes, and approaches the western border of this county, to which it forms a boundary from Worthenbury to Aldford. It then passes on to Chester, where it narrows and, afterwards flows to the west, through an artificial channel, which was formed, at an immense expense, by a body of gentlemen, called The River Dee Company. This river also forms a large sandy estuary between the county of Flint and the hundred of Wirral, and joins the Irish sea about 14 miles N.W. from Chester. The Weaver, deriving its source from Ridley Pool, close to Chaldoncleve Hill, passes the towns of Nantwich, Macclesfield, Weaver, Winsford, and Nethchive, where it is joined by the Dane, from the northern parts of Staffordshire, and two or three other streams from the central parts of the county. Hence it proceeds to Warrington, Acton-Bridge, and Frodsham, where it falls into the swelling bason of the Mersey. The Weaver receives several tributary streams in the course of its progress; and from Winsford to Frodsham it has been rendered navigable by means of various locks. See Canal.

Several other rivers meander through this county, the principal of which are the Goyt, the Bolin, the Dane, and the Whirlow. Cheshire also abounds with broad sheets of water, denominated mere, lakes, and pools. The principal are Oak-Mere, Ruthern-Mere, Mere-Mere, Tattow-Mere, Comber-Mere, Broad-Mere, and Bag-Mere; Petty-Pool, Roseberry-Pool, and Ridley-Pool. Most of these waters abound with fish.

The county is intersected by portions of four canals, which allow a very constant and cheap intercourse between the towns of Chelfter, Liverpool, Manchester, the north of England, Staffordshire, Shropshire, and adjacent counties. See Canal.

The diocese of Chester comprehends all Cheshire and Lancashire, and various parts of Westmoreland, Cumberland, Yorkshire, Denbighshire, and Flintshire, and is divided into two archdeaconries. Cheshire returns four members to parliament, viz. two for the shire, and two for the city of Chester: pays seven parts of the land-tax, and furnishes the militia with 500 men. Gower's Sketches towards a History of Cheshire. Leigh's Natural History of Lancashire and Cheshire.

Cheshire, a county of America, in New Hampshire, on the E. bank of Connecticut river, bounded on the S. by the state of Massachusetts, on the N. by Grafton county, and by Hillsborough county on the E. It contains 54 townships, the chief of which are Charlestown and Steins, and 28,772 inhabitants, including 16 towns.

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Cheshire, a township in the county of Berkshire and the Count of Massachusetts, famous for its good cheese; 140 miles N. westerly from Boston.—Also a township of New-Haven county in the state of Connecticut; 13 miles N. of New-Haven city, and 26 S.W. of Hartford. It contains an episcopal church and academy, and three congregational churches.

Chefsen, a town of China, of the third rank, in the province of Shen; 15 leagues N.W. of Hsing-nan.

Chesin us, in Ancient Geography, a river of European Saxonia. Prolemy.


Chesley, in Geography, a town of France, in the department of the Aube; 9 miles S.E. of Eivy.

Cheslon, in Ancient Geography, a town of Palestine, in the tribe of Juda.

Chesne. See La Chene.

Chesne, Andrew Du, in Biography, called "the Father of French History," was born in 1584, at l'ile Bouchard, in Touraine. His historical and geographical researches were very various, and his productions, considering that his life was not very extended, were astonishingly numerous. In these he appears rather the diligent and labious compiler, than a judicious writer. His premature death in 1649, was occasioned by an accidental injury.

He wrote "A History of England," 2 vols. fol. 1614: "A History of the Papes," 2 vols. fol. 1631; "A History of French Cardinals;" "The Genealogies of several Great Families of France," 7 vols. fol. 1684; "History of the Duke of Burgundy," 2 vols. 4to.; "A Bibliotheca of Authors who have written on the History and Topography of France." He was also the editor of the works of several other authors, as Abclar, Palquin, &c.; and he issued proposals for printing a large collection of French historians, in 24 vols. fol. of which 12 volumes, containing the period from the origin of the nation to the time of Hugh Capet, were published in 1616; and other two volumes, in the press at the time of his death, together with a fifth, bringing the History down to Philip the Fair, were published by his son, Francis du Chesne, who was also a learned man. Moreri.

Chenes, or Queue, called also Quercetanius, an eminent practitioner and voluminous writer in medicine, which he practised successfully many years in Germany, was born in the county of Armagnac in Gascony, about the middle of the sixteenth century. Applying himself to the study of medicine, particularly of chemistry, in which he acquired a considerable proficiency, he was admitted to the degree of Doctor at Balle, about the year 1573. In the latter part of his life, he removed to Paris, and was made one of the physicians in ordinary to the king, Henry IV. As he affected great mystery, and was a professed admirer and follower of the doctrines of Paracelsus, he drew upon himself the cenfures of many of his contemporaries; among them, Riolan was one of the most formidable of his opponents. We also find Guy Patin, who flourished some years at Berlin, treating his doctrines with great severity, and in fact, whatever popularity his works might enjoy in the lifetime of the author, they are long since deftinitely forgotten. Haller has given the titles of them, and analyses of the principal of their contents. The most celebrated among them, which passed through the greatest number of editions, is his Pharmacopoea Dogmaticorum restituta, praxis, felectissime Hermeticorum Floribus illustrata. Gise Hefs. 1607. This is said to have been recommended by Beeckhaves his pupils. Schrueber, in 1645; published a volume, in quarto, 41
under the title of Quercetanus redevisus, containing an
abridgment of his dialogues. He died at Paris in 1672.
Haller, Bib. Elst. Diet.
CHESNEAU, Nicholas, a physician of Tournon, was
born at Maribières, where he took his degree of Doctor
in Medicine, in the early part of the eighteenth century.
He appears to have had a large share of practice in his
profession, and was author of several useful publications.
The greatest of them is his Observationum Medicinæum Libri
quatuor. Quibus accedit ordo Remediiorum alphabetices
ad omnes morbis conterminatus," &c. 8vo. Parisiis, 1732.
This work has passed through several editions, and in 1741,
was printed at Leyden in 4to. Haller has given an abridged
account of its contents. Amidst some insignificant and some
incredible accounts of cures, there are contained in it many
useful practical observations. Haller Bib.
CHESNUT, in Botany. See Fagus sylvatica.
CHESNUT, in Geography, a township of America, in
the county of Northampton and state of Pennsylvania.
CHESNUT creek, a branch of the Great Kanawah, in Vir-
ginia, where it crosses the Carolina line. Here, it is said, are
iron mines.
CHESTER, part of the Alleghany mountains, in Pennsyl-
vania, westward of Greenborough.
CHESS, an ingenuous game performed with little round
pieces of wood, on a board divided into sixty-four squares;
where full and alders are so indispensible requisite, that
chance has no place; and a person never loses but by his
own fault.
Saratins a precise treatise on the different opinions of
the origin of the Latin facet; whence the French echets,
and our chess, is formed. Menage is also very full on the
same head. Leandroes takes it to come from the uschets,
famous Turkish robbers. P. Rimond from the German
schach, theft; and that from calculus. He takes chess to
be the same with ludus latrunculorum of the Romans, but
imperfectly. This opinion is contentious by Voellis and
Salmasius, who derive the word from calculus, as used for
latrunculus. Some derive it from the Hebrew ס_epochs,
whence calculer, calculat; & נד, nut, mori, mortuus;
other; from הלת, sed, levis, and הית, mori; whence
chess and chess-mate. Fabricius says, a celebrated
Perisan astronomer, one Schatrenachs, invented the game of
chess; and gave it his own name, which is still in bears in
that country. Nicod derives it from שֶׁפֶּעַה, or שֶׁפֶּעַק, a Moorish
word for lord, king, and prince. Lochart adds, that schach
is originally Perisan, and that schachmat, whence our check-mate,
in that language, signifies the king is dead.
The learned Hyde has undertook to shew, from un-
doubted authorities, that this game was first invented in
India, and passed from thence to Persia before the year of
Christ 576, and from Persia to Arabia. He adds, that the
antiquity of this game is traced much higher, or to the
middle of the second century, in an irish chronicle, the
authenticity of which is doubtfull. And he shews, that פֶּשֶּק,
that is, was a term much in use among the orientals, which
engaged in this play, and that used it to caution the
king against any danger; and hence the Europeans and
others have denominated the game פֶּשֶּק חלד, and פֶּשֶּק
חלד, and in English chess, from this circumstance. He also
derives the word מַט from the Peric manus, לִשׁוֹן הָעַד; and
fays that it was used in play; when any of the men was fixed
in its place, or taken captive. See Historia Shahsudii apud
Syntagma Diferentiationem, &c. Hyde, editum a Doctore
Sir William Jones concurs in opinion with the learned
Hyde, and ascribes the invention of this game to the Hind-
ous. "If evidence were required to prove this fact," says
this excellent writer, "whole knowledge of the eastern lan-
guages, combined with indefatigable industry in his re-
searches, and a correct judgment and taste, gives a kind of
decisive authority to his opinion. (See Asiatic Researches,
vol. v.)" It is not necessary that the Persians should be
the originators of this game, or that the Persians have
alone been the inventors of any of the arts and sciences
which they have been peculiarly distinguished. The
Persian, however, must be regarded as the original
inventor of the game as it is now generally understood.
Periander, who, though as much inclined as other nations
to appropriate the ingenuous inventions of a foreign
people, unanimously agrees, that 'the game was imported from
the west of India in the 6th century of our era. It seems to
have been immemorially known in Hindoostan by the name
of Chaturanga," i.e. the four angles, or members of an
army; which are the, elephants, horse, chariots, and foot
soldiers; and in this sense the word is frequently used by
epic poets, in their descriptions of real armies. By a natural
corruption of the pure Sanscrit word, it was changed by
the old Persians into chaturang; but the Arabs, who soon
after took possession of their country, had neither the
initial nor final letter of that word in their alphabet, and con-
sequently altered it further into ṇataran, which found its way
presently into the modern Persian, and at length into the
dialects of India, where the true derivation of the word is
known only to the learned. This has a very significant
word in the sacred language of the Brahmins been trans-
formed by progressive changes into uñatran, riñuch, echets,
and, by a whimsical concurrence of circumstances, has
given birth to the English word clock, and even a name to
the Exchequer of Great Britain."
It is confidently affixed, that Sanskrit books on chesh exist
in Bengal; but Sir William had seen none of them when he
wrote the memoir which we have quoted. He exhibits, how-
ever, a description of a very ancient Indian game of the same
kind, but more complex, and in his opinion more modern,
than the simple chess of the Persians. This game is also
called Chaturanga, but more frequently CHATURANG, or
the four kings, since it is played by four persons representing
as many princes, two allied armies combating on each side.
The description is taken from a book called "Bhavishya Pu-
ran," in which the form and principal rules of this factional
warfare are thus laid down: "Eight squares being marked
on all sides, the red army is to be placed to the east, the
greens to the south, the yellow to the west, and the black to
the north. Let the elephant (fays the author of the Purana)
stand on the left of the king; next to him the horse; then
the boat; and before them all, four foot-soldiers; but the
boat must be placed in the angle of the board." From this
passage (fays the president,) it clearly ap-
ppears, that an army with its four angas must be placed on
each side of the board, since an elephant could not stand,
in any other position, on the left hand of each king; and Rad-
hacan (a Pandit) informed me, that the board consisted,
like ours, of 64 squares, half of them occupied by the
forces, and half vacant. He added, that this game is men-
tioned in the oldest law-books, and that it was invented by
the wife of a king, to amuse him with an image of war, while
his metropolis was besieged in the second age of the world.
A ship or boat is abridgely substituted, we see, in this complex
game for the "rath," or armed chariot, which the Bergal-
she pronounced "rath," and which the Persians changed
into "rakth," whence came the root of some European
nations; as the virg and sol of the French are supposed to be
corruptions of zere and sile, and the prime minister and elephat
of the Persians and Arabs." As fortune is supposed to have a great
share in deciding the fate of a battle, the use of dice is introduced into this
game to regulate its moves; for (fays the Puran) "if unique
be thrown, the king or a pawn must be moved; if quatre, the elephant; if trois, the horse; and if deux, the boat. The king pauses freely on all sides, but over one square only, and with the same limitation the pawn moves, but he advances straight forward, and kills his enemy through an angle. The elephant marches in all directions as far as his driver pleases; the horse runs obliquely, traversing the squares; and the ship goes over two squares diagonally. The elephant, we find, has the powers of our queen, as we are pleased to call the general or minister of the Perkins, and the ship has the motion of the piece to which we give the unaccountable appellation of Bishop, but with a restriction which must greatly lessen its value.

In the Puran are next exhibited a few general rules and supercilious directions for the conduct of the game. Thus, "the pawns and the ship both kill and may be voluntarily killed; while the king, the elephant, and the horse may fly the foe, but must not expose themselves to be slain. Let each player prefer his own forces with extreme care, securing his king above all, and not sacrificing a superior to keep an inferior piece." Here (says the proponent) the commentator on the Puran observes, that the horse, who has the choice of eight moves from any central position, must be preferred to the ship, which has only the choice of four. But this argument would not have equal weight in the common game, where the bishop and tower command a whole line, and where a knight is always of less value than a tower in action, or a bishop of that side on which the attack is begun. "It is by the overbearing power of the elephant (continues the Puran) that the king fights boldly; let the whole army, therefore, be abandoned in order to secure the elephant. The king must never place one elephant before another, unless be be compelled for want of room, for he would thus commit a dangerous fault; and, if he can play one of two hostile elephants, he must destroy that on his left hand."

All that remains of the passage which was copied for Sir William Jones relates to the several modes in which a partial success or complete victory may be obtained by any one of the four players; for, as in a dispute between two allies, one of the kings may sometimes assume the command of all the forces, and aim at a separate conquest. First, "When any one king has placed himself on the square of another king (which advantage is called "finhama") or the throne he wins a flake, which is doubled, if he kill the adverse monarch when he fixes his place; and, if he can feat himself on the throne of his ally, he takes the command of the whole army." Secondly, "If he can occupy successively the thrones of all the three kings, he obtains the victory, which is named "chatu-raji;" and the flake is doubled if he kill the last of the three, just before he takes possession of his throne; but if he kill him on his throne, the flake is quadrupled. Both in gaining the "finhama" and the "chatu-raji" the king must be supported by the elephants, or by all the forces united." Thirdly, "When one player has his own king on the board, but the king of his partner has been taken, he may replace his captive ally, if he can seize both the adverses kings; or if he cannot effect their capture, he may exchange his king for one of them, against the general rule, and thus redeem the allied prince, who will supply his place." This advantage has the name of "triprisrishta," or recovered by the king. Fourthly, "If a pawn can march to any square on the opposite extremity of the board, except that of the king or that of the flake, he attains whatever power belonged to that square." Here we find the rule, with a slight exception, concerning the advancement of the pawns, which often occasions a most interesting struggle at our common chess; but it appears that, in the opinion of one ancient writer on the Indian game, this privilege is not allowable when a player has three pawns on the board; but, when only one pawn and one ship remain, the pawn may advance even to the square of a king or a ship, and likewise the power of either. Fifthly, According to the people of Lucca, where the game was invented, "there could be neither victory nor defeat if a king were left on the plain without force; a situation which they named "caca-cahita;" Sixthly, "If three ships happen to meet, and the fourth ship can be brought up to them in the remaining angle, this has the name of "vishanauca;" and the player of the fourth seizes all the others."

The account of this game in the original Sanscrit is in verse, and there are two or three couplets still remaining, to very dark, either from an error in the manuscript, or from the antiquity of the language, that Sir William Jones could not understand the Pandit's explanation of them, and yet perhaps, that even to him they gave very indistinct ideas. It would be easy, however, he thinks, if it be judged worth while, to play at the game by the preceding rules; and a little practice would perhaps make the whole intelligible.

The Honourable Daines Barrington, in his elaborate "Historical Disquisition on the Game of Chefs," (See Archaeologia, vol. ix.) affords, and maintains the claim of the Chinese as inventors; though, he says, Hyde inclines against it, chiefly because they have some additional pieces, which differ from ours, both in their form and powers. This single circumstance, he thinks, is by no means conclusive; because, in all countries where any game hath been of long continuance, the players will make innovations, though in substance it remains the same. Du Halde cites a Chinese treatise, by which it appears that it is the favourite game of that country, and, as such, is sometimes depicted upon Chinese paper. Indeed, in China, it makes a considerable part of the education of their females, and seems to take the place of dancing among us. The origin of this game has been traced to China, in a last from Eyles Irwin, Esq., to the Earl of Charlemont, published in the 6th volume of the Transactions of the Royal Irish Academy. During a long residence in the East Indies, where the game of chess is generally supposed to have originated, Mr. Irwin has often heard of its existence in China, though on a different footing, as well in respect to the powers of the king, as to the aspect of the field of battle. A tradition of this nature obtained among the Brahmins, who excel in this game. When a young Mandarin was shown an English chess-board, he informed Mr. Irwin, that the Chinese had a game of the same nature; and he specified the difference that inhabited in the pieces and the board. Upon further investigation of the subject, the young Mandarin, named Tinqua, brought a Chinese MS, which contains an account of the origin of the game of chess in that country. From this MS it appears, that 370 years after the time of Confucius, or 1665 years ago, Hung Cocn, king of Kiangnan, sent an expedition into the Shensi country, under the command of a mandarin, called Fangting, to conquer it. After one successful campaign, the soldiers were put into winter quarters; where, finding the weather much colder than what they had been accustomed to, and being also deprived of their wives and families, the army, in general, became impatient of their situation, and clamorous to return home. Fangting, upon this, resolved in his mind the bad consequences of complying with their wishes. The necessity of footing his troops, and reconciling them to their position, appeared urgent, in order to finish his operations in the ensuing year. He was a man of genius, as well as a good soldier; and having contemplated some time on the subject, he invented the game of chess, as well for an amusement to his men, as in their va-
event hours, as to inflame their military ardor, the game being wholly founded on the principles of war. The Bra-
tagon succeeded to his wish. The soldiery were delighted
with the game, and forgot, in their daily contests for vic-
tory, the inconveniences of their post. In the spring the
general took the field again, and, in a few months, added
the rich country of Shênit to the kingdom of Kiugian,
by the defeat and capture of its king, Choupayuen, a fa-
mous warrior among the Chinese. On this conquest Hung
Cochu assumed the title of emperor, and Choupayuen put
an end to his own life in despair.

From the above extract from the Concum, or Chinese an-
imals, it appears, that the institution of this game forms a
principal era in the Chinese history; since, by the conquest
of Shênit, the kingdom was first connected in its present form,
and the monarch assumed the title of emperor. Mr. Irwin
observes, that the confined situation and powers of the king,
resembling those of a monarch in the earlier parts of the
world, countenance the supposition of the Chinese origin of
chefs; and that, as it travelled westward, and defended to
later times, the sovereign prerogative extended itself, until
it became unlimited, as in our state of the game. The
agency of the princes also, in lieu of the queen, points out
the nature of the Chinese customs, which exclude females
from every kind and degree of influence and power; and
these princes, in the passage of the game through Peria,
were changed into a single vizier, or minister of state, with
the enlarged portion of delegated authority that exists there;
instead of whom, the European nations, with their usual
gallantry, adopted a queen on their board. The river
between the parties is explicable of the general face of this
country, where a battle could hardly be fought, without
encountering an interruption of this kind, which the soldier
was here taught to overcome; but, on the introduction of
the game into Peria, the board changed with the dry na-
ture of the region, and the contest was decided on terra
firma. Moreover, with the Indians, this game was designed
by a Brahmin, to cure the melancholy of the daughter of
a rajah. But with the Chín, it was invented by an ex-
perienced soldier, on the principles of war; not to difpol
love-fick vapours, or instruct a female in a science that could
neither benefit nor inform her; but to quiet the murmurs of a
discontented soldiery, to employ their vacant hours in lefs-
jons on the military art, and to cherish the spirit of conquest
in the bosom of winter quarters. Its age is traced by the
Chinese actually on record near two centuries before the
Christian era; and among the numerous claims for this no-
bulous invention, that of the Chinese, who call it by way of
discrimination, Chung-Ke, or the royal game, teems to Mr.
Irwin to be indisputable.

In Thibet and the Birman empire, as well as throughout
Bengal and Hindooan, the game of chefs is held in high eli-
nation. The board used by the Birmans, as we learn from
Symes's Embassy to Ava, (vol. iii. p. 285) is exactly similar
to ours, containing 64 squares, and the number of their troops
the same, 16 on each side; but the names, the power, and
the disposal of them differ essentially, the king and his mi-
sider (a queen being never introduced by the orientals)
are mounted on elephants; these are defended by two castles,
two knights on horseback, two officers on foot, and eight
foot soldiers; the forces of each party are arranged in three
lines, by which eight squares remain unoccupied; none of
the pieces allows equal force with our queen; and this re-
stricted operation renders the Birman mode of playing more
complex and difficult than ours. The Birmans affirm that
it is a game of high antiquity, and that it is acknowledged
and worshipped by their sacred writings, although every play
of chance is prohibited. The name of this game, viz.
"Cheedere," bears some resemblance to the name which is
given to the game in most other parts of the world. Col.
Symes infers from this opinion of Sir William Jones, that
it is not of Perian origin. Others may probably con-
ccur with the honourable Mr. Barrington, Mr. Irwin, &c., in
deducing it from the long civilized empire of China, and
 tracing its progress westward through Thibet and Hindooan
to Peria. It indeed this most interesting game had been
known in Peria, whilst Alexander or his successors conti-
nued there, they would undoubtedly have introduced it into
Greece, and its name would certainly have been transmitted
unto us, together with its pieces and their moves.

Chefs is unquestionably a very ancient, as it has been a
very general, game. The opinion maintained by some
learned writers, and which has much prevailed, ascribes the
invention of it to Palamedes at the age of Troy. Most of
the passages relied upon in proof of this opinion may be
found in Stephens's Theaurus, Art. Παλαμεδ, or pebbles.
Mr. Barrington says, that he has examined all these pas-
fages, and that he can venture to affirm, that none of them
relate to chefs, because there is not the most distant allusion
to the putting of the enemy's king in such a situation that
he cannot be extricated, which is the great object of each
player. From a line in the first book of the Odyssey it has
been inferred that Penelope's suitors amused themselves with
this game before the gates of Ulysses's palace. The game
played by Penelope's suitors, and called πίττρα, is particu-
larly described by Athenæus in his tit book of the Diogn-
epholil, on the authority of a native of Ithaca, and it de-
fers most materially from chefs, as the pieces were in number
128 instead of 32. The principal authority for Palamedes's
having been the inventor of chefs is a line from Sophocles,

Εξήντα ; (cf. Palamedes) πίττρας, κοιτός τί πίττραν άπό παντα
κοιτάζει.

But nothing more can be inferred from this line than that he
invented some game which was played with pebbles, πίττρας.
The game called πίττρα in Greek, was by the Romans termed
calcini or latronchi; and Ovid (de Art. Am. i. iii. 357-
366) has described the mode of playing it, that no per-
son who is acquainted with the moves even at chefs, can
read it with attention, and conceive that it alludes to this
game. Mr. —— has also examined a passage cited from
Lucan, in order to prove that chefs was known to the
Romans, and shown that it is not justly applicable to this
game, supposing that the passage is genuine or ancient.
Donatus, on Terence's Emuch, observes, that Pyrrhus,
the most knowing and expert prince of his age, ranging a
battle, made use of the men at chefs to form his designs
and to shuffle the secrets thereof to others. Vopiscus, in
his life of Proculus, informs us, that one of the Roman em-
perors had the title Augvius given him, because of his gaine
ning ten games at chefs sucessively.

Tamarlae is also recorded as a very expert gambler at
chefs.

It appears from Mr. B——'s historical account, that the
game of chefs, called by the Perians Ξανας, and by the
Constantinopolitans Καπα, was a common game at Contan-
tinople in the 12th century, when Anna Comnena flourished;
and this will probably account for its introduction into Eu-
rope. The first crusaders, before the destruction of the
eastern empire, often remained for some time at Constantin-
ople, and thus probably became acquainted with this be-
witching game, which, on their return, they introduced into
their respective countries. Among the European na-
tions it was first known to the Italians, as we may conclude from
From their being nearer to Constantinople than others, and from their early trade with the eastern ports of the Mediterranean. Accordingly we find by Boccace, who lived in the 14th century, that it was a most common amusement at Florence, and that there was a celebrated player, who (like Philidor) could beat two antagonists without seeing either of the chess-boards. Of its first introduction into Italy we have further evidence in the term *gamblat* at chess, now known in most European languages, which is confidedly of Italian origin; _suo dure il gamblato Signore_ to throw down your adversary in wrestling, by placing your foot against his. Chefs thus introduced, became the favourite game throughout Europe till it was given up for cards; but before cards had banished chess, it was in such vogue that the kings both of Spain and Portugal personified the great players, whilst they also flaked confidant fums on the event of the game. We find that three Italians set out from Naples for the court of Philip II., in which was a famous player, and by concealing their skill won very large fums. Hence it happened that as it was impossible to form a just ell mate of the abilities of an antagonist, no one would play at chefs for money, which, therefore, like drafts, fell into disuse, Italy, however, continued to produce the greatest proficient at this game, till the middle of the 17th century. The Italians are said to have been so much devoted to chefs, that a father, who had died before the conclusion of a game, has bound his son to finnish it; and the same custom is also said to obtain among the Germans. See Hyde, ubi supra, p. 7, 8. As Italy was the country from which Europe in general derived its knowledge of chefs, Spain seems to have had the next claim for having produced at an early period players of eminence; and it has been said that in this country whole cities have challenged each other at this game. As at the time of its introduction into England, the learned Hyde supposed that it was known in our country about the time of the conquist, because the court of exchequer was then first established. See Exchequer. Mr. Barrington, however, is of a different opinion; and though he allows it possible that chefs might have been known in England in the next century after the first crusade had taken place, he rather supposes that it was introduced during the 13th century, upon the return of Edward I. from the Holy Land, where he continued so long and was attended by so many English. The Turks, who never change their habits, are full great players at this game, which well suits both their feudal disposition and their taciturnity. Many of them were often prisoners in the Christian camp, as were also the Christians to the Saracens, so that they had many favourable opportunities in all these ways of obtaining instruction. The first mention which Mr. Barrington has met with of chefs being known in England is in a MS. of Simon Aylward, paid by Hyde to be in the library of Magdalen college. The same learned writer cites another MS. of Lydgate, monk of St. Edmund's Bury, who calls it the "game royal," in which are the following lines:

"Was of a Fert fo fortunate,"

"Into a corner drive and mast,"

Which lines are very intelligible, if we suppose that the preceding line relates to the piece called the king; and they will then have the following meaning: "the king was by a fortunate queen (of the adversary) driven into a corner of the chess-board, and check mated;" which of course concludes the game.

We find in Gale's edition of Hist. Ramfieins. (c. 8.) that when bishop Aetheric obtained admission to Canute the Great about midnight, upon some urgent business, he found the king and his courtiers engaged at play, some at dice, and others at chefs. From Hist. Olai Magni (p. 572.) we learn, that when a young nobleman applied to a father for permission to pay his addresses to his daughter, the parent, as it is said, commonly made a trial of his temper, by playing with him at dice and chefs, before he gave him an answer.

It is certain that our ancestors played much at chefs before the general introduction of cards, as no fewer than 26 English families have emblazoned chefs-boards and chefs-rooks in their arms, and it must therefore have been considered as a valuable accomplishment. Hyde moreover gives, that chefs was much played both in Wales and in Ireland; and that in the latter country some of their belt elates depended upon it, and that it was a condition by which two noble families entertained their lands, that the one should engage the other every year at this game. Barrington, however, expresses his doubts as to these facts, because neither of these countries was so early civilized till the latter end of the reign of Henry VIII. With respect to both Ireland and Wales he apprehends, that they have no term for this game in their respective languages. From a treatise, entitled "the Game at Chefs," and published by Caxton in 1474, it appears, that this game was not uncommon during the reign of Edward IV.; and it is certain also that it was a fashionable amusemen in most houses of rank in the time of Richard III.

From the time of Edward IV. chefs continued to be played by our ancestors, till cards became the more general amusement. We have reason to believe that queen Elizabeth was a chefs player. Charles I. was also supposed to have been a player at this game; though in the *Exemp. Barishen*, ascribed to him, he advises his son against it, because it is over-wit. In the last century Stamma, who was a native of Aleppo, and resided some time in England as translator of Oriental dispatches, published some select games at chefs, together with a few instructions; and after him Blitc gave a method how to open the game at a crown per letter. In France this game seems to have been known at an earlier period than in England. The traces of its antiquity, however, are few and faint. The historian Carte gives us the following account of a chefs-match between Henry I. before his accession to the throne of England and Louis le Gros, son to Philip of France; which took place at Philip's court in 1087. Louis lost several games to Henry, and a considerable sum of money, by which he was so much irritated, that he threw the chefs-men at Henry's head. Henry retaliated the affront by striking Louis with the board, so that he was laid bleeding on the floor, and Henry would have killed his antagonist, if his elder brother Robert had not interposed. This is without doubt a very early instance of the game being known in France; but Barrington says, it is much to be wished that Carte had flated the term used in the Norman chronicle to which he refers, and which he has translated chefs, as the game of drafts was very ancient, bears a considerable affinity to chefs, and equally requires a chequered board.

John of Salisbury relates, that in a battle between the French and English in 1117, an English knight seizing the bridle of Louis le Gros, and crying out to his comrades, the king is taken, that prince struck him to the ground with his sword, saying, *Ne fait tu pas qu'aux echecs on ne prend pas le roy? Dijois tu ains seur, qu'at chefs le king is never taken?* The reason is, that when the king is reduced to such a pass, that there is no way for him to escape, the game ends, without exposing the royal piece to further affront. This fact is said to be related in John of Salisbury's book "De Nigis Curialium;" but Mr. Barrington has not been able to discover it. In the reign of Charles V. of France, the king, as Froissart relates, played at this game with the duke of Burgundy. Chefs is alluded
CHESS.

To in the Romance of the Rule, which ascribes the invention of it to one Attalus; and many of the French families bear in their arms a chess-rose. In the sixteenth century it was much played in this kingdom; and in the seventeenth century the traffic instilled "The Calabrian" was translated from the Italian into French, and might have contributed to revive the game after it had been supplansted, as it has been with us, by the more general amusement of cards. At a later period, and even in our own times, Philidor, who was born at Doux, was the most distinguished champion in this game, and considerable subscriptions were made towards bringing him over to England, that the amateurs of chess might have an opportunity of perceiving his decided superiority. It is well known, that he could play two games against able adversaries, and generally beat them, without being either of the boards. Great chefs-players must necessarily bear in their minds several moves which are probably to ensue, both on their own part and that of their adversary; and he, who, like Philidor, can do this throughout the whole game, even with a single antagonistic, must commonly be the victor.

With regard to Germany, Mr. Barrington has not been able to obtain much information; but he says, that Schauen, duke of Brunswick, wrote a treatise on that subject, and named one of his tovows from it. In Mufcovy it is said to be in great vogue among the shop-keepers and common people, who play before the doors of their shops or houses; and it is highly probable that they received it, together with their profession of faith, from the eastern empire, whilst the Greek sovereigns resided in Constantinople. The Russians are said to be great proficient in chess. With them the queen has, in addition to the other moves, that of the knight, which, according to Philidor, spoils the game, but which renders it more complicated; and of course more interesting. The Russians play also at chess with four persons at the same time, two against two: for which purpose the board is longer than usual, contains more men, and is provided with a greater number of squares. This mode, it is said, is more difficult, but more agreeable, than the common manner. Hyde informs us, that this game is not unknown even in Iceland; and it would undoubtedly be a very convenient game for occupying their very long nights during the winter. As the Mahometan religion forbids gaming for money, the Moors of Africa, particularly in the empire of Morocco, are only allowed by the government publicly to play at chess, which is in itself a game sufficiently interesting without the assistance of wages.

Cardinal Cajetan, and other cardinals, rank chefs in the number of prohibited games, as requiring too much application; and Montaigne blames it as too serious for a game.

Hyde (ubi supra) has given a copious account of the names of the several pieces used in this game, as they occur in different languages. The honourable Daines Barrington has also made some remarks on this subject. Conceiving that the game was originally Chinesc, and that it was transferred from their country to Tibet, Bengal, Hindoostan, and Persia, he thinks it highly probable that the pieces did not differ materially in these several countries, either in name or figure. But when the Turks had learned it from the more extrn inhabitants of Arabia, they of course made the pieces different of any particular form or figure, as they understood the feudal commandment in its most literal and rigid sense. The Greeks and Crusaders, becoming adepts in this game by their long continuance in Palestine, took the liberty of giving any name or form to the pieces at their own pleasure; and consequently they often differ in the several parts of Europe where chefs have been introduced. It was natural, therefore, that their principal piece should be a king, both in form and name, and this term to have obtained also in the more eastern parts of Asia. In most of these countries, however, the kings are rather indolent monarchs, and consequently this piece frequently moves at s, but is merely to be defended from attack.

The emperor himself, being thus indolent, necessarily requires a minister or general, who can protect his matter by vigorous and extensive motions, against distant invasion; in the most remote parts of the board. Accordingly the piece of the greatest powers was by the Persians styled "Pherez," or general. Chefs having been universally considered as an engagement between two armies, and the piece of the greatest importance being termed the general, the allusion is properly purfued. When the game, however, was introduced into Europe, the Christians did not trouble themselves about the Asiatic names for the pieces, and styled the "Pherez" or general, queen, probably because she is placed near to the king, as the general was among the Asiatics; but this does not keep up to properly the idea of a military conflict, as when the "Pherez," or general, is placed in the same situation. Another improvement of variety arises from the Pawn's becoming a queen, where the hath reached the last square of the adversary's camp; as it is a suitable reward to the Pawn (or foot-soldier) to make him a general, if he penetrates so far through the enemy's troops; but certainly no provost on his part can entitle him to be transformed into a queen. The French, and after them the English, in the middle ages, called the queen "femmes," from the eastern word "Pherez;" but the title Queen is of considerable antiquity. The next piece in power to the "Pherez," or Queen, is that which we sometimes call the "Rook," but more commonly the Castle. Mr. Douce (Archaeologia, vol. viii.) suggests, that the European form of the castle was copied in part from some ancient Indian piece of the elephant with a castle on his back. Mr. Barrington conceives this term to be derived from the Italians, the first Europeans who played at chess; as rocco in their language not only signifies a rock but a fortress, which was generally placed on such an eminence. Hence, he adds, our phrase at chefs, "the King castles," or puts himself in a state of security, by exchanging, in some measure, places with the castle, which then becomes more exposed to the enemy. The piece, which we call the Bishop has been termed by English writers alpin, aspin, &c. from an Arabic word, signifying an elephant; sometimes was named an archer; by the Germans the bannor or runner; by Russians and Swedes the elephant, by Foks the priedge; and by the French at a very early period the snaif or foot. The reason of this last appellation seems to be, that as this piece stands on the sides of the King and Queen, some of the times. Mr. Barrington suggests, from this circumstance, styled it the fool, because anciently royal personages were commonly thus attended, from want of other names of this amusing themselves. But it is not to easy to accustom for our term Bishop, as our kings and queens have never had any such companion attendants. When it was first introduced it cannot be exactly ascertained; as in Caxton's time this piece was styled the Epilins. Probably the change of name took place after the reform. The top of this piece was exhibited to the Antiquarian Society by Mr. Barrington, among those chefs-pieces that belonged to Charles I. something resembles a bishop's mitre. The Knight has always retained this distinction, says Mr. Douce, on the French and English chess-boards: the Germans, from the nature of their motion, give him the appellation of hopfer, and the Russians call them waffes. The Pawn is supposed to receive their name from pedes, a barbarous Latin term for foot-soldiers. The Germans, Danes, and Swedes have converted
converted them into pensants. The writers of the middle ages, in speaking of the chiefs men, universally style them familiz. In this game each player has eight dignified pieces, viz. a king, a queen, two bishops, two knights, and two rooks, and also eight pawns, which were anciently called fcia, q. d. militis, and made in different figures, and of various materials, mostly of wood or ivory. These pieces are distinguished by being painted in white and black colours.

According to their disposition on the board, the white king is to be placed on the fourth black house from the corner of the board, in the first and lower rank: and the black king is to be placed on the fourth white house on the opposite, or adversary's side of the board. The queens are placed next to the kings, on houses of their own colour. Next to the king and queen, on each hand, place the two bishops; next to them, the two knights; and last of all, on the corners of the board, the two rooks. As to the pawns, they are placed, without distinction, on the second rank of the house one before each of the dignified pieces.

Having thus disposed the men, the outlet is commonly begun by the pawns, which march straight forward in their own file, one house at a time, except the first move, when they may advance two houses, but they never move backwards: the manner of their taking the adversary's men is sideways, in the next house forwards; where, having captured the enemy, they move forward as before. The rook goes forward or cross-ways through the whole file, and back again. The knight skips backward and forward to the next house, face one, of a different colour, with a fiding march, or all ape, and thus: kills his enemies that fall in his way, or guards his friends that may be exposed on that side. The bishop walks always in the same colour of the field which he is placed in at first, forward or backward, slope or diagonally, as far as he pleases. The queen's walk is more universal, as she takes all the steps of the fore-mentioned pieces, excepting that of the knight; and as to the king's motion, it is one house at a time, and that in any direction. As to the value of the different pieces, next to the king is the queen, after her the rooks, then the bishops, and last of all the knights. The difference of the worth of pawns is not so great as that of noblemen; however, the king's bishop's pawn is the ball, and therefore particular care is taken of him. It ought also to be observed, that whereas any man may be taken, when he falls within the reach of any of the adversary's pieces, it is otherwise with the king, who, in such a case, is only to be taken with the word check (black), warning him of his danger, out of which he must move; and if he cannot move without exposing himself to a similar inconvenience, it is check-mate, and the game is lost.

Chess-trees, or Chess-trees, in Ship-Building, are two small pieces of timber with a hole in them, bolted on each side of the floor, and placed as far before the man-mast as the length of the main-beam; their use is to confine the cuie of the main-fall, and for this purpose a rope passes through, that usually extends the clue of the fall to windward.

CHEST, in Anatomy, that part of the body which contains the heart and lungs. See BREAST and THORAX.

CHEST, in Commerce, a kind of measure, containing an uncertain quantity of several commodities. A chell of sugar, v. g. contains from ten to fifteen hundred weight: a chell of glass, from 200 to 250 feet; of coarse silk, from two and a half to three hundred weight; of indigo, from one and a half to two hundred weight; five score to the hundred.

CHEST at Chatham was established in 1783, for the benefit of maimed and supernumerated English mariners, out of which pensions are paid to such for their lives. This fund was at first raised by a voluntary monthly contribution of the mariners out of their pay, and afterwards made perpetual by queen Elizabeth.

By 43 Geo. III. c. 119, this institution was removed from Chatham to Greenwich, denominated "The Chef at Greenwich," and committed to the management of a body corporate, forming the lord high admiral of Great Britain and Ireland, the comptroller of his majesty's navy, the governor of the Greenwich hospital, and the under-treasurer of the same hospital, and denominated "The Supervisors of the Chef at Greenwich." These supervisors are empowered to appoint five persons out of the lieutenant governor, captains and lieutenants belonging to the Greenwich hospital, to be directors of the said chef, together with subordinates officers and clerks, with suitable salaries. This act contains several provisions, for the management of the funds of the institution, and ameliorating the condition of the pensioners.


CHESTER, or WEST-CHESTER, in Geography, an ancient city of Chester in England. From its proximity to the Welsh principality, and its peculiar local character, its annals embrace much curious history: and hence we shall find it necessary to give a more copious account of this, than of the generality of topographical articles. This respectable city is situated near the southern boundary of the county, on a rocky eminence, above the river Dee, and is half encircled by a sweep of that river; a circumstance that occasioned the Roman geographers to name it Deva or Deusa; an appellation that has been relinquished by later historians for that of Celtia, or Ceferea; from celere, a camp or military station, which it seems to have been made previous to Agricola's expedition to Scotland. This commander made it the head-quarters of the twentieth Roman legion, whereas the Britons gave it the name Ceur Llwyd y Gwy, or the camp of the great legion on the Dee. The Saxons styled it Legescaster, and Legessebur; but its denomination West-Chester was obtained through its relative situation to other places which have the name of Chester with some addition. Its Roman occupation is illustrated by the frequent discoveries that have been made of remains of antiquity belonging to that nation, such as coins, fluates, altars, and hypocausts, and many of them with correlative inscriptions. The walls of the present city determine the limits of the ancient; and the form in which the buildings are disposed is evidently the same as that of the Roman camp. Chester principally consists of four streets, running from a centre towards the points of the compass, and each was formerly terminated by a gate. These streets were excavated from a stratum of rock, and are sunk several feet beneath the surface, a circumstance that has been the cause of a singular construction in the houses. On the level of the streets are low shops or warehouses, and above them a gallery on each for reaching from street to street, open in front, and isolated into. These galleries, called the rooks by the inhabitants, appear curiously crowded to strangers, who, when walking in them, can hardly divest themselves of the idea of their being up one pair of stairs. Along the rows are rows of shops, and above them the higher stories, which project to the streets, and form a line with the warehouses beneath. The whole appears as if the first stories of the fronts of all the houses were laid open and made to communicate with each other; pillars only being left for the support of the superstructure.

"These rows," says Mr. Pennant, "appear to me to have been the same with the ancient velabri, and to have been a form..."
a form of building preferred from the time that the city was
puffed by the Romans. They were built before the doors,
landward between the streets and the houses, and were the
plaz, where dependents waited for the coming out of their
patrons, and under which they might while away the tedious
months of expectation. Plutarch, in the third act of his
Henry VI., describes their situation and use:

"Videmus regum ante axées et ambulacrum ejusmodi."

The streets beneath the rows were the cortas and apthbces; rings
for the various necessaries of the owners of the
houses. The streets were once considerably deeper, as is appar-
ent from the clopse, whose floors lie far below the present
pavement; and in digging foundations for houses, the Ro-
nian pavement is often discovered at the depth of four feet
below the modern." The Roman modes of fortification are
still evident in the remains of military architecture which
surround the city. The walls are in many parts guarded by
tower, mostly of a round form, and so placed as not to be
beyond bow-shot of each other, that the arrows might reach
the enemy who should attempt to scale the walls. From
Domesday Book it appears, that in the reign of Edward the
Confessor, Chelte contained 433 houses that were taxable,
bethes 37 that belonged to the bishop. It had a guild mer-
cantile, analogous to a modern corporation; so that no per-
son that was not of that society, could exercise any trade, or
carry on any commerce, within its precincts. The privileges
of the guild were maintained by two overseers, who were
selected from the principal citizens, and who received,
for the use of the city, the customs paid by strangers. A supreme
officer, called the praefect regis, or provost, had the superin-
tendence both of the civil and commercial interests. Some
particular usages prevailed in this city at that period, among
which, whenever the king came there, he claimed from every
longhouse 2 s. 6d. or capons; one cota or vat of ale;
and one reuka of butter; and whoever made bad ale,
were either to pay four shillings, or fit in a tumbril or dung-
cart. The commerce of Chelfte, according to Lucan the
monk, who lived near the time of the Norman conquest,
was even then very considerable. "The beautiful river on the
from side," he remarks, "serves as a harbour for ships from
Gocoing, Spain, Ireland, and Germany, who, by the guide-
ance of Chelte, and the industry and prudence of the mer-
chants, supply and refresh the heart of the city with abun-
dance of goods; so that, through the various confections of
the divine favour, we have wine in profusion from the plenti-
ful vintages of those countries." The principal exports
were hores and flaves; to the latter innumerable traffic the
Saxons were much addicted; and the situation of Chelte,
and the frequent wars carried on with the Welsh, confi.png it
greatly to flourish in this city. The chief of the other com-
modities exported were lead, copper, hides, horns, and cheez,
which the people of Chelte had been celebrated for making
even from the time of the Romans. Chelte, for two or
three centuries from the conquest, was the place of rendez-
vous for troops employed in the Welsh expeditions, and
frequently suffered during the contest between the two nations.
Llewelyn ap Gryffydd, in revenge for the evil inflicts his
subjects had received from Geoffrey Haugrey, who acted as
lieutenant to prince Edward, (afterwards Edward I.), carried
fire and sword to the gates of the city, and destroyed every
thing round it. These ravages were committed in 1255; and
with in two years, king Henry harminned his nobility to at-
tend him at Chelte with their vassals, that he might invade
Wales, and repay the injuries sustained by his people. This
city also was appointed by Edward I. in 1275, to receive
the homage of Llewelyn; a degradation to which that high-
sprited prince refused to submit, and was in consequence in-
volved in the war which proved so fatal to him and to his
country: his subjects being obliged to acknowledge the
sovereignty of England, and make personal homage and fealty
of their lands to Edward of Caernarvon, prince of Wales,
who received their submission in this city in 1295. Richard
II. converted Chelte into a principality, and having annexed
it to the shifte of Holt, with several lordships in Wales,
and on the borders, made an act that it should only be held
by the king's eldest son, but this was rescinded by Henry
VI., who, in 1392, fixed the city and castle, when on his
visit to Flint, where Richard was then imprisoned, through
the treachery of those in whom he had confided. The
ruins of the plague and sweating-houses rendered the six-
teenth century memorable in this city. During the happy
civil war in the time of Charles I. Chelte was particularly
distinguished for its loyalty, and consequently sustained many
fights, bravely resisting the parliamentary forces for three
years, till the siege being converted into a regular blockade,
and the garrison reduced by famine to the utmost distress,
and compelled to feed on hores, dogs, cats, &c. they sur-
rendered on honourable terms February 3, 1645-6. Within
two years the city was visited by a dreadful pestilence, which
carried off more than 3000 persons, and reduced the place
almost to a defart. In the reign of William III., Chelte
was one of the six cities appointed for the reception of an
affay-master, and permitted to issue a coinage of silver.

In reviewing the ecclesiastical state of this ancient city,
it may be needful to premise, that the kingdom of Mercia
was divided into the five bishoprics of Litchfield, Worcester,
Lyeaaster, Dorchell, and Chatte. About the year 785
the latter became incorporated with Litchfield, though its
annual payments to the pope amounted to 3000 flavers,
while that fee only advanced 3000. This, and other
evidences of its prosperity, attracted the attention of Peter,
bishop of Litchfield, who removed his episcopal seat to
Chelte, in 1753; and during the remainder of his life made
use of the church of St. John for his cathedral. This
transfer was hot of short continuance; for his successor
established himself in the former diocese, and Chelte re-
mained without a bishop till after the suppreffion of the
monasteries, when it was restored to its priorine honour by
Henry VIII. who, in 1345, made it one of his new
fees that were then formed. At this period, the church of
the abbat of the abbey of St. Werburgh was converted into a
cathedral. A very important alteration in the concerns of
this diocese was effected by the field of the new bishops. John
Bird, whose vehement opposition to papal supremacy had rec-
commended him to the favour of the rapacious Henry, who
removed him from Danger, the fee he had before occupied.
His disposition harmonized with the spirit of the times; in
15, he granted the manors and demesnes of the bishopric
to the kng, and accepted improvements and rectories in ex-
change. The fee was thus deprived of all its possessions;
and, with the exception of the single acre on which the
palace stands, and the court before it; another house adja-
cent, a little orchard called the Wyndon, two fousbes near
St. John's church, a few small tenements in the city of York,
and some lands in Broughton and Chander Thornton,
bequeathed in 1705, is completely divested of its temporal-
ties, and though the greater in extent of any in England,
is of the smallest value. St. Werburgh's abbey, from whole
possessions this fee was formed, was of great and unquestion-
able antiquity, but its origin is enveloped in the obscurity of
tradition. It is generally supposed to have been a monu-
ment, founded in 660 by Wulfherus, king of Mercia, in accordance
with the wishes of his daughter St. Werburgh; and it forms
probable
Indeed that it was raised by the Danes, when they perfected themselves of Chester, in 895. In place of the muns, a society of canons regular was established in the reign of Athelstan, by Etheldreda, the heroic daughter of Alfred. There were suppressed by Hugh Lupus, on his accession to the earldom of Chester, and a colony of Benedictines introduced in their stead. Liberal grants were made to the abbey, which continued to flourish till the general dilution. Various remains of its buildings are yet standing.

The cathedral is a spacious irregular pile, become ragged through the decay of the mouldering frame with which it is built. The lower part of the hall has a row of arches now filled up, and appears to be the oldest part of the present building; though not any of it can boast of a remote date. All the labour of the Saxons, and almost all of its refounder, Hugh Lupus, are now lost. Simon Pley left, elected abbot in 1485, limited the middle aisle and the tower, and the initials of his name are interlaid in cyphers on the capitals of some of the pillars. The columns are thick, surrounded by pilasters, with small rounded arches. Above is a gallery, with a neat stone balustrade in the parts where it is entire, and a row of large and broad pointed windows, which is the general style. With the exception of these light fragments, most of the present structure seems to have been built in the reign of the three last Henrys. The beautiful west end was begun in 1508, and the first stone laid with much ceremony. The window over the door is filled with elegant tracery; and the door-case enriched with figures and other sculpture. The descent into the church is by several steps, whence it is reasonably inferred that the present was erected on the foundation of the ancient church, which was originally on a level with the old streets. Besides the cathedral and St. Olaf's which forms a part of it, Chester contains eight parishes churches; but St. John's is only entitled to particular notice.

Within the cathedral precincts is the new county gaol, which is scarcely exceeded by any other in the kingdom. It is built with white freestone, and contains five yards, with a working-room and two day-rooms in each. The apartments for the men and debtors are separate from the others. The number of solitary cells for condemned criminals is fourteen. The principal charge incurred in building this fabric was defrayed by the income arising from the river Weaver navigation. The carpenter is performed by two companies of invalids; and has a governor, lieutenant-governor, and constable. The latter holds his place for life, and is the keeper of the prison, but appoints a deputy. The punishment of preying on death, or the pene forte et dure, for standing mute when arraigned, is paid, by Mr. Pennant, to have originated within the walls of the old goal. The puppet for the purpose was made by Edward II. in whose fourth year, Adam, a man of John, of the Woodhouses, was charged with burning his own house; and carrying away the goods. He stood mute; and, a jury having decided that he could speak if he thought proper, he was imprisoned ad dition. This was an ironical term, except five of the influence allowed, which, on the first day, was three morsels of the world bread; on the second three draughts of water out of the next puddle; and after alternately till the sufferer died. This Adam's death being certified, the statute for preying was made, as being left horrible than flaming. The superior wisdom and humanity of modern times have again altered the law, and a refusal to plead is now considered the same as pleading guilty. The walls round Chester are, in circuit, one mile three quarters, and one hundred and one yards. They are the only entire specimen of ancient fortification, those of Carlisle excepted, in Great Britain, but are now only preserved for the purposes of recreations. The continued walk on the top affords a very great variety of prospects. The Welch mountains, the Cheshire hills of Broxton, and the inflated rock of Deloton, crowned with its castle, the rich flat interposed, and the perpetually changing views of the river, are the most prominent and striking objects in this favourite tour. The expense of the repairs is defrayed by certain imposts, called marge-duite, collected at the custom-house, on all merchandise brought from beyond sea into the port of Chester. The whole annual duty is about 250L., great part of which arises from Irish linen, though the sum levied is only two-pence for one hundred yards. The gates were anciently under the protection of the Earls of Shrewsbury, Oxford, and Derby, and the principal magistrate of the city: the guard was maintained by tolls, exacted from strangers at each entrance. The Norman early invested Chester with great privileges, which were confirmed by Henry III. in whose reign its government assumed the form of a regular corporation. The succeeding sovereigns granted various charters and immunities. The date of the last charter is 1676, temp. Charles II. The corporation of Chester consists of a mayor, recorder, two sheriffs, twenty-four aldermen, and forty common-councilmen, two of whom are leave-takers, whose office it is to inform of all persons exercising trades within the city without being Freeman. The two senior officers are mayors, or receivers of the marge-duite, for repairing the walls; and two are treasurers, who are generally next in succession to the mayor. There are likewise a sword-bearer, mace-bearer, and other inferior officers. The principal charitable institution is the Blue-coat School, which is situated near the north gate, and was founded, in 1706, by Bishop Stratford, and endowed for the complete maintenance of thirty-five boys for four years. A sufficient sum was allowed to bind them apprentices at the expiration of that time. Various alms-houses are dispersed through the city: the chief of these is for forty decayed freemen, aged sixty or upwards, who are allowed 4l. annually, and a gown every third year. The infirmary is a handsome structure, situated in an airy spot, on the west side of the city. Chester is distinguished as a port of provincial metropolis, being a place of occasional residence to many of the gentry of the neighbouring counties. The only manufacture of consequence is that of gloves, which are made in vast numbers, chiefly by women. Additional employment is supplied by a small manufacture of tobacco-pipes, an iron foundery, taff-mills, and some embellishments for ship-building. The latter busines is carried on to great advantage; many vessels, from 100 to 500 tons, being built yearly. These, in point of strength and beauty, are reckoned as complete and durable as those built in any port in the kingdom; the materials are entirely of British oak. A shot manufactry was likewise established in 1801. The maritime business of Chester chiefly consists of the Irish and coaling trade. Great quantities of linen cloth are imported from Ireland; and, for the better accommodation of the merchants, a new hall was erected in the year 1778: this is a handsome square brick building, including a spacious area, and containing 111 shops. Besides linen, the com-
modeties imported are, wood, hides, tallow, feathers, butter, provisios, and other articles, from Ireland; groceries, from London; timber, hemp, flax, iron, and tallow, from the Baltic; kid and lambkins, from Lago-horn; fruit, oil, barns, and cork, from Spain and Portugal; and from the latter, a large quantity of wine. The exports are, coal, lead, lead-ore, calamine, copper-plates, calt-iron, and salt quarters of cheese, with which vessels are laden at various times for London from the large cheese warehouse on the river. The limits of the port extend, on the Chefther side of the Dee, to the end of the Werrell; and on the pinntelmire side to the mouth of the Crayvoll; yet the number of ships is but small in proportion to the extent of the commerce. The port of Chelfer was much improved during the last century. The great breadth of the estuary of the Dee, and the comparative smallness of the body of water flowing through it, rendered it liable to be choked up with the sand brought in by the tide; and this gradually so increased, that in the year 1674, vessels of twenty tons could scarcely reach the town; and ships of burthen were obliged to lie under Netton, ten miles lower, which was the origin of that assemblage of house on the adjacent shore, called Park Gate. In that year a plan was formed by Mr. Andrew Yarrenton, to make a new channel for the river, and at the same time to recover, by embankment, a large tract of land from the sea. Between the years 1750 and 1752, a company was established to execute this project; and different powers were granted from time to time by parliament; but the first operations were so expensive, that many sub- 

The county round Manchester, 410. Pennant's Tours in Wales, and Tour from Chelfer to London.

CHESTER, a township of Nova Scotia, in Lunnabenough county, in Mahone bay, first settled by a few families from New England. The road from this place to Windsor is 25 miles.—All, a small plantation of Lincoln county, in the district of Maine; 9 miles from Titcomb.—All, a township of Hampshire county, in the state of Massachusetts, adjoining Westfield on the E. and about 20 miles N.W. of Springfield. It contains 177 houses, and 1119 inhabitants. —All, a large and pleasant township of Rockingham county, in New Hampshire; 21 miles in length, with a lake on the west side, the waters of which flow into Merrimack river. This township was incorporated in 1723, and contains 1392 inhabitants, chiefly farmers. It is situated on the E. side of Merrimack river, 14 miles N.W. of Haverhill; 35 W. by S. from Portsmouth, and 6 N. from Londonderry. This is a port town, and contains about 60 houses and a congregational church.—All, a township of Windor county, in the state of Vermont, 11 miles W. by S. from Charlestown, in New Hampshire, containing 984 inhabitants.—All, a borough and port-town in Pennsylvania, and the capital of Delaware county; pleasantly situated on the west side of Delaware river, near Marcus borch, and 13 miles N.E. of Wilminglon, and contains about 60 houses, a court-house, and a gaol. The first colonial assembly was convened here in December, 1682. This place is the resort of much company from Philadelphia, the metropolis, distant 20 miles by water, and 15 by land, in the summer season. It was incorporated in December, 1795, and is governed by two burgesses, a constable, a town-clerk, and three officials.—All, a county in Pennsylvania, W. of Delaware county, and S.W. of Philadelphia; about 45 miles long, and 30 broad; containing 33 townships, of which West-Chester is the thirc town, and 27,957 inhabitants, of whom 149 are slaves. In the northern parts of this county is found iron ore, which employs six forges, and producing about 1000 tons of bar-iron annually.—All, a court-house in South Carolina, 22 miles S. of Pinckney court-house, and 38 N.W. of Columbia. —All, a navigable river on the eastero shore of Maryland; rising two miles within the Delaware state from two sources, Cyprus and Andover creeks, which unite at Bridge-town; purifying its course nearly S.W. after falling Chester S. nearly three miles, when it receives S.E. creek, and 15 miles further in a S.W. direction; and discharging itself into Chesapeak bay, at Love point. At its mouth it forms an island, and by a channel on the E. side of Kent island communicates with Eastern bay. It is proposed to cut a canal, about 11 miles long, from Andover creek, 1/2 mile from Bridge-town, to Salisbury, on Upper Duck creek, which falls into the Delaware at Hook island.—All, a small town in the county of Shannandoa and state of Virginia, situate on the point of land that is formed by the junction of Allen's, or North river, and South river, which form the Shannandoa; 16 miles S. by W. from Winchester. N. lat 39° 3' W. long. 78° 22'.—All, a county of Pinckney district, in South Carolina, lying in the S.E. corner of the district on Wateree river, and containing 6866 inhabitants, of whom 5866 are whites, and 938 slaves. It lends two representatives, but no senator, to the state legislature.—All, a town in Cum- in Cumberland county, Virginia, situate on the S.W. bank of James river; 15 miles N. of Blandford, and 6 S. of Richmond.

CHESTERFIELD is a large but irregularly built town, situated on the west side of the river Rother, in Derbyshire, England. Its name decidedly implies that it originated.
originated from a Roman station; as all places whose ap-
propositions begin or terminate with "Chester" were occupied by the Romans during their residence in Britain. The Rev. Mr. Pegge, in the 12th vol. of the "Archaeologia," observes, that the Roman road from Derby to York passed this way; and that the fortress, or camp, was on the hill called Tapton or Tupton, but distinguished in several ancient writings by the name of Castle-hill. Chelferfield, at the time of the Norman Survey, appears to have been of so small importance as to be noticed in Domesday Book only as a bailiwick, belonging to Newbold, which is now a small hamlet at a short distance to the north. After this period, it rapidly increased, both in size and population: a church, erected here towards the end of the eleventh century, was given by William Rufus to the cathedral at Lincoln. In the reign of King John, the manor was granted to William de Briwere, or Bruere, his particular favourite, through whose influence with the king the town was incorporated, and an annual fair of eight days continuance and two weekly markets obtained. The Stanhope's derive the title of earl from this town. Chelferfield has been particularly distinguishd from a battle fought here in 1135, temp. Hen. II. between Henry, the king's nephew, and Robert de Ferrers, earl of Derby. After the discomfiture of the barons at Eyeworth, this earl bound himself by an oath to a forfeiture of his estate and honours, if he should join his party again; but after some proceedings in the parliament held at Northampton in 1266, which were obnoxious to the barons, he, in the spring of the ensuing year, again assembled his followers in his castle at Duffield, and, being strengthened by several disaffected nobles, advanced and took poit at Chelferfield; where he was surprized by the forces of Henry, and, after a severe conflict, defeated and taken prisoner. The church, which is said to have been dedicated in the year 1253, is a spacious handsome building, in the form of a cross, but more particularly remarkable for the appearance of its spire, which rises to the height of 250 feet; and is so singularly twisted and dilated, that it seems to lean in whatever direction it may be viewed. An hospital for lepers was founded in this town previous to the tenth of Richard I., and continued till the time of Henry VIII.

Here was also a guild, dedicated to St. Mary and the Holy Cross; several other guilds are mentioned in ancient writings belonging to the corporation: from the chapel of one of them, called St. Helen's, the grammar-school is supposed to have received the name Chapel-school, by which it is generally known. This school was founded in the reign of Queen Elizabeth, and was formerly the largest in the north of England: both the master and usher are clergymen. The present school-house was erected in 1770. In the market-place, a neat town-hall was built a few years ago, under the direction of Mr. Carr of York; on the ground-floor of which is a gallery for debtors, and a residence for a porter; and on the second floor a large room for holding the sessions, &c. Several almshouses have been endowed in different parts of the town. The charter, granted by King John, has been confirmed and enlarged by several succeeding sovereigns. The government of the town till the reign of Elizabeth appears to have been exercised by an alderman and twelve brethren; but the charter of incorporation granted by her, vefi it in a mayor, six aldermen, six brethren, and twelve capital burgesses; who are assisted by a town clerk. By an ennumeration made in 1788, it was found that Chelferfield contained 801 houses, and 5626 inhabitants. Since that time its size and population have increased, as appears from the returns under the late act, by which the number of houses was ascertained to amount to 929, and of residents to 4257. The support of the latter is principally derived from the iron-works of the town and vicinity, and the manufacture of stockings. Some additional employment arises from three potteries for earthenware; from a carpet manufactury; and from the making of shoes, of which a large quantity is annually sent to the metropolis. Chelferfield is 150 miles N.W. from London.

CHERESFIELD, a township of America, in the county of Hampshire, and state of Massachusetts, 14 miles N.W. of Northampton, containing 185 houses, and 1183 inhabitants. -Also, a township in Cheshire county, New Hampshire, on the east bank of Connecticut river, having Wellesmer's to the north, and Hinfield to the south. This township was incorporated in 1752, and contains 1905 inhabitants. It lies about 25 miles S. by W. from Charlestown, and about 90 or 100 W. from Portsmouth. Welf river mountain in this township has frequently alarmed the inhabitants with explosions and columns of fire and smoke; and in two places the rocks bear marks of having been heated and calcined. -Also, a county in South Carolina, in the district of Cheraw, in the N. Carolina line; 35 miles long, and 29 broad. -Also, a county in Virginia, situated between James and Appamatox rivers, about 30 miles long, and 25 broad; containing 14,214 inhabitants, of whom 7407 are slaves. -Also, an inlet on the western side of Hudson bay, in New South Wales, upwards of 220 miles in length, and from 10 to 150 in breadth; full 30 miles.

CHESTER-LE-STREET is pleasantly situated in a valley to the west of the river Wear, and on the Roman military way leading to Newcastle. It is supposed by Camden to be Condercum of the Romans; by the Saxons it was called Cuneagefer, and under that name became the parent of the fee of Durham; as it is only 5 miles north of Durham, and 10 south of Newcastle, lying immediately on the high road, and in the neighbourhood of numerous coal works, it has risen to importance, and promises to become still more important: its ancient and modern history will, therefore, be not uninteresting.

In 882 the body of St. Cuthbert was first removed from Holy Island, the ancient Lindsfarne, and, after a variety of misfortunes to his followers, was carried to a settlement appointed for them by the interposition of such miracles as a conjurer of the present date would refuse to own. Thee, however, bishop Eardulf pretended were sufficient to stop the wanderings of the religious party which attended the body, and whilst the place afforded a secure asylum to the sacred remains, there, in their turn, procured a respectability and reverence for the situation. Eardulf died in 902. Eighteen of the last years of his life were spent in Chester-le-Street. The saint becoming afterwards an object of more general devotion, Athelstan, in the 5th year of the pontificate of Wigerd, who succeeded Eardulf, visited the tomb in his expedition to Scotland, enriched the church by a multitude of gifts, and ordered, should he fall in the undertaking he was entering upon, that his body might be buried as near the relics as possible. In 947 Sexhelm surprised the bishoiie; but so addicted was he to the love of riches, that he oppressed not only the people, but the very persons who were officiating in the sacred duties. We are told by Symeon, that the bishop was admonished by dreams against practices so detaining, to his holy functions, and those visions were so deeply impressed upon his mind, and were attended with such affliction of body, that at length he retired from the see in the greatest distress, and was not relieved till he got without the limits of St. Cuthbert's "circle of power." In the year 995, the see, which had been enjoyed by Chelfer, was removed from it, perhaps for ever; the remains of St. Cuthbert, with every other
other sacred relics, as well as all other kinds of riches, were removed. The incidentable miracles which disturbed the province of Northumberland from the time the fee was settled at Chester, gave little opportunity for the progress of literature, arts, sciences, or manufactures. The bishops too, whilst they were abundant of miracles, appear to have left good works and real piety out of their view. Architecture had made few improvements, for the cathedral of Lindisfarne, from whence the relics of St. Cuthbert had been originally transported, was built of stone, though the monasteries of Jarrow and Monkwearmouth were also erected with the same materials. Yet with all its splendour of priory miracles, and princely homages, that of our present subject still remained of wood. All the hands between the Tyne and the Wear, comprehending the present county of Durham, were in the possession of these ecclesiastics, and obtained the title of "The Holy and Undivided City of the Most Holy Virgin," (after the example of St. Peter's Patrimony at Rome) and the inhabitants were reconciled to the church, by the idea that they were consequentially freed from every sort of military duty except that of fighting in defence of their patron saint. Nothing particular in the history of this place occurs, until the re-assertion of the bishopric by Egbert, at which time it is said by Symeon, that when the workmen were digging a deep foundation for the new church of Chester, a very great treason was discovered, hidden, it was presumed, by the officers of the avaricious Sexelme, who being obliged to abeond, left it there; but it is very probable it was a more ancient concealment; be that as it may, the bishop removed it to Peterborough, and withdrew himself from the fee to that place. Unlike, however, the generality of priests of that day, he employed the treasure upon objects, not of munificence only, but of general utility, as bridges, canals, and other public accommodations; it is therefore no wonder this good man should be perfecuted by the rest of the clergy. In 995, the fee being removed to Durham, this place lost its consideration and weight, and it is only lately that it has obtained a new importance. The present church is a hand-some stone edifice, with a nave, side aisles, and tower; the bate of the latter is of a square form, but above the roof of the church it assumes an octagonal shape apparently more modern, and is terminated by a very elegant stone spire, second only to that of Reyton, (a village up the Tyne) in the north of England. The entire height is 156 feet. The interior of the church is neat, and well preferred; it contains a singular arrangement of monuments, with effigies of the deceased ancestors of the noble family of the Lumleys. The deanery house, now the seat of the ancient family of Hedworth, commands a fine view of Lumley castle, and is surrounded by excellent meadow grounds. The manor of Chester deanery is copyhold, belonging to the bishop, and its jurisdiction is very extensive: it has a coroner, and gives name to the ward. The township, as returned under the late act, contains 1662 inhabitants, and 229 houses; most of the latter are of stone, and they are chiefly arranged in one street, nearly a mile in length.

Chesterton, a pott town of America, and the capital of the county of Kent, in Maryland. Situated on the west side of Chester river, 16 miles S.W. of George town, 38 E. by S. from Baltimore, and 81 S.W. of Philadelphia; and containing about 140 houses, a church, college, courthouse, and gaol. The college was incorporated in 1782, by the name of Washington; and in 1787, it had a permanent fund of 1250£, a year settled upon it by law. N. lat. 30° 12', W. long. 75° 57'.

CHESTNUT. See CHEST.

CHEST-ROPE, in a ship, is the same with the gurt or girt-ropes, and is added to the boat-ropes when the boat is towed at the stern of the ship, to keep her from heaving, i.e. from swaying to and from.

CHEST-TREES. See CHESTERS.

CHESULLOTH, in Ancient Geography. See CHESTE.

Chetla, in Geography, a river of Siberia, which runs into the Changara. N. lat. 70° 25'. E. long. 107° 26'.-Allo, a river of Russia which runs into the Lemen. N. lat. 67° 43'. E. long. 85° 14'.

CHE-CHOU-QUEI, a town of China, in the province of Hon-quaung; 750 miles S.S.W. of PEKING. N. lat. 30° 16'. E. long. 108° 54'.

CHE-TCHING, a town of China, in the province of Quang-chor; 8 leagues W.S.W. of HAO.-ALO, a town of China, the third rank, in the province of Kiang-su; 30 leagues S.E. of KİNGAN.

CHETECAN-HEAD, a cape on the west coast of the island of Cape-Breton. N. lat. 45° 40'. W. long. 65° 45'.

CHETIB and KERI, in Biblical Literature, the one derived from כותיב, to write, and the other from כתי, to real, are terms usually used by Jewish authors to express the difference between the reading of the MSs. and that of the printed copies of the Old Testament. The Chetib is the word adopted in the text, and is marked with a small circle above it, which refers to a different reading in the margin, named the Keri, commonly distinguished by the letter koph פ, and sometimes written in Rubbanch characters. These different readings are supposed to have been conferred by Ezra and the other 119 men of the great synagogue. With regard to the introduction of the keri and Está, the celebrated R. Dov. Remeiious observes, that during the captivity, the sacred books were lost or dispersed, and wise men, who excelled in the knowledge of scripture, were dead. Hence it happened, that the men of the great synagogue, who restored the law to its former state, found varieties in different books, and employed the knowledge they possessed in adulterating them. But in those instances, with regard to which their knowledge failed, they wrote one word, without pointing it, or wrote it in the margin, without inverting it in the text: and they wrote one word in the margin, and another in the text. Kennicott's Diff. Gen. p. 10.

CHETIMACHAS FORD, in Geography, an outlet of the river Misissippi in Louisiana, about 30 leagues above New Orleans, which, after running in a southerly direction about 8 leagues from that river, divides into two branches, one of which runs south-westerly, and the other southerly, to the distance of 7 leagues, when they both discharge their waters into the Mississippi gulf. On the Chetimachas, six leagues from the Mississippi, there is a settlement of Indians of the same name; and thus far it is uniformly 135 yards broad and from two to four fathoms deep, when the water is lowed. At its mouth in the Mississippi, some drifted logs have formed a shoal which it would not be difficult to remove; and the Indians say that no impediment to navigation occurs between their village and the gulf. The banks are higher than those of the Mississippi, and so elevated in some places as never to be over flowed. The productions are the same as those of the Mississippi, but the soil, from the extraordinary size and compactness of the canes, is superior. By proper attention the most prosperous and important settlements in that colony might be formed upon its banks.

CHETIMACHAS, grand lake of, a lake of Louisiana, near the mouth of the Mississippi, 24 miles long, and 9 broad. Lake de Porriage, which is 13 miles long, and 4 broad, communications with this lake at the northern end, b. a front 1 of a mile wide. The country bordering on these lakes...
lakes is low and flat, producing evergreen trees and other kinds of
oak; and on the eastern side the land between it and the
Chalalay river is divided by a great number of navigable
streams, occasioning as many islands. Nearly opposite to an
island, at a small distance from the south-eastern shore of the lake
of Chetnichas, there is an opening which leads to the sea,
about 150 yards wide, and having 16 or 17 fathoms of water.

CHEFAN, a town of Arabia, 6 miles south of Kahtah.

CHE-TSEN, a city of China, of the first rank, in the
province of Koe-te-choen, 875 miles S.S.W. of Peking. N.
lat. 27° 39'. E. long. 107° 44'.

CHE-TSUEU, a town of China of the third rank in the
province of Shang-tu; 50 miles N.E. of Mao.

CHE-TSUNG, one of the towns of China, of the second rank, in the
province of Yunnan, 240 leagues S.S.W. of Peking. N.
lat. 24° 50'. E. long. 108° 38'.

CHETTÉA, in Ancient Geography, a maritime town of
Africa, in Marmorica; sittuate, according to Ptolemy, in
the name of Libya.

CHETTENHAM, in Geography, a township of America,
the county of Montgomery, and state of Pennsylvania.

CHEVAGE, or CHEVAGE. In ancient, formed of the French,
chef, head, according to Bracton, signifies a tribute by
a head, or a kind of pole money, anciently paid by
such as held lands in villanage, or otherwise, to their lords,
in acknowledgment.

The word seems also to have been used for a sum of money
yearly given to a man of power, for his patronage and
protection, as to a chief, head, or leader: but lord Coke says,
that it is a great misprision for a subject to take sums of
money, or other gifts, under the name of chevage, in this
sense of the term. Co. Litt. 140.

In the first sense, Cooke observes, there is still a kind of
chevage fullfilled in Wales, called awoly: paid to the
prince of Wales for the marriage of his daughters;
ancestly by all, now only by some. Lambard writes it chivage.

The Jews allowed to live in England, long paid at Easter
chevage, or pole-money: viz. threepence per head, as appears
by Pat. S. Ed. I. par. 1.

CHEVAGNES, in Geography, a town of France, in the
department of the Allier, and chief place of a canton, in the
district of Moulins, 9 miles east of it. The place contains
8360, and the canton 6873 inhabitants: the territory includes
370 kilometres, and 11 communes.

CHEVAL, in Zoology. See Equus Caballus, horse.

CHEVAL marin. See HIPPODONTUM amphibilis. Che-
val marin is also the name given to the Synonathus hippo-
campus, by Belon.

CHEVAL de Bois, in Military Language, a wooden horse.
It is commonly formed of two planks nailed to trefoils, on
which the French used to put their horsemen when they
wished to punish them for some flight offence, as well as
girls of a debauched and bad life, when they were found
with the folders.

CHEVAL de Frise, in Fortification, a large piece of wood,
or beams, generally from 15 to 18 feet long, thick full and
travers'd with wooden pins or laches from 5 to 6 feet long,
painted and armed each of them with iron at both ends.
Chevaux de frise are made of for stopping up breaches,
and securing the avenues or passages to a camp against the
inroads both of infantry and cavalry; for rendering the
passage along gullies, ravines, and narrow places impracticable.
They are sometimes mounted on wheels with artificial fires
to roll down in an affliot on the assailants, and at other times
they are used instead of reenforcements, as also in front of
ditches in lieu of abatis. On the medal of Luscinus, is found
a kind of cheval de frise, made with spikes interposed;
being to express a fortified camp.

CHEVALER, in the Menea. A horse is said to che-
valer, when, in paffage, upon a walk or a trot, his far
fore-leg crosses, or over-laps the other fore-leg, every second
time or motion.

CHEVALERIE. This word signifies formerly what
was afterwards and is now called robelle, and took its
origin from this circumstance, that the principal exercises of
the nobles were war, julls, and tournaments, which were
carried on or performed by them on horseback. Chevalerie has,
perhaps properly enough, been distinguished into four
kinds: namely, La militaire, La regulaire, L'honoraire, and
La societé.

La chevalerie militaire, was that which was acquired by
army, and was a mark of distinguation that was con-
ferred with the obstinance of several military ceremonies,
as the girding of a sword upon them who was honoured with
the title of chevalere, the putting of gilded foals on him,
the recommending to him the punctual and manly fulfillment
of the duties and functions of his profession, and to forth.

La chevalerie regulaire was that order of chivalry or
knighthood in which one engaged to wear a certain habit, and
to carry arms for the defence of religion, and the protection of
pilgrimages to holy places, &c.

La chevalerie honoraire was that order of chivalry or
knighthood which princes bestowed on each other, and on
the first and favorite seigneurs of their courts.

La chevalerie sociale was only a particular constitution
of people who associated themselves under that title for
different purposes.

CHEVALET, in Fortification, an assemblage of several
pieces of timber for supporting a bridge of fitches or planks,
to enable a body of troops to cross a small river. Chevalets
are also used for bridges of communication in the ditch of a
fortified place between detached works.

CHEVALET d'armes, in Military Language, a sort of bell-
tent, that was formerly used in the French Service. It was
conical and somewhat resembled the wigwam of an Indian.

CHEVALIER, ANTOINE-RUDOLPH, i.e. in Biogra-
phy, a learned French Protestant, was born in 1507, at Mont-
camps, near Vire in Normandy, and studied Hebrew first
at Paris under Vatable, and then at Oxford under Pagini.
He was tutor in the French language to princes; afterwards
queen Elizabeth, and remained in England till the death of
Edward VI. He then removed to Germany, and having
married the daughter-in-law of Tremiltius, he perfected
himself in the oriental language under his direction. From
Strasburg, whither he was invited in 1550, he went to Ge-
neva; where he taught Hebrew, and published an improved
edition of Pagninus's Theocarurius. He afterwards settled at
Caeo, but the civil wars obliged him to take refuge in Eng-
lau, and was kindly received by queen Elizabeth. However,
as soon as the termination of the religious differences at Caeo
allowed of it, he returned thither; but the fatal day of St.
Bartholomew again expelled him; and in his voyage to Eng-
lau he was feiz'd with a disorder, which terminated his
life at Guernsey, where he was landed, in 1574, at the age
of 65. He translated from Syrac into Latin the " Tar-ri
Hierofylumtanum," and St. Paul's epitome to the Galatians;
and his accurate Hebrew grammar, entitled " Rudimenta
Hebraica Linguar," 4to., was printed at Wittenberg in
1574. He had undertaken a bible in four languages, but
died before it was finished, More: Gen. Bzo.

CHEVALIER, formed of the French cheval, horse, and
that of the Latin cavallus, in a general acceptation, signifies
a knight or horsemann.

From the mott remote period of modern history the title of
chevalier has been very eminent and of high consideration.
The novicite necessary for arriving at it was long and trou-
blesome.
balsome. It was requisite, in order to obtain it, to pass through the full or principal degrees that conferred nobility, and to be inadmissible in point of morals and behaviour, as well as in point of bravery and courage. The admission or reception of a chevalier was very august and magnificent; it was accompanied by a degree of pomp altogether extraordinary.

It even attracted the presence of stranger kings and emperors, whose children were not born chevaliers, and could not be received as such, but subject to the formalities prescribed for esquires and gentlemen. When all these things began to decline and get into disuse, sovereigns established different orders of chivalry. See the articles Ecuve, and Ordres de chevalerie militaire.

It is used, in Heraldry, to signify any cavalier, or horsemanship armed at all points; by the Romans called catapultarius. See bows, dow, out of use, and only to be seen in coat armour.

Chevalier, in Ornithology, chevalier aux pieds rouges of Buffon. See Scopilus caudata, the red-backed.

Chevalier of Form. Serin, the ipur-winged waterhen. See Parker jacea.

Chevalier vert, of Buffon. See Rallus bengalensis, Bengal water-rail.

Chevaliers d'armes, or chevaliers servans, form the third rank in the order of Malta. See the article Servans d'armes.

Chevaliers errans, knights errant. These were worthless, who were constantly wandering along the roads and ways in search of fine adventures and giving challenges and defiance.

Chevan. See Chian.

Chevancy Le Chateau, in Geography, a town of the Netherlands, in the duchy of Luxemburg, about 13 miles from Montmedy.

Chevantia, in our Old Law Writers, is used for a loan or advance of money upon credit.

Chevaux de Frite. See Cheval de Frite.

Chevaux bien dressés, in Military Language, horses well broken. See Cavaliere and Cavalry.

Chevaux de troupe léger, the horses of light troops. They ought to be as well condition to the horses of the heavy cavalry, though they may not be so tall and powerful. They should however be neat, active, and light, as the duty and employment of those, whom mount them, are to harass the enemy incessantly, and to drive him before them when they have an advantage over him; and also to render a retreat long and troublesome when the enemy is superior. Chevaux léger. This was a corps of cavalry consisting of 202 men called d maîtres (masters), who formed part of the guard of the kings of France. It is remarked, to the honour of this corps, that they never loll either their kettle-drums or standards. It owed its formation to Henry IV., and was originally composed of men of arms of Navarre.

Chevec, in Ornithology, Grande Cheveche of Buffon, one of the synonymous names of the Short-eared Owl, Strix brachyota. The great Brown Owl, Strix Ulula, is also called Grande Cheveche by some French authors.

Chevelle, a term used by the French Herald to express a head where the hair is of a different colour from the rest of the head.

Cheverny, in Geography, a town of France, in the department of the Loire and Cher; 7 miles S. of Blois.

Chevet du canou, in Gunney, a billet, block, or quoin, sufficient for supporting the breach of a cannon.

Chevet du mortier, a wedge placed between a mortar and its bed or carriage for elevating it with.

Chevetaile, a Military Term. The French cavalry as well as infantry were anciently conducted by chevetaillers, that is to say, captains or commissaries, who held not their commands for life, but by commutation during the continuance of a war or of a particular expedition.

Cheville d'effet, in Gunney, an iron bolt or pin, which serves to bind together the whole of a gun-carriage by traversing or running across through it. Those that have iron buckles, hinges, or staples, are called chevilles à oreilles.

Cheviot Fourvier, a large nail or bolt, by means of which the timber is placed endwise the carriage of a piece of artillery.

Chevilles de travaux militaires, artillery nails of different sizes, to suit the purpuses for which they are used.

Chevillon, in Geography, a town of France, in the department of the Upper Marne, and chief place of a canton in the district of Wally. The place contains 850 and the canton 1568 inhabitants; the territory includes 1373½ kilometres and 15 communes.

Chevilly, a town of France.

Chevis, or Kevels, in Skip-building. See Kevels.

Chevin, a name used in some parts of England for the chub. See Capito, and Fishing.

Cheviot Hills, in Geography, hills of England in the county of Northumberland, near which was a tree chaf, called Chevot, curiously "Chevy Chafe," the scene of the encounter between the Frieries and the Dogges, celebrated in the ancient popular song: 6 miles from the borders of Scotland, and 18 S. of Berwick. These hills form a regular ridge running from the S.W. where they join those of Gal- low; on the N.E., and stretching from near Berwick to the Solway firth, constitute a kind of natural rampart between the two kingdoms.

Chevire, a town of France, in the department of the Mayne and Loire; 5 miles N.W. of Bauge.

Chevisance, in the Law of England, is said to be an agreement, or composition, or bargain between a creditor and debtor; but it seems chiefly to denote an indirect gain, in point of usury, &c. In our statutes it is often mentioned, and most commonly used for an unlawful bargain or contract. See the statutes against usury, anno 12 Annae. In the flat. i. Eliz. c. 7, it is used simply in the sense explained by Dutschne, for making contracts.

The word is said to be derived from the law French chev- vier, to come to the end, or finish any thing; in the same sense as the modern French il chevester.

Chevitie and Chevisse, denote in Mem. Angl. heads of ploughed land.

Chevre, a crab or gin. A machine for razing stones, large pieces of timber, and pieces of artillery. See Crab and Gin.

Chevre, in Zoology, the goat among French writers; Chevre sauvage of Tanner is the Caucaen Ixen. See Capra Asiag. in.

Chevregny, in Geography, a town of France, in the department of the Aisne, and district of Laon; 5 miles S. of it.

Chevres, a town of France, in the department of the Charentes; 18 miles E. of Angoulême.

Chevrolet, in Artillery, an engine to raise guns or mortars into their carriages; it is made of two pieces of wood of about four feet long, standing upright upon a third, which is square: they are about a foot slender, and parallel, and are pierced with holes exactly opposite to one another, having a bolt of iron, which being put through these holes, higher or lower at pleasure, serves with a hand-spike, which takes its poise over this bolt, to raise any thing by force.

Chevetty, and Chevrum, in Zoology, the name given by French writers to the Roe. See Cervus Capreolus.

Chlvreuil, the name under which Du Prat des-
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ferbes the Cervus virginianus. Chevreuil is likewise the
French name of the Roe, Cervus capreolus.
CHEVREUSE, in Geography, a town of France, in the
department of the Seine and Oise, and chief place of a can-
ton, in the district of Verfailles; 8 miles S.W. of it. The
place contains 1753 and the canton 10,326 inhabitants; the
territory includes 110 kilometres and 21 communes.
CHEVRON, or CHEVRONY in Heraldry, one of the
honourable ordinaries of a shield, formed of two-fold lines
placed pyramidalvms, and representing two rollers of a
horse joined together, without any division.

It depends from the chief towards the extremities of the
coat, in form of a pair of compasses half opened. Thus, lie
bears a chevron, a chevron argent. See plates, Heraldry.
The chevron is the symbol of protection, fay some; or of con-
quiesence, according to others: some fay, it represents the
knight's spurs; others, the head-attire of priestesses; others,
a piece of the lift, or the barrier or fence of a park.

When it is alone, it should take up the fifth part of the
field, according to Leigh; and according to others, a third
part: when it is accompanied with any other bearings, its
breadth must be adjusted thereby.

It is borne divers ways; sometimes in chief, sometimes in
base, sometimes enarched, sometimes reversed, &c.
The chevron is sometimes charged with another chevron,
one third of its own height.

Two chevrons are allowed in the same field, but no more:
when they exceed that number, they are called chevronnes,
or chevronnés. There are chevrons of several pieces. The
dimensions of the chevron are the chevronel, which is half
the chevron, and a couple clofe, which is in space half
the chevron. See CHEVRONEL and COUPE-CLF.

A chevron is said to be abaféd, when its point does not ap-
proach the head of the chief, nor reach farther than the mid-
tle of the coat; mutilated, when it does not touch the ex-
tremes of the coat; eleven, when the upper point is taken
off, so that the pieces only touch at one of the angles;
broken, when one branch is separated into two pieces; couched,
when the point is turned towards one side of the efec-
cheon; divided, when the branches are of several metals, or
when metal is opposed to colour; and inverted, when the
point is towards the point of the coat, and its branches to-
towards the chief.

A coat is said to be chevroned, when it is filled with an
equal number of chevrons, of colour and metal.

Counter-chevroned, is when it is divided, as that colour is
opposed to metal, and vice versa.
Per Chevron, or Party per Chevron, is when the field
is divided by only two tinge lines, riling from the two base
points, and meeting in a point above, as the chevron does.

CHEVRONEL, a diminutive of chevron; and, as such,
only containing half a chevron. Morgan and Guillim tell
us, that when there are more than five chevrons in a coat,
they should be called couple-clofe; but Edmundson says,
that if there are 6, 7, 8, 9, or 10 in a coat, and they are
placed at equal distances from each other, they ought to re-
tain their name of chevronels; but in case they are placed
in pairs, then, and then only, they are to be called couple-
clofe.
The name writers also affit, that a chevron between two
chevronels should be termed " A chevron between two
couple-clofe;" but Edmundson is of opinion, that a che-
vron cotified, or a chevron between two chevronels, would be
a truer blazon, and much better understood.

CHEVRONNY, or CHEVRONY signifies the parting of
the shield, several times chevronwise: Gibbon says, che-
vronne of fix.

CHÉVROTAIN, in Zoology, Buffon calls the Musk
of Guinea, Moschus pygmeus of Erxleben, Chevrotain des
Indes Orientales. See Moschus pygmeus.

CHEVROTINE, in Military Language, a leaden ball
of a small diameter, of which there are sometimes from 66 to
166 to a pound.

CHEVROTTER, in French Music, is a term given, in
derision, by musicians to a bad shake: when a finger, in-
stead of a rapid vibration on two distinct sounds at the dif-
nent notes, of a whole tone or a semi-tone, flutters only on one
and the same note. The Italians call this pretended kind of
flakes, rfffe di capo, " a goat's cough." Early in the 17th
century, before finging had been much cultivated, while a
true shake was little known, it was common to write it
down, and even to print, an iteration of the same note at a
cloe, as a grace, when a real shake was afterwards required,
as at a clofe in G:

This appears in the Solf Musiche of Claudio Seracini of
Sienna, printed and published in 1624. We should have
supposed this to have been the caprice of an individual, had
we not found it elsewhere; but the same monotonous trill
occurs, expressed in notes, not only in songs of this period,
but is recommended to the practice of students in finging,
by the celebrated Caccini, in his Nuove Musiche, printed at
Venice, 1615.

CHEUX, in Geography, a town of France, in the de-
partment of Calvados, and dioclet of Caen; two leagues W. of
it.
CHEWASE, a town of America in the Tennesse go-
vernment; 24 miles S.W. of Tellico.

CHEWING-balls, in Farriery, a sort of balls contrived
for horses to chew, not swallowed at once; not intended as
food, but as incentives to appetite; and on other medicinal
occasions very useful to the creature. The receipt now most
extemned for these balls is this: take liver of antimony, and
of asa festuca, of each one pound; wood of the bay-tree,
and juniper wood, of each half a pound; pellitory of Spain,
two ounces: let all these be powdered together; then add
as much fine grape-juice as is necessary to make the whole
into a paste. This is to be formed into balls of about an
ounce and a half weight, which are to be dried in the sun.
These are the chewing-balls, and are to be used one at a time
in the following manner. The ball is to be wrapped up in a
linen rag, and a thread is to be fastened to this, in such a man-
er that it may be tied to the bit of the bridle, and kept in
the mouth: when the bridle is taken off, the horse will im-
mediately eat; and when one ball is consumed, another is
to be tied up, and put in its place, till the intent is an-
swered.

CHEYAM-HOI-EHOTUN, in Geography, a town of
Africa in the kingdom of Corea; 457 miles E.N.E. of Peking.
CHEYNE, George, in Biography, a native of Scot-
lund, where he was born in the year 1670, was at first intend-
ed for the church, but attending the lectures of Dr. Archi-
bald Fitzaine, he became a profeyle to his doctrines, and
determined on practicing medicine. Having taken his de-
gree of doctor, about the year 1700, he came to London,
and soon after published his opinion of acute fevers, in which
he attempts to explain the doctrine of secretion, on me-
chanical principles. His next work, on empyems, was pub-
lished in 1705, and procured his election into the Royal Soci-
ety. Arrived at a mature age, he calls this a juvenile produc-
tion, and acknowledges it was justly cenfur'd by De Moivre,
whom, and to Dr. Oliphant, he makes an apology in the
preface
che Gout," us. The newol; and the treated after contains to ihort-br which of been together nature luxuries, being which candid by year confined to the chart of Roxburgh, for whose use it appears to have been written.

As Chieve was a voluntary, the disposition to corpulence, which he inherited from nature, had so increased, by the time he attained a middle age, that he became unwieldy, short-breathed, and lethargic; alarmed at these appearances of a broken constitution, he determined on altering his mode of living, to which he justly attributed the evil; accordingly he confined himself to a milk and vegetable diet, and submitted to a total abstinence from fermented liquors. The experiment succeeded, and he was soon relieved from the most distressing symptoms of his complaint. Struck with the benefit he had received, he published in 1722, an "Effay on the true Nature and due Method of treating the Gout," together with the nature and quantity of Bath waters, and the nature and cure of most chronic diseases. As he had resided for some years, during the summers, at Bath, and drank the waters, he attributed much of the benefit he had received to them. His next publication, which appeared in 1734, was his famed "Effay on Health and Long Life," 8vo. In this he enunciates the necessity of a strict regimen, particularly in the article of diet, both in preventing and in curing diseases. It was dedicated to Sir Joseph Jekyll, master of the rolls, who had been under the author's care. In the preface the author gives an account of his former works, which he confines, where faulty, with great freedom. He is particularly severe on his own conduct, wherever he has treated other writers with levity or disrespect.

Although so much benefited by an abstemious course of living, he had not been able, it seems, to continue it, after his complaints were subdued; he once more therefore became a free lover, and indulged himself in wine, and other luxuries, but finding his complaints returning, he had again recourse to a milk and vegetable diet, and with much manifest advantage, that he continued it for the remainder of his life, which was extended to the year 1742, when he died at Bath, being 77 years of age. He had several years before, viz. in 1733, published his "English Manners," or treatise on nervous diseases of every kind, as spleen, vapours, lowness of spirits, hysteric and hypochondriac dis-eases, which he thought were more frequent, if not confined, to this country. This work became very popular. In it is contained a candid and judicious narrative of the author's case, which may be read with advantage, particularly by persons who, by inheritance, have impaired their health. For the titles and account of a few other productions, see Tilker's Bib. Med. and the Gen. Bibl. from which much of the above is taken.

CHEZE, la in Geography, a town of France, in the department of the North Coasts, and district of Loudes; 15 league S.E. of it. CHEZERY, a town of Savoy, cited to France in the year 1750.

CHEZY l'ABBEY, or CHEZI-sur-MARNE, a town of France, in the department of the Arthe, and chief place of a canton in the district of Chatou Thierry; 15 league S.S.W. of it. The place contains 1,820 and the carton 11,938 inhabitants; the territory includes 253 1/2 kilometres and 20 communes.

CHIA TERRA See Terra Cina.

CHIABERA, Gabriel, in Biography, a celebrated Italian poet, was born at Savona in 1732. He passed his elementary studies at Rome, and was received into the Roman college. He was a youth of unbounded passions, and was concerned in many disputes, one of which forced him to become an exile for many months. He at length found means to appease all animosities, and dedicated himself to literat pursuits. He was first noticed on account of some Latin verses, but he afterwards turned his talents to Italian poetry, of which he became a voluminous and highly admired author. His reputation as a poet caused him to be invited to the courts of several princes. By Ferdinand I. grand duke of Tuscany, he was munificently rewarded on account of verses composed for a dramatic exhibition given to the prince of Spain, and for others written in honour of the marriage of the princess Mary, who became queen of France. Charles Emanuel, duke of Savoy, professed him to reside at Turin; and on his refusal, made him magnificent presents, and liberally paid his expenses whenever he visited that capital. Vincent Gonzaga, duke of Mantua, was another of his patrons, and assigned him an annual pension. But nothing conducd to much to his reputation as the notice taken of him by the cardinal Barberini, himself a poet, who not only addressed to him an ode, but when pope, under the title of Urban VIII. honoured him with a brief filled with praises and high compliments. The republic of Genoa, of which he was a subject, conferred on him many honours and privileges, one of which was that of being covered when he addressed the serene college. Chabrier lived universally respected to the age of 80; he married a wife at 70, but left no children. As a poet he filled up the interval between the most flourishing and declining ages of Italian poetry. He aimed at originality, and uled to declare, that, like his countryman Columbus, "he was resolved to find a new world, or perish in the pursuit." This is perhaps to be chiefly understood of his lyrical productions, in which, it is said, that he naturalized the graces of Anacreon and the sublime flights of Pindar. He enriched the Italian verse by the introduction of various new measures. He was likewise an elegant prose writer; his "Familiar Letters" paves the graceful cale fitted to that species of composition. A collection of his most esteemed poems was published at Rome, in 3 vols. in 1718.

CHIACA, or CIACA, in Ancient Geography, a place of Asia in Armenia, between Dacula and Mentone. It had a Roman garrison, according to the Notitia Imperii.

CHIAGORAS, a river of Africa, considered by the ancients as one of those which contributed to form the Nile.

CHIAJA BECH, or KIAYA-BEJ, among the Turks, an officer whole duty or business is to serve the Aga of the Janizaries in quality of first maître d'hôtel in the name of all the corps. See KIAYA-BEJ.

CHIJA-BECH, or second lieutenant general, is the third general officer of the Janizaries. He yields in nothing to the second general officer or first lieutenant general, who is called Seyer Bayty, in point of privilege, authority, and command. Some judgment may be formed of the great power of the Aga, or chief of the Janizaries, from the rights and authority of this second lieutenant general, who is captain of the richest company, namely that of Bahr-Doury's, and governs it despotically. He is heir to his father's soldiers as die without children and parents, and he beholds at his pleasure in his subaltern or subordinate officers the governments of the cities of war or the offices called Khariz.

CHIAILS, a folk of Mongols or Moors, inhabiting Surat in the Eak Indies, w.o, as well as the modern Persia.
Persians belonging to the same class, do not consider Abubaker, Omar, and Omeyma as the lawful successors of Mahomet, but as usurpers; whereas Ali, the son-in-law of Mahomet, as the perfon who ought to have immediately succeeded to the place of the prophet; whereas the Turks, who are called 'Sunnites,' or 'Sunnites,' believe the contrary. This difference of belief is the caufe of an irreconcilable hatred between these people, which is encouraged and cherished by the princes on both sides. See SHIITES.

CHIALISH, in Geography, called also Yuldzuz, and by the Turks Karshah, or the black city, a town of Little Buccharia.

CHIAMETLAN, a province of North America in Mexico, bounded on the north by Culican, on the east by the Zacatecas, on the south by Xalafco, and on the west by the Pacific ocean. It is faid to be 37 leagues from north to south, and as wide from east to west. The soil is fertile; many mines of filver are found in the country; and it produces a great quantity of honey and wax. The native Indians are well made and warlike. The river St. Jago difcharges itself into the fea here; N.W. from the point of St. Jago. The chief town is St. Sebaffian.-Alfo, a town of Mexico, in the province of the fame name; 225 miles N.W. of Mexico. N. lat. 23° 40'. W. long. 101° 1'.

CHIAMETLAN-Island, a cluffcr of small islands in the Pacific Ocean, near the coast of Mexico. N. lat. 22° 20'. W. long. 102° 26'.

CHIAPA, a small maritime county of Afa, bounded on the north by the defert of Cochinchina, on the eait and south by the Indian fea, and on the west by Cambodia, from which it is separated by a ridge of mountains. Mr. Pennant, aftcr M. d'Anville, calls this tract Chiampa; and Sir George Staunton (Emb. vol. i. p. 364.) fubstitutes Tliampa, and fays that it appears from the fea, as a fandy tract interfeéted with rocks. Mr. Pennant informs us from an old French narrative, that the people of this country are called Loyes: and are large, muscular and well made, and have a reddifh complexion, rather flat nose, and long black hair; their dreff is very flight. The king refides at Feneri, the capital: and was tributary to Cochin-china. The productions of the country are cotton, indigo, and bad fik. Their junks are well built, and much employed in fhipping. CHIAN Marble. See Marble.

CHIANA, in Geography, a river of Italy, which joins the Ticiber, about 10 miles S. of Orvieto.

CHIANNI, a town of Italy, in the duchy of Tufcany; 16 miles S.E. of Siena.

CHIANTIL, a town of Mexico, in the province of Chiapa; 100 miles S.E. of Chiapa dos Efpanoles.

CHIAOUS, among the Turks, are officers in the corps of Janizaries. They are of three kinds or descriptions, and are distinguished by different names. The firft of these is the bar-chiaous, who as captain of the fecond Ola, or company, has the charge of regiftring thofe who enter into the corps of Janizaries. He receives them by taking them by the ear and giving them a cuff. He inflicts punishments on the guilty, and ranges the foldiers in a line, when the Aga is going to pafs, in order that each of them may have it in his power to blefs him, by repeating fome words of the Alcoran. This bar-chiaous commands two others, who are subordinate to him, each of whom is called Porta-chiaous. Neither of these is a captain, but rather a fott of lieutenant or captain-lieutenant. But their duty is to caufe the sentences of the captains againft delinquent foldiers to be carried into execution. For the foldiers of that corps the fingular privilege of being judged by their own proper officers, or thofe of their own companies. It is alfo the duty of the lorta-chiaous to direct the order of march for the infantry, and more especially to faltate the ftrt with hands joined when it paffes before the general. Every bar-chiaous then, or captain of a company of Janizaries, has two captain-lieutenants, or lieutenants under his orders.

CHIAOUS, an officer in the grand signior's court, doing the bufinefs of an uffier.

The word, in the original Turkifh, signifies envoy.

He bears arms offensive and defensive, and has the care of prisoners of dilfincion. His badge is a flaff covered with filver; and he is armed with a flcimiter, bow, and arrows. The emperor ufually choofes one of this rank to fend as embaffador to other princes. The chiaous are under the direfion of the chiaous-bijebi, an officer who affifts at the divan, and introduces thofe who have bufinefs there.

CHIAPA, in Geography, a province of Mexico or New Spain in North America; bounded on the north by the province of Tabafco, on the south-eaft by Vera-paz, on the south by Guatimala, on the south-west by Soconusco, and on the west by Guaxaca. It is about 85 leagues from eaft to weft, and its breadth, where it is narrowing, is about 30, and in parts nearly 100 miles. The country abounds with fords of pine, cyprifes, cedar, oak, walnuts, and wood vines; with aromatic gums, balflam, liquid amber, tabacuha, copal, and other articles, that yield excellent balflams; and alfo with corn, cocoa, cotton, and wild cochineal; together with fruits of various kinds, as pears, apples, quinces, c.; and achicote with which the natives colour their chocolate. Chiapa has alfo a great variety of cattle; and it is particularly famous for a fine breed of hofes, in fuch elimination, that they fend their colts to Mexico, at the dilfance of 500 miles. This province teems with beafls of prey, and alfo with foxes, rabbits, and wild hogs. In the hilly parts, more efpecially, are fnares of different forts, fome of which are faid to be 30 feet long, others of a red colour, and ftaeked with white and black; which the Indians tame and even coil round their necks. The inhabitants of this province are of a fair complextion, courteous in their difpofition and manners, well fkill'd in music, painting and mechanics, and refpeftful to their fuperiors. The country is well watered; its principal river is Chiapa, which running from the north through the country of the Quelenes, falls into the fea at Tabafco.

This river enables the Chiapa to carry on a confiderable trade with the neighbouring provinces, which confifts chiefly in cochineal and flk; and of the latt commodity the wives of the Indians manufacture handkerchiefs of all colours; which are purchased by the Spaniards and fent to Europe. Chiapa is reckoned by the Spaniards as one of their poorfe provinces, becaufe it has no mines or fand of gold, nor any harbour on the South fea, yet in fize it is inferior to none except Guatimala. To the Spaniards it is of great impoftance, becaufe the strength of their empire in America very much depends upon it; and it may be eafily entered by the river Tabafco, Puerto Real, and its vicinity to Yucatan.

CHIAPA, the name of two towns in the above province: the one is sometimes called "Cividad Real," or the royal city, and the other "Chiapa de los Indos," inhabited by Spaniards. The former is a bishop's fee, and the fott of the judicial courts. It is delightfully fittuated in a plain, surrounded with mountains, and almost equally dilfiant from the North and South seas, and 100 leagues N. from Guatimala. The bishop's revenue is 8000 duetvs a year. The town is neither populous nor rich; and the Spanifh gentry who reside in it are provocably proud, and ignorant. It has feveral monaftries, a cathedral of elegant ftricture, about 400 Spanifh families, and a faubsbour, containing about 100 Indian families. The city is governed by magiftrates.
brates chosen among the burghers of the town, in con- 
sequence of a peculiar privilege granted to them by the king of Spain. The principal commerce of this place is cocoas, cotton, and sailcloth. N. lat. 17°. W. long. 66° 40'.

The other town, called "Chiapa de los Indios," belonging to the Indians, is the largest they have in this country, and lies in a valley near the river Tehuaca, about 4 leagues N.W. of "Cienfald Real." The celebrated Bartholomew de Las Casas was the first bishop of Chiapa. See the biographical article Casas. The town is large and rich, with many cloisters and churches: and no town has a greater number of Indians valuing themselves on their rank than Chiapa. On the river they have several boats, with which they often exhibit fea-fights and sieges. In the environs are several farms well stocked with cattle, and some sugar plantations. Wheat is brought thither from the Spanish Chiapa; and of this they make hard biscuit, which the poorer Spaniards and Indians carry about and exchange for cotton, wool, and such trailing things as they want. In this town there are about 20,000 Indians. The heat of the day is extreme, but the nights are cool.

CHIAPPEN, in Mythology, an idol of the savages in the valley of Tunis, near Parnassus; being their Mars, or god of war. Before they set out for battle, they sacrifice slaves and prisoners in honour of him, and smear the body of the idol with the blood of the victims. In most of their enterprises they consult Chiappen; and they previously undergo a penance for two months, abstaining from the use of salt and all commerce with women.

CHIARENZA, or CLARENCE, in Geography, a town of European Turkey, on the west coast of the Morea, not far from the Mediterranean, near the river Silius; once a considerable place, but now almost ruined; 81 miles S.W. of Livadia, and 20 W. of Corinith.

CHIARELLA, et al. clearer in a Musical Term, one of the most essential requisites in a musical composition. The definition of good music, by that spirited and inventive vocal composer, Galuppi, more frequently called Buralitto, though short, is very comprehensive: it confines (he told the author of the Present State of Music in France and Italy) to "benevolenza, chiarezza, e buona modularazione."

Clearness in music is a very different quality from clearness in literature. In prose, verse, or reasoning, vivâ voce, when a thought has been presented in the most appropriate terms, exempt from all extraneous matter, but accompanied with the accouterments necessary to its development, and intelligibility, it is clear; interesting to be too concise occasions obscurity, and in trying to be clear, we become diffused:

--- Brevis ut laboris.

obscurus fo.

In literature, the greatest secret of the art, is not the saying all that may be said, but to let that be clearly conceived which is not said. It is totally different in music: the moment we become diffused, we cease to be clear; for that as the opposite to clearness in literature, is obscurity; the opposite to clearness in music, is confusion.

A musical idea, apart from all expression, is not an operation of the mind. It arises from a kind of instinct, or, if you please, from a sentiment which takes only directa; and just as it springs from the head of the musician, it is received by the audience, without the least obscurity. We speak here of simple melody. But if harmony is added to it, each part increases complication, obscures the principal idea, and it is then that clearness is wanted.

Each phrase in music should have a character, and this character arises from the melody. If the accompaniment to this melody forms another melody of a different character from the principal part, and is interposing, to which should we attend? there will then be a confusion.

To make use of a term in painting, upon these occasions, when there are many melodies in motion at once, we should aim at transparency; the several parts should be heard through each other.

M. Fraymery, in the Encycl. Meth., has extended this article, and pointed out the several causes of confusion and obscurity: one of which he says, and perhaps with truth, is the present rage for modulation, which destroys the unity of melody, and calls off the attention from the melody to the harmony; breaks the chain of thought, and drives us from the mind the original motive, and like fumes that is too acid, or too sweet, totally destroys the flavour of the principal voice. See Transparency, Melody, Modulation, Charge, and Laboured Accompaniment.

Though clearness is a common epithet, and well understood in common things, it is peculiarly necessary to be explained as applied to music. In compositions of many parts, when the principal melody is not disturbed by the two great complication or activity of the subordinate parts; when not only the principal melody is heard through the cell, but that every part carrying on a particular design, can be distinguished without confusion; here it is that the word transparency might be usefully admitted into the musical technique. However numerous the parts, the principal, the best or most intercalating melody should be respected, to whatever part it may be allayed. When many designs are carried on at the same time, as in double fugues with counter subjects, in writing which, as the composer's talk is difficult, is that of the hearer; as the science of the one is on the stretch, to is the attention of the other.

The composer should never forget the place and the audience for which he is at work. In productions for the church, where tranquility and profound attention are supposed to reign, learning and complication are more likely to be understood than in a theatre, where the interest of the drama, the beauty of the poetry, the gestures of the actors, the pomp of representation, all combine to attract the attention of the audience from the labours of the musical composer. These considerations not only furnish an apology for a thin score in opera fongs, but render it an object of praise. Clearness in dramatic music is so much more necessary than in that of the church or even chamber, as the objects that distract the attention of the audience are so numerous.

CHIARI, FRABRIZIO, in Biography, a painter and engraver of considerable reputation in his profession, was born at Rome in 1621, and died in 1655. He made several etchings from Poulsen, which, though slightly executed and incorrectly drawn, manifest the hand of a master; among others are the following, viz. "Mars and Venus in a Landscape," "Venus and Adonis," and "Venus with Mercury and several children." Strutt.

CHIARI, GIUSEPPE DE JOSPH, an eminent historical painter, was born at Rome, in 1641, and having studied the arts of design under Galliani, placed himself under the celebrated Carlo Maratta, whose style he copied and with whom he so ingratiated himself, that he was entrusted to finish several of his pictures and designs, and recommended to other employment. As he advanced in reputation, he was engaged in many great historical works for churches and palaces, while he exercised himself in fancy compositions. His pictures, in which he exhibited delicacy of touch, an agreeable tone of colouring, and elegance and correctness of drawing, have been held in high
high estimation. What he wanted in genius, says Mr. Fustel, he strove to supply byindustry, moderation, and judgment. He died at Rome in 1727.

CHIARI, in Geography, a town of Italy, in the Breffian, between Brescia and Crema; 12 miles W. of Brescia.

CHIARO SCURO, & OBSUCRO, among Painters. See CLAIR obscur.

CHIARMONTE, in Geography, a town of Sicily, in the valley of Noto; 25 miles W. of Syracuse.

CHIASCIO, a river of Italy, which runs into the Tiber, near Terni.

CHIALESSI, a town of Italy, in the country of Frilà, belonging to the state of Venice; 7 miles W. of Palma-la-Nueva.

CHIASMOS, in Ancient Greek Medical Writers, is the concourse or meeting of any two things under the same figure of a cross, or the letter χει, whence it is named. The adverbs χειρι, and χειρικος, signify the same thing; thus the optic nerves are said to meet χειρικος, so as to cross each other.

CHISTOS, the name of a bandage in Oribabius, so called from its resembling a cross, or the letter X.

CHISTOS, in Rhetoric, the name with what is otherwise called diadetes.

CHIVAY, in Geography, a town of Peru, in the province of Chicón; 120 miles N.W. of Potosí.

CHIAYARI, a town of Guinea; 15 miles W.N.W. of Brugateau.

CHIAVEMA, County of, a country of Switserland, in alliance with the Grisons, situated at the foot of the Rhätis Alp, N. of the lake of Como; about 8 leagues long and 6 wide. This country is fertile in wine and pastures; the inhabitants raise a considerable quantity of flax, but not corn sufficient for their wants, which they procure from their neighbours for cattle, wine, and flax. The inhabitants are Catholics, and dependent in spiritual matters on the bishop of Como. The country of Chiavenna came under the sovereignty of the Grisons at the same time and in the same manner with the Valdés. During the war of the Valdés, it frequently changed its masters; but at the peace of Milan, was finally restored to the Grisons. It is ruled, like the other provinces, by a Grison governor, under the name of commissary, whose whole power in some instances is less limited than that of the judges of the Valdés. The criminal court of justice is formed by the commissary and the affessor, who is appointed by the commissary, from three candidates nominated by the country. He must attend all examinations, concur in ordering torture for the conviction of a criminal, be present when it is inflicted, and ratify the final sentence; but as the affessor owes his place to the commissary, and shares in his exactions, he is a mere eyer, and seldom ventures to exert his right of interfering to a negative. This circumstance renders the courts of justice in Chiavenna more uniformly inequitable than even those of the Valdés; for the close union between the commissary and affessor almost precludes a chance of redress, and gives unbounded scope to oppression. The mode of proceeding established in this court of justice is similar to that of the Valdés, which fee. In civil causes the commissary receives 5 per cent. of the contended property, and an appeal from his decision may be submitted to the syndicate.

CHIAYENNA, the capital of the above county, is situated at the foot and upon the side of a mountain, and contains about 3000 persons. The inhabitants carry on but little commerce. The principal article of exportation, excepting the stone-pots called "Lawezzi," is raw silk, of which the whole country produces about 7500 pounds. A manufacture of flax flockings, the only one in the town, has been lately established. The neighbouring country is covered with vineyards; but the wine is of a meagre sort, and only a small quantity of it is exported. The great support of Chiavenna is the transport of merchandise;—this town being the principal communication between the Milanece and Germany, and from hence the goods are sent either by Coire into Germany, through Fregaz and the Engadine into the Tyrol. A duty is laid by the Grisons upon all the merchandise which passes through Chiavenna; but it is so small, that the whole customs, including those in the Valdés, are farmed for 17,000 florins, or about 1260l. per annum.

The principal object of curiosity in the environs is the fortress in ruins, seated upon the summit of a rock, which overlooks the town, once celebrated for its almost impregnable strength. The strongest part of the fortress was constructed upon an insular rock, rent, as some suppose, from the contiguous mountain, by a violent convulsion of nature. Others suppose that the separation of this rock was the work of art, and aefume to its order of Galeazzo Vicentini, in 1343. The length is above 250 feet, the height about 200, and the greatest distance from the adjoining rock about 20. Close to Chiavenna is a rock of asterlost. Coxer's Travels, &c. vol. iii.

CHIAULSA, a town of Mexico, in the province of Tlascalen; 20 miles S.W. of Puebla de los Angeles.

CHIAYORIO, a town of Germany, in the duchy of Carinthia; 8 miles S.of Traves.

CHIAYUSI, among the Turks, officers employed in executing the visitations, bailiffs, and other great men; the orders for which the grand signior sends them wrapped up in a black cloth, on the reception of which they immediately perform their office. See CHIADUS.

CHIBARAOI TAI KIAIEN, in Geography, a post of Chinela Tartary; 6 leagues N of Geho.

CHIBI, in Zoology, the name of the domestic cat in Paraguay, according to Mr. d'Aza, in his history of the quadrupeds of that country. It is also called by others mbaracaya.

CHIBICOUAZON, or Mbaracaya-Goupazou, the great cat, the name by which the people of Paraguay distinguish the ocelot, according to M. d'Aza.

CHICA, or CHICHA, liquor used by the Indians of South America, in the provinces of Quito, Peru, &c. in the times of the Incas, and still very common. The method of making it is this: they steep the maize in water till it begins to sprout, and then spread it in the sun, where it is thoroughly dried; after which they roll and grind it, and of the flour they make a decoction of any strength at pleasure. It is then put into jars or casks, with a proportional quantity of water. On the second or third day it begins to ferment, and when that fermentation is completed, about two or three days more, they deem it fit for drinking. It is reckoned very cooling; and it is also exhilarating. Among other medical properties that are ascribed to it, they say it is diuretic; and to the use of this liquor the Indians are supposed to be indebted for their being strangers to the ñrangur or gravel.

CHICADEE, in Geography, a mountain of N. America, in the state of New England.

CHICAL, in Zoology. According to Hasselquist this is the name of the common jackal in Turkey.

CHICALY, or CHICALY-CHICALY, in Ornithology, a bird very common in the woods of the illusmus of Panama. It is described by Wafer. (Dampier's Voyage) as a bird of great beauty. Bachelier also speaks of it (Voy. aux Indes Occidentales). The note of this bird, according to these writers, approaches that of the cuckow; but the per's...
and more rapid. The plumage is elegantly diversified with a variety of lively colours, as red, blue, &c.; the tail is long, and the bird carries it in a straight direction like the cock. It lives on wild fruits, inhabits trees, and is rarely seen on the ground. Some ornithologists have imagined this to be a species of Ara, but the true genus does not appear to be correctly ascertained.

CHICAMA, in Geography, a river of South America in the kingdom of Peru, and jurisdiction or intendancy of Truxillo; the water of which is distributed to the adjacent country by canals, and serves to render them productive, in great plenty of sugar-canes, grapes, and fruits of different kinds, both European and Creole, and particularly maize. From the banks of the river Lambayeque to Choco, sugar-canes flourish near all the other rivers; but none of them equal in goodnes or quantity those near the river Chica-

CHICANE, or Chicaneiy, in Law, an abuse of ju-
diciary proceeding, tending to delay the cause, and deceive or impose on the judge, or the parties. Some derive the word from exciun, the skin of a pomegra-
\ntate; whence the Spaniards formed their chico, little, slender; chicané being convenient about trifles.

The French call folletes, attorneys, &c. gens de chi-
cane.

Chicané is also applied to the foolish, to vain sophisms, distinctions, and substities, which immortalize disputes, and obscure the truth: as, the chicané of courts does jus-
tice.

CHICANES de juffer, chicaneiy of the duch or joffee, in Military Language, very serious and sometimes very bloody contrivances, intrigues, and attempts between the besiegers and the besieged, when the former endeavour to make themselves masters of the covert-way and the ditches. Be-
fides intrepidity and resolution on the part of both, a good deal of coolness, intelligence, and invention is required in those who conduct, on such occasions, either the attack or defence. The night is generally chosen for such enter-
prises.

CHICANGA, or Chicangn, in Geography, a kingdom of Africa, which was formerly a part of the country of Monomotapa, rich in gold mines. It is called "Manica" from the principal town, which is situated on the river Sofala, in S. lat. 20° 15', E. long. 28'.

CHICAPEE, or Chickapee, a small river of North America, in the state of Massachusetts, which rises from fe-
veral ponds in Worcester county, and running S.W. unites with Ware river, and 6 miles farther it discharges itself into the Connecticut at Springfield.

CHICAS, Chicas, or Tarija, a jurisdiction of South America, in the audience of Charcas, and belonging to the archbishopric of Plata, about 30 leagues S. of Plata; the greatest extent of which is about 35 leagues. This is now a province of the new vicereigny of Buenos Ayres. The temperature of this district is various, some parts of it being hot and others cold; and hence it has the advantage of pro-
ducing corn, fruits, and cattle. This country, every where where abundant in mines of gold and silver; and especially that part called Chocayas. Between this province and the country inhabited by wild Indians, runs the large river Tipuany, the sands of which, being mixed with gold, are washed like those of the river Caravaca. The gold mines in Chicas and Tarija, by the statement of Helms, are 41; the silver mines 55; and it has 1 lead mine.

CHICCAMOGA, a large creek of North America, which runs north-westerly into Tennessee river. Its mouth is 6 miles above the Whirl, and about 27 S.W. from the mouth of the Hillafee. N. lat. 35° 18'. The Chiccamog-
a Indian towns lie on this creek and on the bank of the Tennesse. See Chicagoes.

CHICHA. See Jollas.

CHICHACOTTA, a post on the frontier of Bootan, in the track from Bengal to Tibet; which was rendered famous by being an object of contile between the British troops, and the people of Bootan, in the war carried on upon their fron-
tier in the year 1772. As a fortification, it was then: as it is at this day, a large oblong figure encompassed by a high, bank, and thick flockade. The Bootans defended it with obstinacy, and a battle was fought in its vicinity, in which they displayed much personal courage; though it was impossi-
ble they could long contend against the superior advantage of firelocks and cannon over matchlocks, the fabre, and the bow. But though they were compelled to give way, they made Chicachotta, for a considerable time after, a post of danger and alarm, which the British troops were obliged alter-
atively to polishes and relinquish, till they were finally driven back, and purfued beyond Buxadawer or Pallaka. It was reftored at the clofe of the war, and now constitutes the Bootan frontier. The boule in the fort, to which capitulation Turner was conducted in his embassy to Tibet, was of a totally different construction from any in Bengal. The first apartment, to which the acent was by a wooden ladder, was elevated about 8 feet from the ground, and supported on forklifts: bamboo, reling on the forks, lerved as beams: the floor of one room was formed by mats of split bamboo, that of the other by pieces of plank from 3 to 6 feet long, and 1, or 1½ broad, hewn by the axe, and laid on beams of fir. A prop rode from the center of the ground-
floor to the roof, which was of thatch; and the sides of the room were encompassed by split bamboo, interwoven lattice-
wife, fo as to leave interfaces for the admission of light and air. The apartments were divided by reeds placed upright, confined at top between two flat pieces of bamboo, and rei-
ning at bottom in a groove. In the whole fabric there was no iron; the thatch was very low, projecting considerably be-
yond the walls; fo that the rooms were equally defended from the rain and wind. N. lat. 26° 35'; E. long. 85° 35'. Turner's Embafly, &c. p. 19.

CHICHE, a town of France, in the department of the Two Sevres, and the district of Thouars; 6 miles S.E. of Breuffire.

CHICHEROBE, a town of America in the state of Georgia; 20 miles N. of T'gloeo.

CHICHESTER, a city of Suffex in England, is raised on the site of a Roman fitation, on ground a little elevated in the midst of a very level tract of country. The four prin-
cipal streets, which are tolerably wide, and paved, branch off at right angles from the center of the city, in lines bearing direct towards the four cardinal points of the com-
pafs. At the end of each of these streets was formerly a fortified gateway: but these have been destroyed, and of the ancient embattled wall which formerly surrounded the city, only some portions remain. The principal of them is on the north side, where a spacious terrace was raised about the year 1755. This being covered with fine gravel and shaded by a row of lofty elm trees, affords an ornament to the city, and a pleasant promenade to the inhabitants. The whole circumference of this place within the walls is about 422 perches, or 696 feet, embracing an area of between 100 and 101 acres of land.

That Chichester was a Roman station appears evident from the termination of its present name, and from several relics peculiar to the Romans that have been found here at different times. In the year 1727 a telfellated pavement was...
was discovered near the episcopal palace: and Mr. Hay, in his recent History of Chichester, says it was the residence of the Roman, propurator, and that a heathen temple was erected here. On a place called the Revile, near the city, are the vestiges of a large encampment, the earth-works of which, according to Mr. Hay, extend about three miles in length, by one in breadth; but the Chichester guide states with more probability that it is an oblong square, of about half a mile in length, and half as much in breadth. The Roman name of this station was Regina or Regina.

During the Saxon dynasty the name was changed to Ciffa-ceifer, from Cilla, a king of the South Saxons, who, after a long reign of 74 years, died A.D. 577. From this period Ciffa-ceifer continued the seat of the monarchs of this district for above 300 years, and was attacked at different times, by the kings of Wessex, and by the piratical Danes. At the Roman conquest, there were, according to the domed-day book, one church and above 100 dwelling houses within the walls; and soon after that event, Hugh de Montgomerie was erected by the conqueror, earl of Chichester and Arundel. To secure himself in the populous town he raised a castle, and augmented the fortifications of the former place. Camden states that Chichester was taxed at this time with 13s. per annum for the king, and 10d. for the earl. The latter having obtained leave of his monarch to establish a fee in his newly acquired town, granted the whole fourth part of it to Stigandus, who was the twenty-second abbot or bishop of Selcfa, and the heir of Chichester. It appears that two or three churches were erected here, and successively destroyed, before the present cathedral was founded. This is flated by Mr. Hay to have taken place during the prelacy of Bishop Seffrid, who, "affiliated by six other prelates, consecrated the church on the second of the ides (i.e. the 12th day) of September A.D. 1189." (History of Chichester, 8vo, p. 417). Judging from the styles of architecture which prevail in this building, and from some auxiliary circumstances, we should rather coincide with Dean Litticoton in attributing to bishop Ralph the "greatest part of the inside walls of the nave, choir, and transept." This bishop was installed in 1191; he began the church in 1195, and died in 1213. He signalized himself not so much for his buildings, as for his energy and spirit in refuting the papal encroachments which were then attempted to be made under the pretense of the Cardinal de Creina, whose blameless exit from this kingdom is noted, and justly reproached by Hume, Henry, &c. in their histories of England. Bishop Ralph appears to have been liberally afflicted in the progress of his cathedral by Henry I. In the year 1187, a devastating fire destroyed nearly the whole city of Chichester; and the wood work with some other parts of the cathedral was consumed, or considerably injured. This damage was, however, repaired by Bishop Seffrid and his immediate successors; one of whom was the famous bishop Poore, who was translated from this see to that of Sarum in 1217, where he exerted and displayed his knowledge of, and taste for, architectural science in designing the present magnificent fabric at the latter city. It is extremely probable that the principal additions of Chichester cathedral, which are easily distinguishable by pointed arches and their corresponding decorations, were completed about this time. The spires of this, and that at Salisbury are traditionally said to have been built by the same person, and their general resemblance seems to justify the conclusion. Both of these are, however, of a date much later than any other parts of the fabric, but are both striking varieties of the style which prevailed during the long and pious reign of Henry III., when the architects and ecclesiastics were animated by the same enthusiastic ardour of emulation. The ornaments of the interior of this cathedral, the halls of the choir, and the tallcets paintings on the ceilings, appear to have been executed in the time of bishop Sherburn, who was translated to this see in 1505. This prelate was employed many years by Henry VII., in a diplomatic capacity, and he is said to have brought into England an Italian artist of the name of Bernardo, who was commissioned to produce an historical painting on large panels of oak, and which were to occupy both sides of the south transept of Chichester cathedral. It was intended to represent the founders and benefactors of the church. This picture, or these pictures, though extremely bad as works of art, are very curious specimens of early portrait painting, and may perhaps be considered among the earliest examples of the kind in this country. The east end of this cathedral has totally lost its original character: as the chapel of the virgin is converted into a library beneath which are large vaults for the Richmond family, and for that of Waddington; also a cemetery for that of Millar. A large number of monuments is affixed to different parts of the cathedral, many of which are not only ugly in themselves, but are highly injurious to the stability and beauty of the building. One monument among these deserves particular notice, as a memorial to genius, and a specimen of English talent. This was erected by a subscription raised among the citizens, to commemorate the name and character of Collins the poet, who was a native of this place. The monument is by Mr. Flaxman, who has displayed his usual taste and talent in its design and execution. Here are some other marble monuments by the same artist. The site, &c. of Chichester cathedral may be estimated by the following measurements:

From east to west, 410 feet; crofs ailefs, or transept from north to south, 131 feet; breadth of body and aisles at the west end 92 feet; height of the central tower and flteeple 270 feet, which is 134 feet less than that of Salisbury; height of towers at west end 95 feet, and of another tower, which stands on the N.W. side of the church, 107 feet; height of the roof, or vaulting 61 feet. The four sides of the cloisters are respectively 120, 109, and 103 feet.

The walls of the city inclose six parishes; and without the walls are two other parishes. Besides the churches here is a fine ancient market crofs, a guildhall, a market-house, and council chamber, a workhouse, a theatre, a custom-house, a prison, a work-house, and some chapels. The crofs, an elegant octagonal structure, highly ornamented, was built by bishop Story, who was advanced to this see in 1435. "There is a degree of grandeur in the design, and elegance of execution in this crofs, superior to any other structure of the same class in England." A plan with details, &c. of it is given in the Architectural Antiquities of Great Britain, vol. 1. 410. The guildhall is a spacious ancient building, situated in a retired part of the city: here was a nunnery, founded by William dean of Chichester, in the reign of Henry II. It is now converted into an hospital under the patronage of the dean and chapter, and is supported by revenues from several valuable elates. Within its walls is a neat chapel. The bishop's palace is a large pile of building, and the gardens are spacious. The river Havant nearly encircles the city, and is navigable for small vessels: but the quay or harbour is about two miles from the city walls. In the reign of king James I. an act was obtained to widen and deepen the river up to the city; but this has not yet been effected. Chichester sent members to parliament in the twenty-third year of Edward I.; and by charter granted, in the reign of James II. A.D. 1685, it is governed by a mayor, recorder,
It sends two members to parliament, who are elected by the inhabitants paying fees and lot, and certain freemen, in all amounting to about 620 voters. Besides the mayor, who is elected from the aldermen, here are four justices of the peace, before whom and the mayor most of the petty causes and litigations are tried.

Here are two weekly markets, on Wednesday and Saturday; and every Wednesday fortnight the market is very large. Here are also five annual fairs. This city is 65 miles S.W. from London, and contains 8,511 houses, and 4,744 inhabitants. Hay's History of Chichester, 8vo. 1864.

About two miles and half N. of Chichester is the village of Lavant, near which is a seat belonging to the duke of Richmond, who has another at Rawmere, and another at Goodwood, about 4 miles from the city. Four miles N.E. of Chichester is West Stoke, the cheerful residence of Lord George Lenox. A short distance hence is WestDean the seat of Lord Selsby.

Chichester, Upper and Lower, two townships of America, in the state of Pennsylvania, and county of Delaware.

Chichester, a small township of Rockingham county in New Hampshire, about 35 miles N.W. of Exeter, and 45 miles N.E. from Portsmouth. It lies on Suncook river; was incorporated in 1737, and contains 403 inhabitants.

CHICHICOCO, a mountain of South America, in the province of Quito, being a branch of the snowy mountain of Carguarito, and one of the flattens in the Cordilleras of the Andes, where the Spanish aluminers fixed a signal in measuring the degree of a meridian. While they were in this station, an earthquake occurred, which reached 4 leagues round the country.

CHICHTILI, in Ornithology. See Strix cichicthi. Lam.

CHICHTOTOTLI, the Mexican name of the silver-beaked tanager, tangara lec d'argent of Soumain.

CHI-CHOW, in Geography, an island of the China sea, not far from Formosa, which in reality consists of two islands close to each other. The southern coast of this island, on Dallymple's chart, is in N. lat. 22° 13', but by the observators of captain Marchand, who anchored in the Sound under this island, it's coast is in N. lat. 23° 4' or 5'.

CHICHELY, Henry, in Biography, an English bishop, born of obscure parents at Higham Ferrers, in Northamptonshire. He was educated at Winchelsea school, from whence he was admitted at New college, Oxford, where he took the degree of doctor in civil and canon law. He was afterwards chaplain to Robert Medford, bishop of Salisbury, by whom, in the year 1402, he was promoted fint to the archdeaconry of Salisbury, and in two years afterwards to the chancellorship of that diocese. His various talents brought him into notice, and he was employed by Henry IV., and V. in various important negotiations. He was sent embassador to pope Gregory XII. to congratulate him on his advancement to the papacy; the bishopric of St. David's becoming vacant during his absence, he was promoted to that see by the pope, who consecr him with his own hands. In 1414, he was translated to the see of Canterbury. The commons having addressed the king to seize upon the revenues of the church, archbishop Chicheley employed his talents to divert the storm. He advised the clergy to grant the king a large subsidy, and then enflamed the ambition of the monarch to lay claim to the provinces of France which had belonged to his predecessor. He went over to France with the king, and on his return before his sovereign, he caused abundance of processions to be made for obtaining the favour of heaven upon his arms, and, at the many synods which he held, exhorted his brethren to open their purses freely in support of fo just and necessary a war. He was frequently with the king in his camp, and was present with him at Paris after the surrender of that capital. In 1421, he crowned queen Catherine in London, and during that year he baptized prince Henry, who, when he came to the crown, ever treated him with a fort of filial respect. During the minority of that prince he was nominated first privy-counselor, but never exhibited any inclination to engage in matters of state, confining himself to his ecclesiastical functions. He founded a noble college and large hospital at his birth-place, and endowed them with ample revenues, which were considerably augmented by his two brothers, who were aldermen of London. In 1426, pope Martin V. exhibited some tokens of displeasure against the archbishop for having vigorously opposed certain encroachments made by the see of Rome. The prelate was obliged to make his concessions before he could be restored to favour. He was a liberal benefactor to the university of Oxford, and was the founder of the college of All Souls, one of the noblest foundations in the university. He likewise displayed much munificence by contributing large sums in awning and improving the cathedral at Canterbury, and for building Croydon church, and the bridge at Rochester. This prelate, who was greatly respected, died in 1443, and was buried in a monument which he had himself erected in Canterbury cathedral.

CHICINE, in Geography, a town of Lithuania; 3 miles N. of Rohazow.

CHICK Pet. in Botany. See Cicer.

CHICKAHOMINY, in Geography, a small navigable river of America, in Virginia. At its mouth in James river, 37 miles from Point Comfort, in Chesapeak bay, is a bar, which has only 12 feet water at common flood-time. Vessels of his tons burden may go 32 miles up the river.

CHICKAMACOMICO, a creek of America, in the state of Maryland, and county of Dorchester, which runs southward between the towns of Middle-town and Vienna, and discharges itself into Fisbing bay.

CHICKAMAGUES, a denomination given to part of the Cherokee nation of Indians in America, which occupies five villages on the Tennesse river. See Chichamogga.

CHICKASAW, an American creek, which falls from the Eull into the Wabash, a little below Fort St. Vincent. -Alleo, a river which discharges itself into the Missipp, on the east side, 104 miles N. from the mouth of Mark's and 57 S.W. of Mine-au-fer. The lakes here are excellent, and covered with a variety of useful timber, canes, &c. This river may be ascended, during high floods, upwards of 30 miles, with boats of several tons burden.

CHICKASAW Bluff lies on the eastern bank of the Missipp, within the territories of the United States, N. lat. 35°. In 1795, the Spaniards suddenly built a strong fort in this place; but it was given up by a treaty of 1796.

CHICKASAWS, a famous nation of Indians, who inhabit the country on the east side of the Missipp, on the head branches of the Tombigbee, Mobile, and Yazoo rivers, in the N.W. corner of the state of Georgia, and N. of the country of the Cheatts. This territory is an extensive plain, tolerably well watered from springs, and of a pretty good soil. They have seven towns, the central one of which is in N. lat. 34° 23', W. long. 89° 30'. The number of persons, formerly occupying this district, was reckoned to be 17,253; and of these 575 are said to have been warriors.
CHI

CHICKEN, in Ornithology, the young of the gallinaceous order of birds, and especially of the common hen. Chickens require no meat for two days after they are hatched: and they are first fed with small oat meal, dry or steeped in milk, and the crumbs of white bread: and as they acquire strength, with curds, cheese-paste, or some kind of bread, the young are fed with their food will prepare them from the rye, and other differences of the head: and care should be taken to furnish them with a proper supply of clear water. In order to have fat crowded chickens, they should be cooped up when the hen forsakes them, and fed with wheat-meal mixed with milk, and made into a paste: this diet will fatten them in about a fortnight. See Cock, Fowl, and Hatching.

CHICKEN-POX, in Medicine. See Varicella.

CHICKWEED, in Botany. See Alisleine and Arenaria.

CHICKWEED, Bajfard. See Befonia.

CHICKWEED, Water. See Callirichie.

CHICLANA, in Geography, a town of Spain, in the province of La Mancha; 22 miles N. of Ubeda.

CHICOCA, in Mythology, an idol of the African negroes, supposed to be the guardian of the dead. His nativity, composed of wood, is erected near their burial-places.

CHICOMUJZLO, in Geography, a town of Mexico, in the province of Chicapa, remarkable for a cave which has a narrow entrance, but is spacious within, having a stagnant lake, of clear water, two fathoms deep towards the banks.

CHICOMYXEN, a town of America, in the slate of Maryland; 38 miles S.S.W. of Annapolis.

CHICORACEOUS, in Botany. M. Vaillant divides plants with composite flowers into three classes or families: the cynaropholopous, the eorymbifrons, and the chicoraceous.

CHICOREE, in Conchology, the name given by the French collectors to a variety of shells which are furnished with foliated processes, as in the Murex ramphus of Linnaeus. The collectors in this country distinguish the same kind of shells by the general appellation of endives, which literally have the same meaning as the French chicorée. With scientific collectors such indiscriminate terms are not however adopted, as shells of very different genera are comprehended under this title, although the greater number of them are mucres.

CHICOVA, in Geography, a kingdom or district of Africa, having on the north, Butan; on the west, Boronos, and on the south Mocaranga, called Monomotapa. This kingdom is reported by travellers to abound with silver mines, in several parts of the country, near Zambesi, which inundates the country like the Nile, except in the month of April. S. lat. 15° 46'. E. long. 29° 30'.

CHICOYNEAU, Michel, in Biography, a native of Blois, ruffed medicine at Montpellier, and was admitted doctor in that faculty on the 6th of October, 1652. In 1659, on the death of James Durant, he succeeded to the professorship of medicine; to this post was soon afterwards added, those of anatomy and botany, with the superintendence of the royal botanical garden, much to the regret of his brethren, who were sufficiently mortified, Allrue relates, to find a young man occupying such important posts, which had hitherto been belied as rewards for age and merit. Their opposition however did not prevent his being soon after made chancellor and counsellor of state. Knowing the enmity of his opponents he was careful, by diligence in the discharge of his duties, to render their efforts to get him dismissed of his offices, ineffectual. Cheveyne became blind towards the latter part of his life, which was extended to the year 1672. He had three sons, one of whom only, his second son, survived him.

CHICOUXNEAU, Francis, was born at Montpellier, in 1672. In March, 1693, he was made doctor in medicine, and his father had interred sufficient to purchase his the reversion of the feval offices he held on his death, and get him appointed his subtiture, to perform the duties of them. When from losses of sight he was rendered incapable of reading the簿. The diligence he used in performing the duties imposed on him, and the fidelity of his transactions, gained him the esteem of both his colleagues and pupils. As he had distinguished himself equally as a practictioner and teacher in medicine, he was appointed one of the physicians who were sent to Marseilles, in the year 1720, to assist in putting a stop to the dreadful ravages of the plague, which in the end almost depopulated that city; M. Chirac, his father-in-law, who was first physician to the regent, having recommended him as qualified for that office. The attention and zeal he showed in this situation, gave complete satisfaction to the inhabitants, and was rewarded on his return to Montpellier, by a pension; and in 1731, on the death of M. Chirac, he was chosen to succeed him as first physician to the king; he was also made counsellor of state, and honorary member of the Academy of Sciences. He died in 1752, being 80 years of age. In 1751 he published "Observations et Réflexions touchant la Nature, les Événements, et le Traitement de la Peste de Marseilles," 12mo. It was the 2nd part of his life, and Meffs. Verny and Dedler, who had been joined with him in the commission. Its principal trait is the opinion contained in it, that the plague was contagious. Influenced by that opinion they had boldly entered the apartments of the diseased, and fortunately escaped infection; but the confidence hence inspired, probably contributed in spreading the disease, and making it more general, by inducing the inhabitants to neglect separating the sick from the healthy. Having received orders from the king to collect the opinions of different physicians on the plague, and particularly all the facts and observations that had been published on the subject of the plague at Marseilles, he published his collection under the title of "Traite des Causes, des Accidents, et la Cure de la Peste," with a recueil d'observations, et un détail circonstanciation des précautions qu'on a prises pour le souffrir aux bords des peuplées alliées de cette maladie, ou pour le prévenir dans les lieux qui en sont menacés." Paris, 1744, 4to. This work is drawn up with candour, and is valuable from the number of useful facts contained. His son,

CHICOUXNEAU, Aimé François, born in 1699, was made grand pensioner of Montpellier in 1732. After receiving the rudiments of his education under his father, he went to Paris, and was farther instructed by his grandfather, Chirac, Du Verny, Winlow, and Vallant. Returning to Montpellier, he was first made demonstrator in botany, an office he filled with such credit, that he obtained the reversion of the places occupied by his father, and supplied his place when he was at Marseilles, and afterwards, on his being appointed physician to the king. As he was particularly attached to botany, which he cultivated with zeal, he fet himself with diligence to repair and almost renew the botanical garden, which had been founded by Henry IV. His father having procured him the office of counsellor in the court of aids, he applied himself to the study of the law, and with such success that he was soon enabled to discourse on the subjects which came before him in that department as readily as on theof in medicine. He was an elegant Latin scholar, and his orations were admired for the purity of the language, as well as for their neatness and perspicuity. But all these good qualities were soon lost to the world, as he died in 1745, aged only 38 years. Haller's Bib. Lloy. Diet. Hall. Gen. Bing.
CHICOQUERA. in Ornithology. See Falco Chigrara.

CHICALTI, the name of a kind of finpe found in the mountains parts of India; the exact species is not distinctly known: perhaps the same with the Notius corona of Nicergren, the Indian name of which according to that author is Chinchati. Its beak, he says, is long, black, and slender; its head is marked with undulated streaks of yellow near the eyes; the breast and belly of a whitish colour, and the throat with some black feathers intermixed with white ones; the back variegated with black, yellow, and green. This bird is found principally among the mountains, where it generally runs on the ground. It is easily bred in cages, and feeds indiscriminately on various kinds of food.

CHIDNEI, in Ancient Geography, the name of an ancient people who inhabited the vicinity of the Euxine sea.

CHIDRIA, a place in the Thracian Chersonesus, which some of the Athenians, after the defeat at Aegos Potaamos, made their escape.

CHIEF, a term denoting head, or a principal thing or person. The word is formed of the French, chef, head.

We say the chief of a party; the chief of a family, &c.

Agamemnon was the chief of the Greeks who besieged Troy. The Romans sometimes refused triumphs to their victorious general, because the conduct of the chief was not as answerable to his success. The abbots that are chiefs of their order are all regular; and it is there the general chapters are held.

Chief baron. See Barons and Court of Exchequer.

Chief, in Heraldry, is the upper part of the escutcheon, reaching quite across, from side to side.

The arms of France are three golden fleurs de lys, in a field azure; two in chief and one in point.

Chief is more particularly used for one of the honourable ordinaries, drawn horizontally across the face of the shield, and containing the uppermost third part of the escutcheon.

Plate, Heraldry. When the escutcheon is cut in feme, or in relievo, the chief stands out prominent beyond the rest; and is supposed to represent the diadem of the ancient kings and princes; or the caque of the knights.

It is frequently without any ornament; sometimes it is charged with other bearings; sometimes it is of a colour of metal different from that of the coat.

The line that bounds it at the bottom is sometimes straight, sometimes indented, engraved, embattled, lozenged, &c. Thus, ray they, the field is gules, a chief argent, &c. Again, he bears, gules, a chief sable, or embattled, argent.

Sometimes one chief is borne on another; expressed by a line drawn along the upper part of the chief; when the line is along the under part, it is called a fillet. The first is an addition of honour, the second a diminution.

The chief is said to be abated, when it is detached from the upper edge of the coat, by the colour of the field which is over it; and which retrocedes from it on-third of its height. We also say a chief is chevroned, paled, or bended, when it has a chevron, pale, or bend, contiguous to it, and of the same colour with itself. A chief is said to be supported, when the two thirds at top are of the colour of the field, and that at bottom of a different colour.

Chief, in. By this is understood any thing borne in the chief part, or top of the escutcheon.

Chief jousting, in Law. See Justice.

Chief jousting of England. See Justiciary.

Chief lord, denotes the feudal lord, or lord of an honour, on whom others depend.

Chief, holding in, or tenants in. See Capital and Tenure.

Chief, pleady, is the same as heir apparent, which fee.

Chief point. See Point.

Chief rents. Reduit capitate, in Law, denote the rents of freetholders of manors; called also quit-rents, quietus reditus, because by them the tenant gets quit and free of all other services. See Quit-rents and Rents.

CHIETAIN, the chief leader, or general of an army; or the like.

CHIELLEA, in Geography, a town of European Turkey, in the Morea, near the gulf of Corom. It was taken by the Venetians in the year 1685.

CHIELESEVICH, in Ichthyology, one of the names under which Remond describes the chimoton dus, which fee.

CHIEN-SEE, in Geography, a lake of Germany, in upper Bavaria, about 14 miles long and 5 broad; sometimes filled the sea of Bavaria. It contains several islands, particularly Herrenward and Frawnend; the former being the site of a bishop, suffragan of Saltzburg, founded in the 17th century.

CHIEN DE Mousseet. See the article Serpentus.

CHIEN-VOLANT, in Zoology, the name under which Daubenton describes the great ternate bat, vespefira vampyrus, which fee.

CHIEHTUENDEN, the Persian name of the rhinoceros, according to Pietro della Valle.

CHIENTO, in Geography, a river of Italy, in the Ecclesiastical State, which runs into the Adriatic, between Fermo and Recanati.

CHIERS, a town of Piedmont, seated on the declivity of a hill, in a pleasant country, where the air is soft and salubrious: the hills on the north and east are covered with vines, and those on the west and south present to view fruit-trees of various kinds: the land is fertile, and the inhabitants are industrious, and employed in manufactures of cloth and silk. The ancient name of this town was "Chermon," or "Carium;" and by the French it is called "Quiers." Frederic Barbarossa destroyed it by fire in 1154, but it was soon after rebuilt. It is encompassed by an ancient wall, defended by towers, with a fosse; and formerly had a fortress, called "Rochetta," which was demolished in the 16th century. It has fix gates, and other grand squares or palaces, many churches, and religious houses, though it has only two parishes within the walls, and one without: 6 miles E. of Turin. N. lat. 44° 45′. E. long. 7° 36′.

CHIERS, La. a river of France, which runs into the Meuse, between Monzon and Sedan.

CHIESA, La. a river of Italy, which runs into the Oglio at Caneto, in the Mantuan territory.

CHIETI, a city of Naples, and capital of the province of AbruzziCitrea, the site of an archbishop, erected by pope Clement VII.; 75 miles E.N.E. of Rome. N. lat. 40° 29′. E. long. 14°.

CHIETTA, La. a town of France, in the department of the Jura and district of Orgelat; 11 miles N.E. of it.

CHIEVRES, a town of France, in the department of Jemappes, and chief place of a canton, in the district of Mons. The place contains 2053, and the canton 12,720 inhabitants: the territory includes 130 kilometres and 21 communes.

CHIETTI, a town of Naples, in the province of Capitanata; 13 miles S.S.E. of Termoli.

CHIFFIR, or Chifir, according to Libianus, in the preparation of the philosopher's fire, is called lapis animale as the mineral is called chrus minerals. Johnstone says, that the chrus minerals is by some interpreted gold, but that he rather takes it to be any sulphur of the metallic kind.

CHIFFLET,
CHIFFLET, John James, in Biography, equally celebrated for his political and for his medical labours, was born at Béланц, the 12th of January, 1758. Having received such education as his native city could afford him, and been introduced to the study of medicine by his father, who was in high reputation there, he went to Paris, and, in succession, to Montpellier, Padua, and other of the principal schools, diligently attending the lectures of the professors in the different branches of medicine. In 1614 he returned to Béланц, and was appointed physician and counsellor to the city, in the place of his father, now far advanced in years. His reputation increasing, he was sent on an important mission to the arch-deans Isabella-Clara-Eugenia, governor of the Low Countries, and performed his commission with so much skill, as to attach that prince to him, who retained him as her physician in ordinary. Some time after, he was sent by his mistress to Philip IV. of Spain, who made him his physician, and engaged him to write the History of the Order of the Golden Fleece. He also wrote the History and Antiquities of Béланц, which was published at Lyons in 1618, 4to.; but the work which has been most noticed, was his Vindicia Hispanica; in which he attempts to prove that the race of Hugh Capet does not descend in the male line from Charlemagne, and that the female branch of the house of Austria precedes it. This work gave great offence; the rather, that Chifflet, being a Frenchman, should set up the house of Austria before that of his native sovereign. He was answered by Blondel, Le Tanneur, and other writers, who treated him with great asperity, which he was not backward in returning. Quitting Spain, he was appointed physician to Cardinal Ferdinand, who had succeeded Isabella as governor of the Low Countries in 1633. He enjoyed the same post under the arch-duke Leopold, and his succesor, and died there in 1662, aged 72 years. He wrote also de Ampulla Remedi, laughing at the fable of the holy vase of oil, used in the coronation of the kings of France, and published a collection of treaties of peace between France and Spain. His writings, in this way, were collected and published at Antwerp, in folio, in 1639. His principal works in medicine were, "Singulares ex curatiunibus et cadaverum findicionibus observaciones. Paris, 8vo. 1614." He supposes many diseases to be produced by the influence of the stars. There are nevertheless some useful and valuable observations in this volume. "Polvis ferribusis orbis Americani ventilatus. Lo- rain, 1652, 4to." Intermittents that had been lopped by taking the Peruvian bark, frequently, he says, return, and with increased violence: he therefore diffused from using it. He had three sons, an uncle, and three brothers, who were all writers, and distinguished for learning and abilities.


CHIFFRE, French, in Music, to figure a base, to indicate the chords in thorough base, and point out the harmony of a composition to an accompaniment on a harp, lute, or keyed instrument.

CHIFUNG, among the Chinefe, the name of an herb found about Canton, by which the sailors pretend to know how many storms will happen every year. They compute from the number of knots or joints; and from the distances of the knots from the root, they determine what month the storms will fall in.

CHIGGARON, in Geography, a river of Afa, which rises in Peru, and runs into the Caspian sea, a little to the north of Amol.

CHIGGRE, a small narrow valley of Africa, in the desert of Nubia, closely covered up and surrounded with barren and pointed rocks. The wells in this valley are ten in Vol. vi.
CHILBLAIN.

Immediate manner upon its surface, where it first excites a kind of cryp القطPlate inflammation of the skin, which becomes red and painful. When the operation of the cold is violent and long continued, the skin becomes pale and insensible, an uncommon degree of anxiety and languor is produced, and at last an irremovable inclination to fall asleep; which, if the patient does not retire with all his powers, brings on a complete apathy and insensibility, that finally terminates in death. Persons, who are obliged to expose themselves to extreme cold, ought, therefore, in order to avoid the impending danger, particularly to flun the inimicable use of spirituous liquors, to keep themselves constantly in motion, never stand or sit still, or rest themselves in any manner whatever; and as soon as they perceive languor and inclination to sleep come on, they should exert their strength to the utmost, in order to accelerate their motions, and preserve the circulation of blood in the extremities.

As a frozen limb may be recovered and revived by warming it, the same may also be done with the whole body, when it has been apparently deprived of life by the operation of cold. In the latter case, however, it is not sufficient to warm the body, but the vital motions must also be restored. When, therefore, any of these actions insufficient to detect in the heart and larger vessels of a body that has been frozen, they communicate themselves, as soon as the body is warmed, to the other parts of the system, and the patient is restored to life. But when all the vital actions have entirely ceased, and the blood in the heart itself is congealed, the body may indeed be thawed, but fearfully restored to life. And as this circumstance can never be foreseen, by the surgeon, he ought never to omit trying every possible means for restoring the patient's life; nor should he be induced to relinquish the attempt by the long duration of the apathy (or state of insensibility) as frozen bodies, that have remained for four and even six days apparently lifeless, have in some instances been restored to life. See article ASPHYXIA.

It is necessary, however, that the warming of a frozen body or limb should be performed in a very gradual manner. For when a limb that has only been exposed to a violent degree of cold, (without being actually frozen,) is suddenly warmed, it becomes affected with the most violent inflammation, swells to a great degree, becomes red and blue; and intolerable pungent and throbbing pains are produced in it. The consequences, when in a slighter degree, are chilblains; in a more violent degree, real inflammation, effusion of the fluids into the cellular sublimation, and suppuration: suppose it be in the lungs, for example, a cough and catarh will ensue; in the fingers, paronychia or whitlow, &c. But when a limb that is actually frozen is suddenly warmed, the same symptoms appear in a more violent degree, and mortification speedily and inevitably ensues. Of a similar kind and origin are the changes that take place in the whole body of a person who suddenly goes into a very warm place after having been previously exposed to extreme cold. The skin swells and becomes red; a burning and prickling sensation is felt; red spots appear, which proceed from small extravasations of blood; languor, vertigo, syncope, hemoptysis, anxiety, inflammation of the lungs, &c. are produced, all in consequence of the sudden relaxation of the surface of the body and lungs, and the violent influx of the fluids into the vessels of those parts. When a person frozen to death is suddenly warmed, all hopes of restoring him to life are annihilated, and putrefaction speedily ensues.

The best method of warming a frozen limb gradually is to rub it with snow, till it recovers its powers of sensatio and motion; but this must be done with caution, for fear of destroying its continuity, which may easily happen when the part is not supported by a bone, for example, the tip of the nose and ears. Or it may be sufficient to plunge the frozen part into ice-cold water; and in order to keep the water sufficiently cold, lumps of ice should now and then be thrown into it. When the powers of sensatio and motion have been completely restored, we may wash the part with cold brandy, or oil of turpentine, camphorated spirits, hirse and fuch like stimulating fluids; or we may apply electrical sparks, upon which it generally soon recovers its natural warmth. When this has been done, it is very serviceable to administer some gentle diaphoretic remedy, such as warm tea or wine-whey; to lay the patient in bed in a chamber without a fire, and to let him remain there for two or three hours, till a gentle perspiration takes place.

When a frozen limb has been too suddenly warmed, and is very much swollen, painful, red, blue, may even black, and to all appearance already gangrenous in several places; it may nevertheless sometimes still be completely restored, and all the above mentioned symptoms removed, by plunging it immediately into ice-cold water. But it must be suffered to remain in the water, till all the symptoms have disappeared from which we may rub it, and above mentioned, with brandy, &c. and gradually warm it. This treatment now and then succeeds in cases where it could fearfully have been hoped for. No benefit, however, can be expected from it, when it has been too long deferred, that mortification has already actually taken place, which must then be treated in the usual manner. See GANGRENE.

The body of a person who has been frozen must be treated in the same manner as a single member. He must be brought into a cold chamber, laid in snow, or in a vessel filled with ice-cold water, with his nose and mouth above the surface: the necessary caution should be also used, lest any frozen part might break; and in this situation he is suffered to remain till he begins to exhibit signs of life. As soon as these are observed, strong fomentations and fomentations are to be applied to his nose; air must be blown into his mouth; tobacco-smoke should be injected into the rectum; the fauces are to be irritated with a feather, a cloth dipped in cold vinegar and camphorated spirits is to be laid over the pit of the stomach, &c. If the jaws are firmly closed, they must be rubbed with the above mentioned spirituous and stimulating remedies. When the body has thawed, and more signs of life appear, the patient must be taken out of the water, rubbed with water or brandy, left cold than the former, and brought gradually into a warmer atmosphere; gentle fomentations are also to be administered, for example, an infusion of lemon and orange-peel with a little vinegar; and after he has been carefully wiped dry, he must be laid in bed, where he should remain till a gentle perspiration comes on. If, after he has been revived, a violent inflammatory fever comes on, it is necessary to draw blood from the arm. When the patient still remains insensible; when his face and the vena of the neck are filled, so that an apple-pie is to be apprehended; the jugular vein must be opened. If after he has been revived, any part of the body exhibits appearances of being still frozen, continuing rigid, hard, inflexible and without sensation; we must cover or rush such part with snow, or with cloths dipped in cold water, till its powers of sensatio and motion are restored; but on no account, use hot applications to it. Chilblains are typical inflammations, which produce symptoms more or less troublesome in proportion to the violence of the inflammation. In its slighter degree, a chilblain is a swelling attended with a moderate redness of the skin, which produces a sensatio of heat and itching; and after some
CHILBLAIN.

Some time spontaneously disappears. In a more violent degree, the swelling is larger, redder, and sometimes of a dark blue colour; and the heat, itching, and pain are so violent, that the patient cannot use the part. In the third degree, small vesicles arise upon the tumour, which burst and produce an excoriating fluid; soon becoming an ill-conditioned ulcer that sometimes penetrates so deep as the bone, discharges a thin acrid fluid, and generally proves very obilivate. In the most violent degree, the inflammation goes on to mortification, which is frequently distinguished by vesicles filled with blood that appear upon the tumour.

Chilblains from most frequently arise from the sudden application of heat to a part that has been exposed to cold; and, once west, from the sudden exposure of a part, that has previously been heated, to the cold. Hence they frequently appear upon those parts which are most exposed to sudden transitions from one degree of temperature to another; for example, the nose, ears, lips, hands, and feet. They are more certainly produced, when the part which is suddenly exposed to cold is not only warm, but at the same time moist and sweating. Sometimes appearances much resembling chilblains, are left behind in limbs that, after having been frozen, have been restored to sensation and motion; especially if they have not been treated with proper caution. Chilblains are more apt to be produced, the more venial and tender the skin is, and the less it is used to the cold: hence the people most frequently affected with them are children, young persons, women, those who have been bred up in a delicate manner, and are used to keep themselves unnaturally warm; or those who avoid exposure to the free air, and sweat much on the feet. But even when none of these causes are present, some weakly persons are extremely subject to chilblains, and in them their production seems to be favoured by some peculiar morbid predisposition.

Chilblains almost always make their appearance in the winter. During the summer they disappear, but return the succeeding winter. Some persons are attacked with them in the autumn, and some not till the spring. With some they continue only a few weeks, with others during the whole winter. When they are violent, they frequently deprive the patient of the use of the affected limb; and even excite a fever, by which the patient is confined to his bed. Suppurating chilblains frequently penetrate to the bone, and produce caries, and sometimes death. Suppurating chilblains are (from long habit) converted into a kind of fistulas; nature thus succours herself to the discharge and irritation, which at length are supposed to be necessary to health.

The most certain means of guarding against chilblains, consists in using the skin to a moderate degree of friction, and hardening it; in not exposing oneself to heated rooms, or keeping the body too warm; in adapting the quantity and kind of clothing to the climate of ventilation, so as to avoid extremes, either in summer or winter; in washing the body frequently with cold water; in using oneself to regular exercise in the open air, even in all weathers; and in taking especial care not to go suddenly into a warm chamber, or very near the fire, out of the cold atmosphere.

A chilblain, in the first and second degrees, is a pure topical inflammation; which, however, cannot be removed by the general antiphlogistic remedies, but requires means adapted to its peculiar nature. Amongst the various remedies of this kind, there is none which always proves successful: one remedy cures one patient, another remedy succeeds with another. In relaxed and feeble habits, spirited applications are generally serviceable; and in rigid constitutions oily and emollient substances. All these remedies, indeed, only remove the chilblains for the time, and do not prevent their return the ensuing winter. When the inflammation is so violent as to excite feverish symptoms, the application of leeches and internal antiphlogistic medicines are necessary; but leeches applied to the affected part are particularly serviceable in such cases.

One of the most effectual remedies against chilblains in the milder degrees, is water reduced to the freezing point of temperature. The affected part should be dipped in it several times in the day, and kept there till the heat and itching hand which the chilblain entirely disappears. After the part has been bathed in this manner, it should be well dried by rubbing it with a coarse cloth; then covered with leather or flannel, or a diasyphon plaster, and carefully guarded against the external air. Instead of water, we may also use snow, with which the affected limb should likewise be rubbed for some minutes several times in the day, till the chilblain disappears. With some persons, who are not used to expose to the cold, who have very irritable skins, or who are much inclined to cough and colic pains, the application of cold water and snow does not agree, and with some it even increases the inflammation; so that we must be guided in a certain measure by its effects. Exposing the part affected to an extreme heat and actually scourging it, has now and then proved efficacious; but it is too painful to be prudently adopted, as a general practice.

In one case, in which the pains were not relieved by the application of cold water, (see Richter's Chirurg. Biblioth.) Mr. Schneider used a bath of quick-lime, in which the patient was directed to hold his hands for the space of half an hour every morning and evening; after which the ulcerated hands and fingers were drenched with a quart of brine, of fiev. cervin. ol. laur. & ol. terebinth. spread upon linen. As soon as the mortified part had separated, and the remaining ulcer was clean and sensible, he drenched it with Guillard's cerate, till the cure was completely accomplished. The bath was prepared by plunging a piece of quick-lime, about the size of a man's fist, into four quarts of boiling water, and flinging it till the water was reduced to a lukewarm temperature.

In some cases, ol. petre. ol. terebinth. butter of cacao, cervin. balf. Peruvian. balf. capavia, either alone or mixed with the yolk of eggs; cataplasm of rotten apples, or bruised houfe-kec, or frch turnips bruised with eggs and myrrh; or an ointment of hog's lard, olive oil, yellow wax, and pitch melted together; or frozen turnips, scraped and fried with linseed oil; or queills applied with hot oil or hot turpentine, &c. have been found very serviceable. These remedies are partly applied fresh twice a day, and partly rubbed into the affected limb, if it be not ulcerated.

In other cases, strengthening and astringent remedies prove more serviceable; and in Germany with an ointment, employ Thiden's vulnerary wash, which is particularly serviceable when the chilblains swell as the frost sets in. This remedy is applied cold to the part, which is kept for some days constantly moistened with it. Persons who are subject to annual attacks of chilblains, may guard themselves against them by washing their feet and hands every morning and evening, during the autumn, with this mixture; only it is said to be inadmissible with those who have arthritic tumours upon their limbs, as these might thereby be repelled. It has also been recommended to wash the chilblains with water boiled with flour and millard-feed; also with marine acid, diluted in water; with hot salt water; spirits of wine, or soap liniment; the fumes of hot vinegar, a decoction of turnip peel in water with a fifth part vinegar: the lower orders of people employ hot urine, either alone or with lime-water. &c.
These remedies are to be applied to the affected part several times in the day: after they have been used, the part must always be well dried, and guarded against the external air, by means of gloves, or sacks of thin leather, wrought, or flannel. Sometimes all these remedies are of no service, unless the patient abjures from using the affected limb.

For the cure of suppuring chilblains, an appropriate strengthening regimen, and a course of medicines, will be generally required. See Ulcer and Gangrene.

CHILDBY, in Embryology, sometimes febrility, the Arabian name of a fish found in the Nile, which is figured and described by Somon in his Travels in Upper Egypt. This is a fish of the Gine genus, Silura myta of Pouchail; Silura myta, pinnus dorbillun, radius fex, in circulo ovo, Arclid and Linn. Haffeiquil also describes it. Somniss observes, that it is not such bad eating as some other fishes of the Nile. This writer has nothing to add to the Linnæan description above quoted, and for which Linnaeus was indebted to Haffequil, except that the upper jaw of the chilby has two rows of little sharp-hooked teeth; that the lower jaw has but one row of those recurved teeth; and that it is all over of a pretty uniform blackish; red colour, deeper above the lateral line than below, with a few tinges of red on the nose, and at the base of the pectoral, anal, and caudal fins; and lastly, that the iris of the eye is of a golden colour. See Silurus mytaus.

CHILCA, in Geography, a town of South America, in the vice-royalty of Peru, archbishopric of Lima, and jurisdiction of Canete, is situated about 10 leagues from Lima, and celebrated for its saltpetre, of which gunpowder is made in that city. It has also a good fishery, together with plenty of fruits, pulse, and poultry, which supply a large trade between the jurisdiction of Canete and the capital, S. lat. 12° 31', W. long. 76° 5'.

CHILCAUTHL, in Ornithology, the Mexican name of the St. Domingo teal, anas dominica; called also coelcanauli.

CHILD, a word of Saxon origin, meaning the young offspring of the human species, and expressing relation to parent.

We say Natural child, Legitimate child, Putative child, Bastard child, Adoptive child, Posthumous child, &c.

Dr. Derham computes, that marriages, one with another, produce four children, not only in England, but in other parts also. See Marriage.

It is well known that children, for some time after they are born, are too fat, and too imperfectly provided; and M. Petit, (Ac. Paris, 1727. H. p. 143.) after taking a great deal of pains to investigate the cause of it, found it to be owing in part to the thickness of their cornea, and the small quantity of their aqueous humour. Not that the mere thickness of the cornea could have this effect; but because the thickness is owing to it not being well stretched, and consequently, having wrinkles and inequalities on its surface, which occasion an irregular refraction of the light. On the same account also the cornea has not a sufficient degree of convexity to bring the pencils of rays to a focus soon enough. All these defects, he says, are remedied by the increase of the aqueous humour. M. Petit ascribes this imperfection of light in infants to their eyes being composed by the fluid in which they are immersed in the womb. He also gratified his curiosity by inquiring into this circumstance reflecting various new-born animals, as dogs, cats, rabbits, calves, hogs; and he found in all of them that the cornea was thick and flaccid, and the aqueous humour not sufficiently copious. It is possible, that, besides the small quantity,
After children have attained to manhood, and have left
their father's family, their duty to parents is simply that of
gratitude; in kindred the weakest of that which we owe to
any other benefactor, but in degree so much exceeding other
obligations, as a parent has been a greater benefactor than
any other friend. The services and attentions, by which filial
gratitude may be testified, cannot be distinctly enumerated.
It will shew itself in compliances with the will of parents,
however contrary to the child's own taste or judgment, pro-
vided it be neither criminal nor totally inconsistent with his
happiness: in a constant endeavour to promote their enjoy-
ments, prevent their wishes, and soften their anxieties, in
small matters, as well as in great; in afflicting them in their
businesses; in contributing to their support, care, or better
accommodation, when their circumstances require it; in a-
fording them our company, in preference to more amusing
engagements; in waiting upon their sickness or decrepitude;
in bearing with the infirmities of their health or temper, with
the peevishnes and complaints, the unfashionable, negligent,
andrue manner, and offensive habits, which often attend
upon advanced years: for where must old age find indul-
gence, if it do not meet with it in the piety and purity of
children? In all contests between parents and children, and
more especially those that occur in relation to marriage, or
the choice of a profession or business, it is the parent's duty
to represent to the child the consequences of his choice and
conduct; and this should be done with fidelity, moderation,
and candour. Parents, however, are forbidden to interfere,
where a truth is repeated personally in the son; and where,
consequently, the son was expected, and by virtue of that ex-
pectation is obliged, to pursue his own judgment, and not that
of any other; as is the case with judicial magistrates in the
execution of their office; with members of the legislature in
their votes; and with electors, where preference is to be
given to certain preferred qualifications. In these and similar
cases the son may shew his own judgment by the opinion
and advice of his father; but his own judgment ought finally
to determine his conduct.

The duties of children to their parents arise from a prin-
ciple of natural justice and retribution. For to those, who
gave us existence, we naturally owe subjection and obedience
during our minority, and honour and reverence ever after:
they having placed us under that care to which we were enti-
ted to our protection in the infancy of our age; they
who by suffrence and education have enabled their off-
spring to prosper, ought in return to be suppli-ted by that
offspring, in case they need assistance. The Athenian laws
carried this principle into practice with a scrupulous kind of
nicety; obliging all children to provide for their father,
when fallen into poverty: with an exception to fursious
children, to whose whole chastity had been prostituted by
confent of the father, and to those whom he had not put in
any way of gaining a livelihood. Our laws agree with those
of Athens with regard to the first only of these particulars,
the care of ftursious issue. In other cases the law does not
hold the tie of nature to be diffused by any misbehaviour of
the parent; and, therefore, the child is equally justifiable in
defending the person, or maintaining the cause of a bad
parent as a good one; and is equally compellable, (Rat. 43
Eliz. c. 2.) if of sufficient ability, to maintain and pro-
vide for a wicked and unnatural progenitor, as for one who
has flown the greatest tenderness and parental piety.

The duty of children to their parents was thought wor-
thy to be made the subject of one of the ten commandments;
and, as such, is recognized by Christ, together with the rei-
of the moral precepts of the de-calogue, in various places of
the gospel. The same divine teacher's sentiments concern-
ing the relief of indigent parents appear sufficiently from
that manly and deferred indignation, with which he repre-
sented the wretched efficacy of the Jewish exploitors, who,
under the name of a tradition, had contrived a method of
evading this duty, by converting, or pretending to convert,
to the treasury of the temple, so much of their property,
as their disreputed parent might be entitled by their law to demand.

Obedience to parents is enjoined by St. Paul to the
ephemians (ch. vi. 1.) and also to the Colossians (ch. iii. 20)
upon two principles: the distinct statement of which flows
that moral rectitude and conformity to the divine will were,
in his apprehension, the fame. By the Jewish law, disobedie-
cence to parents was, in some extreme cases, capital. Deut.
See also Education.

CHILD, Dr. William, in Biography, according to Ant.
Wood, was a native of Bristol, and disciple of Elway
Bevin. In 1631, being then of Christ-church College, Ox-
ford, he took his degree of bachelor in music; and, in 1636,
was appointed one of the organs of St. George's Chapel
Windor, in the room of Dr. John Monday, and soon after
one of the organs of the Royal Chapel at White-
hall. After the restoration he was appointed chanter of the
King's Chapel, and one of the chamber musicians to Charles
II. In 1663, the university of Oxford conferred on him
the degree of doctor in music, at an act celebrated in St.
Mary's church. Dr. Child, after having been organist of
Winford chapel 65 years, died in that town, 1697, at 90
years of age. In the inscription on his grave-stone, in the
fame chapel, it is recorded that he paved the body of that
choir at his own expense; he likewise gave 20l. towards
building the town-hall at Windfor, and 50l. to the corpora-
tion to be dispofed of in charitable uses, at their discretion.

The following epitaph is also on his grave-stone in St.
George's chapel:

Go happy foul, and in thy feat above
Sing endless hymns of thy great Maker's love.
How fit in heavenly fongs to bear a part!
Before well practis'd in the sacred art;
Whiff hearing us, sometimes the choir divine,
Will sure defend, and in our comfort join;
So much the music should not want a hall,
Has made our earth to reprefent their heaven.

His works are " Psalms for Three Voices," &c. with a con-
tinued base either for the organ or theorbo; composed after
the Italian way. London, 1639. "Catches. Rounds, and
Canons," published in Hilton's "Catch that Catch can,"
1652. "Divine Anthems and Compositions to several
Pieces of Poetry," some of which were written by Dr.
Thomas Pierce of Oxford. Some of his peculiar compositions
likewise appeared in a book entitled "Court Ayres,"
printed 1655, which will be mentioned hereafter. But his
principal productions are his services and full anthems,
printed in Dr. Boyce's collection. His serice in E minor
has something more varied and interesting, in the modula-
tion, than there is in most of his other works; and in his cele-
brrated service in D major, there is a glow of rich harmony,
which, without any great compass of genius or science, is ex-
tremely pleasing, the more so, perhaps, from being compose-
d in a key which is more perfectly in tune than most others
on the organ. His full anthems are not without imagination
and free, p. 67. (Boyce, vol. ii.) "And upon our solemn fast
day, &c.," the modulation and contrivance are admirable
to the end of the anthem. His style was so remarkably easy
and natural, compared with that to which choirmen has been
accustomed, that it was frequently treated by them with de-
ription.
The Child, the act of bearing a child. See Birth and Labour.

Child-wit, a power to take a fine of a bountiful woman unlawfully gotten with child; that is, without consent of her lord. Every reputed father of a bafe child, got within the manor of Writtle in Essex, pays to the lord, for a fine, 3D. 4d. where it seems, child-wit extends to free, as well as bond-women. Quotumque fecerit child-wit, archiepiscopus aut totam, aut dimidiam emendationis partem habebit, quidcumque de child-wit. Du-Cange.

Chidermass Day, called also Innocents' Day, an anniversary fault of the church, held on the 28th of December, in memory of the children of Bethlehem, mal feared by the order of Herod.

Children, Charity. See Charity school and Hospital.

Children, Expofing of. See Exposing.

Children, naming of. See Name.

Children, Overlaying of. This is a misfortune which frequently happens; to prevent which, the Florentines have contrived an instrument called arcuato.

CHILHOWEE, in Geography, a town of America, in the Tennessee government; 25 miles S. of Knoxville.

CHILL, an extensive, rich, and fertile country of South America, reaching from the frontiers of Peru to the irrigations of Magellan, terminating towards the coast partly on the frontiers of Paraguay, from which it is separated by uninhabited deserts, and partly on the government of Buenos Ayres with the intervening pampas, or extensive and level plains, and bounded on the west by the Pacific ocean. On the north its boundary is the defart of Atacama, or Atacama (which for), extending 80 leagues between the province of the same name, being the laft of Peru, and the valley of Copoypo, or Copiapo, the first in Chili: on the east it is separated by the eastern branch of the Andes from Cuyo, in the vice-royalty of La Plata, and the savage tribes; on the south, by barren mountains and regions covered with sand and snow; and on the west, as we have already faid, by the South Sea, extending from 27° nearly, the latitude of Copiapo, to 52° 30'. Its length is computed at 1260 geographical miles, and its breadth, which depends on the distance of the Andes from the ocean, is from 24° to 32° about 210 miles, from 32° to 37° 120 miles, and thence to the islands of Chile, about 300 miles. If we comprehend within its extent the Andes, Chili may be supposed to contain about 378,000 square miles. Of this extensive and interesting country little or nothing was known till about the middle of the 15th century. At that period the native Chilian were divided into 15 tribes, each of which was governed by its own chief. About the year 1450, the Inca Yuponqui, the 10th emperor, allured by the enchanting account given of this country, undertook the conquest of it, and persecuted the enterprise with such success, that he subdued the several nations inhabiting the valleys of Copiapo, Coquimbo, and Chili; but having established his dominion in some of the northern districts, his progress farther southward was vigorously opposed by a confederacy on the part of the gallant and high-spirited inhabitants, who were determined to maintain their independence; and the Peruvian army was defeated. The Chilotes, however, who were subdued, and those who remained free and independent, pursued the same mode of life. They cultivated their lands with maize, potatoes, yuccas, and other native plants; they encouraged the breed of the camel and sheep, which supplied them with flesh for food, and with wool for clothing; and they are said to have had at this time hogs and hens, besides other beasts and birds, which belonged to their country. But though they seemed to have advanced from a pastoral to an agricultural state, their instruments of husbandry were mean and unwieldy. Their villages consisted of scattered huts; and their chiefs, who were probably raised to this dignity on account of their wealth, possessed merely a power of direction, and not of coercion. The right of property was acknowledged; the field that was cultivated belonged to him who tilled labor on it, and defended to his children. Their looms resembled those of the Europeans, though of rude fabric, and they were acquainted with the processes of manufacturing earthenware. From their mountains they extracted gold, silver, copper, tin, and lead; and of a mixture, like bell-metal, they formed axes and other instruments; although those in more general use were made of baff. It has been supposed that they were acquainted with the use of iron; and this fact seems to be doubtful. They were not strangers to业主, both solid and that produced from water by evaporation: they fixed their dyes by means of an aluminous stone, called "polaua." They prepared thread for cords and nets from one of their plants; and they possessed canoes of different ports. In numbers, it is said, they could express one thousand, and they had pros or the Peruvian gipos, a bundle of threads of various colours, with different knots to express contracts or events. The native Chilotes, being generally of a mild character, as Molina cited by Mr. Pinkerton fugitives, may probably have proceeded from the illes of Polynesia; though their colour is brown, tinged with red or copper, whereas that of the Polynesians is generally olive. The language of the Chilote, which is said radically to differ from the Quechua, or Peruvian, is remarkably rich and harmonious, and from the vocabulary, formed by Molina, it is capable of expressing most natural objects, and even abstract terms. It essentially differs, however, from the other American languages, not less in its words than in its structure. The Araucans, the present possessors of nearly one half of Chili, and celebrated for their valor in fulfilling the progres of the Spaniards, may be considered as the genuine representatives of the ancient Chilote. The beautiful tract of country which they inhabit extends from the river Biobio north to that of Valdivia south, and is bounded on the eft by the Andes, and on the west by the sea. Their people derive their name from the province Arauco, which is the smallest of their states; and they are also distinguished by the appellation of "Aucas," or freemen. Without sacrificing the useful, they are generally robust, well-formed, and of a warlike aspect. The face is nearly round; the eyes small, but lively and expressive; the nose somewhat flat; the mouth well made, with white and uniform teeth; the legs muscular and elegant, and the feet small and flat. They have naturally little beard, and take pains to extract it: and they also eradicate the hair from other parts of the body. The hair of the head, which they prefer, is black and abundant, and they bind it up in a knot. Many of their women are handsome: particularly those of Boror. They live to the advanced age of 70, 80, and even 100 years, without any perceptible decay of mind or body. Their mental qualities correspond to their bodily vigour; and they are characterized as intrepid, patient of the labors of war, prodigal of their lives in defence of their country, ardent lovers of liberty, in defence of which they are ready to make any sacrifice, jealous of honour, courteous,
curteous, hospitable, Faithful to their engagements, grateful for benefits, generous, and humane towards the vanquished. These excellent qualities, however, are tarnished with the vices incident to savage life; such as drunkenness, sloth, self-confidence, and a pride which leads them to treat other nations with contempt. The drefs of the Araucans, who are a military people, is short, wholly made of wool, and generally of a blue colour. The coathing of the women is modelled and simple; though sometimes fested off with artificial ornaments. Their hair is parted into flowing tresses, and the head adorned with false emeralds, or with the green stone called "glauca," which they highly value. They also use necklaces and bracelets of glass beads, ear-rings of silver in a square form, and numerous silver rings on the fingers. Polygamy is almost universal; and their houses are constructed so as to admit the number of wives which the owner can entertain: but their furniture is plain, and such as is merely adapted for use. Their habitations are generally dispersed over the country, and situated near the rivers; but cities are regarded by them as prisons.

Their political arrangements are suited to their discriminating character. The whole territory of Araucana, from north to south, is divided into four parallel tetrarchies; almost equal in size, and demarcated the maritime, the plain, the upland, and the mountainous. Each of these is subdivided into five provinces, and each province contains nine districts. The mountainous tetrarchy is poissled by the Puelches, formerly allies to the Araucans, but now united with them. The government is aristocratical; and they have three orders of chiefs, viz. "Toquis," from toqui, a judge, who presides over each tetrarchy, and are independent of each other, except that they confederate for the general good; "Apo-ulmens," or grand chiefs, who govern the provinces; and "Ulnems," who preside over the districts, and acknowledge no superior, except on occasions of war. The distinction of a toqui is an axe of porphyry or basalt. Thrice of the other two orders have flatts headed with silver; the apo-ulmens being distinguished by a ring of the same metal round the middle of the staff. All these dignities are hereditary, in the male line, and sole order of primogeniture. The able-bodied power is vested with the Puelches, who decide all causes of a general character, called the "Araucayag," or assembly of freemen. This congress is commonly held in a spacious meadow. Their laws, degrading to them by tradition, are called "Admapu," or customs of the country. No two dignities are allowed to concentrate in the same head; and if a family fail, the vaflals exercise the right of election another; nor are they attached to the gleebe, as in the feudal system, or confined to any personal service, except in time of war. Tributes and taxes are unknown, as each chief lives on his own estate; nor are they resented as superiors, but merely as the first among equals. Although many crimes are punished with death, yet a composition may be entered into with the relations. The ulmens are the legitimate judges of their vaflals. Whenever war is resolved on by the great council, the commander in chief is selected from the toquis; who instantly affumes the axe of stone, as the symbol of his authority; all the other chiefs take oaths of obedience; and the people, though at other times unruly, become submissive to their military sovereign. Herals are sent to the confederate tribes, and to the Indians in the adjacent districts of the Spaniards; and the badges of these heralds are bundles of small arrows bound with a red thread, and their feecery is equal to their dispatch. The general signifies to the tetrarch the number of troops that are requisite, and it is divided among the apo-ulmens, who demand the contingent from each ulmen. As every Araucan is a soldier, the levy is easily raised: and the army generally amounts to 5,000, exclusive of a body of reserve. It consists both of cavalry and infantry: the former are armed with lances and sabres, the latter with pikes, or clubs having iron spikes. Each regiment of infantry is composed of 1000, and each company consists of 100: and they have all their particular banners, besides the common badge of the nation, which is a star. Under their usual dres they wear a cloak of leather; and of this leather, which they have a peculiar mode of hardening, they make helmets and shields. They have not discovered the art of making gun-powder. On the march the infantry is mounted, but they dismount before a battle. Each folder carries his provision of parched maize, which is steeped in water. Their camp is well formed and guarded. In battle, the cavalry forms two wings, and the infantry occupy the centre, in distinct battalions or divisions; a clubman and a pikeman placed alternately composing the files. The toqui addresses a pathetic discourse to the army, exhorting them not to permit the sacred flame of freedom, bequeathed by their ancestors to expire. They then advance with loud hoots, generally attacking the Spanish centre, and, with their clubs, notwithstanding the enemy's artillery, they often make terrible havoc. The booty is equally divided among the captors, without any preterence of the officers, or even of the general. The prisoners remain slaves, till exchanged or ransomed; and sometimes, though very seldom, one is sacrificed, to pacify the manes of the slain. Treaties are formed in a kind of council, held in a meadow near the river Biobio. The symbol of peace is a branch of the cinnamon tree; and an Araucan orator difficulties, in the Chilafo language, the motives of the war, and the means of future harmony. As soon as this speech is interpreted, the Spanish governor or president replies; and the articles being reviled, are ratified with a sacrifice of Chilafo camels. The president then dines in company with the toqui and chief ulmens, to whom he makes the usual preents, in the name of his sovereign; and these are presented on the arrival of every new president.

The Araucans acknowledge a supreme being, the author of all things, who is called "Pillan," or the Spirit; and they express, by hieroglyphics, his existence in heaven; his being the soul of all creation; dreadful from his univer- sity: the architect of the universe; omnipotent, eternal, and infinite. They also hold, that the affairs of worlds are administered by inferior spirits, of various rank and power. The Mars of the Araucans is Epumame; and Meulen is a beneficent god, and lover of the human race. They admit an evil principle, Guccuba, the author of calamity and death; and subordinate to Meulen are many genii, who attempt to counteract the machinations of Guccuba. These genii are male and female; and the latter are supposed to ferre the men. Conceiving that the spiritual lords resemble the ulmens, and would despise any attempts of mortals to praise and honour them, they have neither temples, idols, nor priests; and they offer no sacrifices, except during endemic maladies, or on a treaty of peace. However, they often address prayers to Pillan and Meulen. Chriftianity is tolerated in the country of the Araucans, and the milli onaries are well received; but the number of profelytes is small. These people are very attentive to omens and dreams; and the brave Araucan warrior will tremble at the sight of an owl. They consult their magicians in all affairs of moment; and are firm believers in apparaitions. They admit the immortality of the soul, and suppose that, after death, the soul passes to the well, to a place or country called "Galecman," where, according to some, delights abound
for the good, and the bad are punished by privation: but, according to others, all souls will enjoy pleasures, punishments, like or men, being short and transitory. The watch the dead all night, and, on the third day, carry the body to the cemetery of the family, which is commonly situated in a wood or upon a hill. The bar is surrounded by women, who affect to weep; and another spreads itself behind, in order to prevent the return of the soul to the Loupe. When the body is set down, we-she weapons are placed round it; and if it be that of a female, her ornaments; together with plenty of food, and vales of liquor, often cider or wine, that there may be no want on the journey into the other world. After a long leave of the dead, with many lamentations, and willing a happy journey, the body is covered with earth, or with flowers, in the form of a pyramid, over which they pour copious streams of cider. They farther believe, that an old woman soon arrives, in the form of a whale, to carry the soul across the ocean, where another old woman guards the Elysian fields, and sometimes exacts an eye, when the passenger cannot satisfy her demands. The occupation and pleasures of the future life remain the same; and the husband, if he chooses, may have his wife again; but there are no children, because it is the abode of the dead. There are also wars and battles; and armies, meeting in the air, cause thunder and lightning. The Araucans have an idea of a great deluge; during which many were saved on the mountain 'Thygthe,' which can float in water. This idea, Molina fuggetis, has arisen from the earthquakes and volcanoes, so common in their country; for, during the terrors excited by a severe earthquake, they flit run to the mountains, with provisions, in hope of escaping, if the sea should overwhelm their country.

The year of the Araucans is solar, and commences on the 22d of December, immediately after their summer solstice; and it is divided by the solstices in June into two parts. They have 12 months of 20 days, and 5 intercalary days. They have 4 feasons, each of 3 months; and they divide the day into 12 parts, 6 of light and 6 of darkness. The hours of the day are distinguished by the height of the sun; and those of the night by the position of the stars. Constella-tions are also marked; the Pleiades being styled that of fire from the most apparent stars, and the Arcanteric that of star. The milky way is called the thread of the table, because the astronomers of the country reject certain popular tales concerning it. They dilate on the planets, and believe them to be inhabited. The Araucans, though they have little or no idea of the speculative sciences, cultivate rhetoric, poetry, and medicine; to the purity of their language and to the elegance of their public speeches they pay great attention. They acquire themselves much to a figurative and all-egorical style, and their discourses abound with epistles and parables. Strong and lively images, bold figures, frequent allusions and similes, novelty and force of expression, and pathetic sentiments concur to form their poetry, which is chiefly employed in celebrating the actions of their heroes. Their lines consist of 8 or 11 syllables; and their poems are all in blank verse, with an occasional, though very rare, admission of rhyme. Of physicians there are 3 classes; the empirical, who are belh, have some knowledge of the pols, and use of herbs; those who believe that all diseases proceed from insects; and others who ascribe them to witchcraft, and thus occasion the death of innocent persons; they have also prisons who can fet broken bones and cure wounds. With regard to their mode of carrying on trade, we shall observe, that as the use of money is not known, exchange is the only mode of commerce. Their foreign trade consists chiefly in cloaks and cattle, which are exchanged with the Spaniards for wine and European articles. In their intercourse with Europeans they are troublesome; and they thither expect to be treated with great ceremony and respect; whilst they are devilish of benefits, they are eager for vengeance on their enemies. In their discrimination of different families, they use names and surnames. Polygamy, as we have already said, is universal, and a man may buy as many wives as he can maintain; but an old bachelor is regarded with contempt as an enemy of the state. Marriage is a very solemn rite; being of amusing rape, as the husband feizes the bride unexpectedly, while she is to cry out for assistance. Her friends then pass to his home, and after a festival, receive the nuptial present; to the first wife, however, particular honour is rendered, while the rest are regarded as mere concubines. The husband indicates his preference by ordering one, during dinner, to prepare the bed; the others sleep in the same chamber, which no stranger is permitted to enter; strangers being lodged in tents at a distance. All the wives pay great respect to their husbands. The Araucans are distinguished by neatness and cleanliness in their houses and in their own persons. The bath is universally used both by men and women; but the latter resort to separate places protected by shade and solitude. On the day of parturition, they take the new born infant to the river, wash it both in and them-seles, and return to their habitations without inconvenience; no bandages are used for their infant; they are placed in hanging cradles upon thin slates, and covered with a cloth, and they are rocked by means of a cord which hangs from the cradle, so that the mothers are not interrupted in their business; the infant is soon able to take care of itself. The education of children is repressed to horsemanship, the use of arms, and the practice of speaking their language with elegance. Faults are seldom noticed; nor do the Araucans ever chafe, because, in their opinion, punishments can only produce falsehood and cowardice. The food of the Araucans consists mostly of grain or pot-herbs variously dressed; but maize and potatoes are the most esteemed; they use little meat or fish, and instead of bread they have a kind of light cake or potatoes. Their drink consists of various kinds of beer and cider; and they are fond of wine, which they procure from the Spaniards. The mother and his family eat at the same table, which is covered with earthen-ware and goblets of horn or wood. They light their fire by turning one stick rapidly on another. Although in private they are frugal, yet on solemn occasions they spare no expense in their repasts; and then fermented liquors are freely taken. Music, dancing, and gaming, contribute their principal amusements. Their music is bad, and their songs harsh and hideous; but their dances are more cheerful and harmonious. The women, however, dance apart from the men. Their games are both sedentary and gymnastic. From time immemorial, it is said, they have known the game of chess, which they call 'comanc,' the young are fond of wrestling, the race, and a kind of tennis. But their favourite games of the gymnastic kind are the 'puenoo,' and the 'jalicam,' the first representing the siege of a fortress, when 12 or 20 persons form a circle and place a boy in the middle of it whom the assailants endeavour to seize; but seldom succeeds, the latter resembles a battle, 30 or more players attempting to drive the ball within their bounds, and this game will sometimes last half a day.

Having enlarged on the disposition and manners of the Araucans, because their country is little known, although Dr. Robertson in his 'America,' and Perou in his voyages, and some others have very trenchantly mentioned
Chili.

mentioned them, we shall close this part of the article Chili with observing, that the Puelches of the mountains, now united with the State of Araucania, are more rude and savage than the other inhabitants. Their name signifies eastern men; their stature is tall, and they are fond of the chase, so that they often change their habitations, and detach colonies to the eastern sides of the Andes, as far as the lake Naguelgapi, and the shores of the Atlantic, in the plains of Patagonia. By the Araucans the mountaineers are highly esteemed on account of their bold services in war, and their invincible fidelity in adhering to the confederacy.

The value of the Araucans, and their love of liberty and independence, have been signally manifested on a variety of occasions; not only in their early contests with the Peruvian Inca, but in their resistance to the hostile attacks of the Spanish invaders of their territory. Soon after their subjugation by Peru, the Spaniards, alarmed by the fame of the populace of Chili, commissioned Diego de Almagro to attempt the conquest of it. Accordingly, in 1535, he marched from Cuzco, and, after having many Indians and a considerable number of Spaniards, who perished with cold impounded over the Cordillera Nevada, as well as with fatigue and famine, he arrived at Copiapo, where the Indians immediately submitted. Thus encouraged, he proceeded to the conquest of other nations, which had never acknowledged the Peruvian Inca. In his progress he met with a vigorous opposition; as the Chiloe soon recovered from their first surprise, and not only defended themselves with obstinacy, but attacked their new enemies with more determined valor and ferocity than any American nation had hitherto discovered. The Spaniards however continued, amidst increasing difficulties and conflicts, to penetrate into the country, and collected considerable quantities of gold; but they were so far from thinking to make any settlement amidst such formidable neighbors, that, in spite of all the experience and valor of their leader, the final issue of the expedition still remained extremely dubious, when they were recalled from it by an unexpected revolution in Peru. (See the biographical article ALMAGRO.) In the year 1541 the scheme of invading Chili was again reformed, and the command of the expedition for this purpose was conferred by Pizarro on Pedro de Valdivia; and, notwithstanding the fortune of the natives in defending their possessions, he made such progress in the conquest of the country, that he founded the city of St. Jago or Santiago, which still remains the capital of the country, and thus commenced the establishment of the Spanish dominion in that province. In 1548 he was promoted to the government of it by the president of Peru. Valdivia, after having exhibited many displays both of courage and military skill, was cut off in 1553, together with a considerable body of troops under his command. Francisco de Villagra, Valdivia's lieutenant, by his spirited conduct, checked the natives in their career, and favored the remainder of the Spaniards from destruction. By degrees, all the champaign country along the coast was subjected to the Spanish dominion. Several colonial towns were established by the Spaniards, which the Araucans have repeatedly taken and destroyed. The frontier banks of the river Biobio are lined with fortresses. At the peace of 1773, after a war which had cost the Spanish treasury 1,706,000 dollars, the Totten of the Araucans milited on having a relitigious minister at the city of Santiago, and the Spaniards reluctantly complied. The mountainous country, however, is still polluted by the Puelches, Araucans, and other tribes of its original inhabitants, who are formidable neighbours to the Spaniards, and with whom, during the course of about three centuries, they have been obliged to maintain almost perpetual hostility, suspended only by a few intervals of indolent peace.

That part of Chili, to which the Spaniards are restricted, and which may properly be deemed a Spanish province, is a narrow district, extending along the coast from the desert of Atacama and the river Biobio, and divided into 13 provinces, viz. Copiapo, Coquimbo, Quillota, Aconcagua, Melipilla, Santiago, Rancagua, Colchagua, Maulli, Itata, Chillan, Pucuncavir, and Huiquilema. The Spaniards also possess port Valdivia, in the country of the Conchis; the archipelago of Chiloé; and the island of Juan Fernandez. Don George Juan and don Antonio de Ulloa, in their voyage to South America, inform us, that the captain-generalship of Chili comprehends four particular governments, viz. the major-generalship of the kingdom of Chili, to which belongs the military government of the frontier towns and fortresses, along the banks of Biobio, which are Araucana, the flatte residence of the general, Santajuan, Puren, Los Angelos, Tucapel, and Yumbel; Valparaiso; Valdivia; and Chiloé, which are respectively: and the following 11 jurisdictions, viz. Santiago, Rancagua, Colchagua, Chilao, Aconcagua, Melipilla, Quillota, Coquimbo, Copiapo and Guasco, Mano- doza, and La Concepcion; which fees. The president, governor, or captain-general of Chili, to whose government Spanish Chili is subject, resides in the city of Santiago, exercising, except in time of war, independent authority, and directing all military affairs; the three great officers of the kingdom, viz. the camp-marshals, sergeant-major, and commissary, and also the four governors of Chiloé, Valdivia, Valparaiso, and Juan Fernandez, being subject to his orders; as president and governor-general, he administers justice, or preaches in the court of audience in Santiago, which is divided into two halls, the civil and the criminal, with a regent, judges, fiscal or royal procurator, and a protector of the Indians. In cases where the property exceeds 10,000 dollars, an appeal lies to the supreme council of the Indies. There are also tribunals of finances, of the papal bull, and of vacant lands; and the confidante, or tribunal of commissary, which is a new institution in the Spanish colonies, is independent of all others. The provinces are governed by prefects or correedors, commonly named by the captain general. The inhabitants are formed into regiments of militia, besides which there is also a body of regular troops. In the town of Concepcion, there is a regiment of cavalry, and another of infantry, to watch the Araucans; and the city of Santiago maintains some troops of dragoons for its police and defence.

Spanish Chili is divided into two extensive archbishoprics, those of Santiago and Concepcion, both suffragans of the archbishop of Lima. The cathedrals are fixed by canon, and at Santiago the holy, or rather infamous, office of the inquisition, has a commissary and various subalterns. There are no convents, except at Santiago and Concepcion.

This province has derived considerable advantage from the liberty of commerce obtained in 1778; and its population has since that event been augmented. Before that period, the cultivation of the country, though singularly fertile and productive, had been shamefully neglected by the Spaniards. A great part of it remained uncultivated; and in its whole extent, there were not above 83,000 white inhabitants, and about three times that number of negroes and people of a mixed race. The Spanish inhabitants have, for the most part, migrated from the northern provinces; and they are intermixed with a few English, French, and Italians. They are described by Molina, cited by Pinkerton, as "well made, interped, incapable of treason or meannesses, vain, liber-
The rivers of this country, though sometimes considerable, have but a short course from the Andes to the sea. There are several lakes, both fresh and salt; the two largest being in Amauca, viz. the Lauanquen or Villarica, about 72 miles in circuit, with a beautiful conic hill in the centre; and the Nahnelgapi, about 80 miles in circumference, having an island in the centre, crowned with beautiful trees, and giving rise to a river of the same name, which runs towards the Atlantic, while from the first springs the river Tolten, which joins the Pacific. The country abounds with mineral waters and salt rivers, described by the Araucans to the beneficence of their god Meulon.

The climate of Chili is the most delicious in the New World, and is hardly equalled by that of any region on the face of the earth. Though bordering on the torrid zone, it never feels extreme heat, being tempered on the coast by the Andes, and refreshed on the well by cooling sea-breezes. The temperature of the air is so mild and equable, that the Spaniards give it the preference to that of the southern provinces in their native country. Influences occur in this country of surprizing longevity. A Spanish knight attained the age of 165 years, without knowing sickness; and he had by two wives 28 sons. Some of the crooks have arrived at the age of 104, 107, and 115. It is also said that the women are fruitful in an extraordinary degree, and that twins are common. A Frenchman who died in 1764, left by one wife 163 descendants. The fertility of the soil corresponds with the benignity of the climate, and is wonderfully accommodated to European productions. The most valuable of these, corn, wine, and oil, abound in Chili, as if they had been native to the country. The Fall, even that part of it which has been long in tillage, is little degeneratated by producing fruits almost as necessary. The grain, as some say, yields from 100 to 150; but by a more moderate and just estimate, it is rated both by Molina and in Perou's voyage, from 50 to 70 in the midland country, and in the maritime 40 or 50. Many of the plants of Chili are the same with those of Europe, and almost all the pot-herbs and fruits of that continent flourish there. The northern provinces produce the sugar-cane, the sweet-potato, and other tropical plants. Maize is common and abundant; the mango is a kind of rice, and the sweet-spike of barley, both of which were cultivated before the arrival of the Spaniards. Peas and potatoes were also well known to the Chilian. Of the latter they have 30 different kinds; and it is even conjectured that this valuable root was first brought into Europe from this country. The large white strawberry of Chili is now known in English garden. Many of its plants are valuable as dyes, and others as medicinal. The gentleman is peculiar to Chili. The vira-vira expels the ague; the papo is excellent for indigellin. Wild tobacco abounds in Chili. The beautiful flowers and shrubs are infinite. Lucerne, not inferior to that of Arabia, is produced by a shrub, diluting tears of a whitish yellow, and of a bitter aromatic taste. The trunk of the p€wi supplies excellent cork; the fusco kali is plentiful on the shores; and Chili produces seven kinds of beautiful myrtles, one of which yields an excellent aromatic wine preferred by

Strangers
strangers to any mucafeal. The cale furnishes a tea, which is known as a verminge. An acacia of the province of Quilota yields a ballam, that is used in the cure of wounds; and the palqui is esteemed, as a febrifug, superior to the Peruvian bark. The coffee feme grows on the banks of the rivers Maypo and Salvia. Of 97 kinds of trees, that diversify the beautiful forests of Chili, only 13 lose their leaves in winter. Cypress, pines, and red and white cedars grow in the valleys of the Andres; the red cedars, particularly in the Cordiller, are of an enormous size, to that from 700 to 500 pangs, 20 feet long, may be... from one tree. The cin- namon tree, that yields what is called winter's bark, is regarded as the trade by the Araucans, who present it as a token of peace. Beautiful woods of various colors are supplied by the Chillie fore's. Vines, though none appear to be native, flourish admirably well: they are found in the forests, arising from seeds deposited by the birds: on the confines of the river Maulli, they are three or four feet high, and supported by flaxes; but further to the south, they are left loose on the sides of the hills. The bell wine is that which is obtained from the banks of the river Itata, and is commonly called wine of Conception; it is red, generous, of an excellent flavor, and equal to the best in Europe. Mufcetal wines are also excellent. The vintage is April and May. All the other European fruits attain the greatest perfection.

Of the zoology of Chili, Molina has given an ample account. Oylters of an excellent kind are found near Coquimbo; and the rocks of Chile furnish the phools. There are also many kinds of lobsters and crabs. Among the insects is the locust of Africa. Bees abound in the southern provinces. Reptiles are rare; but the fest supplies 50 kinds of fish, all excellent and fatigable. The seals, called sea-cows, appear in the shores of Araucania. Opossums and aquatic birds of different species amount to 137; and the fowl are innumerable. Of these, several retire in spring to the forests of the Andres for propagation, and on return of winter, they revisit the plains. The American orchids appear in great numbers in the valleys of the Andres, and especially near the grand lake Nahueltpí. The egges, of which the female lays from 12 to 60 in the sand, yield, each of them, about two pounds of good food; and the feathers are used for plumes, parfafs, fans, &c. The condor is also found in this country. Molina reckons 50 species of quadrupeds in Chili; and it is observed that, most of the European animals have improved in this delicious climate and fertile country. The celebrated Spanish sheep have not lost any of their distinguishing qualities: the horned cattle are larger than those of Spain; and the breed of horses far surpass both in beauty and spirit the famous Andalusian race, from which they sprung.

Nor has nature exhausted her bounty on the surface of the earth: she has stored its bowels with riches. A) the argilaceous earths mentioned by Wallerius are found here, exclusive of the bole of Lemnos; and Molina adds live forts to those already described. Of metallic earths, according to his arrangement, there are mountain-blue and green, native cufre, ore of zinc, with brown, yellow, and red ochres. Among the rocks are slate, bone, green slate, fleatite, athes, amethyst, gold and silver mica; and the tale called Macnow ships is found in large plates, and used for windows. Limedon, marble, and gypsum, are plentiful. Besides the latt; marble, Chili affords the black, green, and yellow; and two mountains of Copiapo and Maulli are altogether compos'd of marble of different colors, and dispos'd in regular strata from the bottom to the top. Molina also mentions a great variety of flowers, yellow, green, and blue, called false topazes, emeralds, and sapphire. The Andres also afford fine alabaster, and large plates of folinite, used by the inhabitants of San Juan in the windows of their churches. Of silicious stones, there are quartz, flint, and rock crystal. Here are also freestone and grindstone, some common agates, and Jasper red, green, grey, white, and variegated. Rock crystal occurs of different colors, called falso ruby, topaz, jacinth, emerald, &c. One of the most celebrated, says this author, was found in Coquimbo, and a topaz in the province of Santander. A little hill, N. E. of Talca, is almost wholly composed of beautiful amethysts, in a kind of grey quartz. Turquoises are found in Copiapo and beautiful brecce, peridotes, and granites occur in the Andres. Rock-salt is abundant; and is often crystallized in cubes of various colors. Sul ammoniac is common near the volcanoes; and nine abundance in Coquimbo. The country is supplied with different kinds of alum or bitumen, and all the vitriles. Araucana furnishes jet; and coal is supplied by various parts of the kingdom. The province of Copiapo comprehends two mountains of crystalized feldspar; and the same substance abounds in all the Andres. Pyrites of several kinds and under various forms are found in several places. Of the semi-metals, this country yields arsenic, cobalt, bismuth, zinc, antimony, and mercury, both virgin and cinnabar. Chili contains mines, many of them very rich and productive, of lead, tin, iron, silver, and gold. The chief silver-mines are those of the provinces of Santiago, Aconcagua, Coquimbo, and Copiapo; but the most celebrated is that of Ulpahua, situated on the eastern mountains of the Andres, in the province of Aconcagua, supposed to extend to Poto, through a space of 840 geographical miles; discovered in 1636, neglected till 1762, but since wrought to great advantage. However, of all the metals, gold is the most abundant in Chili; so that there is not a mountain or a hill, which does not more or less produce it, and accordingly, it is found in the soil of the plains and the sand of the rivers. The gold is reckoned the purest in the world, being generally found of 22 carats, and often of 23½ carats. The most considerable mines of gold which have been disovered, have ever since the conquest of the country, yielded a confluent and considerable produce. The gold of the mines of Chili, paying the royal fifth, amounts to about four millions of dollars annually; of which a million and a half are coined at the mint of Santiago.

The commerce of Chili employs 23 or 24 ships from 5 to 1000 tons each, and in return for the grain, wine, fruits, provisions, tallow, leather, wood, copper, &c. sent to Peru, it receives iron, cloth, and linen made at Quito, hats, shoes, of which there are manufacturers in Chili, sugar, cacao, sweetmeats, tobacco, oil, earthen ware, and all kinds of European goods. A small commerce is also carried on between Chili, Paraguay, and Buenos Ayres, of which the latter is the staple. The products of Paraguay, which consist only in its herb and wax, are carried thither, then forwarded to Chili, whence the herb is exported to Peru. Large quantities of tallow are also sent to Mendoza for the manufacture of soaps. In exchange for these commodities Chili sends to Buenos Ayres linen goods, woolen and worsted stuffs, furs, of which are imported from Peru, and others manufactured in the country; also sugar, snuff, wine, and brandy, which two last the traders chiefly buy at San Juan, as most convenient for transportation. Ships from Spain, in return for European goods, receive gold, silver, copper, Vicuna wool,
and tanned leather. The domestic commerce of Chili chiefly consists in the provisions sent to Valdivia, which supplies other places with cedar. Chinese refreshments from the other parts brandy, wine, honey, sugar, the Paraguay herb, salt, and Guinea pepper; and return to Valparaiso and Concepcion several kinds of fine wood, with which the island abounds; also woollen stuffs of the country, made into shawls, quilts, &c.; together with hams and dried peaches. Copacabana sends copper to Valparaiso, which in exchange returns Cordova's leather, and soap, made at Mendoza, from whence it is carried to Santiago, and thence sold to different parts of the country. The trade with the wild Indians carried on by barter, consists in hardware, as bits, spurs, and edge tools; also toys, and some wine. They return horned cattle, horses of their own breeding, &c.

Before we close this article, we shall mention as a matter of annual observation, that the sea gradually retreats from the coast of Chili; and therefore, the shore consists mostly of a plain, 5 or 6 miles broad, between the sea and the maritime mountains; their sides bearing evident marks of the sinking of the ocean, which has sometimes formed curious grottos, with different chambers, hung with shells or stalactites, where bears take refuge in the winter. Voyage to South America, by Juan de Ulloa, vol. ii. Robertson's America, vol. iii. Pickerton's Geography, Ed. 5th.

Cordovan, formed of yemas, mtila, a thousand, an aflemage of several things ranged by thousands. The term was particularly applied to tables of logarithms, which were at first divided into thousands. Thus it was used by Mr. Briggs. See the article Briggs.

CHILIANO, in Geometry, a regular plane figure of 1000 sides and angles. We can safely demonstrate, that the sum of all its angles is equal to 1695 right ones; for the internal angles of every plane figure are equal to twice as many right angles as the figure hath sides, except those four which are about the centre of the figure, from whence it may be resolved into as many triangles as it has sides. The author of L'Art de Penfer, p. 44, 45, brings this inference to dwell the confusion between imagination and conceiving. See Notion.

CHILARCHA, or CHILARCIUS, from χίλαις, a thousand, and χιλιας, command, an officer in the armies of the ancients, who had the command of a thousand men.

CHILIARTE, in Church-History, the same with MIL- LARTE.

CHILIANTS. See MILLENAIRE.

CHILICOMITUS, in Ancient Geography, a canton of Avis, in Media; placed by Ammianus Marcellinus in the vicinity of Cordova.

CHILISQUAQ, in Geography, a township of Susquehannah river in Pennsylvania.

CHILKA, a lake of Hindostan, on the sea-coast of the province of Caractac on the N.W. side of the bay of Bengal. This lake bounds the Northern Circars on the north. It seems to be produced by a breach of the sea over a flat, sandy shore, whose elevation was somewhat above the interior country. Both this, and the Pusat lake of similar origin, communicate with the sea by a very narrow, but deep, opening; and are shallow within. The Chilka lake is about 40 miles in length from N.E. to S.W.; and in most places 12 or 15 wide; with a narrow slip of sandy ground between it and the sea. On this lake are many inhabited islands. On the N.W. it is bounded by a ridge of mountains: being a continuation of that which extends from the Mahaumdhy to the Godavery river; and shuts up the Circars towards the continent. It forms a pass on each side of it towards the Caractac province, and affords an agreeable diversity of objects; mountains, islands, and forests; and an extended surface of water, with boats and small vessels, resting on it. To those who navigate at some distance from the coast, it has the appearance of a deep bay; the slip of land not being visible.

CHILAKOTHE. An Indian town on the Great Miami, which was discovered in 1782, by a body of militia from Kentucky. This name is applied to many different places in honour of an eminent chief who formerly headed the Shawanoes. See TAMWAX.

CHILAKOTE, old, an Indian town, lying about three miles S. of Little Miami river, but destroyed by the forces of the United States in 1782. The part of the adjacent country, which is beautifully chequered with meadows, is rich. See MIAMI.

CHILLAN, or CHILAN, a town of South America and capital of a district of the same name, being one of the jurisdictions of the kingdom of Chili. The place is small, but has the title of city; the number of families not exceeding 2000, and having among them but few Spaniards. It is 75 miles N.E. of Concepcion.

CHILEIRON, a town of Portugal, in the province of Eltramadura; 44 leagues N.W. of Lisbon.

CHILLES, a town of France, in the department of the Lozere and district of Orléans; 14 miles N.E. from it.

CHILLIKOTHE, a town of America, in the state of Ohio and county of Roffs; situated on the Scioto river, about 65 miles from the Ohio. Such has been the increase of this settlement, that though it began in 1796, and became an incorporated town in 1792, it is now the seat of government and capital of the state. The adjacent country is fertile, and the town is rapidly increasing. At present it is said to contain 150 houses. Its public buildings are a goal, built with wood, and a court or house of hewn stone.

CHILLINGWORTH, William, in Biography, distinguished as a theologian, was born at Oxford in October 1602. He was an admiral of Trinity college in the year 1618, and after taking the usual degrees, was elected fellow of his college in 1620. He was, in very early life, charactised by a fondness for disputations; for this temper Lord Clarendon refers to his own life. "He was," says the Noble Lord, "a man of so great a subtlety of understanding, and so rare a temper in debate, that as it was impossible to provoke him to any passion, so it was very difficult to keep a man's self from being a little discomposed by his sharpness and quickness of argument; and instances in which he had a rare felicity, and a great advantage over all the men I ever knew." This turn of mind was attended with its disadvantages, for we are told he had contracted such an irreligion and habit of doubting, that by degrees he felt confident of nothing. It was probably the cause also of his conversion to popery, through the subtlety of John Fisher, a Jesuit, at what instance he went to the college of Douay. Here he made but a short stay, having, by means of a correspondence with his godfather, Laud, bishop of London, afterwards archbishop of Canterbury, seen reason to change his sentiments again. Upon his return to England he retired to Oxford, where he pursued his studies with great care and diligence. In 1634 he wrote a paper in confirmation of the arguments by which he had been deceived; each, however, was the ingenuousness of his mind, and his regard for truth, that after his return to Protestantism, he made it a practice to re-examine the grounds of it, which occasioned a report that he had gone back again to the church of Rome, and he continued through life to be reviled by one party and suspected by the other; yet he felt
flame on account of the candour and impartial inquiry which caused these fluctuations in his creed. Speaking of himself he says, "I know a man, that of a moderate Protestant turned a Papist, and the day he did so, was convicted in conscience, that his yesterday's opinion was an error. The same man afterwards, upon better consideration, became a doubting Papist and of a doubting Papist a confirmed Protestant. And yet this man thinks himself no more to blame for all these changes, than a traveller, who using all diligence to find the right way to some remote city, did yet mistake it, and afterwards find his error and amend it." Few persons, it is presumed, will, upon reading this, dispute Chillingworth's title to full approbation. In the year 1637, he published a work entitled, "The Religion of Protestants a safe way to Salvation," which is one of the ablest defences of the Protestant cause. Its fundamental principle is, that the scriptures are the only rule by which we can judge of controversies, and that no church of any one denomination, is, or ought to be, accounted infallible. "It is sufficient," says he, "for any man's salvation, to believe that the scripture is true, and contains all things necessary to salvation, and to do his best endeavours to find and believe the true sense of it."

Chillingworth's orthodoxy was now sufficient, and he was immediately branded with the epithets of Arius and Socinian; he had previously to the publication of this work refused prebend, which was offered him by Sir Thomas Coventry, keeper of the great seal, because he could not, at that time, subscribe to the thirty-nine articles: he declares that he is ready to endure any extremity of indulgence and the displeasure of his friends, rather than to make a declaration which his conscience could not thoroughly approve. These seruples were not of long continuance; for in 1638 he complied with the usual forms of subscription, on being promoted to the chancellorship of Salisbury, with the prebend of Brixworth in Northamptonshire, annexed to it. From a passage in the preface to his Religion of Protestants, it appears, that he now considered subscription as an offering to peace and union, not a declaration of faith, to which opinion he was probably led, by the arguments of his friend, Dr. Sheldon, afterwards archbishop of Canterbury. In addition to his other prebendary he obtained the mastership of Wigan's hospital in Lanchester, and in 1640, he was deputed as proctor by the chapter of Salisbury to the convocation. At the breaking out of the civil war he adopted loyally the royal cause, and was present in the king's army at the siege of Chichester, where he acted as engineer, and contrived some machines for assaulting the city. Very soon after this, on account of ill health, he retired to Arundel castle in Suffolk, where he was taken prisoner by Sir William Waller. His illness increasing, and not being able to go to London, he obtained leave to be conveyed to Chichester, where he was lodged in the bishop's palace, and after a short illness died in the month of January 1643-4, and was buried, according to his own desire, in the cathedral church of Chichester. Chillingworth was the author of several works besides his "Religion of Protestants a safe way to Salvation." He wrote nine sermons on special occasions, and a defence of episcopacy. His writings have always been highly esteemed by some of the most eminent persons of the nation, among whom were the great Locke, and archbishop Tillotson. His private character was marked by sincerity, candour, and benevolence: and according to Lord Clarendon he was a man of excellent parts and of a cheerful disposition, void of all kind of vice, and ended with many notable virtues; of a public heart, and an indefatigable desire to do good; his only unhappiness proceeded from his sleeping too little, and thinking too much, which sometimes threw him into violent fevers."

"This last circumstance," says Dr. Alken, "denotes that warmth of brain which may account for the mutability and the disputations turn that seem to have superseded in his nature." Biog. Brit. Gen. Biog. Blackburne's Works.

CHILOAS, or CHILAOAS, a jurisdiction of South America in the diocese of Truxillo, belonging to the vice-royalty of Peru, and the audience of Lima. See LLAMA.

CHILORN, a castle or caftellated house, in the kanon of Berin, 5 miles E.S.E. of Vevey. This is a large pile with round and square towers, standing on a rock in the lake of Geneva, and connected with the land by a draw-bridge. The vaults are very fine; the arched roofs, and the supporting pillars, are in a neat Gothic style. This castle in 1536 was wrested from Charles III. of Savoy by the canton of Berin assisted by the Genevans, who furnished a frigate to hefeive it by water. In a deep dungeon, below the level of the lake, the conqueror found Bonivard, prior of St. Victor, the intrepid antagonist of the dukes of Savoy, and the great allier of Geneva in peradventure. He had been imprisoned by the Savoyards for 5 years, and by confidant walking within his short limits, had worn a hollow in the rock. This castle was for a short time the residence of a bailiff from Bern, until a more convenient house was purchased in Vevey. It was feized by the insurgents in January 1558: and this act of rebellion, not being punished, was followed by the irruption of the Pays de Vaud from the canton of Bern.

CHILLY, a town of France, in the department of the Jura, and district of Loui-le-Saultier; one league S. W. of it.

CHILMA, or CHILMENSE oppidum, now called Gilma, an ancient town in the interior of Africa. Ptolemy and Pliny place it under the dominion of Carthage, and say that it was situated between the rivers Bagradas and Tri on. It is now in ruins, with fearcly any remaining veldige.

CHILMARK, a township of America on Martin's Vineyard island, in Duke's county and state of Massachusetts, containing 771 inhabitants. It lies 99 miles S.E. of Bolton.

CHILMARY, a town of Hindoostan, in the country of Bengal; 110 miles N.E. of Moorshatbad.

CHILMIRAR, CHILMINAR, or TCHELMINAR, the noblest and most beautiful piece of architecture remaining of all antiquity: being the ruins of the famous palace of Persepolis, to which Alexander the Great, being drunk, set fire, at the perfusion of the courtian Thais.

Authors and travellers are exceedingly minute in their descriptions of the Chilminar; particularly Gracia de Silva Figueroa, Pietro de la Valic, Chardon, and Le Brun. A general idea thereof may be conceived as follows: There appear the remains of near four columns; the fragments whereof are at least six feet high: but there are only nineteen that can be called entire; with a twentieth all alone, 153 paces from the rest. A rock of black hard marble serves for the foundation of the edifice. The ascent to the full plan of the building is by fourscore and fifteen steps, cut in the rock. The gate of the palace is twenty feet wide; on one side is the figure of an elephant, and on the other a rhinoceros, each thirty feet high, and of a shining marble; near these animals are two columns; and not far off the figure of a Pegasus. After this gate is passed, there are found a great number of columns of white marble; the remains whereof shew the magnificence of the work: the smallest of these columns is fifteen cubits high, the largest eighteen; each has forty fluting.
flattings, three inches broad; whence the height of the whole may be guessed at, with other proportions. Near the gate is an inscription on a square piece of marble, smooth as glass, containing about twelve lines: the characters are of a very extraordinary figure, resembling triangles and pyramids.

These noble ruins are now the shelter of beasts, and birds of prey. Besides the inscription above mentioned, there are others in Arabic, Persian, and Greek. Dr. Hyde chafers, that the inscriptions are very rude and unartful; and that fome, if not all of them, are in praise of Alexander the Great; and therefore are later than that conqueror.

M. Le Brun took his voyages to the East Indies, merely for the sake of viewing the Chilianizar. See Perspolis.

CHILLO, in Biography, one of the wife men of Greece, who flourished about the first year of the 56th Olympiad or 556 B.C. But Diogenes Laerterius fays, that he was an old man in the 52d Olympiad. He was one of the Lacedemonian Ephors, and celebrated for both his fagacity and probity. In the exercise of his office as a magistrate he acted with so much integrity that in his old age, he faid, that he recollected nothing in his public conduct which gave him regret, except that, in one instance, he had endeavored to feren a friend from punishment. The fighest attainment of wisdom, in his opinion, was, that fagacity which enables a perfon from the view of present circumstances and events to predict future occurrences. If a fop is faid to have once asked him, how Jupiter employed himself? He replied, "in humbling thofe that exalt themselves, and exalting thofe that abide themselves."

He is faid to have lived to a very advanced age, and to have expired through excess of joy, in the arms of his son, when he returned victorious from the Olympic games. Some fay, that the greatness of his value are the following:

—Three things are difficult: to keep a fecret, to bear an injury patiently, and to spend leisure well. —Visit your friend in misfortune rather than in prosperity. —Never ridicule the unfortunate. —Think before you fpeak. —Do not defire impossibilities. —Gold is tried by the touchstone, and men are tried by gold. —Honest lofs is preteritable to fameful gain; for by the one, a man is a fufferer but once; by the other, always. —In conversation use no violent motion of the hands; in walking, do not appear to be always upon hufines of life or death; for rapid movements indicate a kind of phrenzy. —If you are great, be condescending; for it is better to be loved than feared. —Speak no evil of the dead. —Reverence the aged. —Know thyfelf. Diogenes Laerterius, T. i. l. § 63-74. Pin. H. N. T. i. vi. § 32. Brucker's Hist. of Philof. by Eimfeld, vol. i. p. 133. Rollin's Ancient Phil. vol. ii. p. 334.

CHILLO, in Geography, a considerable island, or rather group of islands, being one of the governments of Chili, fited on its coast in the southern Pacific ocean, in the gulf of Chonos, or the archipelago of Guaytecas, and feparated in its southern part from the continent by a narrow fex, which forms a bay. It is about 130 miles in length by 30 in breadth; but almost divided, in the middle, by bays or creeks. It lies between 41° 40' and 43° 50' S. lat. The principal harbour of the island on the north coast is Chacao, which is faid to be well fortified and capable of a good defence, and at Culhuco, which is larger, reide a corregidor, nominated by the president of Chili, and also regidors and alcaldes annually. Besides the parish church, this place has two convents, and a college of Jiftins. The island is well peopled with Spaniards, Mulattoes, and Indian profefles. We learn from Lequanda, cited by Pinkerton, that from the middle of the 18th century many ships from Peru have visited the ife of Chiloe. The port of St. Carlos. (S. lat. 40° 50'; and long. 30° 57' from the meridian of Tenerife,) is capable of receiving considerable vessels, and the articles of commerce supplied by the island have given life to a trade somewhat beneficial. The natives are robust and well disposed; but are deficient in industry. Chiloe has forests of excellent timber, particularly cedar. It abounds in wine, and its pita, feeding on shell-fish, supplies excellent hams. It has an ample fisheries; its wheat is fteady, though the fift is good; but the deficiency is fupplied with a kind of potatoes, called papas, and with barley and beef, of which they make flour. Cattle and sheep, introduced from Spain, are abundant, and afford good meat; the tame and wild birds are numerous; and the kind of fheep, called cauf-wolf, is plentiful. The fhep of the fheep is felled by the Indians of the small adjacent islands called Chonos, and used as common food. The fheep, which is common from Chiloe to Valdivia, furnishes fur not inferior to that of the Canadian beaver, which might become a lucrative article of commerce; and the fkins of a bird, called the American fwan, is covered with an exquisite snowy down, and used as a delicate fur. The females of the island manufacture pouschos or Indian mantles, and other coarse woolen articles. Some few linen articles are also woven; but both these ma-ufactures are insufficient for clothing the inhabitants, who are estimated at 25,000, exclusively of the Chonos. They begin to import woolens and cottons from Peru; but the consumption is small. During five years, it is faid, the imports from Chiloe at Lima in boards, pouschos, hams, and felt-fish, amounted to more than 280,000 dollars. The exports from Lima to Chiloe exceeded 334,000.

CHILLO, a river of Siberia, which runs into the Sea of Okdeguck.

CHILONGO, or Ceylonogo, of Cylongo, in Geography, a maritime province of Africa, and the largest in the kingdom of Loango. It is situated between the rivers of Quila on the S. and Combi on the N., which last separates it from Majumba, once a small kingdom of itself, but now a province of this. Its plains are spacious and fertile, and fotted at a distance by ridges of high mountains. Its inhabitants carry on a very considerable commerce, especially of elephants' teeth, though in other respects they are extremely rude and unpolifhed. On the coast stands the "Cabro Negro," or black cape, fo called by the Portuguese on account of its dark appearance; the whole promontory being covered with trees.

CHILLOU, a village of Ceylon, S. of Patalaham, where the Dutch have erected houses for the entertainment of strangers. It is situated on the banks of a broad river, and the adjacent country is wild, and dangerous for passengers, on account of the multitude of wild beasts with which it is infalted. To the southward of Chilou elephants are numerous, and are hunted with considerable fecu.

CHILQUES, a jurifdiction of South America, in the kingdom of Peru and diocese of Cuzco; commencing at the distance of about 7 or 8 leagues S.E. of Cuzco, and extend-ing about 30 leagues in length. The temperature of the air corresponds to the situation of its several parts; some of which are very fertile in producing grain, and others fed a great number of cows and sheep. Besides these, its commerce is much augmented by the woollen manufactures of the Indians.

CHILTERN, a ridge of hills, traversing the county of Bucks
Bucks a little to the south of its centre, and reaching from Tring in Hertfordshire, to Henly, in the county of Oxford. To these hills, called the Chiltern Hundreds, is annexed the nominal office of steward under the crown, the acceptance of which enables a member of the British parliament to vacant his seat.

CHILTOTOL OF Hernandez and Ray, in Ornithology, the celsinalis of Broum, the Vibrignan Langer of Latham, and the tangara Breglia of Linnaeus; which see.

CHIMARA, in Ichthyology, a genus of fishes in the chaetodontiæ order, the head of which is pointed on the upper part. It is a small, quadriradial, and under the neck; smooth placed beneath, upper lip five-toed, cutting each two in front both above and below; body elongated; dorsal spine single. Gmulin adds, the tail ending in a slender thread, and longer than the body; but we rather agree with Bloch, who considers the finfold tail of the chimera monofisa as a specific a generic distinction.

Two species only of this singular tribe of fishes have been hitherto discovered; the first, monofisa, or sea monster, was sufficiently well known to the older writers as an inhabitant of the Iberian seas, under the names of centina prima, Simia marina, geles acanthias, &c.; the other callorhynchus, the elephant fish of Cook's voyages, is a native of the southern hemisphere, and ranks among the more recent discoveries in ichthyology.

Chimera monofisa has the lower part of the snout piano and plaited, and the tail terminating in a long and slender filament. Chimera monofisa regia, Subtilis pleiæ puncta, Linn. Fæ. Suec. Chimera caudata foiformis, Bloch.

A fish of more remarkable appearance can scarcely be conceived. The body is of a lengthened form, compressed, and gradually tapering towards the tail, which terminates in a long and slender filament; the head is large, thick, and ascending in front into a comical or pyramidal form; the mouth is placed beneath, and is of moderate size; each jaw is furnished with a pair of broad bony lamines, which are crenulated at the tip; the upper lip is divided into five parts, and the front, from the mouth to the eyes, is marked by transverse undulations and pores; a line of this kind runs across the forehead beneath the point of the tip, and is continued in a serpentine course into the lateral line, and another line passes from this beyond the eyes, which returns again towards the nostrils. The whole body is of a black brown above, varied with yellowish brown, and silvery, and the lower parts of a bright silver colour. The eyes are large, of a greenish colour with silvery irides, and very brilliant, and shining with phosphoric splendour. The pectoral fins are of considerable magnitude. The male is distinguished by having a single fringed crest on the top of the head, and by the rough, lengthened processes at the anal fin, which correspond with those observed in the males of the ray and shark tribe. This fish inhabits the northern seas of Europe, and is very rarely seen so far southward as the British isles. (Vide Donov. Brit. Fishes.) It grows to the length of three or four feet, and feeds on marine worms and fish of the smaller kinds. The Norwegian fishermen call it the king of herrings, from the circumstance of its being often lurking among the schools of that fish, the flesh of which appears to be its principal food. The flesh of the Chimera is hard, coarse, and unmarketable; the inhabitants of Norway employ however the roes of this fish in their patry, and in making cakes, and extract an oil from the liver, which they consider of singular efficacy in disorders of the eyes, and as an emollient for wounds and bruises.

Some call it the sea ape, and others the fradion; it is the Chimere arctica of modern French writers.


This nearly corresponds in size with Chimera monofisa, but has the front rather sloping downwards, and the upper lip extending into a lengthened cuticular flip, or appendage, bending down in a reversed direction beneath, from which peculiarity it has acquired the name of the elephant fish. The eyes are large; the front marked by multilobate lines, and pores, the bill of which appears numerous than in C. monofisa. The frill dorsal fin, as in that fish, large, somewhat triangular, and armed anteriorly with a strong spine; second dorsal fin resembling the first, but without a spine; the third very shallow, and continued into a thread at the termination of the tail, but which is very short. The pectoral fins are large; ventral moderate; anal small; lateral line commencing from the upper sides of the head, and thence continued in a straight direction, to the beginning of the caudal fin, at which place it terminates. General colour of the whole fish silvery, with a yellowish brown call on the upper parts; fins pale brown. Inhabits the South Seas.

Chimera in Fabianus History. See Chimera.

Chimarrhus, in Botany, (so named by Jacquin, 1769, because it usually grows by torrents), Schr. 309. Wild. 352. Jacq. Amer. 61. Ciais and order, pontandra monogyna.

Gen. Ch. Col pachan entire, crowning the germ, permanent. Cor. on- petalised, funnel-shaped; tube very short; border five-cleft; segments lanceolate, concave, blunted, hairy below, with a longitudinal line running along the middle, forading. Stam. filaments five, aw-shaped; the length of the corolla hairy at the base, below the divisions of the border; anthers oval. Erect. Fil. germ roundish, inferior; file diliform, the length of the stamens; stigma blunt, obtuse. Pet. capitate somewhat egg-shaped, obtuse, crowned, two-celled, two-valved; valves biaid at the tip. Stylus solitary.

Ell. Ch. Corolla funnel-shaped, with a very short tube. Capitate inferior, obtuse, two-celled, two-valved; valves biaid at the tip. Seeds one in each cell.

Sp. C. femos. A lofty tree, with branches spreading out horizontally, wood white, used for beams, rafters, &c. Leaves egg-shaped, acuminate at both ends, quite entire, shining, petioiled, opposite; a foot long, commonly eight or ten at the end of each twig. Flowers white, numerous, small, sessile, in cyme-like racemes half a foot in diameter; those in the axis opposite and solitary, those at the end usually four together. Capsules small. A native of Martinique, where it is called Baie de Riviere.

Chimarrus, in Ancient Geography, a river of Polonnesus; placed by Pausanias between the Eridanus and the maritime burch of Lerna.

Chimay, in Geography, a town of France, in the department of Jemmappe, and chief place of a canton, in the district of Charleroy. The place contains 1,892, and the canton 8,335 inhabitants; the territory includes 3,800 hectares and 17 communes. In the vicinity of Chimay, are mines, with founderies and forges, of iron. It is 105.203 E.N.E. of Cambes, and 154.8 S.E. of Lillo.

Chimbadores. See Santa.

Chimbo, a jurisdiction of South America, in the province of Quito, situate on the west side of the jurisdiction of
of Riobamba, and consisting of an affluent and seven villages: the former, being the capital, is called Chimbó, and was the residence of the corregidor; till it was thought proper, for the convenience of commerce, to remove it to Guayaquil, the principal of the above villages. Guayaquil is inhabited generally by Muñozos, with some Indians, and very few Spaniards. The jurisdiction of Chimbó being the seat of the Serrania, or ridge of mountains bordering on that of Guayaquil, carries on, by means of innumerable drays of mules, the whole trade of Quito and the other provinces, by the way of Guayaquil, carrying the whole of cloth and fleeces, together with the meal, corn, and other products of the country, from the former to the latter; and returning with wine, brandy, salt, cotton, fish, oil, and other goods, for the supply of the provinces of the mountains. This traffic is very advantageous to the inhabitants; but, as the roads, in winter, are impassable to beasts of any kind, it can only be carried on during the summer. This inter- mission of trade they call 4 carruse la montana, i.e. the shutting up of the mountains. The temperature of the air at Guayaquil, and of the greatest part of the jurisdiction of Chimbó, from the proximity of Chimborazo, is very cold. The country is extensive and fertile; but the leguminous, or legumes, are generally appropriated to the breeding of mules; a few oats being cultivated for different species of grain.

CHIMBORAZO, a mountain of South America, situ- ate in the province of Quito, about 100 miles to the south of the city of that name, and about 10 miles to the north of Riobamba, and reckoned the highest point of the Andes. The French mathematicians, who were employed from 1735 to 1742 in measuring a degree of the meridian, computed the height of this mountain to be 3217 French toises above the level of the sea, or 14,322 French feet, which, reduced to English feet, are 20,571. Others flate the height of this mountain above the ocean to be 19,596 feet. Con- sequently, if we admit the height of Mont Blanc to be 15,662 feet, Chimborazo, according to the French mea- sure, is nearly 5000 feet, or a quarter higher. That part of Chimborazo which is covered with perpetual snow, is about 2400 feet from the summit. It should be re-collected, however, that this mountain is elevated above the highest plain of Quito, which constitutes nearly one-half of the computed height, allowing it to be 9377 feet above the ocean; and, therefore, considered as mere excrescences from the land, they still yield to Mont Blanc. This mountain, though it lies in S. lat. 3° 41' 40", and consequently near the equator in the middle of the torrid zone, is covered on its sides with ice and snow; and the country adjacent to it is often pierced with intolerable cold, on account of the winds which blow from the mountain. See MOUNTAIN.

CHIMIPANESTICK, a river of Canada, which runs into the river St. Lawrence. N. lat. 50° 3'. W. long. 61° 25'.

CHIMIER, in Ornithology, the Chiming-Thrush and Tur- dus Campanella of Latham, La Carilloncelle of Buffon, and Turdus tumulbattus of Gmelin; which see. See also Chimera.

CHIMERA, or Hirma, in Ancient Geography, a town of Sicily, Steph. Byz. Chimaera, a mountain of Asia Minor, in a district of Lycaonia, according to Pliny, who says that it had many volcanoes, and resembled Etna. The Lyceans built near this mountain the town of Hephelise, which they consecrated to Vulcan. Virgil mentions this mountain in his Æneid. See Chimera infra.

CHIMERA, in Geography, a town and fortress of European Turkey, capital of a district in the province of Albanea, feated on a rock near the sea-coast, opposite to the island of Corfu. N. lat. 40° 47' E. long. 19° 2'.

CHIMERA, or Chimera, in Fabius History, a monster, the daughter of Typhon and Echidna, that breathed a fierce and incinquantuable fire, and which the poets feign to have the head a herd of a lion, the body of a goat, and the tail of a dragon; and to have been killed by Bellerophon, mounted on the horse Pegasus. This female monster was born in Lycaonia, and Bellerophon received his orders from Japhet, king of Lycaonia, to destroy her, and to extirpate a people called the Solyuni. Minerva, as S. Ray. Del., according to others, N. Paus. commending his first action, exposed to such dangers, sent him the flying horse Pegasus, by whose assistance he overcame the Solyuni and slew the Chimera.

The foundation of the table is this: that anciently, in Jules, there was a volcano, or burning mountain, of this name; the top whereof, which was deferti, only inhabited by men; the middle, having good pastures, was frequented by goats; and the foot, being marshy, by serpents: Thus Ovid:

"--- medinis in partibus hic um
\[\pi\]cUnos et ora lac, caudam serpentis habebit."

Bellerophon being the first who caused this mountain to be inhabited it was hence supposed that he flew Chimera. Pliny says, the fire that issued would burn in water, and could be extinguished with nothing but earth or dung. Among other explanations that have been given of this table, some have supposed that the Chimera was a pirate ship, whose prow bore the figure of a lion, the middle of that of a goat, and her stern a serpent. Among the Bronzes in the collection of the Grand Duke at Florence, is a curious representation of the Chimera, composed of a lion and goat, in their respective proportions, with an inscription in Etruscan characters. Among philosophers, and in common language, Chimera denotes a mere creature of the imagination.

CHIMERA is used, in Writers of the Middle Age, for a kind of vault or ship. It seems to have been less than the chironium.

CHIMERIUM promontorium, in Ancient Geography, a promontory of Asia Minor, on the coast of Lycaonia, according to Strabo. It was formed by the mountain called Chimera or Chimera.

CHIMES, in Horology, is a species of music mechanically produced by the strokes of hammers against a series of bells, tuned agreeably to a given scale in music; the hammers are lifted by levers actuated by metallic pins or wooden pegs stuck into a large barrel which is made to revolve by clock-work, and is so connected with the striking part of the clock mechanism, that it is set in motion by it at certain intervals of time, most usually either at every hour, or at every quarter of an hour. The music thus produced may consist of a direct succession of the notes constituting an octave frequently repeated, or otherwise may be a psalm tune, or short popular air in the key to which the bells are tuned. This species of mechanical music is by no means calculated to improve the taste, and had its origin most probably, like clockwork itself, in some of the musical institutions of Germany, where, according to Dr. Burney, it prevails greatly, and where the ringing of changes on bells, as in England, is but little, if at all practised. The chime mechanism may be adapted either to act with the large bells of a church clock, by means of wheel-work proportionally strong to raise heavy hammers, or a set of bells of different diameters may be arranged concentrically, within one an-
other on one common axis, sufficiently small to be introduced into the frame of a clock, or even of a watch, which we have seen performed by Margetts, who lately died in a state of infirmity. The manner in which the hammers are moved by the pins of the chime-barrel must necessarily vary according to circumstances, as the wires of different rooms are differently placed to produce the sound of a house bell, but an ingenious workman will vary the length and shape of his levers of communication agreeably to the situation and distance of his bells from the clockwork, so that if we give a description of the chime mechanism of a church clock, and also of a portable piece, he will not be at a loss to know how to devise and adapt the necessary parts for any other construction. But before we proceed to our descriptions, it will be proper to give an account of the chime-barrel, and the method of infecting the lifting pegs, or of what is called prick ing it.

Chime-barrel is that cylinder of brass in small clocks, or of wood in church-clocks, which gives motion to the hammers, that strike on the bells, and produce a change or tune thereon, by means of pegs inserted into certain points of its circumference at measured intervals, the pegs serving to lift the hammers in regulated succession both of order and time.

In making a chime barrel for any given tune there are certain necessary conditions to be attended to: First, the barrel must be well turned in a lathe upon its own arbor, so as to have the whole surface of its circumference concentric, when revolving on its pivots. Secondly, the train of wheel-work, belonging to the chime-work, must make the barrel revolve in a space of time exactly equal to what is required for playing the requisite tune on any other instrument, which time may be exactly limited by proportioning the fly on the half wheel to the power of the weight or spring that urges the half wheel of the train. Thirdly, there must be as many bells as the compass of the proposed tune contains musical notes, and also as many rows of pegs inserted into parallel circular lines on the circumference of the barrel as there are hammers to be lifted by them; and, lastly, the whole circumference of the barrel must be divided into as many longitudinal parallelograms of equal breadth, as there are musical bars in the proposed tune, each of which must be again subdivided into as many parts as there are notes of the lowest denomination, whether crotchets, quavers, or semi-quavers, in each bar; then the parallel dividing lines will correspond to the bars, and the sub-divisions within will be the guides for placing the pegs in those bars respectively; for instance, suppose that Pleyel's German hymn be required to be played by a chime clock of any description, and that the points on the barrel where the pegs or pins are to be inserted had required to be ascertained?

In fig. 1. of Plate VII. (Horology), it will be seen that the popular hymn is marked 

\[ \frac{a}{4} \]

which implies, that the bar is measured by four, or crotchets, of which there are two in each bar; it is also observable that the quickest note in the tune is a semi-quaver, of which denomination eight constituent two crotchets, or one bar; consequently the bar must be subdivided into eight. Now suppose the length of the barrel to be represented by the line, D D, or d d, because the compass of the hymn is just one octave beginning and ending with D inclusively, the line, D D, or d d, must be divided into seven equal parts, which will require eight points in each to include them, viz. D, E, F, G, A, B, C, D, and d, e, f, g, a, b, c, d; then, because the whole hymn contains 16 bars, the whole line, D d, which we assume as equal to the circumference of the barrel, must be divided into 16 equal parts, which we have made to fall opposite their respective bars, the better to elucidate our example; then each of these parts may easily be conceived to be subdivided into eight smaller divisions, as from 1 to 2 in the lower line, D d. From the dividing points let straight lines be drawn to complete the squares, or parallelograms which can be divided into, and there will be a figure, D D d d, with 8 \times 16 = 128 small squares or parallelograms, which we will suppose to be on paper that will exactly cover the barrel when placed round it, in order to convey a more distinct idea of the method of ascertaining the true places of the pins on the barrel, which may be thus done:

The first note, B, is a crotchet, and therefore the pin represented by a dot, that moves its hammer must be in the beginning of the line B b, and the next following pin must be at the space of half a bar forwards to limit its continuance; accordingly the next note, D, is placed on the line, D d, at half a bar forwards; again this second note, D, being also a crotchet, requires the next succeeding note of A to be removed another half bar, namely to the interjection of the lines, A a, with 2 2; but the third note, A, which we have just mentioned, is equal in length to three quavers, or fix semi-quavers; the succeeding pin to represent B must consequently be removed \( \frac{2}{3} \) or \( \frac{2}{2} \) of the bar, leaving \( \frac{1}{3} \) or \( \frac{1}{2} \) for the remaining quaver from B to C, the latter of which, being the first note of the third bar, falls on the interjection of the bar line, C c; with the hammer-tail line, C c e, by the same rule the crotchet, C, once struck continues half a bar, and requires the following A to be half of a bar advanced, but A is here \( \frac{2}{2} \) of a crotchet, and the following B only \( \frac{1}{2} \) of the same or \( \frac{2}{2} \) of the bar; the pin of B must therefore be at \( \frac{3}{2} \) of the bar, and the succeeding one on the bar line to limit its duration to \( \frac{3}{2} \). In the fourth bar there is a crotchet reb, which is the reason why there is no dot or pin between its bar lines, as though the B of this bar had been a minim. We might thus have analyzed the whole surface of the barrel, so far as relates to this hymn, but it is presumed the preceding detail, clearly understood, will render the rest perfectly intelligible without further explication.

When the hammers are very heavy, as in church clocks, these bells which have quavers or semi-quavers to be struck immediately in succession require to have each two hammers and each a pair of parallel circles pricked to perform within the limit of time; and when either the barrel is made adjustable, or the pins moveable, a number of times may be put on the same barrel, and where the bells are sufficiently numerous, the tune may be played in two or even three parts.

This method of pricking a chime barrel for playing on bells differs from that of an organ-barrel in this respect, that in the former the length of the note is measured by the space between the contiguous pins, whereas in the latter the limit of the note is produced by crank pieces, instead of pins, which pieces keep the pipes open, and therefore must cover the very spaces which lie between the pins of the other, the projecting parts of one barrel mutually corresponding to the vacant parts of the other.

Chimes of a church clock. Plates V. and VI. of Horology explain the chime mechanism in the clock-room of St. Margaret's church, Westminster: A (figs. 1 and 3) is a barrel on which the rope B is wound: this rope, after passing over a fixed friction roley, has a heavy leaden weight attached to it, by the weight of which the mechanism is actuated; D is a large wheel at the end, and on the arbor of this barrel, which is worked by a pinion E, not seen, the arbor of which is square at the projecting end for the key of the
the handle by which the weight is wound up; the barrel A is so contrived, by means of the click b and ratchet wheel e, (fig. 1) that, when the rope is in the act of being wound, the barrel flips round its stationary arbor, but when the weight is going down, it turns the large cylinder or chime barrel C, attached to the arbor along with it; the chime barrel is made of wood, and has a number of pegs struck into it, which, as it turns round at proper intervals, take hold of the inner ends d of the horizontal and parallel levers E; raise them to a certain height, and then let them go suddenly; this motion at the same time depresses the outer ends of the said levers, and by means of the upright rods G, and other intermediate rods, raises the hammer which strikes upon the large bells in the belfry or belfry above. On the end of the chime barrel next to barrel A, is a large wheel H (figs. 1 and 3) which takes into a small pinion on the arbor of the wheel I; this wheel works a pinion on one end of the long arbor K, (fig. 1) on the other end of which arbor is a pair of fanners, or a fly L, the vanes of which catch the air, as they turn, and regulate the velocity of the machine. This fly is shown separate in fig. 2. A is a portion of the arbor, on which is loosely fitted an iron bar B, having a vane D at each end to prevent the bar from slipping round the arbor in a retrograde direction; a ratchet wheel T is attached to the outer end of the arbor, and a click e is fastened on the fly, which is fast to the teeth of the wheel by a spring, so that when the arbor turns the click flips against the teeth of the wheel, and turns the fly with it, but when the arbor is suddenly stopped (as hereafter described), the fly continues its forward motion for some time by means of its momentum, the click e in the mean time flipping round the ratchet T; by this contrivance all strain upon the mechanism, by a sudden check of the momentum of the fly, is avoided. On one of the diagonal or cross bars of the wheel I (figs. 1 and 3), is a projecting piece of metal f, which piece, when the machine is to be flayed, is caught by a detent g, which detent may be moved towards the centre of the wheel (f0 as to clear the piece f) when the machine is to be put in motion; the upper end of the detent g is fastened to an arbor M, so as to have a circular motion with it; to which arbor is also fixed another detent h (fig. 3) bent to avoid the bar of the frame. On the middle of this detent h, a piece of upright iron i is riveted, on the end of which a hammer N (figs. 1 and 3) strikes; this hammer is raised at the proper hour by the church clock, and by its fall strikes the piece i, (fig. 3) depresses the bent detent h, and consequently moves the detent g from the flap of the piece f. O is a circular plate, having a notch in one part of its circumference, at the back of it are fastened four arms l, l, m, (fig. 3) and another not seen. On the face of the wheel H there is a projecting tooth n (fig. 1) which takes hold of one of the arms on O, and at every turn of the wheel H, moves the wheel O round the space of one quarter. Behind the arms l, l, m, are four knobs p, q, r, s, in a detached state (shewn in fig. 4) against which a lever R (figs. 3 and 4) is pressed by a spring S; the use of this additional mechanism is to make the wheel O always deliver a complete quarter of a revolution whenever it moves at all, for suppose the arms m, l, k, (fig. 4) to have the position of the dotted lines m', l', k', the pin n on the wheel H (figs. 1 and 3) takes the arm m and pulls it downwards, during which course the knob p (fig. 4) raises the lever R into the position of the figure; the spring and lever then act upon the knob p, and quickly bring the arms to the dotted position, in which situation the letters of reference are advanced each to the next arm. This clock has moreover the striking work, in which there is, as usual, a wheel called the count wheel, which turns round once in 12 hours; in this wheel there are three pins, that, at the hours 4, 8, and 12, move the end of a lever that communicates, by means of an intermediate r d Q, (figs. 1 and 3) with the tail P of the hammer N, so as to elevate it; as the count wheel turns round, one of its pins lets go the lever, and the hammer N falls upon the detent b, (the end of which is supposed to be in the notch of the plate O); pushes it down, and at the same time moves the detent g on the same arm O upward; as soon as the hammer has made a stroke, it is partly lifted up again by the tail spring t (fig. 3) acting against the bar of the frame, but the end of the bent detent b is prevented from again entering the notch in the plate O, when the hammer rises, by the lever R, which at the instant the lever b (fig. 4) is pulled down, moves the wheel O a little round, by means of the spring S, into the position of the figure. When the hammer has thus struck and removed the detent g, (fig. 3) the leading weight pulls the barrel A, and sets the machine in motion, during which motion the pegs in the chime barrel E strike the lever, F, and move the bell hammers in the due succession of time, the fly (fig. 2) in the mean time regulating the velocity of the barrel. At each revolution of the chime barrel E, the peg n in wheel H turns the wheel O round one quarter of a revolution, and by the time the barrel has turned four times, the notch in the plate O is brought again opposite to the end of the bent detent b, which therefore falls in by the weight of the detent g, the lever of which also falls at the same time, so as to catch the flap f which lays the machine. The said notch in the plate O is so placed, that when the bent detent b is broken into it, the knobs p, q, r, s, on the back of this plate, are in the position shown in fig. 4, so that this plate O moves, the instant it is permitted to do so, by the bent b being removed by means of the spring S, independently of the great wheel H. This machiniry plays four different tunes, which are changed by turning the index W (fig. 1) by the handle to the corresponding tune marked on the dial plate T; this handle has a pinion on its arbor, behind the dial plate, which works in a rack upon the crooked iron bar y, so as to move it up or down when the handle is turned; the bar y is made to move readily, by having a crooked x with parallel sides at each end, sliding against both sides of corresponding steady pins fixed in the frame; and the friction of a spring 7, pressing against it, prevents its being moved by accident: in the middle of the bar y is a bend y, which acts as an inclined plane between the rollers A, 4, fixed in a small frame at the end of the bar W, so as to move the bent detent b, while the crooked bar y is moved vertically; to the horizontal bar W are fixed the centres of the keys, or levers, F, and a long iron plate, 5, with 16 notches to confine each lever to its own plate of action. The sliding pins g, g, moving in a cock with two perforations attached to the frame, confine the bar W to a horizontal motion. In setting out the pegs on the barrel, 64 parallel circles, four to each lever, are drawn round it, at equal distances; every four of these coincide successively, by the rack-work adjustment, with one of the levers, so that the respective pegs upon the barrel in the first of four circles may work on its own lever, and play one tune; then by moving the levers, along with the bar W, the distance that two contiguous circles are apart, a second set of pegs is presented to the said levers, which now play a second tune; and in the same manner at a third and fourth, successively. The 16 rods G have each a screw adjustment at their lower ends, and their upper ends are connected with revolving rods fixed to the clock, by which the motion is conveyed, under each bell, to the
the hammers, which are placed each in a line perpendicularly under the axis of its bell, so as to strike near its lower extremity; (Plate vii. fig. 4;) the weight of each hammer is supported by a spring S, in such a manner that it rises from the bell the instant it has struck. There is moreover a long horizontal iron bar that goes across the levers E (Plate V. fig. 1) not seen, the ends of which are connected with another lever also not seen, which, when it is pulled down, takes up all the hammers at once, so as to clear the bells in the act of ringing. There are several in this chime, six of which have each two hammers, and the other four but one piece; the double hammers are used where the same bell is required to be struck twice in succession so quickly, that the same hammer could not be lifted up and be made to return twice in the requisite time.

In the mechanism we have here described, the chime barrel is so contrived as to be capable of playing only four tunes; but in some figured wheels which we have visited, the barrels have parallel longitudinal apertures, which admit the lifting pegs to slide into any situation, and which consequently render them disposable for any tune within the compass of the two extreme notes, the sliding pieces being fixed by thumb screws within the barrel.

Chimes of a common clock. After the ample account which we have given of the chime mechanism of a large church clock, we will satisfy ourselves with giving so much only of the chime work of a common clock, as may suffice to give the reader an idea how a communication is made from the barrel to the bells, which portion could not easily be represented where the bells are at a distance from the barrel, as is the case in a church steeple. We beg leave, however, to refer our readers to our article Clock with chimes, for a more particular description of the mechanism which connects the chime part with the going part of the clock, and which alternately locks and unlocks the train of wheel-work that regulates the chime-barrel, it being impossible to describe in a complete manner the contrivance for making the chimes go, and repeat at every quarter of an hour, without describing at the same time the striking mechanism, which does not properly belong to this article. Figures 2 and 3 of Plate VIII. (Horology) represent as much of the chime mechanism of an ordinary clock as will serve our present purpose: A B C D constitute a portion of the clock frame, of which one connecting pillar only is shown; E is the chime barrel of brasses, nearly equal in length to the pillar, and of a diameter sufficient to admit of diagonal rows of brasses or india pins to lift the hammer tails F, in the successive order of a descending octave, while the barrel is revolving, there being eight hammers G, usually striking successively again as many bells H, which are mounted concentrically within one another, on a common axis held fast by the bearing piece of wheel I, screwed to the face of one of the plates at its lower extremity. The mechanism connected with the striking part of the clock is so ingeniously contrived and arranged, as may be seen under the article to which we have already referred, that at and after the first quarter from any hour, it will repeat the octave once; at and after the second quarter, it will repeat the same twice; and at and after the third, four times; and at and after the hour itself, four times; also whenever the octave is repeated four times, the chime part unlocks the striking part, and allows the clock to strike the last hour as soon as the chimes have ceased, but not before. K is a brasses frame forced at the lower end across the side of the superior part of the clock frame, which holds the works, and has a brass plate N, of hammered metal attached to it by screws; this plate, N, is divided nearly to the top by eight parallel vertical flits, made by a saw, which form so many springs; the hammers all turn upon a common fixed arbor near P (figs. 2 and 3;) by means of a perforation made in each fold part P above the tails, which fold part has a straight edge in each, against the central point of which the respective spring bears a little above its inferior extremity (fig. 2); this mode of applying a spring gives the advantage of performing two offices, for it will not only keep the hammer tail in its proper situation, to be taken by a pin of the barrel, but will give a firmness to its bow, and then relieve it to its original position, by acting alternately, partly above and partly below the central hole; which kind of action will readily be understood, by examining the opening joint of a pen-knife, and attending to the manner in which its spring is applied. L is a cock screwed to the face of one of the plates of the frame, and holds the projecting pivot of the fly wheel, to which the fly M is attached with a spring O pressing against it, in such a manner as to hold it to the arbor of the wheel when the latter revolves, and yet to allow it to turn in a detached plate, when the motion of the wheel is suddenly arrested at the conclusion of the chiming, which is a necessary precaution for preventing the destructive effect which might be produced by an instantaneous check of the momentum of the fly, and answers the same purpose as the ratchet wheel and click, together with a spring, on the large fly of the church chime work before described.

The chime barrel which we have here described, is pricked for the performance of a repetition of the eight notes of the octave by a descending gradation, but it might as easily have been made to chime the same scale by an ascending gradation, or to play any hymn or other tune within the compass of the eight notes, or even with more notes, by the addition of a few more bells; and that without more than one hammer to each bell; for when the mechanism is light, the hammers may be made to act with as much rapidity, as the hammers of a grand piano forte.

CHIMIN, or CHEMIN, in Lat., a road, or way. See HIGHWAY and ROAD.

CHIMINAGE. A toll for wayfarage or passage through a forest. The feudista called it pedagogium.

CHIMITAS, the name of a tribe of American Indians, in the province of New Granada, who are seated on one side of the river Magdalbeca, whilst the Guagros occupy the other; and both concur in intercepting the trade of Cartagena and the coast.

CHIMNEY, in Architecture, a part of a house or chamber, in which the fire is made.

The word chimney comes from the French chemin, which is derived from the Latin communis, and that from the Greek κοινόν, a chimney, of κοινός, common. The parts of a chimney are, the hearth or fire-place, the jambs or sides, the back, the mantle resting on the jambs, and the tube or flue which conveys away the smoke.

It has been frequently made a question whether or not the ancients were acquainted with the use of chimneys in the common acceptance of the word. On this subject we shall proceed to state those circumstances and arguments that occur.

In favour of the antiquity of chimneys it has been alleged, that Homer (Odys. i. v. 58.) represents Ulysses, in the grotto of Calypso, as wishing that he might see the smoke ascending from Ithaca: whence Montfacon (L'Antiquitè expliquée) infers, that the houses of Ithaca had chimneys, without which the wish is unintelligible. But in reply, it may be said, that smoke might have been seen in its first, though it proceeded from doors or windows. Herodotus also relates (i. viii. c. 57,) that a king of Libya, when one of his servants asked for his wages, offered him in cold the sun, which
Chimney.

which at that time flone into the house, through the chimney as some have translated the origina but what is her called chimney was merely an opening in the roof, under which, probably, the fire was made in the middle of the edifice. Aristotle, in his comedy of the Vespex (v. 139), introduces old Philocleon that up in a chamber whence he endeavours to make his escape by the chimney; which, however, was a mere hole in the roof, as Reitil has determined; and this appears probable, because mention is made of a top or covering, with which the hole was closed. Several passages have been cited from Atheneus (Deipnosophists), which seem to refer to chimneys; but these are evidently inconclusive; and some of them intimate that there was no such passage for the smoke as a chimney.

Such are the testimonies of Greek authors, refecting the antiquity of chimneys; but they are rather evidences to the contrary, or that the houses of the ancients were constructed without chimneys; more especially when we consider, that there were no chimneys at Rome at the time when the authors wrote, which would not have been the case if the Romans had ever seen them among the Greeks. Vitruvius makes no mention of them, and it is well known that the Romans were accustomed to use other means for warming their houses, such as flues and braziers.

The two words *camina* and *focus* employed by the Latin authors to denote the fire-place are used indiscriminately, so that it is not possible to observe any difference in their signification. Thus, *focus*, which might be taken for a brazier in which charcoal was burnt, is also used to denote a place proper for the consumption of wood, as the words of Horace prove,

"Diluvva frigus, ligna super foco Large repone." Lib. i. Od. 9, 9.

And when Vitruvius directs in what manner the stoves of farm-houses should be placed with respect to the kitchen fire, (Lib. vi. cap. 9) he also uses the word *focus*, which certainly cannot be supposed in this place to mean a portable brazier.

Cicero, in writing to Atticus, says in the same sense as Horace: "Camino incutendo utendum cenico." When Vitellius was chosen emperor, the eating-room or *triclinium* was set on fire by the *camina*. Sueton, cap. 8. This passage, however, seems to allude to a chaffing-dish filled with coals.

Thus these two words are used in a manner which gives completely (fay the advocates for the antiquity of chimneys) the idea of a common chimney, for it cannot be supposed that in any dwelling where the conveniences of life were tolerably understood, a fire of wood should be made without a passage for the smoke. The line of Virgil,

"Et jam fumma procul villarum culmina fumant,"

in some measure supports this opinion, which is further confirmed by Appian, who says "that those persons preferred by the triumvirs fome hid themselves in wells and caves, some in the tops of houses and chimneys;" so for those who maintain this opinion understand *camina hominis sub teco pohtae*. It is alleged, however, that the true translation is *fumosa canacula*; and it is further said that the principal persons of Rome endeavored to conceal themselves in the smoky apartments of the upper story under the roof, which, in general, were inhabited only by poor people; and this seems to be confirmed by what Juvenal expressly says (Sat. x. v. 17) "Rarus venit in canacula miles." The use of chimneys, it is allowed, if it ever obtained among the Romans, was superseded by that of flues and flues; this practice was probably introduced about the reign of Nero. Senea relates that in his time there were invented certain tubes which were placed in the walls, by which the heat of the fire was made to circulate and warm equally the upper and lower apartments.

Against the antiquity of chimneys it has been urged, that if there had been any in the Roman houses, Vitruvius could not have failed to describe the construction of them. But he does not say a word on this subject; neither does Julius Pollus, who has collected with great care the Greek names of every part of a dwelling-house; and Grapaldis (De partibus aedificiorum), who in latter times made a like collection of the Latin terms, has not given a Latin word expressive of a modern chimney. It has been said, indeed, that the word *canina* means a chimney; but this term, though it was used for a chemical or metallic furnace, for a smith's forge, and for a hearth, does not seem, among the Romans, to have denoted a chimney.

In the houses discovered at Herculanum and Pompeii, there are no chimneys, but they appear all to have been warmed by the means of flues and a subterraneous furnace or *hypocaustium*. See that article, and also Browne.

The complaints often made by the ancients respecting smoke, serve also to confirm the opinion that they had no chimneys. Upon the whole it may be observed, that, though one or more expressions of ancient authors may appear to allude to a chimney, and though we should infer from such expressions, as Montfaucon has done, that the ancients were acquainted with the art of constructing in masonry elevated flues for conveying away the smoke, it must be allowed, when we consider the many proofs that occur to the contrary, that they were, at any rate, extremely rare. As they are so convenient and useful, and can be easily constructed upon most occasions, it is impossible, if they had been well known, that they should ever have been forgotten.

It is not easy to determine the period when chimneys first came into use. If it be true, as Du Cange, Voilus, and others affirm, that apartments called "*caminatae*" were apartments with chimneys, they must have been introduced at an early period; for that word occurs in the year 1569, or before that time; but it is always found connected in such a manner as entirely to contradict the above signification. The writers of the 14th century seem either to have been unacquainted with chimneys, or to have considered them as the newest invention of luxury. That there were no chimneys in the 10th, 11th, and 12th centuries has been premised from the terms "ignitenum," or "pyritium," the censer-bell of the English, and the repeater of the French; to intimate, that the people made fires in their houses in a hole or pit in the centre of the floor, under an opening formed in the roof; and when the fire was burnt out, or the family went to bed at night, the hole was flung by a cover of wood. See Curieu.

The oldest certain account of chimneys that has occurred to Beckmann in his researches (see Hist. of Inventions, vol. ii. p. 105.), is in the year 1347; for an inscription at Venice records that at the above period a great many chimneys (*molts camini*) were thrown down by an earthquake. He adds, that the first chimney-sweepers in Germany came from Savoy, Piedmont, and the neighbouring territories, and these for a long time were the only countries where the cleaning of chimneys was followed as a trade. Hence, he conjectures, that chimneys were invented in Italy.

In considering the countries of modern Europe we may observe the use of flues prevalent throughout the North, while in France and Great Britain open chimneys are general. On the other hand, in the warm countries of Italy and Spain there are very few chimneys, and the only method usually
A chimney, as it has been before observed, consists of a fire-place in which the fuel is consumed, and a flue to carry off the smoke and vapour arising from the combustion; thus affording the benefit of the heat of a fire without the inconvenience of its smoke. But these objects were, and still are very imperfectly attained, a very large portion of the fuel being wantonly consumed without increasing the warmth of the apartment, and, in fact, causing those blasts of cold air to commonly complained of by the sides of large open chimneys, while the smoke is frequently driven out to the intolerable inconvenience of the inhabitants. The plague of a smoking chimney is proverbial, and has engaged considerable attention from observers of various descriptions.

Dr. Franklin is the first who has treated this subject in a philosophical manner, and in his "Observations on the Causes and Cure of Smoky Chimneys," published in 1787; he has very satisfactorily explained all the usual causes of this defect, and shown their remedies. To this pamphlet, succeeded the Essay of Count Rumford, in 1796, whose improvements have been very generally followed in the construction of fire-places. From these two works, which together form a very valuable body of information, we shall draw the materials for the following treatise on the cause and cure of smoky chimneys, together with the methods of increasing the heat and diminishing the quantity of fuel consumed.

The mode and cause of the ascent of smoke in a chimney may be thus explained: the air contained in the flue being heated by the fire immediately below it, becomes rarefied, and therefore lighter than the external air through which it accordingly rises, and as the heated air escapes from the top of the chimney, its place is supplied by the influx of fresh quantities of air, which, passing over the fire, becomes likewise heated, and thus continues to rise; so that the smoke and vapour from the burning materials. It may be observed here that smoke is not, as some are apt to imagine, in its own nature specifically lighter than air, but the contrary, as may be shown by a simple experiment. Having lit a pipe of tobacco, plunge the stem to the bottom of a decanter half filled with cold water, then put a cloth over the bowl and blow through it, and make the smoke descend in the stem of the pipe, from the end of which it will rise in bubbles through the water, and being thus cooled, will not afterwards rise to go out through the neck of the decanter, but remain spreading itself and retreating on the surface of the water. In this case, therefore, the smoke is heavier than air, and it is only when rared by heat that it becomes lighter. As, however, the vapour rising from a fire must always be highly rared, it is easy to perceive that it would be as much a miracle if smoke should not rise in a chimney, (all hindrances to its ascent being removed,) as that water should refuse to run in a syphon, or to descend aSyphon. What is it then, which makes a smoky chimney? That is, a chimney, which, instead of conveying off all the smoke, discharges a part of it into the room? The causes of this effect may be reduced to the following general causes.

Smoky chimneys in a new house, are such, frequently, for want of air. The workmanship of the rooms being all good and just out of the workman's hands, the joints of the flooring and of the panelling of the wainscoting are all true and tight; the more so as the walls, perhaps not yet thoroughly dry, preserve a dampness in the air of the room which keeps the wood-work swelled and close: the doors and

the fashes too being worked with truth, shut with exactness, so that the room is perfectly tight, no passage being left open for the air to enter except the key-hole, and even that is frequently closed by a little dropping shudder. In this case it is evident that there can be no regular current through the flue of the chimney, as any air escaping from its aperture would cause an exhaustion in the air of the room similar to that in the receiver of an air-pump, and, therefore an equal quantity of air would rush down the flue to restore the equilibrium; accordingly the smoke, if it ever ascend'd to the top, would be best down again into the room. These, therefore, who stop every crevice in a room to prevent the admission of fresh air, and yet would have their chimney carry up the smoke, require inconsistencies and expect impossibilities. The obvious remedy in this case is, to admit more air, and the question will be how not exactly, will naturally supply the air without is to be admitted, so as to produce a great difference of climate at the door or window be left so much open, it causes a cold draft of air to the fire-place, to the great discomfort of those who sit there. Various have been the contrivances to avoid this, such as bringing in fresh air through pipes in the jams of the chimney, which, pointing upwards, should blow the smoke up the funnel; opening passages in the funnel above to let in air for the same purpose; but these produce an effect contrary to that intended, for as it is the constant current of air passing from the room through the opening of the chimney into the flue, which prevents the smoke coming out into the room, if the funnel is supplied by other means with the air it wants, and especially if that air be cold, the force of that current is diminished, and the smoke in its efforts to enter the room finds less resistance.

The wanted air must then indifferently be admitted into the room to supply what goes off through the opening of the chimney, and it is advisable to make the aperture for this purpose as near the ceiling as possible, because the heated air will naturally ascend and occupy the highest part of the room, thus confirming a great difference of climate at different heights, a defect which will be in some measure obviated by the admission of cold air near the ceiling, which descending, will beat down and mingle the air more effectually.

Another cause of smoky chimneys is too short a funnel, as, in this cafe, the ascending current will not always have sufficient power to direct the smoke up the flue. This defect is frequently found in low buildings, or the upper stories of high ones, and is unavoidable, for if the flue be raised high above the roof to strengthen its draft, it is then in danger of being blown down and crumbling the roof in its fall. The remedy in this case is to contract the opening of the chimney so as to oblige all the entering air to pass through or very near the fire, by which means it will be considerably heated, and by its great rarefaction, cause a powerful draft, and compensate for the shortness of its column. The cafe of too short a funnel is more general than would be imagined, and often found where one would least expect it; for in not uncommon in ill-contrived buildings instead of having a separate funnel for each fire-place to bend and turn the funnel of an upper room so as to make it enter the side of another flue that comes from below. By this means the funnel of the upper room is made short, of course, since its length can only be reckoned from the place where it enters the lower funnel, and that flue is also shortened by the difference between the entrance of the second funnel and the top of the flack; for all that part being readily supplied with air through the second flue, adds no strength to the draft, especially as that air is cold when there is no fire in the second chimney. The only easy remedy
Another very common cause of the smoking of chimneys is, their overpowering one another. For instance, if there be two chimneys in one large room, and you make fires in both of them, you will find that the greater and stronger fire shall overpower the weaker, and draw air down its funnel to supply its own demands, which air descending in the weaker funnel will drive down its smoke, and force it into the room. If, instead of being in one room, the two chimneys are in two different rooms communicating by a door, the same thing will happen, and the reason is, to take care that every room have the means of suppling itself from without, with the air its chimney may require, so that no one of them may be obliged to borrow from another, nor under the necessity of lending.

Another cause of smoking is, when the tops of chimneys are commanded by higher buildings, or by a hill, so that the wind blowing over such eminences falls like water over a dam, sometimes almost perpendicularly on the tops of the chimneys that lie in its way, and beats down the smoke contained in them. The remedy commonly applied in this case is, a turn-cap, made of tin or plate-iron, covering the chimney above, and on three sides open on one side, turning on a spider, and which being guided or governed by a vane, always presents itself back to the wind. This method will generally be found effectual, but if not, raising the flues, where practicable, so that their tops may be on a level with or higher than the commanding eminence, is more to be depended on.

There is another cause of command, the reverse of that last mentioned; it is where the commanding eminence is farther from the wind than the chimney commanded. For instance, suppose the chimney of a building to be so situated as that its top is below the level of the ridge of the roof, which, when the wind blows against it, forms a kind of dam against its progress. In this case, the wind being obstructed by this dam, will, like water, press and search for passages through it, and finding the top of the chimney below the top of the dam, it will force itself down that funnel in order to get through by some door or window open on the other side of the building, and if there be a fire in such chimney, its smoke is of course beat down and fills the room. The only remedy for this inconvenience is, to raise the funnel higher than the roof, supporting it, if necessary, by iron bars; for a turn-cap in this case has no effect, the dammed up air prevailing down through it in whatever position the wind may have placed its opening.

Chimneys otherwise drawing well are sometimes made to smoke by the improper and inconvenient situation of a door. When the door and chimney are placed on the same side of a room, if the door is made to open from the chimney, it follows, that when only partly opened a current of air is admitted and directed across the opening of the chimney, which is apt to draw out some of the smoke.

A room that has no fire in its chimney may sometimes be filled with smoke, which is received at the top of its funnel and descends into the room. To understand this effect, it will be necessary to observe, that currents of air are frequently produced in flues, though not exposed to the influence of fire. The air contained in a funnel, being confined on every side by brick-work, which is a bad conductor of heat, will not be immediately affected by any sudden variation in the temperature of the atmosphere; and thus, while it differs in weight from the external air, an ascending or descending current will be formed in the flue. If, after a warm season, the outward air suddenly grows cold, the empty warm funnels begin to draw strongly upwards, that is, the rarified air contained in them begins to rise, cooler air enters to supply its place, is rarified in its turn, and rises; and this operation continues till the funnel grows cooler, or the outer air warmer, or both, when the motion ceases. On the other hand, if, after a cold season, the outward air suddenly becomes warm, this operation is reversed. When the temperature of the atmosphere and of the flues is nearly equal, the difference of warmth in the air between day and night is sufficient to produce these currents; the air will begin to ascend the funnels as the end of the evening comes on, and this current will continue till, perhaps, nine or ten o'clock the next morning, when it begins to decline, and as the heat of the day approaches, it sets downwards, and continues so till towards evening, when it again hesitates for some time, and then goes upwards constantly during the night, as before mentioned. Now, when smoke, issuing from the tops of the neighbouring chimneys, palls over the tops of funnels which are at the time drawing downwards, as they often are in the middle part of the day, such smoke is of necessity drawn into those funnels, and descends with the air into the chamber.

Chimneys which generally draw well do, nevertheless, sometimes give smoke into the room, it being driven down by strong winds palling over the tops of their flues, though not descending from any commanding eminence. To understand this, it may be considered that the rising light air, to obtain a free passage from the funnel, must push out of its way, or oblige the air that is over it to rise. In a time of calm, or of little wind, this is done visibly for we see the smoke that is brought up by that air rise in a column above the chimney. But when a violent current of wind palls over the top of a chimney, its particles have received so much force, which keeps them in a horizontal direction, and follow each other so rapidly, that the rising light air has not strength sufficiently to oblige them to quit that direction, and move upwards to permit its issue. Add to this, that some of the air may impinge on that part of the inside of the funnel which is opposed to its progress, and be thence reflected downwards from side to side, driving the smoke before it into the room. The simplest and best remedy in this case is the application of a chimney-pan, which is a hollow truncated cone of earthenware placed upon the top of the flue. The intention of this contrivance is, that the wind and eddies which strike against the oblique surface of the cover may be reflected upwards instead of blowing down the chimney. The remarkable chimneys observed at Venice, in which the top of the flue is enlarged and rounded in the shape of a funnel, seem also intended as a remedy to this inconvenience, that the wind blowing over one of the edges into the funnel may be fanned out again on the other side by its form.

The bad construction of fire-places is another cause of smoking chimneys; and this will lead us to the consideration of the second part of our subject, namely, the methods of raising the heat and diminishing the consumption of fuel; for it will be found that the improvements necessary to produce the last-mentioned end will also have a general tendency to cure smoky chimneys. On this subject the most labourious works of Count Rumford are conspicuous, and we shall proceed to give an abridged account of his method.

In investigating the best form of a fire-place, it will be necessary to consider, first, what are the objects which ought principally to be had in view in the construction of a fire-place; and, secondly, to consider how these objects can best be attained. Now the design of a chimney-fire being simply to warm a room, it is essential to contrive so that this end shall...
be actually attained, and with the least possible expenditure of fuel, and also that the air of the room be perfectly pure and fit for respiration, and free from smoke and all other offensive smells.

In order to take measures with certainty for warming a room by means of an open chimney fire, it will be necessary to consider how and in what manner such a fire communicates heat to a room. This question may, perhaps, at the first view of it, appear to be superfluous and trifling; but a more careful examination of the matter will shew it to be highly deserving of the most attentive examination.

To determine in what manner a room is heated by an open chimney-fire, it will be necessary, first of all, to find out under what form the heat generated in the combustion of the fuel exists, and then to see how it is communicated to those bodies which are heated by it.

In regard to the first of these subjects of inquiry, it is certain that the heat which is generated in the combustion of the fuel exists under two perfectly distinct and different forms. One part of it is combined with the smoke, vapour, and heated air which rise from the burning fuel, and goes off with them into the upper regions of the atmosphere; while the other part, which appears to be uncombined, or combined only with light, is sent off from the fire in rays, to be afterwards reflected or refracted. With respect to the second subject of inquiry, it is highly probable that the combined heat can only be communicated to other bodies by actual contact with the body with which it is combined; and with regard to the rays which are sent off by the burning fuel, it is certain that they communicate or generate heat only when and where they are stopped or absorbed. In passing through air which is transparent they certainly do not communicate any heat to it; and it seems highly probable that they do not communicate heat to solid bodies by which they are reflected.

A question which naturally presents itself is, what proportion does the radiant heat bear to the combined heat? Though that point has not been determined with any considerable precision, it is, however, certain, that the quantity of heat which goes combined with the smoke, vapour, and heated air is much more considerable, perhaps three or four times greater, than that which is sent off from the fire in rays: and yet small as the quantity is of this radiant heat, it is the only part of the heat generated by the combustion of fuel in an open fire-place which ever is, or, indeed, ever can be employed in heating a room. The whole of the combined heat escapes by the chimney, and is totally lost: and no part of it could ever be brought into a room from an open fire-place, without bringing along with it the smoke, which is also combined.

It is, therefore, of the highest importance to determine how the greatest quantity of radiant heat may be generated in the combustion of the fuel, and how the largest proportion of that quantity may be brought into the room. Now the quantity of radiant heat depends very much upon the management of the fire, or upon the manner in which the fuel is consumed. When the fire burns bright much radiant heat will be sent off from it; but when it is smothered up very little will be generated, and, indeed, very little combined heat that can be employed to any useful purpose; most of the heat produced being immediately expended in giving elasticity to a thick dense vapour or smoke, which will be seen rising from the fire; and the combustion being very incomplete, a great part of the inflammable matter of the fuel being merely raised and driven up the chimney, without being inflamed, the fuel will be wasted to no purpose. During this time no heat is communicated to the room; and what is still worse, the throat of the chimney being occupied merely by a dense vapour, not polluted of any considerable degree of heat, and consequently not having much elasticity, the warm air of the room finds itself forced in forcing its way up the chimney and clearing, than when the fire burns bright: and it happens not infrequently, especially in fire-places ill constructed, that this current of warm air from the room which profeses into the chimney, crossing upon the current of heavy smoke which rises slowly from the fire, obstructs it in its ascent, and beats it back into the room: hence it is, that chimneys for-often smoke when too large a quantity of fresh coals is put upon the fire.

To cause as many as possible of the rays, as they are sent off from the fire in straight lines, to come directly into the room, it will be necessary, in the first place, to bring the air as far forward, and to leave the opening of the fire-place as wide and high as can be done without inconvenience; and secondly, to make the sides and back of the fire-place of such form, and of such materials, as to cause the direct rays from the fire which strike against them, to be sent into the room by reflection in the greatest abundance.

Now, it will be found, upon examination, that the best form for the vertical sides of a fire-place, or the enclosures, as they are called, is that of an upright plane, making an angle with the plane of the chimney of about 95 degrees. According to the old fashion of chimneys, this angle is 90 degrees, or forms a right angle; but, as in this case the two enclosures are parallel to each other, it is evident that they are very ill contrived for throwing into the room, by reflection, the rays from the fire which fall on them.

The next improvement will be to reduce the throat of the chimney, the immaterial space of which is a most essential fault in their construction; for, however good the formation of a fire-place may be in other respects, if the opening left for the passage of the smoke is larger than is necessary for that purpose, nothing can prevent the warm air of the room from escaping through it; and whenever this happens, there is not only an unnecessary loss of heat, but the warm air, which leaves the room to go up the chimney, being replaced by cold air from without, produces those drafts of air so often complained of. But though these evils may be remedied, by reducing the throat of the chimney to a proper size, yet, in doing this, several considerations will be necessary to determine its proper situation.

As the smoke and hot vapour which rise from a fire naturally tend upwards, it is evident that it will be proper to place the throat of the chimney perpendicularly over the fire; but to ascertain its most advantageous distance, or how far above the burning fuel it ought to be placed, is not so easy, and requires several advantages and disadvantages to be balanced.

As the smoke and vapour rise in consequence of their being raked by heat, and made lighter than the air of the surrounding atmosphere, and as the degree of their rarefaction is in proportion to the intensity of their heat, and as this heat is greater near the fire than at a distance from it, it is clear, that the nearer the throat of a chimney is to the fire, the stronger will be what is commonly called its draught, and the less danger there will be of its smoking, or of dust coming into the room when the fire is litred. But, on the other hand, when a very strong draught is occasioned by the throat of the chimney being very near the fire, it may happen that the influx of air into the fire may become too strong as to cause the fuel to be consumed too rapidly. This however will very seldom be found to be the case, for the throats of chimneys are in general too high.

In regard to the materials which it will be most advantageous to employ in the construction of fire-places, little difficulty
difficulty will attend the determination of that point. As
the object in view is to bring radiant heat into the room, it
is clear that that material is best for the construction of a
fire-place which reflects the mott, or which absorbs the heat
of it, for that heat which is absorbed cannot be reflected.
Now, as bodies which absorb radiant heat are necessarily
heated in consequence of that absorption; to discover which
of the various materials that can be employed for construct-
ing fire-places are best adapted for that purpose, we have
to find, by an experiment very easy to be made, what
bodies acquire heat least, when exposed to the direct rays of a
clear fire; for those which are least heated evidently
absorb the least, and consequently reflect the most radiant
heat. And hence it appears that iron, and in general metals
of all kinds, which are well known to grow very hot when
exposed to the rays projected by burning fuel, are to be
reckoned among the very worst materials that it is possible
to employ in the construction of fire-places. Perhaps the
best materials are fire-brick and common bricks and mortar.
These substances are fortunately very cheap, and it is not
easy to say which of the two the preference ought to be
given. When bricks are used, they should be covered with a
thin coating of plaster, which, when perfectly dry, should
be white-washed, when that is used; and every part of the fire-place
which does not come into actual contact with the burning
fuel should be kept as white and clean as possible.

We shall now proceed to describe particularly, with the
aid of figures, the improvements of Count Rumford.

**Fig. 1. Plate XLI. of Architecture, is a plan of a fire-place on the old construction; fig. 2, an elevation, and fig. 3, a section of the same. Fig. 4, a plan; fig. 5, an elevation, and fig. 6, a section of an improved fire-place.**

The bringing forward of the fire into the room, or rather
bringing it nearer to the front of the opening of the fire-
place, and the diminishing of the throat of the chimney, be-
ning two objects principally had in view in the alterations of
fire-places recommended, it is evident that both these may
be attained merely by bringing forward the back of the
chimney. It will then remain to be determined how far
the back should be brought forward. This point will be
limited by the necessity of leaving a proper passage for the
smoke. Now, as this passage, which in its narrowest part is
called the throat of the chimney, ought, for reasons before
flated, to be immediately or perpendicularly over the fire,
it is evident that the back of the chimney should be built
perfectly upright. To determine therefore the place of the
new back, nothing more is necessary than to ascertain how
wide the throat of the chimney ought to be left. This
width is determined by Count Rumford from numerous ex-
periments, and comparing all circumstances, to be four inch-
es. Therefore, supposing the breadth of the chimney, or the
wall above the mantle, to be 9 inches thick, allowing 4
inches for the width of the throat, this will give 13 inches
for the depth of the fire-place. The next consideration will
be the width which it will be proper to give to the back.
This, in fire-places of the old construction, is the same with
the width of the opening in front; but this construction is
faulty, on two accounts; first, because the openings being
parallel to each other, are ill contrived to throw out into the
room the heat they receive from the fire in the form of rays;
and, secondly, the large open corners occasion eddies of
wind which frequently disturb the fire and embarrass the
smoke in its ascent, in such a manner as to bring it into the
room. Both these defects may be entirely remedied, by
diminishing the width of the back of the fire-place. The
width which in most cases it will be best to give it, is one-
third of the width of the opening of the fire-place in front.
But it is not absolutely necessary to conform rigorously to
this decision, nor will it always be possible. Where a chimi-
ney is designed for warming a room of moderate size, the
depth of the fire-place being determined by the thickness of
the breast to 13 inches, the same dimensions would be a
good size for the width of the back, and three times 13
inches, or 3 feet 3 inches, for the width of the opening in
front, and the angles made by the back of the fire-place,
and the sides of it, or covings, would be but 135 degrees,
which is the best position they can have for throwing heat
into the room. In determining the width of this opening in
front, the chimney is supposed to be perfectly good, and
well fitted. If there is any reason to apprehend its ever
flickering, it will be necessary to reduce the opening in front,
placing the covings at a less angle than 135 degrees, and
especially to diminish the height of the opening by lowering
the mantle.

If from any consideration, such as the width to accommodate
the fire-place to a g ate or stove already on hand, it should
be wished to make the back wider than the dimension recom-
manded, as for instance, 16 inches; it will be advisable not
to exceed the width of 5 feet 3 inches for the opening in front,
as in a very wide and shallow fire-place, any sudden motion
of the air in front would be apt to bring out puffs of smoke
into the room.

The throat of the chimney being reduced to four inches,
it will be necessary to make a provision for the passage of a
chimney sweeper. This is to be done in the following manner.
In building up the new back of the fire-place, when this wall is brought up so high that there remains no
more than about 10 or 11 inches between what is then the
top of it and the underside of the mantle, an opening or
door-way, 11 or 12 inches wide, must be begun in the mid-
dle of the back, and continued quite to the top of it, which
according to the height that it will commonly be necessary
to carry up the back, will make the opening 12 or 14 inches
high, which will be quite sufficient for the purpose. When
the fire-place is finished, this door-way is to be closed by a few
bricks laid without mortar, or a tile or piece of stone con-
finned in its place by means of a rebate made for that purpose
in the brickwork. As often as the chimney is swept, the
chimney sweeper removes this temporary wall or stone, which
is very easily done, and when he has finished his work, he
again puts it in its place.

The new back and covings may be built either of brick-
work, or of stone, and the fire-place between them and the old
back and covings, ought to be filled up to give greater solidity
to the structure. This may be done with loose rubbish or
pieces of broken bricks or stones, provided the work be
strengthened by a few layers or courses of bricks laid in
mortar; but it will be indispensably necessary to finish the
work where these new walls end, that is, to fill, at the top of
the throat of the chimney, where it ends abruptly in the open
canal or flue, by a horizontal course of bricks well
secured with mortar. It is of much importance that they
should terminate in this manner; for were they to be flopped
outward and nailed in such a manner as to swell out the upper
extremity of the throat of the chimney in the form of a
trumpet, and increase it by degrees to the size of the flue
of the chimney, this contraction would tend to afflux the
winds which may attempt to blow down the chimney, in
forcing their way through the throat, and throwing the
smoke backward into the room.

The internal form of the breast of the chimney is also a
matter of great importance, and which ought to be particu-
larly
C H I M N E Y.

larily attended to. The worst form it can have is that of a vertical plane or upright flat, and next to this the worst form is an inclined plane. Both these forms cause the current of warm air from the room which will, in spite of every precaution, sometimes find its way into the chimney, to follow upon the current of air which rises from the fire in such a manner as to embarrass it in its ascent and drive it back. The current of air which, passing under the mantle, gets into the chimney, should be made gradually to bend its course upwards, by which means it will unite quietly with the ascending current of smoke, and will be less likely to check and impede its progress. This is to be effected by rounding off the inside of the breast of the chimney, which may be done by a thick coating of plaster.

Plate XLI. of Architectura, Fig. 1. The plan of a fire-place on the old construction: A, B, the opening of the fire-place in front; C, D, the back of the fire-place; A and B, the covings.

Fig. 2, shews the elevation or front view of the same fire-place.

Plate XLI. of Architectura, Fig. 3. This figure shews how the fire-place, represented in Fig. 1, is to be altered, in order to its being improved. A B is the opening in front, C D the back, and A C and B D the covings of the fire-place in its original state. A B its opening in front, B C its back, and A D its covings after it has been altered; e is a point upon the hearth upon which a plumb suspended from the middle of the upper part of the breast of the chimney falls. The situation for the new back is ascertained by taking the line e f equal to 4 inches. The new back and covings are represented as being built of bricks, and the space between the new and the old back and covings as being filled up with rubbish.

Fig. 4. This figure represents the elevation or front view of the fire-place, Fig. 2, after it has been altered. The lower part of the doorway left for the chimney sweeper, is shown in this figure by dotted lines.

Fig. 5. This figure shews the section of a chimney fire-place and of a part of the line of the chimney on the old construction. a b is the opening in front, b c the depth of the fire-place at the hearth, d the breast of the chimney, d e the throat of the chimney, and d f g e a part of the flue.

Fig. 6. This figure shews the section of the same chimney after it has been altered: b l is the new back of the fire-place, l m the tile or stone which closes the doorway for the chimney sweeper, d i the height of the chimney narrowed to 4 inches, a the old mantle, and b the new mantle formed under it to diminish the height of the opening of the fire-place in front, the new mantle being backed with plaster to make the inside of a proper form.

When the breast or wall of the chimney in front is very thin, it may happen, that the depth of the fire-place determined according to the preceding rules may be too small. Thus supposing the breast to be only 4 inches thick, which is sometimes the case, particularly in rooms fitted near the top of a house, taking 4 inches for the width of the throat, will give only 6 inches for the depth of the fire-place. In this case, it would be proper to increase the depth of the fire-place at the hearth to 12 or 13 inches, and to build up the back perpendicularly to the height of the top of the grate, and then sloping the back by a gentle inclination forward, bring it to its proper place directly under the back part of the throat of the chimney. This slope, though it ought not to be too abrupt, yet should be quite finished at the height of 8 or 10 inches above the fire, otherwise it may perhaps cause the chimney to smoke; but when it is very near the fire, its heat will enable the current of rising smoke to overcome the obstacle which this slope will oppose to its ascent, which it could not so easily do, were the slope situated at a greater distance from the burning fuel.

There is one important circumstance requiring chimney fire-places designed for burning coals which remains to be examined, and that is the grate. Although there are few grates that may not be used in chimneys, altered or constructed on the principles recommended by Count Rumford, yet they are not by any means all equally well adapted for that purpose. Those whose construction is most simple, and of which all the cheapest, are beyond comparison the best on all accounts. If thing being wanted but merely a grate to contain the coals, and all additional apparatus being not only useless but pernicious; all complicated and expensive grates should be laid aside, and such as are more simple substituted in their room. The proper width for grates in rooms of a middling size, will be from 6 to 8 inches, and their length may be diminished more or less according to the difficulty of heating; the room, or the severity of the weather. But where the width of a grate is not more than 5 inches, it will be very difficult to prevent the fire from going out. It has been before observed that the use of metals is as much as possible to be avoided in the construction of fire-places, it will therefore be proper always to line the back and sides of a grate with fire-brick, which will cause the fire to burn better and give more heat into the room.

Smoke in its passage through a chimney departs a great part of the foot, with which it is loaded, upon the sides of the flue, which caurs danger from fire, and is besides apt to fall back to the room. It is therefore frequently necessary to have the flues cleaned. To effect this, various expedients have been resorted to, but that most commonly adopted is the use of chimney boys, who ascend within the chimney and sweep down the foot. The evils of this disagreeable and unwholesome occupation to those engaged in it, are generally acknowledged, and at least twelve years the public attention has been directed to this subject, and premiums offered for the discovery of methods which might be substituted to a practice so offensive to humanity.

In the year 1802 a number of practical and wealthy persons affiated for this purpose, and offered considerable premiums to those who might invent and bring into practice, a method of cleaning chimneys by means of water which should supercede the necessity of chimney boys. Inventing themselves, perhaps, inaudaciously, they applied to the "Society for the encouragement of Arts, Manufactures, &c." in the Adelphi, requesting them to engage it, and to offer premiums on the subject. In consequence of this application the society offered their gold medal to the person who should invent the most effectual mechanical or other means for cleaning chimneys from foot, and obviating the necessity of children being employed within the flues. In a few months there were five candidates for this premium, whose several inventions were put to the test of experiment upon chimneys not less than 50 feet high. One of the inventions consisted of a lot of brushes with polished watts, which were to be let down from the top of the chimney, but as the object was to find an apparatus to effect the purpose from the inside of the house, the was deemed unfit to accomplish the views of the society. Another gentleman proposed the plan of throwing gravel up the chimney by means of conduited air; the machine was tried, and deemed wholly inadequate to the purpose. A third apparatus consisted of elastic rods of whalebone and cane, with a brush at the end of the upper one, which was found to answer only in short and straight chimneys. The next consisted of lattice several feet long, which locked into the other,
other, and on the upper one was fixed an elastic expanding flue, which, in its ascending and contracted state, occupied a space of only six or eight inches, but which was to be opened, when forced to the top of the chimney, by means of a spring attached to it, the whole length of the rods. After many experiments before divers persons appointed to examine its merits, this was given up as ineffective to the purpose required. The only remaining apparatus was invented by Mr. George Smart, the patentee of a method of making hollow rods for flues; to him, after a long series of practice, in which he has been almost uniformly successful, the gold medal was adjudged; he has received also, we believe, a premium for the invention. His method is now practised by several persons in and near the metropolis, we shall give a particular account of it, with references to an engraved plate. The principal parts of the machine are a brush, some rods or hollow tubes, that fit into each other, by means of brass sockets, and a cord for connecting the whole together.

The brush consists of four fan-shaped portions, see Plate C, fig. 1 and 2, which are to come upon the stage, in ascending the chimney, the brush may be kept up a small space as possible, and in descending, it may be turned out and keep the sides of the flue; by a contrivance exactly like that which is adopted in the common umbilical, the brush is prevented from falling down into its contracted form; fig. 1 represents it expanded, and in fig. 2 it is shown in its contracted state. The substance made use of in general for the brush is what is called white. The rods represented by a, b, c, d, e, f, &c. f, s, 1, 2, and 3, are hollow tubes with a metal socket, at the lower end; some of the sockets have a ferrule in them for the purpose of confining the cord after it has been duly stretched, and preventing the rods from separation (see fig. 2); the upper end of the rods are either with or without ferrules, and taper to admit of a small motion within the sockets. The rods are about thirty inches long, and the cord runs from the top of the brush through all the rods, and when drawn tight keeps the whole machine together. Fig. 3, represents the cloth to be placed before the chimney opening, and a bar of deal or other wood, with a flue on it, fixing it to different fixed openings; fig. 4, is a bar or bars made to slide out, like a telescope, with a ferrule to fix it at different lengths, for closing the sides of the cloth to the jamb of the chimney piece; fig. 5, exhibits the machine raised up the chimney with the man working, he being on the outside of the cloth, through which there is a small slit or opening to admit the tubes passing. Fig. 6, a part of the apparatus, consisting of a small pole and pulley, fixed in a board for the purpose of more easily drawing the cord tight before it is made fast with the ferrule. The method of using the machine is this: Having ascertained, by leaving up the chimney, that is the direction of the flue, the cloth is then to be fixed before the fireplace, with the horizontal lines for the flue, fig. 5, and the sides to be closed with two upright bars like fig. 4. The brush is introduced through the opening of the cloth, which opening is then to be buttoned, and one of the rods is to be slipped up the cord into the socket on the lower end of the rod which supports the brush; the other rods are in like manner to be brought up one by one in succession, till the brush is raised somewhat above the top of the chimney, observing to keep the cord constantly tigget, and when those rods which have a ferrule in the socket brought up, they are to be placed on the purchase; the cord is to be put round the pulley and drawn very tight, and screwed down, by which all their ends above will be firmly connected together, and the whole may be regarded as one long flexible rod. In pulling the machine down, the edges of the brush striking against the top of the chimney, will cause it to expand, and there being a spring to prevent its contracting again, it will bring down the foot with it. In drawing down the machine, the person should grasp with his left hand, the rod immediately above that which he is separating with his right hand, to prevent the upper ones from sliding down too soon. The rods as they are brought down, are to be laid carefully one by one in a small compact package, and arranged like a bundle of flints.

This machine has been found useful in extinguishing fires in chimneys; for that purpose a coarse cloth is to be tied over the brush, dipped in water, and then passed up in the manner directed. After three years experience, Mr. Smart's machine has been found a great support, to answer the purposes for which it was intended; in the course of several thousand trials it is ascertained that not more than one or two chimneys at most, in a hundred, has required the passage of the brush. It is, however, of importance to observe that the invention cannot be deemed in a state of perfection; foot from some causes adheres so strongly to the sides of the chimney and chimney pot, that no brush will of itself bring it down, so that after a considerable time it may be expected that means must be found to separate off the foot as the chimney ball is generally do. We have therefore that such an addition to the apparatus could be devised, as should remedy the defect: it is well known that one coat of the smoking of chimneys is from the circumference of the top of the chimney pot being clogged with foot that adheres to the upper edge, which it is certain Mr. Smart's brush has in many instances failed to remove. He has done much to obviate an evil long complained of; an evil that has deprived of health, and eventually of life, a multitude of persons in their youth, that might for a long course of years have been useful to the community, and we wish to see in his hands, the invention, to honourable to his talents, rendered still more useful by being more perfect. He has attained, with regard to making his brush ascend the chimney, all that can be expected, and instead of bringing up infants to climb the fifty or hundred chimneys which on account of the direction of the flue no apparatus can be made to ascend, other means may be adopted, such as, &c. By having a fixed apparatus at the top, with a chain descending down the flue, and a brush annexed to it, for which purposes two patents were taken out in the year 1827, one by Mr. Bill of Hampstead, and one by Mr. Davy, of London. Or 2nd, by the method practised at Edinburgh, and other places in the northern parts of the United Kingdom, of letting down a weight attached to one end of a cord, with a brush of lolly tied at the other end, which by means of a person at the top and another at the bottom of the chimney is worked up and down till the foot is thoroughly cleaned away.

Chimney-Sweeps, regulation concerning. By Statute 28 Geo. III. c. 48, the churchwardens and overseers of the poor of any parish, with the consent of two Justices, may bid any boy of the age of 8 years and upwards, who is chargeable to the parish, to any person following the trade of a chimney sweeper, till he shall attain the age of sixteen years. No master shall have more than five apprentices at one time; nor let out his apprentices to hire to any other person for the purpose of sweeping chimneys; nor cause them to call the streets before seven in the morning, or after twelve at noon, between Michaelmas day and Lady day; nor before five in the morning, or after twelve at noon the rest of the year. Every master shall cause his name and place of abode to be engraved on a brass plate, to be fixed upon the front of a heathen cap, which he shall provide for each apprentice.
prentice, who shall wear the same when he is out upon his duty. These regulations are enforced by penalties of not more than 10l. and not less than 5l. The law is so tender with regard to these generally foundless children, that it has appointed a particular form of indenture, by which the master converts to find his apprentices clothes for his daily occupation, and other clothes for his life when he is not employed at his work and on Sundays; he converts all to be that he is properly cleared from all foot and fifth week, and be required to attend public worship in the dress adopted for the purpose.

CHINEY, in Geography. - town of the island of Ceylon, 34 miles S.E. of Candi.

CHINAMAN, are the sides of a chimney, usually flandering out perpendicularly, sometimes circularly from the back; on the extremities whereof the mastic-tree tells.

CHINAMAN-piece, or burnt-many, a tax imposed by statute 13 and 14 Car. II. c. 10, expressing, that every fire-break, and lobe of every dwelling, or other house, within England and Wales, except such as pay not to church and poor, shall be chargeable with two shillings per annum, payable at Michaelmas and Lady day, to the king and his heirs. But this tax was declared to be an oppression and badge of slavery, and accordingly abolished by Act 1 W. and M. c. 10, and the window-tax established in its room. See PEACE AND WINDOW-TAX.

CHINAMAN-piece, in Building, a composition of certain moldings, of wood or stone, flanding on the outer side of the jambs, and coming over the mantic lecturer.

CHINAMOS, in Antiqu Geog., a maritime village of T. fret, on the borders of the Marcide name. Pliny.

CHIMANZEE, in Zoology, the Anglu-ape, fami tropelines of B Lamarck, f_camera index of Tolpian, &c.

This animal very nearly approaches the orang-outang, but in the opinion of most good zoologists is specifically distinct. It is, according to Blumenbach and Gmelin, distinguished among other particulars by having the body smooth, except the back and shoulders, which are hairy; the head is also of a form what comon ice, and the body brawny, or remarkably muscular. The true orang-outang has the body entirely covered with hair, the hamsches especially, and the hair on the fore arms is placed in a reversed direction. In the year 1758, one of those chimpanzees was brought over into England by the captain of a ship in the Guinea trade; it was of the female sex, and was two feet four inches high; it naturally walked erect. It would eat very coarse food, and was fond of tea, which it drank out of a cup with milk and sugar, as we do: it played in the manner of the human species, and in its voice made form-suggestion of the human speech, when people speak very haltingly, but without any articulate sound. The males of this species are represented as very bold; they will fight a man though they see him armed. Their disposition is extremely lascivious, insomuch as to render it unsafe for women to venture into the woods alone; it is affirmed that the female negroes are often surprized and overpowered by these dastardly animals. The chimpanzees thrown in London in 1758 was only about twenty months old, and was of a docile disposition: the parent had it in her arms when she was attacked by the Moors in Angola, and would not part with it till she was killed by one of their spears. This full-grown female was five feet high.

CHINA, in Botany, Ambulacina, Rumph. See SMILAX zebrina.

China radix, Bauh. Pin. See SMILAX China.

China pura radice, Bauh. Pin. See SMILAX ficula China.

CHINA, in History and Geography. The word China is well known to the people whom we call Chinese; but the mod learnt among them never apply it to themselves or their country. They wish to be described as the people of Han, or of some other illustrious family, by the memory of whose actions they flatter their national pride; and their country they call Chum-cut, or the central kingdom, representing it in their symbolical characters by a parallelogram exactly bfecked; at other times they distinguish it by words that mean all that is valuable upon earth. It is difficult to give any account that shall be satisfactory as to the origin of the Chinese. Four opinions have been advanced, all of which have been preternaturally asserted rather than supported by argument and evidence. By a few writers it has been urged that they are an original race who have dwelt for ages, if not from the first creation of things, in the land which they now possess; by others, chiefly the missionaries, it is alleged that they sprang from the same flock with the Hebrews and Arabs; a third assertion is that of the Arabs themselves, and of M. Panow, who contend that they were originally Tartars, descending in wild clans from the despees of Ilius; and a fourth is that of the Brahamins, that the Chinese, so they call them in Sanscrit, were Hindus of the military class, who, abandoning the privileges of their tribe, rambled in different bodies to the north-east of Bengal; and forgetting, by degrees, the rites and religion of their ancestors, established particular principalities, which were afterwards united in the plains and valleys which are now poissified by them. Sir William Jones has examined each of these claims with great care and attention, and he observes, that, "in support of an opinion, (viz. that Chinfe and Hindus were the same people), which I offer as the result of long and anxious inquiries, I should regularly proceed to examine the language and letters, religion and philosophy of the present Chinese, and I shall join some remarks on their ancient monuments, on their sciences and their arts, both liberal and mechanical; but their spoken language not having been preferred in the usual symbols of articulate sounds, must have been for many ages in a continual flux; their letters are merely the symbols of ideas; their popular religion was imported from India in an age comparatively modern; and their philosophy seems yet in a rude state, as hardly to serve the appellation; they have no ancient monuments from which their origin can be traced; their sciences are wholly exotic; and their mechanical arts have nothing in them characteristic of a particular family; nothing which any set of men in a country to highly favoured by nature might not have discovered and improved. They have, indeed, both national music and national poetry, and both of them beautifully pathetic; but of painting, sculpture, or architecture, as arts of imagination, they seem to have no idea. Instead, therefore, of altering separately on each of these heads, I shall briefly inquire how far the literature and religious practices of China confirm or oppose the proposition which I have advanced."

In the course of this inquiry, he finds that the Buddha of the Hindus is unquestionably the Po of China; but the great progenitor of the Chinefe is also named Po-hi, where the sound syllable signifies a victim. Now the ancestor of that military tribe whom the Hindus call the Chandra-rana, or "children of the moon," was, according to their legends, Buddha, or the genius of the planet Mercury, from whom, in the fifth degree, descended a prince, named Drauya; whom his father, Yatay, sent in exile to the east of Hindoostan, with this imprecation, "may thy progeny be ignorant of the Vedas." The name of the banished prince cannot be pronounced by the modern Chinese; and though Sir William Jones does not assert that the last syllable of it has been changed
changed into Yao, he observes, that Yao was the fifth in descent from Fo-hi, or at least the fifth mortal in the first imperial dynasty; that all Chinese history before him is considered by the Chinese themselves as fabulous; that his father, Yao, like the Indian king, Yavati, was the first prince who married several women; and that Fo-hi, the head of their race, appeared, say the Chinese, in a province of the west, and held his court in the territory of Chin, where the rivers mentioned by the Indian legislators are supposed to have settled. Another circumstance in defence of this opinion is, that the mother of Fo-hi was the "daughter of heaven," named "Flower-loving"; and, according to the Chinese mythology, as the nymph was walking alone on the bank of a river, with a familiar name, she found herself suddenly encircled by a rainbow; soon became pregnant, and was delivered of a son, called "Sin," or the "Star of the Year." According to the fyttem of the Hindus, the nymph Rukhini, who prelides over the fourth lunar mansion, was the favourite mistress of Soma, or the Moon, among whose numerous epithets we find one answering to "Delighting in a species of water-flowers that blossoms at night," and their daughter, for which they were the eda, was highly estimated also from her parent Raudrapea, or Swarna. Sir William Jones shows also, that the opinions of the Chinese and Hindus are in many respects similar: they both believe this earth to have been wholly covered with water, which they describe as "flowing abundantly, then subsiding, and separating the higher from the lower age of mankind," and that the division of time, from which their poetical or fabulous history begins, just preceded the appearance of Fo-hi on the mountains of Chint. Though the religion of Confucius was pure, and worthy of a great mind, containing for the existence of a Supreme God, and giving a demonstration of his being and providence from the exquisite beauty and perfection of the celestial bodies, and the wonderful order of nature, in the whole fabric of the world; yet the people of China, in general, had an ancient system of ceremonies and superstitions, which the government and philosophers appear to have encouraged, and which has an apparent affinity with many parts of the oldest Indian worship. They believed in the agency of genii, preliding over all things, of which, like the Hindus, regions of a pleasant type. To these they offered victims on high places with ceremonies, and in a language very like those used by the Brahmans. M. L. Gentil observed, he says, a strong resemblance between the temple rites of the Chinese, and the fraddha of the Hindus: and M. Baily, the celebrated French astronomer, after a very learned investigation, concludes, that "even the purer and abstruder stories of the Chinese fabulists contain a remnant of ancient Indian history, with a faint sketch of the first Hindu ages." After a very elaborate discussion, in all the particulars of which we cannot follow him, Sir William Jones says, that the several circumstances of literature and religion, seen collectively to prove, as far as the question admits of proof, that the Chinese and Hindus were originally the same people, but having been separated nearly four thousand years, have retained few strong features of their ancient conformation, especially as the Hindus have preferred their old language and ritual, while the Chinese very soon lost both; and the Hindus have constantly intermarried among themselves, while the Chinese, by mixture of Tartars, have from the time of their first establishment, have at length formed a race distinct in appearance from Indians and Tartars.

Mr. Barrow, who has visited China, and seen much of the inhabitants, and to whose excellent account of his travels in this country we shall have occasion frequently to refer, does not agree with Sir William Jones with regard to the origin of the Chinese. He admits several of the facts adduced by M. Baily and others: he allows that the Hindus, like the Chinese, have always shown a remarkable predilection for the number nine; that the two nations resemble one another in the observance of the folliated and equinoctial festivals; in making offerings to the maus of their ancestors; in the dread of leaving no offspring behind them, to pay the accustomed obsequies to their memory; in observing eight cardinal or principal points of the world; in the division of the zodiac, and in a variety of other coincidences; which the late Mr. Bryant accounts for, by supposing the Egyptians, Greeks, Romans, and Indians, to be derived from one stock, and that some of these people carried their religion, and their learning into China; but he says their physical character is a sufficient proof that the Chinese do not owe their origin to the same stock as the Hindus. The fancied resemblance of the Chinese in the size of their eyes, and general turn of countenance peculiar, on the continent of Asia, from the tropic of Cancer to the Frozen Ocean. The peninsula of Malacca, and the vast multitude of islands spread over the eastern seas, and inhabited by Malays, as well as those of Japan and Iermukon, have clearly been peopled from the same common stock. Having given this account of the different conjectures respecting the origin of the Chinese, we proceed to consider the

Situation and extent of China. In the last century, the Chinese emperors extended this wide empire over many western countries, so that it may be now considered as reaching from those parts of the Pacific Ocean called the Chinese and Japan Synto and Satoou to the eastern limits of India, in a distance of 8°, which, reckoning the median latitude of 30°, will amount to nearly 4,200 geographical, or 4,900 British miles. From N. to S. this vast empire may be computed from the Uralian mountains, lat. 50°, to the southern part of China, about lat. 21°, being 29° of latitude, that is, 1740 geographical, or nearly 2020 British miles. This empire consists of three principal divisions; that of Chi a proper; the territory of the Mandales and Mengus, on the north and west; and lastly, the singular and interesting region of Tibet; with the flirf of these we are at present concerned, referring the others to their proper places in the alphabet.

China proper extends from the great wall in the north to the Chinese sea in the south, about 1140 geographical, or 1350 British miles. The breadth from the shores of the Pacific ocean to the frontiers of Tibet may be computed at 1750 British miles. In square miles the contents have been estimated at 1,979,669, and in acres at 3,850,795,392. On the wall and south the boundaries are maritime, and to the north there are marked by the great wall and the desert of Sihama. The confines with Tibet on the west seem to be chiefly indicated by an ideal line, though occasionally more strongly marked by mountains and rivers; particularly according to M. D'Aulville by the river Yatan, which falls into the Kian-kil, the country of Sifan lying between Tibet and China, on the south of the Eluths of Kotonor.

As China extends from the second to the fifth climate,
its temperature must vary accordingly. The difference of the length of its days is little more than four hours; the longest in the most northern parts, being about fourteen hours and three quarters; and the shortest, in the most southern, about ten hours and three quarters; and the proportion considerable. It is, however, generally reckoned very moderate, except only towards the north, where the cold is extremely piercing, not so much from its northern situation, as from ridges of mountains that intersect those parts, and are vastly high, and covered deep snows. Even in those parts which lie under the tropics, the winds that blow thither from the large and mountainous parts of Tartary render the weather exceedingly cold and piercing, during the three, and sometimes four, winter months. The southern parts, on the other hand, must be supposed to be very hot and dry; but these heats are more easily borne, by the help of their groves, groves, and cooling shades; to these they retire during the heat of the day; at which time there is the same universal silence, and cessation from business, as if it were midnight. In these southern parts there is neither snow nor ice, but they are much troubled with storms, and violent rains, about the time of the equinoxes; all the rest of the year is crowned with a clear sky, and a most delightful verdure. Upon the whole it must be admitted, that where nature has been most unequal in the distribution of her gifts, Chinese industry has supplied the defects. It has in some instances levelled whole ridges of mountains in particular provinces, and raised the land in others. By providing proper fences against excessive colds in some, and heats and droughts in others; and by varying their agriculture, according to the different soils and climates, every spot almost of that vast territory produces enough to maintain its inhabitants, rendering the whole country delightful, populous, healthy, and opulent.

Progressive Geography. The progressive geography of China, as known to the western nations, is not of ancient date, whether with M. de l'Anville we suppose the Sinzato have been in Cochin-China, or with Gozcinpl place them in the western part of Siam. The most ancient external relation which we possess, is that of the two Mahometan travellers in the ninth century, who suppose us with accounts of barbarism and cannibalism little to be expected: but the Arabs are so fond of fables, that implicit credit may be safely withheld from several passages. Yet these travellers impart high ideas concerning the Chinesse empire, and mention Cafoo, supposed to be Canton, as a city of great trade, while the emperors resided at Cambay, which seems to be the city also called Nanking, or the southern court, in contradistinction from Peking, or the northern court. This wide empire, continued, however, obscure to the inhabitants of Europe, till the travels of Marco Polo appeared, in the end of the fourteenth century. Yet the work of this traveller remained so unknown, that pope Pius II. In his description of Asia, is contented with the more imperfect account by Nicola Conti, a Venetian traveller of his own time, who visited Cathay. Haihò the Armenian, who wrote his book on the Tartars about the year 1306, begins with an account of China; and Odeicer of Portmaur defers his voyage to China in 1318. Sir John Mandeville visited China about 1340; and Pegezelli gave directions for the route in 1385. But in the following century there seem to have been a strange and unaccountable intermission of intercourse and research, if we except the travels of Nicola Conti above mentioned; and so perishable was the knowledge acquired, as to have escaped even a learned pointil. After this relapse of darkness, the rays of more genuine and authentic knowledge gradually emerged by the discovery of the Cape of Good Hope, and the subsequent enterprises of the Portuguese.

History. The Chinese as a nation pretend to an antiquity beyond all credulity; they carry their history back many millions of years before the period assigned by the Scriptures to the creation of the world. According to the Chinese histories, the first monarch of the whole universe, that is, of China, was called Puon-lu, which is a word denoting the highest antiquity. Puon-lu was succeeded by Tomehlaung, which signifies the emperor of heaven; to this monarch they ascribe the invention of letters. He was succeeded by Ti-hoang, the emperor of the earth, who is said to have been skilled in astronomy; to have divided the day and night; appointing thirty days to make the period of one moon; and he fixed the winter solstice to the eleventh moon. Thoahng was succeeded by Gine-hoang, sovereign of men, who shared the government with nine brothers. These are said to have taught their subjects to build houses, cities, &c. The reigns of these four emperors make up but one of what the Chinese called L, "ages" or "periods," of which there were nine before Fo-ahi, who is acknowledged, by the most fertile writers, to be the founder of their empire, but the regular history begins with Yan.

The Chinese historians of this country have reckoned twenty three dynasties, of which the first included Fo-ahi and his eight successors down to Shen. The others, together with the number of emperors belonging to each family, and the years they reigned, are as follow:

<table>
<thead>
<tr>
<th>Dynasty</th>
<th>Emperors</th>
<th>Years</th>
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<tbody>
<tr>
<td>1. Hya</td>
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<td>17</td>
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<tr>
<td>2. Shang</td>
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<td>25</td>
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<td>3. Chew</td>
<td></td>
<td>32</td>
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<tr>
<td>4. Tin-al-Chin</td>
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<td>4</td>
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<td>5. Han</td>
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<td>6. Hew-han</td>
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<td>7. Tzin, or Chin 2d</td>
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<td>8. Song, or Soum</td>
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<td>9. Tzi, or Chi</td>
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<td>10. Lyang</td>
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</tr>
<tr>
<td>11. Chin-al-Kia</td>
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<td>5</td>
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<td>12. Swi, Soui</td>
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<td>13. Tang Tam</td>
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<td>22</td>
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<tr>
<td>14. Hew-liang</td>
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<td>15. Hew-tang</td>
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<tr>
<td>16. Hew-tzin</td>
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<tr>
<td>17. Hew-han</td>
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<td>18. Hew-chew</td>
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<tr>
<td>19. Song, or Soum</td>
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<td>18</td>
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<td>20. Ywen</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>21. Ming, or Mim</td>
<td></td>
<td>17</td>
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<tr>
<td>22. Tzin, Chin</td>
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<td>2</td>
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</tbody>
</table>

The most interesting particulars of the Chinese history relate to the incursions of the Tartars, who at last conquered the whole empire, and who still continue to hold the sovereignty; though by transferring the seat of empire to Peking, and by adopting the Chinese language, manners, and customs, Tartary seems rather to be incorporated with China, than the conqueror of it. These incursions began very early, even in the time of Shun, the immediate successor of Yao above mentioned, when the Tartars were repelled and driven back into their own territories. From time to time, however, they continued their invasions, and the northern provinces of China were often ravaged by the Tartars in their neighbourhood. About the year before Christ 213, Chi hoang-ti having subdued all the princes of
the different provinces, became the emperor of China, with the possession of unlimited powers. He divided the whole empire into thirty fix provinces, and finding the northern parts of his dominions greatly harassed by the invasions of the neighboring barbarians, he sent a formidable army against them, which drove them far beyond the frontiers of China, and to prevent their return he built the famous flower-wall which separates China from Tartary. After this, being elated with his own exploits, he formed a design of taking further policies, believing that he himself had been the first Chinese emperor that ever sat on the throne. For this purpose, he ordered all the historical books and records, containing the fundamental laws and principles of the ancient government, to be burned, that they might not be employed by the learned to repel his authority, and the changes which he proposed to introduce into the monarchy. He is even said, on this occasion, to have caused four hundred of the literati to be burnt, together with their books. In the tenth century of the Christian era, the Kitan, a people of Eastern Tartary, made incursions into the country, subdued a part of the empire, and established a government of their own in 916. Thirty years after this, Mu'tiz-tung, the emperor of China, was attacked by his brother-in-law, She-kong-tang, and was by him deprived of his crown and life. She-kong-tang assumed the title of emperor under the name of Kau-tu. But the Kitan general refused to acknowledge him, except on the condition of his yielding up to the Tartars sixteen cities in the province of Pe-cheli, which is the most northern province of China. This submission served only to inflame the avarice of the Kitan, and in the year 927 they invaded the empire again. Thang-van, the emperor, opposed them with a formidable army; but through treachery he was taken prisoner, and was obliged to resign his empire to one of his own generals, who assumed the name of Kau-tu. The succours of this man opposed the barbarians insufficiently till the year 978, when they became so strong as to lay siege to a formidable city. The emperor sent against them in the night 300,000 soldiers, each carrying a light in his hand, with orders to approach the camp as near as possible. The enemy, in a moment, set fire to the whole Chinese army, and immediately fled, and, falling into the ambuscade laid for them, were almost all cut to pieces. In the year 967, and again in 995, the Kitan attacked the empire, and laid it under heavy contributions; after which we hear little more of them till the year 1117, when their ravages became so intolerable, that Wey-yong-tung, the emperor, in order to put a stop to them, called in the assistance of the Eastern Tartars to destroy the kingdom of Kitan, which they effectually accomplished. Thus, however, proved of no advantage to the Chinese; for the Tartar general, elated with his conquest, gave the name of Kiu to his new dominion, assumed the imperial title, and began to think of aggrandizing his empire. For this purpose he invaded and made himself master of the greater part of the provinces of Pe-cheli and Shan-fu, when, after several conferences between the Tartar general and Wey-yong-tung, the latter was thrown into prison, where he ended his days in 1126, having nominated his eldest son, Kiu-tung, to succeed him. Kiu-tung began his reign with putting to death six ministers of state, who had betrayed his father into the hands of the Kiu-Tartars. The Barbarians in the mean time purified their conquests, and, marching directly towards the imperial city, took and plundered it, at the same time fixing the Emperor and his court, they carried them away captive. The crown devolved on Kiu-tung, the ninth son of Wey-yong-tung, who fixed his court at Nanking. He made several fruitless efforts to recover some of his provinces from the Kiu. Kiu-tung, the Kiu monarch, in the mean time, endeavored to gain the esteem of his Chinese subjects, by paying a great regard to their learning and learned men. He advanced to Nanking a man whom Kiu-tung had retired, and took it, but receiving advice that Yo-shi, general of the Song, or Southern Chinese, was approaching to the relief of the city, he left the palace, and retired northward. However, Yo-shi arrived time enough to fall upon their rear-guard, which suffered so much, that, from this time, the Kiu never dared to cross the river Kyang. But in 1127, the king approached the mouth of that river, and commanded his troops, on the pain of death, to cross it, which they refused, rebelled against their sovereign, and killed him in the beginning of the tumult, and then retired. After this, nothing remarkable occurs in the Chinese history till the year 1210, when the chief of the Western Tartars, Moguls, or Monguls, quarreled with Yong-thi, emperor of the Kiu. In 1212, the Monguls forced the great wall to the north of Shan-fu, made inroads as far as Peking, the capital of the Kiu empire, and defeated an army of 30,000 Kiu. The war was continued, and several battles fought in the next year; in one of which, the ground was burned with dead bodies for upwards of four leagues. In 1220, Oktay marched into Honan, besieged the capital of the Kiu empire, took several cities, cut to pieces an army of 40,000 men, but was, notwithstanding, obliged to retire into Shan-fu. The war was carried on with various successes by Oktay and his brother-Toyly, who took more than fifty important places in the province of Shan-fu. Toyly demanded of the Song a passage for his army through the country of Han-chung-fu, which being refused, he forced the passage, and put to the sword the inhabitants of two cities. Having cut down rocks to fill up deep abysses, and made roads through places almost inaccessible, he besieged the city itself, the inconsiderable inhabitants of which fled to the mountains on his approach, where more than a hundred thousand of them perished. In January 1227, Oktay, seizing the Whang-lo, encamped in the district of Kay-long-fu, the capital of the Kiu empire, and sent his general, Suputay, to besiege the city. At that time the place was 50 miles in circumference; but having only 40,000 soldiers to defend it, as many more, besides 20,000 packhorses, were ordered into the city, while the emperor published an affecting declaration, animating the people to defend it to the last extremity. Although the Monguls took some considerable towns, yet, in other instances, they were opposed with such intrepidity and valor, that they were obliged to retire. Oktay resolved to return to Tartary, but Suputay, his general, pushed on the siege of the capital with renewed vigor. For sixteen days and nights he continued his attacks without intermission, which seemed only to inspire the besieged with fresh courage, an incredible number of men perishing on both sides; at length Suputay, finding that he could not take the city, withdrew his army. Soon after, the plague broke out in Kay-long-fu, and raging with such violence, that, in fifty days, more than a million of persons perished by it, and took the city in a short time the war was again renewed. The capital of the Kiu empire was delivered up by treachery to Suputay, who put all the males of the imperial race to the sword, while he spared, by command of Oktay, the inhabitants, who are said to have amounted to near a million and a half of families. The monarch, after this disaster, retired to Juning-fu, a city in the southern part of Honan, attended only
only by four hundred persons. Here they were again beleaguered by the Moguls, and reduced to the extremity of living three months on human flesh, killing the old and feeble, as well as many prisoners, for food. This being known to the Moguls, they attacked them, but were repulsed, though at the expense of all the five Khan officers; upon which the emperor resigned his crown to Cheng-shih, a prince of the blood. While the ceremony of installing the new emperor was performing, the Moguls broke into the city, slew the late emperor and his successor; and, thus, in the year 1271, an end was put to the dominion of the Kin Tartars in China.

The empire of China was now to be shared between the Song, or southern Chinese, and the Moguls. It had been agreed upon, that the province of Honan should be delivered up to the Song as soon as the war was finished. But they, without waiting for the expiration of the term, or giving Ok-tay notice of their proceedings, introduced their troops into some of the considerable Mogul cities. On this the Mogul general resolved to attack them, and repulsing the Whang-ho, cut to pieces part of the garrison of Loyang, while they were out in search of provisions. The Song emperor now declared a continued peace, which, however, did not accord with the views of Ok-tay, who, at the head of the Moguls, made great progress in the province of Hu-ping, where he took several cities, and put vast numbers to the sword. From 1239 to 1246, the Moguls were unable to make any progress; but upon the death of the Chinese general, Hong-kue, they renewed the war with more vigour and success than ever, for several years. In 1259 they laid siege to Ho-chue, a strong city, to the well of Peking, defended by a numerous garrison. The siege continued from February till August, when the Moguls made a general assault in the night. They mounted the walls before the governor had intelligence of it, but were soon attacked with the utmost fury; a terrible slaughter ensued, and among the rest fell the emperor himself, upon which they raised the siege, and retired to Shen-hi. Hupilay succeeded to Mong-ko, and laid siege to Yu-chiang-fu, a city near the capital of the Song empire. The relief of this city was committed to a man desitute of courage and talents, and who, to obtain a peace, entered into a treaty, by which he engaged the Song empire to pay an annual tribute of 12,000,000, and likewise to acknowledge the sovereignty of the Moguls. This treaty proved the ruin of the empire; for when the Mogul emperor found the terms not fulfilled, he determined to revenge himself on the Song for their treachery, published a manifello against them, and, in 1268, the war was renewed. They made many conquests, took Nanking, and marched towards Hang-chew-fu, the capital of the Song empire. Notwithstanding, however, the progress made by the Moguls, vast territories still remained to be subdued, before they could be confidered as masters of the Chinese empire. On the death of Iwon-tong, therefore, the mandarins raised his brother, Te-ping, to the throne. His army, consisting of nearly 200,000 men, ignorant of the art of war, was defeated by 20,000 Mogul troops. Nor was the fleet more successful; for being thrown into confusion by that of the Moguls, and the emperor in danger of falling into their hands, one of the officers, taking him upon his shoulders, jumped with him into the sea, where they were both drowned. Molt of the mandarins followed this example, as did also the empress and minister, all the ladies and retainers of honour, and multitudes of others, infusion that 100,000 people are supposed to have perished on that day. Thus ended the Chinese race of emperors; and the Mogul dynasty, known by the name of Ywen, commenced.

Though no race of men ever existed more remarkable for cruelty than the Moguls, yet the emperors of the Ywen dynasty were not, in any respect, worse than their predecessors. On the contrary, Hupilay, aided by the Chinese Shih-tin, who was the first emperor of that race, entered himself so much to the people, that the reign of his family is flaid by the Chinese, the wife government. The Moguls were made acquainted with the value of science by paying hands regard to their ancient laws and customs, by the methods of his government, and by his attention and encouragement to learned men. In 1280 he employed some mathematicians to search for the source of the river Whang-ho, which, at that time, was unknown to the Chinese themselves. In four months they made the discovery, and drew a map of it, which they presented to his majesty. A treatise on astronomy was, by his order, published in the same year. And, in 1282, he brought together all the learned men of the empire, to examine into the state of literature, and to take measures for its advancement. Soon after his accession he fixed his residence at Peking, where being informed that the harks, which brought to court the tribute of the southern provinces, were obliged to come by sea, and often suffered shipwreck, he caused that celebrated canal to be cut, which is at present one of the wonders of the Chinese empire. It reaches from Canton to Peking, and thus forms a communication between the southern and northern provinces. During the reign of Shih-tin he formed the design of reducing the islands of Japan, and the kingdoms of Tumpin and Cochin-China; but these enterprises failed, with the loss of 300,000 men. The throne continued in this family till the year 1297, when Shinh-ti, the last of that dynasty, was driven out by a Chinese, named Chu, who assumed the imperial title under the name of Hong-yu, and thus put an end to the Ywen government. Hong-yu and his successor drove the Moguls beyond the great desert, which separates China from Tartary. They continued, notwithstanding, to make incursions upon the empire till 1289, when vast numbers of them were cut to pieces by the Chinese troops. The twenty-fourth dynasty of Chinese emperors, founded in the year 1280, continued till 1644, when they were again expelled by the Tartars. The last Chinese emperor was Hwey-tiong, who ascended the throne in 1268. He found himself at once engaged in a war with the Tartars, and attacked by a number of rebels in the different provinces of his empire. The former were both vanquished; but the emperor finding himself overpowered by the rebels, deserted by his subjects, betrayed by those in whom he placed the greatest confidence, and preferring death to the disgrace of falling into the hands of his enemies, retired with his empress, whom he tenderly loved, and the princes, their daughter, into the garden. His grief was so great that he was unable to utter a single word. After a few silent embraces the empress hanged herself on a tree. Her husband laid only to write these words on the border of his veil: "I have been falsely deserted by my subjects; do what you will with me, but spare my people." He then cut off the young prince's head with one stroke of his scimitar, and hanged himself on another tree, in the seventeenth year of his reign. His prime minister, queens, and counsels followed his example. And thus ended the Chinese monarchy, to give place to that of the Tartars, which has continued ever since. The whole empire submitted to the usherer Li, except prince U-fang-ghey, who commanded the imperial forces in the province of Lyau-tong. This brave prince, finding himself unable to cope with the usherer, invited the Tartars to his assistance; and Hong-te, their king, immediately joined him with an army of 30,000 men. Upon this Li marched directly to Peking, plundered and
and burn the palace, and then fled with immense treasures. The young T'arter monarch was immediately declared emperor of China, his father, T'o-nè, having died almost as soon as he set foot in that empire. The new emperor, Shun-chi, conferred upon U-fan-ghey the title of king, and offered to him the capital of Shên-hi for his residence. In 1642 the whole empire was so entirely subdued, that the emperor, Kang-hi, successor to Shun-chi, determined to visit T'arter, his native dominions, in order to take the diversion of hunting. This practice he continued for several years. He was a great encourager of learning and the Buddhist religion, in favour of which he published a decree in 1667. In 1676, however, he revised some of his laws against the Christians; and in the next reign Christians of all denominations, not excepting even those of the Iberian race, were persecuted; the J suits were banished into Tartary, a little island inhabited by the Portuguese, but subject to China.

In the year 1720, the emperor received the congratulations of the whole empire, on the signal victory which his forces had gained over the Khubs, who polluted the country of the Lamas, and had committed dreadful ravages for four years successively; which victory gave him now the title of command of the kingdom of Tibet. In the month of June an earthquake was felt at Peking, which lasted about two minutes, and killed about 10,000 persons by the fall of houses. In November, the czar of Muscovy made his public entry into Peking, with a numerous and splendid retinue, dressed after the European manner. He met with a gracious reception at the court, though the emperor would not accost the object of this visit, which was to take measures for establishing free commerce between the dominions of the two sovereigns.

The emperor, while taking the diversion of hunting in one of his parks, was suddenly seized with a swerving fit, which obliged him to return to his palace immediately. His illness increased, and medical assistance was applied to, but was found to be in vain. Being conscious of his approaching end, he assembled all his grandees, and having in their presence declared his faith for his successor, he expired on the 29th of December, 1722, in the 60th year of his age. Yong-ch'ing was 43 years old when he ascended the throne. He had several brothers, but placed his confidence only in one; the rest he dispossessed or banished. He imprisoned many of the princes and grandees for protecting the mulattiques, to whole design he had himself formerly been so favourable; and disdained all these fathers from his service except one, who was an excellent painter. In other respects he showed himself a wise prince, industrious and indefatigable in the discharge of the duties of government, steady and resolute in his disposition, and endowed with a degree of eloquence and address, and attentive in anwering the memorials which were presented to him. He governed wholly by himself; and no monarch was ever more absolute, or more dreaded by his subjects. This unlimited authority enabled him to enforce a great many wholesome laws and regulations, in framing which he spent whole days and nights with the most persevering industry. The purest way of gaining his favour, was by presenting him with some scheme tending to the public good, or to the relief of his subjects in times of calamities, in the execution of which, if it appeared practicable, he spared no pains. On the 12th of November, 1731, the city of Peking was nearly overturned by a dreadful earthquake, such as had never before been felt in China. The first flocks, which happened about eleven in the forenoon, were so sudden and violent, that in less than an minute above 100,000 inhabitants were buried in the ruins of houses, and a full greater number in the surrounding country, where whole villages and towns were destroyed. The emperor was then at his pleasure-house about two leagues from the capital. While taking an airing in his barge, feeling the eddies and tumultuous currents of the river, he fell on the knees, with his hands and eyes lifted up to heaven. He published an edict, ascribing himself as the chief cause of the calamity, and attributing the judgment to the wrath of God for his offences and want of care in governing the people. He then ordered an appearance to be taken of the remains which had suffered by it, and an enumeration of the damage which had occurred; advancing considerable sums for their relief; part of which was bestowed to the ministers, towards repairing their churches. But in the following year as he reviewed his perfecution against the Christians, and could the misfortunes, and all that belonged to them, to be loaded with iron, and thrown into prison; such he ever condemned to the punishment of carrying the war-dollor. This prince was succeeded by K'ing-Ling, who, after a happy, peaceable, and long reign of 61 years, died on the 11th of February, 1796, and was succeeded by K'ing-Hing, the present emperor, and the fifth of the T'arter dynasty. These emperors have wisely prevented the European nations, who have overflowed in this thievish and gaudy country, from obtaining a footing in China. They permit them, the English in particular, to carry on a refined intercourse at the single port at Canton; but they treat with coolness every attempt to obtain exclusive privileges, to build forts, or to establish permanent factories.

Topographic Description, Population &c.—After the above historical sketch, we proceed to the topography of China. It is divided into fifteen provinces, six of which are flyed northern and nine southern. The names of these will be green below, when we come to speak of the population; and the description of each province will be found in the alphabetical order of the dictionary. Sufficient as the Chinese seem to be of the advantages derived from an easy communication between the different parts of the empire, by means of canals, it is the more surprizing what the motives could have been that, till this moment, have restrained them from facilitating an intercourse by means of good roads, in such parts of the country as have no inland navigation. In this respect they fall short of most civilized nations. Except near the capital, and in some few places where the junction of the grand canal with navigable rivers is interrupted by mountains of ground, there is scarcely a road in the whole country that can be ranked beyond a foot path. Hence it happens that in the northern provinces, during winter, it is impossible to travel with any degree of safety, with convenance, or facility; all the canals to the northward of the Yellow river, which runs from 36° to 35° latitude, being frozen up. It is equally surprizing that their ingenuity has not extended itself to the invention of bridges, or some sort of carriages, suitable for travelling on ice, which other nations have converted into the belt of roads. The cities and large towns are for the most part built in a regular form; their walls are high and strong, the gates are spacious, the main streets are broad and straight, intersected with others, which cross them at right angles. The squares are adorned with noble structures, such as triumphal arches and stately towers several stories high, embellished with galleries, carving, gilding, and a variety of other ornaments. Their public buildings are more remarkable for their extent than for their magnificence; their private houses are large but low, seldom exceeding one story in height, without any windows towards the street; their are often painted, varnished, and gilt, in a most splendid manner. The shops are set out with all their rich mer-
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Chandize, some of which is brought out and dispayed in
front of the houses. Before these are erected large wooden
pillars, the tops of which are higher than the eaves of the
houses, bearing inscriptions in gilt characters, setting forth
the nature of the wares to be sold, and the hon (£)l reputation
of the seller, and, to attract the more notice, they are
generally hung with various colored flags and streamers
from top to bottom, exhibiting the appearance of a line of
flying dreel, as may be sometimes seen, on the river
Thames, in the colours of all the different nations of Eu-
rope. The streets, being generally unpaved and covered
with land, prove so dusty in dry weather, as to be not only
offensive to the great crowds that continually throng them,
but very injurious likewise to the fine merchandise that is
exposed. These clouds are still increased by multitudes of
horses and carriages of all descriptions that are in continual
motion. In rainy weather they are still more inconvenient
from the mud and dirt, so that in winter and summer they
are very troublesome and even unhealthy to walk in. The
towns, villages, and military polls, are regularly placed at
intervals of about three miles. No just idea can be formed
of the population and magnitude of a Chinese city by the
extent of its enclosing walls. Few are without large patches
of unoccupied grounds within them, which, in many in-
fances, far exceed the quantity of land that is built upon.
Even in that part of the capital called the Chinese city, se-
veral hundred acres are under cultivation. The imperial
city, containing the palace and buildings for the officers of
flute, the eunuchs, and artificers, occupies nearly a
square mile, more than two-thirds of which is a kind of
park and pleasure grounds; and under the north wall of
the Tartar city there is a pond or swamp, which appears to
be fully twice the dimensions of Lincoln’s-Inn-Fields. Such
spaces of unoccupied ground might perhaps have been re-
erved for the use of the inhabitants in cafe of siege, as the
means of supplying a few vegetables of the pungent kind,
as onions and garlic, for the beleaguered, which are the more
necessary for a people who use no small portion of animal
food, and little or no milk. Thus the cities of Babylon
and Nineveh, which were so frequently exposed to the cala-
mities of war and siege, had gardens and corn-lands within
their walls. Independently of towns and villages, the bodies
of the peasants are, in many parts, scattered about.
The face of the country is often level and entirely open; not a
hedge-row, and very few trees to be seen through an exten-
sive district. The cottages appear clean and comfortable;
they are without fences, gates, or other apparent precaution,
against the intrusion of wild beasts or thieves. Robbery is
said to happen seldom, though not punished by death, un-
less aggravated by the commission of violence. The wives
of the peasantry are of material assistance to their families,
in addition to the rearing of their children, and the care of
domestic concerns; for they carry on most of the trades
which can be exercised within doors. Not only do they rear
silkworms and spin the cotton, but the women are almost
the sole weavers throughout the empire.

Many parts of the country are so covered with swamps
and morasses, as not to admit of the usual cultivation. In
such situations the Chinese exhibit new instances of industry
and ingenuity. They form rafts or hurdles of bamboo
which they float upon the water, or reit upon morails; on
these rafts they spread a layer of soil, from whence they
raise various kinds of vegetables, in like manner successful
attempts are also made, in miniature, to produce smaller
vegetables on flat-land, by laying seeds on moistened soil,
or even on pieces of flannel placed in frames and wetted. By
these means the radical leaves of mulgard, for example,
sprout up quickly and are particularly grateful to persons
long absent from land. Besides this method of raising a
crop upon the water, the lakes, rivers, and canals of China
are converted affably to such other useful purposes, as in
cultivating vegetables growing from their bottom, or
in catching the birds that swim upon its surface, or the fish
that exist under it, or the other animals which creep upon
the bottom, or by fertilizing the lands, by irrigation from
them, and by the cheap and easy communication which they
afford between the different districts of the empire;
thus saving so much land, otherwise necessary for roads, and
so much labour to make and keep them in repair, which is
now employed in agriculture. In a country so populous as
China every precaution is necessary to prevent the smallest
spot of ground from being unoccupied that can be applied
to any use; hence grape-vines, small quantities of which are
produced in this country for food, are generally planted on
the sides of the canals; and, as they spread, small upright
poles are driven in the water five feet from the bank,
by which means that space is converted into a perfect arbour,
without any expense of earth but what is immediately about
the roots. Ample provision is likewise made for the con-
stant cultivation of the land, by the forfeiture of such as
are neglected, to the sovereign, who immediately grants
them to other farmers willing to undertake their culture.

We must next proceed to the rivers of China, of which the
Hoan-ho and the Kian-ku, deserve particular attention.
The sources of the first, which is also denominated the Yel-
low river, from the quantity of mud which it devolves,
are two lakes, situated among the mountains of that part of
Tartary known by the name of Kowonor. These lakes
lie about 35° N. lat. and 9° of longitude, to the westward
of Peking, or about 97° E. of Greenwich. This prodigious
river is extremely winding and devious in its course, pur-
furling a N. E. direction to about 45° N. latitude, and
after running due east it suddenly bends south to a lat-
titude nearly parallel to its source, and pursues an easterly
direction till it is lost in the Yellow sea. Its comparative
course may be estimated at about 100 British miles; or ac-
cording to the late embassy 2150. At about 70 miles from
the sea, where it is crooked by the imperial canal, the breadth
is little more than a rod, and the depth only about nine or
ten feet, but the velocity equals about four or eight miles
an hour. The Kian-ku rises in the vicinity of the sources
of the Hoan-ho; but, according to the received accounts
and maps, about 200 miles further to the west, and winds
easily to the south as the Hoan-ho does to the north.

After washing the walls of Nanking, it enters the sea at
about 200 miles to the south of the Hoan-ho. The Kian-ku
is known by various names during its long progress; and near
its source is called by the English, Portuchu or Petchou; its
course is about equal to that of the former; these two rivers
being considered as the longell on the face of the earth, for
they are supposed to exceed the famous river of the Amazons
in South America, and the majestic course of the Ganges
does not extend half the length. In the late embassy
the length of the Kian-ku is estimated at 2700 miles; and it is
observed that these two great Chinese rivers taking their source
from the same mountain, and falling almost close to each other,
in a particular spot, afterwards separate from each other,
to the distance of 1° of latitude, or about 105° British
miles; and finally discharge themselves into the same sea,
comprehending a tract of land of about 1600 miles in
length, which they greatly contribute to fertilize. To
these great rivers many important streams are tributary;
but it would not be consistent with our plan to enter into
details here respecting them, the principal of these meriting
notice.
China.

In China there are many noble and extensive lakes. According to Du Halde, there is one in the province of Hou-quang, that is at least 85 leagues in circumference. In the province of Kiang-nan there is another about thirty leagues in circumference, formed by the confluence of four large rivers, and is itself very dangerous to navigators. There is a considerable lake, not far to the south of Nanking, besides a number of smaller ones chiefly in the eastern and central parts of China. Sir George Staunton mentions, that upon a lake near the imperial canal, were observed thousands of small boats and rafts, constructed for a singular species of fishery. On each boat, or raft, are ten or twelve birds, which, at a signal from the owner, plunge into the water: and it is astonishing to see the enormous size of fish with which they return grasped within their bills. They are so well trained, that it does not require either ring or cord about their throats, to prevent them from swallowing any portion of their prey, except what the master is pleased to return them, for encouragement and food. The boat made use of by these fishermen is of a remarkably light make, and is often carried, together with the fishing birds, by the men who are there to be supported by the employment.

Du Halde describes some of the Chinese mountains as abounding with silver: others produce marble and crystal. In the province of Kiang-nan there is a district, wholly mountainous. Two grand ranges, running E. and W. intersect the centre of the empire, apparently continuations of the enormous chains of Tibet. In the southern part of China the principal ridges run from N. to S.

The population of China has been a topic of considerable debate. Pauw observes from Du Halde, that when the missionaries proceeded through the empire, to prepare their maps, they found in the greater part of its large governments, countries of more than twenty leagues, little peopled, almost uncultivated, and often so wild as to be quite unhabit-

able, and he infers that the population is even exaggerated when it is computed at 82,000,000. "In so wide an empire," says Mr. Pinkerton, "most of the features are on a large scale, nor can human industry totally overcome, though as we have seen, it diminishes certain impediments of nature, as ridges of rocks, and extensive swamps, in certain positions; and in the north of China large forests are indispensably preferred for the sake of fuel. On a smaller scale, such ob-
tacles to universal population are found even in the most fertile countries; they occur, as we all know, near the capital of our town." Civil wars, which, as we have seen in the foregoing history, have repeatedly raged in China, have laid desolate immense districts of the country for a long period of time. As it would be absurd to suppose that all China consists of land fit for cultivation, so it would be equally absurd to deny that the population has increased every traveller with astonishment, and with ideas totally differ-
tent from those of Pauw, who seems to have forgotten that the want of cultivation in some districts is balanced by that refiding on the waters, millions of families palling their whole existence in boats, on the numerous rivers, lakes, and canals. The recent English embassy, prepared as they were for something very extraordinary on the subject of population, were nevertheless greatly astonished when the following statement was delivered at the request of Lord Macartney by a mandarin of high rank, as the abstract of a census that had been taken the preceding year: "The amount," says Mr. Barrow in his Travels in China, "appeared so en-
ornous as to surpass credibility. But as we had always found this officer a plain, unaffected, and honest man, who on no occasion had attempted to deceive or impose on us, we could not confidently consider it in any other light than a document drawn up from authentic materials. To the table containing the account of the population are added the number of people on a square mile, and the value of the surplus taxes remitted to Peking in the year 1792.

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Population</th>
<th>Square miles</th>
<th>No. on each square mile</th>
<th>Surplus taxes remitted to Peking</th>
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<tbody>
<tr>
<td>Pe-tche-lee</td>
<td>38,000,000</td>
<td>58,949</td>
<td>644</td>
<td>3,036,000</td>
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<tr>
<td>Kiang-nan</td>
<td>32,000,000</td>
<td>92,611</td>
<td>344</td>
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<td>Kiang-fei</td>
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<td>72,176</td>
<td>263</td>
<td>2,120,000</td>
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<tr>
<td>Tche-kiang</td>
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<td>39,150</td>
<td>536</td>
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<td>53,480</td>
<td>280</td>
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<td>53,638</td>
<td>488</td>
<td>3,722,000</td>
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<tr>
<td>Shen fee one</td>
<td>18,000,000</td>
<td>154,008</td>
<td>195</td>
<td>1,720,000</td>
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<td>162</td>
<td>670,000</td>
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<td>128</td>
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<tr>
<td>Quang-fei</td>
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<td>75,250</td>
<td>128</td>
<td>5,300,000</td>
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<tr>
<td>Yu-nan</td>
<td>8,000,000</td>
<td>64,554</td>
<td>140</td>
<td>1,450,000</td>
</tr>
<tr>
<td>Koei-tchoo</td>
<td>9,000,000</td>
<td>64,554</td>
<td>140</td>
<td>1,450,000</td>
</tr>
</tbody>
</table>

| Totals         | 333,000,000 | 1,297,999 | 36,548,000 |

The
The measurement annexed to each of the fifteen ancient provinces was taken from the maps constructed by a laborious, and, as is generally believed in China, very accurate survey, which employed the Jesuits ten years. Whether this great empire, the first in rank both in extent and population, does or does not actually contain three hundred and thirty-three millions, is a point that Europeans are not likely to ascertain. That it is capable of subsisting this and a greater population, Mr. Barrow, in his work already referred to, has taken considerable pains to prove. He mentions several canals that have contributed to the population of this country: since the Tartar conquest China has enjoyed a profound peace, and its army being parcelled out as guards for the towns, cities, and villages, and stationed at the numberless posts on the roads and canals, all marry, have families, and a certain portion of land, which they have time to cultivate, is allotted for their use. As the nation has little foreign commerce, there are but few feamen: such as belong to inland navigation are mostly married; public opinion indeed considers celibacy as disgraceful, and a sort of infamy is attached to a man who continues unmarried beyond a certain time of life. As an encouragement to the nuptial state, every male child may be provided for, and receive a stipend from the moment of his birth by having his name enrolled on the military list. By the equal division of the country into small farms, every peasant has the means of bringing up his family, if drought or inundations do not frustrate his labour; and the pursuits of agriculture, it is well known, are very favourable to health, and consequently to population. From the general poverty that prevails among the lower classes, drunkenness is little known, and temperance, from necessity, very much practiced. The climate in general is moderate and uniform, and, excepting the small pox, the Chinese are liable to few epidemic disorders; the women are very fertile, and from the innate kind of life which they lead, are subject to few accidents, and they all fiddle and nurse their own children. From these and other favourable circumstances, Mr. Barrow supposes that the population of China may not have been exaggerated even by those who have given the highest calculations.

Canals and Chinese Navigation. In China there is scarcely a town or even a village which has not the advantage either of an arm of the sea or a canal; by which means navigation is rendered so common, that almost as many people live on the water as on land. The great canal is one of the wonders of art; it runs from north to south, extending from the city of Canton to the extremity of the empire; and by it all kinds of foreign merchandise entered at that city are conveyed directly to Peking, a distance of 825 miles. This canal is about 50 feet wide; it passes through, or near 41 large cities; it has 75 large sluices to keep up the water, besides several thousand bridges. China owes the greatest part of her riches to these numerous canals, which are cut through any kind of private property, not even excepting the gardens of the emperor, who, when the work arrives at his ground, digs the first spade of earth, and pronounces with an audible voice, "This is to let all know that private pleasure should never obstruct the public good." The canals are bordered or faced with quays of freestone, and, in low places, long causeways are raised for the convenience of travellers. There are bridges over the canals of three, five, or more arches, of which the middle one is high enough for vessels to pass under with their masts lowering. When the water is liable to overflow the neighbouring meadows, they open the sluices to convey it away, and there are inspectors appointed to keep the canals in proper repair. One great canal generally runs through every province, and a vast number of smaller ones are cut from the large one; which again are divided into some still smaller, that end at a village or great town; sometimes they discharge themselves into a lake, or large pond, from which all the adjacent country is watered. Among all the canals in the southern provinces, one is called the great canal, which is the grandest inland navigation in the known world, being, according to Mr. Barrow, nearly 1000 feet in width, of which the sides are built with masonry blocks of grey marble mixed with others of granite; and this immense aqueduct, although forced several feet above the surface of the country, by embankments thrown up by the labour of mankind, with a current of about three miles an hour towards the Yellow river. The buftle and activity both on shore and on the numberless canals that branch out in every direction from the main trunk, exhibit, for several miles, on either side, one continued town, extended to the point of junction with this large river, celebrated in every period of Chinese history. That which most charms the eye is the immense number of large boats with imperial colours, and beautifully painted, that sail in fleets, and commanded by a single mandarin of the province, and laden with its belt productions, and chiefly on the emperor's account. There are several classes or rates of these boats: very neat and commodious; a middle sized one has a hall and four very convenient rooms, besides a good kitchen, and place for the attendants; the rooms are generally carved, painted, and gilt; even the ceiling is painted, and the whole varnished; some of these boats are of 200 tons burthen, and from 300 to 400 of them on the same canal at the same time, and sometimes in one fleet; and by the clearness and good management of the canals, it is rendered the most pleasant and fertile country in the world. The Chinese junks are strong roomy vessels, from 150 to 300, and some 300 tons burthen; the hold below deck is divided into several distinct apartments, partitioned off with two-inch planks, grooved or rabatted as close as possible, and the joints or seams are caulked with a cement of lime, pitch, &c. prepared in such a manner as to render it perfectly watertight. A junk may strike against a rock and not sink; a leak may be sprung, but will damage no further than the goods in that apartment. Before the barges are launched from the canal into the stream of the Yellow river, certain ceremonies are conceived to be indispensably necessary: an oblation is made in every vessel to the genius of the river: the animals sacrificed on such occasions consist of fowls or pigs. The blood, with the feathers and the hair, are daubed upon the principal parts of the vessel, and on the fore-castle are placed cups of wine, oil, and salt; the latter article being thought by the Chinese as necessary to every sacrifice. The cups, the slaughtered animals, and several made dishes remain on the fore-castle, while the captain flands over them on one side, and a man with his gong on the other. On approaching to the rapid part of the stream, at a signal given by the gong, the captain takes the cups one by one, the contents of which he throws over the bow of the vessel, into the river. The libation being performed, a quantity of crackers, figs, and gilt tin foil are burnt with up-lifted hands, while the deepounding gong is incessantly struck with increasing violence as the vessel Peggs along with the current. The victim and the other dishes are then removed for the use of the captain and the crew, and the ceremony ends by three genuflexions, and as many prostrations. The Chinese are unfitted in the art of navigation. They keep no reckoning at sea, nor possess the least idea of drawing imaginary lines upon the surface of the globe, by the help of which the position of any particular place may be ascertained; in other words, they have no means of ascertaining the latitude or longitude of any place.
place either by the distance failed, or by observation of the heavenly bodies. Yet they pretend that many of their early navigators made long voyages in which they were guided by charts of the route, sometimes drawn on paper, and sometimes on the wax surface of large gourds.

The present system of Chinese navigation is to keep as near the shore as possible, and never to lose sight of land, rules in voyages that absolutely require it, such as to Japan, Batavia, and Cochin-China. Knowing the bearing or direction of the port intended to be made, they endeavour to keep the head of the ship always pointing to it by means of the compass. Yet even with the assistance of the compass it is surprising how their ill-constructed vessels can perform a long and dangerous voyage as that of Batavia, and, indeed, very few numbers of Chinese vessels are annually lost by shipwreck in attempting it. When a ship leaves Canton on a foreign voyage, it is considered as an equal chance that she will never return; and when the event proves favourable, a general rejoicing takes place among the friends of those who had embarked in the hazardous undertaking. Some of these ships are not less than 1000 tons burden, and contain half that number of souls, besides passengers, who hope to make their fortunes at Batavia or Mollucca.

A ship belongs to several merchants, and is divided into as many compartments as there are partners, and each fits up his own as he pleases. He ships his goods and accompanies them in person, or sends his son, or a near relation, for it rarely happens that they will trust each other with property where no family connection exists. Each sleeping-place is just the length and breadth of a man, and contains only a small mat spread on the floor, and a pillow. Behind the compass is generally placed a small temple, with an altar, on which is continually kept burning a spiral taper composed of wax, tallow, and sandal-wood. This holy flame answers a double purpose: for while the burning of it fulfils an act of piety, its twelve equal divisions serve to measure the portions of time which make up a complete day. It should seem that the superstitious notions inculcated on the people, have led them to believe that some particular influence resides in the compass; for on every appearance of a change in the weather, they burn incense before the magnetic needle.

Government and political Relations. The government of China is patriarchal. The emperor is absolute, but the examples of tyranny are rare, as he is taught to regard the people as his children, and not as his slaves. Being considered as the common father of his subjects, he is accordingly invested with the exercise of the same authority over them, as the father of a family exerts on those of his particular household. In this sense he takes the title of the Great Father; and by his being thus placed out of the reach of any earthly control, he is subjected to be also above earthly defects, and therefore, as a natural consequence, he sometimes flites himself the sole ruler of the world and the son of heaven. Conformably to this system, founded entirely on parental authority, the governor of a province is considered as the father of that province; of a city, the father of that city; and the head of any office or department is supposed to preclude it over it with the same authority, interdict, and affection, as a father of a family superintends and manages the concerns of domestic life. The stability of the government, in all its sensible and evident motions, terms and customs, justly astonishes those who are most conversant in history. It arises from a circumstance unknown in any other government, the admission and practice of the principle, that "knowledge is power." For all the offices of government pass through a regular education, and a progress of rank, which are held indispensable. Of the officers called mandarins, there are nine classes, from the judge of the village to the prime minister. The profession requiring a long and severe course of study, the practice of government remains, like that of medicine, wherein by exterior events; and while the imperial throne is subject to accident and force, the remainder of the machine goes on without interruption. The governors of the provinces have great and absolute power, yet rebellions are not uncommon. Bribbery is also an universal vice, and the Chinese government, like many others, is held beautiful in practice than in theory. The Chinese laws are ancient, but numerous; and edicts of the reigning dynasty have restrained the mandarins within stricter limits of duty.

Though unbounded authority is given to the emperor by the laws, yet the same laws lay upon him a necessity to use his power with moderation and discretion, which are the two props that have to long supported the great fabric of the Chinese monarchy. The first principle induced into the people at large, is to respect their prince with so high a veneration as almost to adore him. His commands are indissoluble, and his words sacred. He seldom hews himself to the people, and is never spoken to but on the knees. When he is ill, the palace is full of mandarins, who spend their whole time in a large court, offering petitions to heaven in behalf of their prince's cure. No weather, no inconvenience, can excite them from this duty: so long as the emperor is in pain or in danger, the people seem to fear nothing but the loss of him. Self-interest is no small occasion of the great respect which is shown him by his subjects; for as soon as he is proclaimed emperor, the whole authority of the empire is in his hands, and the fortunes of his subjects are entirely at his disposal. 11. All places of honour and profit are in his gift. Honour, learning, experience, and gravity of behaviour, are said to be the only qualifications to induce succeces to the candidate for any post of trust or dignity. As the emperor has the sole choice of all his official of state, he diffuses, without ceremony, those who are deficient in their duty. 12. He has absolute power over the lives and properties of all his subjects. Offenders are arraigned and tried in the different provinces, but the sentence is always presented to the emperor, who either confirms or rejects it, as he pleases. He can lay what taxes he thinks fit upon his subjects to supply the pressing wants, and relieve the necessities of the state. 13. The right of making peace and war belongs to the emperor; he may make what treaties, and upon what terms, he pleases, provided they are not dishonourable to the kingdom. The judgments passed by him are irrepealable, and his foreign courts and vicegerents dare not use the least delay in regenerating them. 14. Another irregular circumstance belonging to the Chinese government, is the right that the emperor has of choosing his successor, whom he may select both only from the royal family but from among other subjects there and have been emperors, who, finding none of their own family able to support the dignity of a crown, have chosen for their successors persons of mean birth and fortune, but eminent for virtue and understanding. Examples of this nature are not, however, very common, but it frequently happens that the choice does not fall according to seniority, which, in China, never occasions any civil commotions or rebellions. 15. The grave itself does not put an end to his power over his subjects, which is exerced even upon the dead, whom he disgraces or honours, when he has a mind either to reward or punish them or their families. He confers upon them, after their decease, titles of honour; canonizes them as saints, or, according to their language, "makes them naked spirits." Sometimes he builds for them temples; and, if their administration of public
affairs has been very beneficial, or their virtues remarkably eminent, he commands the people to honour them as gods. The emperor has ever been looked upon as the chief priest and principal servant of religion; and there are ceremonies and public sacrifices which he alone is thought worthy to offer up to the great Creator of heaven. 6th. The emperor may change the figure and character of the letters, abolish characters already received, or form new ones. He may likewise change the names of provinces, of cities, and of families. He may forbid the use of any commonly received expression or modes of phrase, and introduce others which have hitherto been esteemed obsolete and uncomely.

To afflit the emperor in the weighty affairs of the state, and in the arduous task of governing an empire of so great an extent, and such an immense population, the constitution has allotted him two councils; the one, called the ordinary council, is composed of his principal ministers, of which there are five. The other, or extraordinary council, confids entirely of the princes of the blood. For the administration of the affairs of government, there are fix boards or departments, consisting of, 1. The court of appointments to vacancies in the offices of government, being composed of the ministers and learned men, qualified to judge of the merits of candidates. 2. The court of finance. 3. The court of ceremonies, presiding over the direction of ancient cutumens, and treating with foreign ambassadors. 4. The court for regulating military affairs. 5. The tribunal of justice. 6. The board of works.—These public functionaries resolve upon, recommend, and report to the emperor, all matters belonging to their separate jurisdictions, who, with the advice of his ordinary, and, if necessary, of his extraordinary council, confirms, amends, or rejects their decrees. Subordinate to these supreme courts held in the capital, are others of a similar constitution, established in different provinces, and great cities of the empire, each of which corresponds with its principal in Peking.

The political importance and relations of China may be said to be concentrated within itself, as no example is known of alliance with any other state. It has been supposed, that one European ship would destroy the Chinese navy, and that 10,000 European troops might over-run the empire. Yet it is very probable, that an obstacle to foreign conquest, and, perhaps, not less than 100,000 soldiers would be necessary to maintain the quiet subjugation of it; so that any foreign yoke must prove of very short continuance. The recent conquest by the Mandhurs happened in consequence of the general detachment excited against a fanatical usurper; and the invaders were in the immediate proximity, even while a Russian army would find almost insurmountable difficulties on the route, and the conquest, like that by the descendants of Zingsis, would infallibly prove of short duration. The Chinese have taken almost all their civil laws from their canonical books of morsy. Filial piety is their basis, as well as that of their government. Some decrees of the emperors, and especially those respecting the observance of certain ceremonies, which custom has established, form the rest of the code. In a word, the Chinese jurisprudence contains every thing that is to be found in the bill moral writers. Every mandarin who is a governor, either of a province or city, is obliged, twice a month, to instruct the people around him, and to recommend the observance of certain salutary rules, such as filial piety, a certain deference to others, frugality, temperance, and the other personal virtues. An experts law points out those points of morality which ought to be the subjects of these discourses. Jurisprudence is taught in China in the same manner as the principles of religion are taught in other countries.

The laws of China which concern marriage are very extensive. A man can have only one lawful wife; and her rank and age must be nearly equal to his own; but he may receive into his house, on certain conditions, several concubines or wives of the second rank, who are wholly subject to the lawful spouse. Their children are considered as hers, they address her as mother, and can give this title to her only. Divorces are granted in China as they were among all ancient nations, but with less facility and only in certain cases, such as adultery, incompatibility of temper, filial disobedience, and infectious diseases. The law protects every wife who is abandoned by her husband, and can, if she desires, repudiate for three years, take another husband, provided she first get the consent of the mandarin. The law forbids marriage in certain circumstances: and marriage is also suspended when a family experiences any severe misfortunes. Every father of a family is responsible for the conduct of his children; he is even accountable for that of his daughters. Every fault is imputed to him, whose duty it is to prevent it. The old persons of a family live generally with the young; the former force the piously of the latter, and the influence of age over youth is supported by the sentiments of nature, by habits of obedience, by the precepts of morality ingrained in the law of the land, and by the unremitted policy and honest endeavours of parents to that effect. They who are paid labour dispense the rules and the wisdom which experience taught them, to those who are advancing in life. Plain moral maxims are written up in the common hall where the male branches of the family assemble. In almost every house is hung up a tablet of the ancestors of the person then residing in it, to which references are perpetually made, and their example serves as an incitement to travel in the same path. The descendants from a common stock visit the tombs of their forefathers together, at stated times, which practice collects and unites the most remote relations. They cannot lose sight of each other, and seldom become indifferent to their respective concerns. The child is bound to labor and to provide for his parents' maintenance and comfort, and the brother for the brother and the sister, who are in extreme want; the failure of which duty would be followed by such detestation that it is not necessary to enforce it by positive laws. The most constant kindsmen, reduced to misery by accident or ill-health, has a claim on his kindness for relief. Manners, stronger than laws, produced and nurtured by intercourse and intimacy, secure efectual alliance for him. These habits and manners fully explain a fault that appears extraordinary to Europeans, that no spectacles of divers are seen to excite the compassion, and inspire the casual charity of individuals.

Civil and Military Establishments. From the produce of the taxes, the civil and military establishments, and all the incidental and extraordinary expenses, are first paid on the spot on which they are incurred, out of the provincial magazines, and the remainder is remitted to the treasury in Peking to meet the expenses of the court, the establishment of the emperor, his palaces, temples, gardens, women, and princes of the blood. The confiscations, presents, tributes, and other articles, may be reckoned as attaching to his privy purse. The furplus revenue remitted to Peking in the year 1792, was flated to be about twelve millions sterling. It is a general opinion among the Chinese part of his subjects that vast sums of the surplus revenue, and much as arise from confiscations, are annually sent to the capital of Tartary; this, however, is an erroneous opinion. Notwithstanding the great wealth of the imperial treasury, the present emperor found it necessary, in a single year, to accept of what
is called an offering, of five hundred ounces of silver, from the late merchants of Canton, and sums of money, and articles of merchandise from other quarters, to enable him to quell a rebellion that was raging in one of the Western provinces. He even sent down to Canton a quantity of pearls, azurite, pericarpus, and other stones of little value, in the hope of raising a temporary supply from the sale of them to foreign merchants. The emperor of China, therefore, has not so much wealth at his disposal as has usually been imagined. He even accepts of patriotic gifts from individuals, consisting of pieces of porcelain, filks, fans, tea, and such like trifling articles, which afterwards have to pay to foreign embassadors; and each gift is promptly proclaimed in the Peking gazette. The civil officers in the civil departments of government, independent of the ministrés and the different boards in Peking, according to the statement of Tschou-ta-gin, with their salaries and allowances, reduced into silver, will be seen from the following table:

<table>
<thead>
<tr>
<th>Quality</th>
<th>Number</th>
<th>Salaries in Ounces of Silver</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viceroy, over one or more</td>
<td>11</td>
<td>20,000</td>
<td>220,000</td>
</tr>
<tr>
<td>Governors of provinces</td>
<td>15</td>
<td>16,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Collectors of revenue</td>
<td>19</td>
<td>6,000</td>
<td>11,000</td>
</tr>
<tr>
<td>Presidents of criminal</td>
<td>18</td>
<td>6,000</td>
<td>12,000</td>
</tr>
<tr>
<td>tribunals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governors of more than one</td>
<td>86</td>
<td>3,000</td>
<td>258,000</td>
</tr>
<tr>
<td>city of the first order</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governors only of one city</td>
<td>184</td>
<td>2,000</td>
<td>368,000</td>
</tr>
<tr>
<td>of the first order</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governors of a city of the</td>
<td>1,705</td>
<td>800</td>
<td>1,364,000</td>
</tr>
<tr>
<td>second order</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governors of a city of the</td>
<td>117</td>
<td>3,000</td>
<td>342,000</td>
</tr>
<tr>
<td>third order</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presidents of literature and</td>
<td>117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>examinations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspectors General</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total ozs. 2,560,000

The inferior officers acting immediately under the orders of these, and amounting to many thousands, together with the salary and expenses of the different boards, all of which are paid out of the public treasury, must require a sum, at least equal to the above; so that, on a moderate calculation, the ordinary expenses of the civil government will amount to the sum of 5,920,000 ounces of silver, or 1,073,313 pounds sterling. Some idea may be formed of the numerous appointments and the frequent changes in administration, from the Chinese court calendar, which is published every three months, making four large volumes. The attention, precaution, and extreme jealousy of the government, have not been considered as sufficient for the protection of the empire, without the assistance of an immense standing army, which, in the midst of a profound peace, was flouted by Fan-ta-gin, to consist of one million of infantry and eight hundred thousand of cavalry. The expense of this military establishment, together with artillery, tents, war-equipage, vessels of force on the different rivers and canals, the building and keeping in repair the military posts, &c., &c., has been estimated at 34,982,973l. sterling. The revenue is estimated at fifty-six millions sterling, so that the whole will stand as follows:

Total amount of the revenue
Civil establishment £1,973,333
Military ditto 49,982,973 £51,956,266

Surplus, being for the emperor’s establishment £14,043,734

which accords pretty nearly with the sum paid to have been remitted to Peking in the year 1792. It may perhaps be asked, in what manner this large body of men is employed. Since the nation is so little engaged in foreign war, it may be replied, that the employments of the military differ materially from those among European nations. Except a great part of the Tartar cavalry, who are stationed on the northern frontier, and in the conquered provinces of Tartary, and the Tartar infantry, who are distributed as guards for the different cities of the empire, the rest of the army is parcelled out in the smaller towns, villages, and hamlets, where they act as constables, thief-takers, attendants to magistrates, subordinate collectors of the taxes, guards to the granaries, and are employed in a variety of different ways under the civil magistracy and police. Besides these, an immense multitude are stationed as guards of the military posts, along the public roads, canals, and rivers. These posts are small square buildings, like so many little castles, each having on its summit a watch-tower and a flag, placed at the distance of three or four miles a fortnight. At one of these posts there are never fewer than six men, who not only prevent robberies and disputes on the roads, but convey the public dispatches to and from the capital. An express sent from post to post travels in this way at the rate of a hundred miles per day, and there is no other mode of conveying letters for the convenience of the public.

A great part then of the Chinese army may be considered as a kind of militia, which never has been, and probably never will be, embodied; as a part of the community not living entirely on the labour of the soil, but contributing something to the common stock. Every folder stationed on the different guards has his portion of land assigned to him, which he cultivates for his family, and pays his quota of the produce to the state. The different kinds of troops compose the Chinese army consist of 1. Tartar cavalry, whose 

only weapon is a saber; and a few who carry bows. 2. Tartar infantry, bowmen having also large sabers. 3. Chinese infantry, carrying the same weapons. 4. Chinese matchlocks. 5. Chinese tigers of war, bearing large round shields of basketwork and long swords. On the shields are painted monstrous faces of some imaginary animal, intending to frighten the enemy, or to petrify their beholders. The military dress varies in almost every province; sometimes they wear blue jackets edged with red, or brown with yellow; some have long pantaloons, some breeches, and others petticoats and boots: the bowmen have long loose gowns of blue cotton, fluffed with wadding, stuffed with bras knobs, and bound round the middle with a girdle, from which the fabre is appended behind. On the head they wear a helmet, with flaps on each side, that cover the cheeks and fall on the shoulders. The upper part is like an inverted funnel, with a long pipe terminating in a kind of spear, on which is fastened a tuft of hair dyed black. They call the greatest number of soldiers' taws Mr. Burrow, that we saw at any one place might be from 2 to 3,000, which were drawn up in a single line along the bank of a river, and, as they stood with
with an interval between each other, equal to the width of a man, they formed a very considerable line in length. Every fifth man had a small triangular flag, and every tenth a large one; the flags that supported them were of different colours, and fixed to the jacket behind the shoulders." The Tartar cavalry appear to be remarkably swift, and to charge with great inactivity; but the horses are so small, and broken into so quick and short a frothe, that the eye is deceived, and their real speed is but moderate. Their saddles are soft, raised before and behind, so that the rider cannot be easily thrown out of his seat; and the stirrups are fo short that the knee is nearly level with the chin. They have little artillery, and that is very bad. They have a decided preference to clumsy matchlocks, over the fire-locks now in use among European troops, pretending that the former, by being fixed with iron forks into the ground are capable of doing more execution than the latter; but the true reason are probably their want of good metal to manufacture locks, or the bad quality of their gun-powder, or, above all, their deficiency in courage to make use of them with that flexibility which is required to produce their full effect.

Their favourite weapon is the bow, which, like all other muffle weapons, requires less courage to manage than those which bring a man to oppose himself in close contest with man. Although the Tartars have continued the Chinese arms on the old footing, they have used every exertione to recruit it with their own countrymen in preference to the Chinese. Every male Tartar child is accordingly enrolled, a precaution highly necessary, as their whole army at the time of the conquest is said not to have exceeded 80,000 men. It is, however, certain, that the Chinese government was at this time under a very weak administration, and every department both civil and military under the control of eunuchs, 6,000 of whom are said to have been turned adrift by the Tartars, on the taking possession of the palace at Peking.

The conduct of the Manchou Tartars, whose race is now on the throne, was a matter-piece of policy not to have been exposed in a half-civilized race of people. They entered the Chinese dominions as auxiliaries against two rebel chiefs, and in a short time placed their own leader on the throne; but instead of setting up for conquerors they melted into the mael of the conquered. They adopted the dress, the manners, the opinions of the people, and in all the civil departments of the state, they appointed the abett Chinese, and all vacancies were filled with Chinese in preference to Tartars. They learned the Chinese language, married into Chinese families, encouraged Chinese superstition, and, in short, omitted no step that could tend to incorporate them as one nation; their great object was to strengthen their army with their own countrymen; while the Chinese were so satisfied with the change, that they almost doubted whether a change had really taken place. In proportion as the Tartar power increased, they have become less solicitous to conciliate the Chinese; all the heads of departments are Tartars; the ministers are Tartars; and most of the offices of high trust and power are filled by Tartars. The best soldiers of this empire are collected from the three northern provinces; those supplied by the rest are seldom called forth; but remain with their families, enjoy their pay, and have seldom any occasion to remember that they are soldiers, except when ordered to appear at a review.

State of Society; Manners and Customs. It may be laid down as an invariable maxim that the condition of the female part of society in any nation will furnish a tolerably just criterion of the degree of civilization to which that nation has arrived. The manners, habits, and prevailing sentiments of women have great influence on those of the society to which they belong, and generally give a turn to the ideas and conceptions on the moral and intellectual powers of the mind in the female sex are held in most estimation, will be governed by such laws as are best calculated to promote the general happiness of the people; and, on the contrary, where the personal qualifications of the sex are the only objects of consideration, as is the case in all the despotic governments of Asiatic nations, tyranny, oppression, and flavery are sure to prevail; and these personal accomplishments, so far from being of use to the owner, serve only to deprive her of liberty and the society of her friends, to render her a degraded victim subservient to the sensual gratifications, the caprice, and the jealousy of man. Among savage tribes the labour and drudgery fall heavily on the weaker sex. The Chinese have imposed on their women a greater degree of humility and restraint than the Greeks of old, or the Europeans in the dark ages. Not satisfied with the physical deprivation of the use of their limbs, they have contrived, in order to keep them the more confined, to make it a moral crime for a woman to be seen abroad. If they should have occasion to visit a friend or relative, they must be carried in a close sedan-chair; to walk would be the height of vulgarity. Even the country ladies, who may not possess the luxury of a chair, rather than walk, suffer themselves to be rolled about in a sort of covered wheel-barrow. The wives and daughters, however, of the lower classes are neither confined to the house, nor exempt from hard and laborious labour, many being obliged to work with an infant upon the back, while the husband, in all probability, is gaming, or otherwise idling away his time. In the province of Kiang-fei nothing is more common than to see a woman drawing a kind of light plough, with a single handle, through ground that has previously been prepared; the easier talk of directing the machine is left to the husband, who, holding the plough with one hand, calls to the same time, with the other, the feed into the drills. The advantages which these women possess in a higher sphere of life, if any, are not much to be envied. Even at home, in their own family, a woman must either eat at the same table, nor sit in the same room with her husband. And the male children, at the age of nine or ten years, are entirely separated from their sisters. Thus the feelings of affection, not the instinctive products of nature, but the offspring of frequent intercourse, and of a mutual communication of their little wants and pleasures, are nipped in the very bud. A cool and ceremonious conduct must be observed on all occasions between the members of the same family. There is no common focus to attract and concentrate the love and respect of children for their parents. Each lives retired and apart from the other. The incidents and adventures of the day, which furnish the conversation among children of many a long winter's evening, by a comfortable fire-side, in our own country, are in China buried in silence. Boys, it is true, sometimes mix together in schools, but the stiff and ceremonious behaviour, which constitutes no inconsiderable part of their education, throws a restraint on the little playful actions incident to their time of life, and completely subdues all spirit of activity and enterprise. A Chinese youth of the higher classes is inanimate, formal, and insensible, constantly endeavouring to assume the gravity of years. To beguile the many tedious and heavy hours that must unavoidably recur to the secluded females, totally unqualified for mental pursuits, the tobacco-pipe is the mind expeditant. Every female from the age of eight or nine years wears, as an appendage to her dress, a small flaken purse or pocket,
to hold tobacco and a pipe, with the use of which many of them are not acquainted at this tender age. Some, indeed, are constantly employed in working embroidery on silk, or in painting birds, insects, and flowers on their gauze. But the women who employ their time in this manner are generally the wives and daughters of tradesmen and artificers; a lady of rank would not be supposed to confide the use of her needle. Daughters may be laid to be invariably fond. The bridgroom must always make his bargain with the parents of his intended bride. She has no choice, but is disposed of to the highest bidder. The man, indeed, in this respect, has no great advantage on his side, as he is not allowed to see his intended wife until the arts forms in formal procession at his gate. If, however, on opening the door of the chair in which the lady is shut up, and of which the key has been lost before, he should desire his bargain, he can return her to her parents; in this case the articles are forfeited that constituted the price; and a sum of money in addition may be demanded, not exceeding the value of these articles.

C To what a degraded condition," says Mr. Barrow, "is a female reduced by this absurd custom, and how little Intelligence can she have to render herself amiable or elegant, knowing that she will be configured into the hands of the first man who will give her the price that her parents have fixed up on her charms." The man takes a wife because the laws of the country direct him to do so, and custom has made it indispensable; and a woman after marriage continues to be the same piece of inanimate furniture she always was in her father's house. She suffers no indignity, nor does she feel any jealousy or disturbance when her husband brings into the same house a second or a third woman. Although polygamy be allowed by the government, yet few take the advantage of it. Nine-tenths of the community find it difficult to rear the offspring of one woman by the labour of their hands; nay, therefore, are neither in circumstances, nor probably feel much inclination to purchase a second. The unיבורious distance which the law prefers to be observed between the lexers, and the cool and indifferent manner of bargaining for a wife, are not calculated to produce numerous instances of criminal intercourse. These, however, sometimes happen, and the weight of punishment always lies heavier on the woman. The husband finds no difficulty in obtaining a fiction of divorce, after which he may sell her for a slave, and thus redeem a part at least of his purchase-money. The same thing happens in case a wife should elope; but if a young girl should chance to lose what is justly held to be the most valuable part of female reputation, she is sold to market by her parents, and publicly folded for a slave. In cases of mutual duilt, or incompleteness of temper, the woman is generally sent back to her parents. The prohibition against the frequent intercourse with modest females, for there are public women in every great city, is not attended here with the effect of rendering the pursuit more easy; it seems even to have the contrary effect, of promoting that sort of connection, which, being one of the greatest violations of the laws of nature, will ever be considered by an enlightened people as the first of moral crimes, a connexion that links the man infinitely below the brute. The commissio of this detestable and unnatural act is attended with so little sense of shame, that many of the first officers of state seem to make no hesitation in publicly avowing it. Each of these offenders is constantly attended by his pipe-bearer, who is generally a handsome boy, from 14 to 18 years of age, and is always well dressed, the reason of which is too obvious, to bye-bidders, to be misunderstood.

The state of domestic society in China is ill calculated to promote the affection and kindness which children feel for their parents in many countries. A tyrant to command, and a slave to obey, are found in every family; and if the acts of kindness and attention that create mutual engagements be wanting among the members of the same family living under the same roof, it will be in vain to expect to find them in the large sphere of public life; and in fact there are no friendly locales, nor meetings, to talk over the transactions and the news of the day. These can only take place in a free government. A Chinama, having fulfilled his daily employment, retires to his solitary apartment. There is, it is true, a fort of public houses where the lower orders of people resort for their cup of tea; but such places are not frequented for the sake of company. Whatever a few Chinese meet together, it is generally for the purpose of gaming, or to eat a kettle of boiled rice, or drink a pot of tea, or imake a pipe of tobacco. The upper ranks indulge at home in the use of opium, of which they are very fond, though it is strictly prohibited by law. It is, however, too expensive to be used by the common people. The young have to occasionally assemble for the purpose of dancing, and of executing themselves in acts of activity, which in Europe are attended with the happiest effects. The first day of the new year, and a few succeeding days, are the only holidays that are observed by the working part of the community. On these the poorer peasantry make a point of procuring new clothes for himself and his family; they pay visits to their friends and relations, intercalate civilities and compliments, make and receive presents; and the officers of government, and the higher ranks, give feasts and entertainments; but even in these there is nothing that bears the remembrance of conviviality. The guests never partake together of the same service of dishes, but each has a separate seat; the eyes of all must constantly be kept on the master of the feast, to watch his motions, and to observe every morcel he puts into his mouth, and every time he lifts the cup to his lips (for a Chinama of good breeding can neither eat nor drink without a particular ceremony), to which the guests must pay attention. If a person invited should be prevented from attending, the portion of dinner that was intended for him is sent in procession to his own house; it is even customary to send after the guests the remains of his dinner. Whatever may be the occasion of bringing together a few idlers, they seldom part without trying their luck at some game of chance, for which a Chinama is never unprepared. He rarely goes abroad without a pack of cards in his pocket, or a pair of dice; both of these are different from similar articles elsewhere; their cards are much more numerous than ours, and their games much more complicated. They sometimes play at chess, which appears to be essentially different from that game as played in other Oriental nations. The spirit of gaming is so universal, in most of the towns and cities, that, in almost every bye corner, groups are to be found playing at cards or throwing dice. They are accust of even taking their wives and children on the hazard of a one of their most favourite sports is cock-fighting, which is as eagerly pursued by the upper classes in China, as it continues to be by those in a similar situation in some parts of Europe. The training of gums for the same cruel purpose of butchering each other, further abundance of employment for the idle and dispossessed. They have even extended their inquiries after fighting animals into the insect tribe, in which they have discovered a species of gryllus, or locust, that will attack other with such ferocity, as seldom to quit their hold without breaking away, at the same time, a limb of their antagonist. These little creatures are kept apart in bamboo cages; and the custom of making them devour
devour each other is so common, that during the summer months fearlessly a boy is seen without his cage end grafters.

Another trait in the Chinese character, which must not be passed over, is the horrid practice of infanticide, tolerated by custom, and allowed by government; because where the legislature does not interfere to prevent crimes, it may be said to lend them countenance. The laws of China do not indeed suppose such an unnatural crime to exist, and have therefore provided no punishment for it. They have left the child entirely to the disposal of the father, concluding, that if his feelings will not prevent him from doing it an injury, no other consideration will. Thus, though the commission of infanticide be frequent in China, it is considered as more prudent to wink at it, as an inevitable evil, which natural affection will better correct than penal statutes. It is, however, tacitly considered as a part of the duty of the police of Peking, to employ certain persons to go their rounds at an early hour in the morning with carts, in order to pick up such bodies of infants as may have been thrown into the streets in the course of the night. No inquests are made, but the bodies are carried to a common pit without the city walls, into which all those that may be living, as well as those that are dead, are said to be thrown promiscuously. The number of children thus inhumanly slaughtered, in the course of a year, is differently stated by different authors. Some making it about 10 and others 50,000 in the whole empire. Mr. Barrow thinks the truth may probably lie in the mean of these extremes. He concludes that about 24 infants are on an average daily destroyed in Peking, where it is supposed about an equal number are exposed, to that of all the other parts of the empire. How weak then, says he, must be the boasted filial affection of the Chinese for their parents, when they scruple not to become the murderers of their own children, towards whom, according to the immutable laws of nature, the force of affection will ever be stronger, than for those, whom the laws of China, in preference, have commanded to be protected and supported when rendered incapable of affilling themselves. Hence, and from other facts, the result of his own observations, he infers that filial pitty, among the Chinese, may rather be considered in the light of an ancient precept, carrying with it the weight of a positive law than the effect of sentiment. These unfavourable features, in the character of a people whose whole natural disposition is neither ferocious nor morose, but on the contrary mild, obliging, and cheerful, can be attributed only to the habits in which they have been trained, and to the heavy hand of power, perpetually hanging over them. That this is the case may be inferred from the general conduct and character of those who have from time to time emigrated into other countries, where they are not less remarkable for their honesty than for their peaceable and industrious habits. In these places it appears also that their quickness at invention is not surpassed by accuracy of imitation. The exterior deportment of every class in China is uncommonly decent, and all their manners mild and engaging; but even these, among persons of any rank, are considered as objects worthy of the interference of the legislature; hence it follows that they are ceremonious without servility, insipidions of the most only of politeness, without either the eafe or elegance of good-breeding. An inferior makes a sham attempt to fall on his knees before his superior, and the latter affects a flight motion to raise him. A common satisfaction has its mode preferred by the court of ceremonies; and any neglect or default in a giberian towards his superior is punishable by corporal chastisement, and in men in office by degradation or suspension. In a govern-

ment where every man is liable to be made a slave, where every man is subject to be brigaded with the bamboo, where he is compelled to thank the tyrant on his knees for the trouble he has taken to correct his morals, high notions of honour, or even of common honesty, cannot be expected. Such a system is well calculated to exclude and obliterate every notion of the dignity of human nature. A flave in fact cannot be dishonoured, the vices of such a condition are innumerable, and they appear on all occasions: a Chinese merchant will cheat, whenever an opportunity offers him the means, because he is considered incapable of acting honestly; a Chinese peasant will steal whenever he can do it without danger of being detected; because the punishment is only the bamboo, to which he is daily liable; and a Chinese prince, or a prime minister, will extort the property of the subject, and apply it to his private ufe whenever he thinks he can do it with impunity. The only check upon the rapacity of men in power, is the influence of fear, arising from the possibility of detection. The love of honour, the dread of shame, and a sense of justice seem to be equally unfelt by the majority of men in office. Mr. Barrow produces a variety of instances to prove that the character of the Chinese is generally defective in these respects; and he says that the refined knave displayed by Chinese merchants in their dealings with Europeans, and the tricks that they play off on their tranfactions with one another, are well known to nations, and proverbial in their own. A merchant, with them, is considered as the lowest character in the country, as a man that will cheat if he can, and whose trade it is to create, and then supply artificial wants. To this general character, an exception is due to those merchants, who, acting under the immediate function of government, have always been remarked for their liberality and accuracy in their dealings with Europeans trading to Canton. The want of principle in the Chinese character seems to be more in the system of government, than in the nature and disposition of the people.

The Tartars, by assuming the drefs, the manners, and the habits of the Chinese, are scarcely distinguishable from them in their external appearance; and if any physical difference exists it seems to be in stature only. The Chinese are rather taller and of a more slender and delicate form than the Tartars, who are in general short, thick, and robust. The small eye, elliptical at the end next to the nose, is a predominating feature both in the Tartar and Chinese countenance; they have both the same high cheek-bones and pointed chins, which with the custom of shaving off the hair gives to the head the shape of an inverted cone. The natural colour both of the Chinese and Tartars seems to be that tint between a fair and a dark complexion, and the shades of this complexion are deeper, or lighter, according as they have been more or less exposed to the influence of the climate. The women of the lower classes, who labour in the fields or who dwell in welfels, are almost invariably coarse, ill featured, and of a deep complexion, very like that of a Hottentot. Among the men, those who are drest drest wear a front of velvet cap on their heads; a short jacket close buttoned round the neck and folded across the breast, the sleeves remarkably wide; the materials, cotton cloth; black, blue, or brown silk; or European camlet; they wear quilted petticoats and black satin boots. The common people are drest in large straw hats, blue or black cotton frocks, wide cotton trousers, and shoes made of straw; some have coarse fockings of cotton cloth; the legs of others are naked, and a single pair of drawers constitutes the whole clothing of a great portion of the crowd. On the banks of the Pei-ho, and indeed in most parts of the country, bunches of large artificial flowers,

of
of different colours, are stuck in the jet black hair of the women, which is screwed up close behind, and folded into a knot across the crown of the head. Two bodkins of silver, brass, or iron, are conspicuously placed behind the head in the form of an oblique crook. Their faces and necks are daubed with white paint, the eye-brows are blackened, and on the centre of the lower lip, and at the point of the chin, are two spots about the size of a small wafer, of a deep vermilion colour. A blue frock like that of the men, reaching to the middle of the thigh, in others to the knee, is almost universal. A pair of wide trousers of different colours are extended a little below the call of the leg, where they are drawn close, the better to display an ankle and a foot which, for singularity at least, may challenge the whole world. This distended member consists of a foot that has been cramped in its growth to the length of four or five inches, and an ankle that is generally swollen in the same proportion that the foot is diminished. The little shoe is as fine as tinfoil and tawdry can make it, and the ankle is bandaged round with party-coloured cloths ornamented with fringe and tassels; with such a leg and foot thus drest out they are considered in China fuperlatively beautiful. This monstrous fashion of cramping the growth of the feet has been attributed to the jealousy of the men. The fashion is, however, at present so universal, that any deviation from it is considered as disgraceful. Upon the principle of being thought superior to others, the men of learning, as they call themselves, fatter the nails of their little fingers to grow, sometimes to the length of three inches, for the sole purpose of demonstrating the impossibility of their being employed in any sort of manual labour; and upon the same principle, perhaps, the ladies of China may be induced to continue the custom of maiming their female infants in order that they may be distinguished from those of the peafantry, who in most of the provinces are condemned to submit to the drudgery of the field. The interior wrappers of the ladies' teet are said to be seldom changed, a custom that conveys no favourable idea of Chinefe cleanliness; this, indeed, forms no part of their character; the comfort of clean linen, or frequent change of under garments, is equally unknown to the sovereign and the peafant. A fort of thin coarse flits supplies the place of cotton or linen, next the skin, among the upper ranks; but the common people wear a coarse kind of cotton cloth. These velments are rarely removed for the purpose of washing; the consequence is an abundant increafe of those vermin, to the production of which filthinefs is found to be favourable. The highest officers of state make no hesitation of calling their attendants in public to feek in their teets for thofe troublesome animals, which when caught they put between their teeth. They carry no pocket handkerchiefs, but make use of small square pieces of paper, which their attendants have ready prepared for the purpose. They sleep at night in the fame cloaths they wear by day; their bodies are as seldom washed as their articles of dress. At their meals they make no use of table linen, and eat without knife, fork, or spoon; a pair of small sticks, or the quills of a porcupine, are the only substitutes for these convenients articles; and a Chinefe, if his rank enables him, lies down to feep as soon as he has finifhed his lonely meal. There are no infants in any part of this vall empire, that is, no inhabited and furnished houses where a traveller may purchase thofe refreshments of which he stands in need. What they call innis are mean holvs, confifting of bare walls, where, perhaps, a passenger may procure a cup of tea for a piece of copper money, and permission to pas the night, but this is the extent of the comfort which such places afford. The practice indeed of journeying by land is so rare, that no house of decent accommodation could be supported by the occasional visits of travellers. The officers of state invariably make use of the conveniences which the temples afford, as being the belt that can be obtained.

Buildings and Furniture of the Chinefs. The Chinefe buildings, even public monuments, and the emperor's palaces, lioke more by their extent than their magnificence. The imperial palace at Peining may be compared to a large city; those of the princes, principal mandarins, and people of great fortune, contain four or five outer courts, in each of which is a separate building with three gates; that in the middle is larger than the other two, and is decorated with two marble lions, which are placed on either side of it. The halls set apart for receiving visits are neat, and provided with seats, and other plain furniture, but nothing can be perceived in them which marks either magnificence or grandeur. The apartment in which they entertain their friends is equally plain and simple. Thofe set apart for their women and children are inaccessible to every intruder, even the most intimate friend of the master of the house. The Chinese gardens are laid out in a peculiar style. In these are groves, ponds, artificial mountains and rocks, and winding alleys, which conduct to different points of view, each of which presents a new object. The Chinefe are fond of every thing that is gigantic: with them the beauty of a column consists in its size and height; and that of a hall in its extent. Two provinces, viz. Chian-tong and Kiang-nan, abound with excellent marble, and in quantities sufficient to supply the rest of the empire; but the Chinefe are neither acquainted with the art of cutting it properly, nor of applying it to the purposes of building. They generally employ it in constructing bridges, for thresholds to the doors, and to pave their streets, where any of them are paved. Some triumphal arches, temples, and pagodas, are, however, built of it, but without art or taste. The Chinefe exhibit but little attention in ornamenting and embellifying the interior part of their houses: they have neither mirrors, tapestry, nor gilding. They, besides, receive no visits but in a particular hall, which is situated in the front part of the house, and before every other apartment, for the purpose of preventing those who are admitted into it from having any communication with the inner apartment. Its ornaments consist of large lanterns made of painted silk, which are suspended from the ceiling, tables and other furniture, which are generally covered with a most beautiful varnish so transparent, that the veins of the wood may be seen through it, and to bright and shining, that it reflects different objects like silvered glass. The fort of tapestry manufactured in China is of white fatin, on which are wrought birds, flowers, landscapes, &c. Sometimes they contain, in large characters, a few moral sentences, which generally compose a kind of epitaph. Poor people are contented with whitening the walls of their apartments; others cover them with that fort of paper which is brought from China, and which people of fortune, in Europe, used formerly to employ in ornamenting some part of their's. The beds of the rich are furnished in winter with curtains of double fatin, and in summer of plain white taffety, interspersed with flowers, birds, and trees: sometimes they are composed only of very fine gauze, which keeps out gusts and mosquitos, and leaves a free passage for the air. The poils of these beds are gilt, painted and ornamented with what they denominate sculpture. The common people use curtains only of linen, and plain mat-teries, tufted with cotton; in the northern provinces they sleep upon beds constructed of brick. These fquare beds are larger or smaller in proportion to the number of the family.
nily. They are kept warm by means of a small fire. Those who are able place on the bricks a kind of mattress. In the morning this is removed, and its place is supplied by a carpet, or mat; the bed then becomes a fort of couch, upon which the whole family sit and work. At the flowers, the poor people dress their meat and warm their tea and other liquors, for, notwithstanding the heat of the climate, they never drink any thing cold. In the houses of the great the flowers are built in the wall, and the fire is lighted from the outside.

Language and Literature. The Chinese language is not only one of the most ancient in the universe, but is, perhaps, the only language of the early ages, which is still spoken and living: it is indeed extraordinary, as the people who speak it, and has no relation whatever to any known language. Its genius is such that no laws of analogy can comprehend it. It has no alphabet, and the words which compose it consist of one syllable only, and are very few in number. These words always remain the same; that is to say, monosyllables, even when two are united to signify one thing; whether they are written or pronounced, they remain always separate and distinct, and are never blended into one. These monosyllables never produce one sound. When they are written by the European alphabet, they generally begin by the letters ch, kgh, g, or j, b, l, w, n, ng, p, s, ts, vs; the final letters are a, o, 0, ou, u, i, n, ng. The middle of the Chinese words consists of vowels and consonants, which produce only one sound, and are always pronounced as monosyllables. The Chinese language contains only about three hundred and thirty primary and radical words; though some dictionaries make them amount to four hundred and eighty-four. The sense of these primitive words may be multiplied almost without end, by the abundance and variety of accents, inflections, and aspirates used, and by other changes of the voice which pronounces them. The nice distinctions between the tones and accents of words, nearly resembling each other in sound, but varying much in fene, require a great nicety of ear to distinguish, and of vocal powers to render them exact. To succeed in making these distinctions perfectly, a stranger should begin to learn them at an early age, while his organs are flexible and acute. Synonymous words are frequently introduced into Chinese dialogues to prevent any doubt about the sense. If, however, in an intricate disquisition any uncertainty should still remain as to the meaning of a particular expression, recourse is had to the criterion of tracing, with the finger in the air, the form of the character, and thus completely ascertaining at once what was meant by a word. In the Chinese language there are not many minute rules of grammar, conjugation or declension. There is no necessity of distinguishing inflections, adjectives, or verbs; nor any accordance of gender, number, and case, in a Chinese sentence. The beginning or end of words is not altered as it is in the Greek verb, by the times of performing the action meant to be expressed, or the cases in which the things mentioned are intended to be placed. A very few particles denote the pall, the present, and the future; nor are those auxiliaries employed, when the intended time may be otherwise inferred with certainty. The plural number is marked by the addition of a word, without which the singular is always implied. Neither the memory, nor the organs of speech, are burdened with the pronunciation of more sounds to express ideas, than are absolutely necessary to mark their difference. A single syllable always expresses a complete idea, and may be answered by an European confiant preceding a vowel, sometimes followed by a liquid. Such an order of words renders the language soft and harmonious as the Italian, from the rarity of confiants, and the frequency of its vowel

terminations. There is in the Chinese a certain order or setted syntax in the succession of words in the same sentence: a succession fixed by custom, differently in different languages. The formation of Chinese sentences is often the simplest and most artless possible, and such as may naturally have occurred at the origin of society. A simple character repeated, stands sometimes for more than one of the objects which, singly, it denotes; and sometimes for a collective quantity of the same thing. The character of wood, singly, is a tree; repeated, is a thicker; and tripled, is a forest. In Chinese there are fearfully fifteen hundred distinct sounds. In the written language there are, at least, eighty thousand characters, or different forms of letters.

The Chinese characters are divided into fixed sorts; the first exhibiting the shape or image of sensible things; the second indicating the object by some visible addition to the image or symbol; the third associating two characters to express one object, which neither will denote separately; the fourth expressing a sound, in order to supply the defect of the figure, as ya adjoined to the figure of a bird, to represent a duck, &c.; the fifth being a metaphorical application of their characters, by which their language acquires a force and vivacity of colouring peculiar to itself, but at the same time rendering it extremely obscure; the sixth extending the primitive sense of a character, so that the same character may denote a verb or adverb, an adjective or substantive. These characters have been represented by some learned writers for sensible things, and symbols for mental objects, which are tied to no sound, and may be read in every tongue; and this seems to have been the case in the most remote antiquity, when their characters, which are now abbreviated and disguised, might have been more simple and natural. See Phil. Transf. vol. lix. p. 489.

The characters of the Chinese language were originally traced, in most in Indian, with a view to express either real images, or the allegorical signs of ideas: a circle, for instance, for the sun, and a crescent for the moon. A man was represented by an erect figure, with lines to mark the extremities. The difficulty and tediousness of imitation, soon occasioned a change to traits more simple, and more quickly traced. A faint resemblance, however, still remains, in a few infinences, of the original forms in the present hieroglyphic characters; and a gradation of their changes is traced in several Chinese books. Not above half a dozen of the present characters consist of a single line; but most of them consist of many, and a few of seventy different strokes. A certain connexion is to be perceived in the arrangement of the written characters of the Chinese; as if it had been originally formed upon a system to take place at once, and not to grow up, as other languages, by flow and dilatant intervals. Upwards of two hundred characters, each consisting of a few lines, are made to mark the principal objects of nature. These may be considered as the genera or roots of language, in which every other word or species, in a syllabic tongue, is referred to its proper genus. The heart is a genus, of which the representation of a curve line approaches somewhat to the form of the object, and the species referable to it, include all the sentiments, passions, and affections, that animate the human breast. Each species is accompanied by some mark denoting the genus, or "heart." Under the genus "hand" are arranged most trades and manual exercises. Under the genus "word," every sort of speech, study, writing, understanding, and debate. A horizontal line marks a noun; crossed by another line it stands for ten. The five elements, of which the Chinese suppose all bodies in nature to be compounded, form so many genera, each of which comprehends under it a great

number
number of species. As in every compound character or
species, the abridged mark of the genus is discernible, a per-
son is soon enabled to consult the Chinefe dictionary, in
which these characters are arranged under their proper ge-
nera. The characters of the genera are placed at the be-
ninning of the dictionary, in an order, which, like that of
the alphabet, is invariable, and soon becomes familiar to the
learner. The species under each genus follow each other,
according to the number of strokes of which each consists,
indipendently of the one or few which serve to point out the
genus. The species wanted is thus found out, and its mean-
ing and pronunciation are given through other words in
common life, the first of which denotes its signification,
and the other its sound. When no one word is found to
render exactly the same sound, it is communicated by two
words, with marks to inform the inquirer, that the confonant
of the first word, and the vowel of the second, joined to-
gether, form the precise sound wanting. The composition of
many of the Chinefe characters often displays considerable
ingenuity, and serves to give an insight into the opinion and
manners of the people. The character expressive of happi-
ness, includes abridged marks of land, the source of their
physical, and of children, that of their moral, enjoyments.
This character, embellished in a variety of ways, is hung up
in almost every house.

Upon the formation, changes, and allusions of compound
characters, the Chinefe have published many thousand vo-
lumes of philological learning: No where does criticism
more abound, or is more strict. The introduction or altera-
tion of a character is a serious undertaking, and seldom fails
to meet with opposition. The most ancient writings of the
Chinefe are still classical among them. The language seems
in no influence to have been derived from or mixed with any
other. The written forms to have followed the oral lan-
guage, soon after the men who spoke it were formed into a
regular society. The Chinefe printed character is the same
as is used in most manuscripts, and is chiefly formed of straight
lines in angular positions, as most letters are in eastern
tongues. A running hand is used by the Chinefe only on
trivial occasions, or for private notes, for the cafe and expe-
dition of the writer; and differs from the other as much as
an European manuscript does from print. The principal
difficulty in the study of Chinefe writings, arises from the
general exclusion of the auxiliary particles of colloquial lan-
guage, that fix a relation between indeclinable words, such as
are all thofe of the Chinefe language. The judgment must
be confantly exercised by the student, to supply the absence
of such affilation. That judgment must be guided by atten-
tion to the manners, customs, laws, and opinions of the
Chinefe, and to the events and local circumstances of the
country, to which the allusions of language perpetually re-
fer. The Chinefe characters are sketches, or abridged figures;
and a sentence is often a string of metaphors. The
different relations of life are not marked by arbitrary sounds,
flningly conveying the idea of such a connexion, but the qua-
lities naturally expressed to arise out of such relation become
frequently the name by which they are respectively known.
Kindred, for example, of every degree is thus distinguished,
with a minuteness unknown in other languages. That of
China has distinct characters for every modification known
by them of objects in the physical and intellectual world.
Abstract terms are no otherwise expressed by the Chinefe
than by giving to each the name of the most prominent ob-
jects to which it might be applied, which is likewise indeed
generally the cafe of other languages. Among the Latins
the abstract idea of virtue was expressed under the name of
virtus, being the quality most esteemed among them, as filial
piety is considered to be in China. The words of an alpha-
abetical language being formed of different combinations of
letters, each with a different sound and name, whoever knows
and combines these together, may read the word without the
least knowledge of their meaning; this, however, is not the
case with hieroglyphic language, in which each character has
a found annexed to it, but which bears no certain relation to
the unnumbered lines or strokes, of which it is composed.
Such character is studied and belt learned by becoming ac-
quired with the idea attached to it; and a dictionary of
hieroglyphics is lefts a vocabulary of the terms of one lan-
guage with the correspondent terms in another, than a Cy-
clopedia containing explanations of the ideas themselves,
re-presented by such hieroglyphics. In such a case, only, can the
acquisition of Chinefe words be fully said to engross most of
the time of men learning among them. Enough, however,
of the language is imperceptibly acquired by every native,
and may, with diligence, be attained by foreigners, as far as
concerns the ordinary concerns of life.

We now proceed to the literature of the Chinefe. In
their language are a multitude of books, abounding in
useful knowledge; but the highest class consists of five
works: one of which, at least, every Chinefe who aspires to
literary fame must diligently peruse. The first is purely
historical, containing annals of the empire from 2337 years before Christ; it is entitled Shihking,
and a version of it has been published in France. The second
classical work of the Chinefe contains three hundred odes, or
short poems, in praise of ancient sovereigns and legislators,
or descriptive of ancient manners, and recommending an imi-
tation of them in the discharge of all public and domestic du-
ties. They abound in wise maxims, and excellent precepts,
their whole doctrine being reducible to this grand rule, "that
we should not even entertain a thought of any thing base or
culpable." So high an opinion do the Chinefe entertain for
this work, that one of their writers asks, "Why, my sons,
do you not study the book of Odes? If we creep on the
ground, if we be useless and inglorious, those poems will
tafe us to true glory: in them we fee, as in a mirror, what
may beft become us, and what will be unbecoming; by
their influence we fhall be made focial, affable, benevolent:
for, as mutic combines founds in juft melody, fo the ancient poetry
temper and compofes our fations. The Odes teach us our
duty to our parents at home, and abroad to our prince; they
instruct us also delightfully in the various productions of na-
ture." "Hail, thou fublime," said the philofopher to his
fon, "the firit of the three hundred odes? He who fhudies
them not, refembles a man with his face againft a wall, unable
to advance a step in virtue and wisdom." Moll of these
odes are three thousand years old. The work is printed in four
volumes. The third book is entitled Teeling, or the book of
changes, believed to have been written by Po, the Hermes of
the East, and confiting of line regularity variously difpofed;
it is, however, scarcely intelligible to the moft learned manda-
rins. Confucius, himfelf, being d iffatisfied with the com-
mentators upon it, intended to have elucidated it, but was
prevented by death. The fifth, or Liki, is compiled from old
monuments, and confifts chiefly of the Chinefe ritual, and of
tracts on moral duties; but the fourth, entitled Chung-Ciu,
or Spring and Autumn, by which the writer meant the flu-
rifying late of an empire under a virtuous monarch, and the
fall of kingdoms under bad governors, is an interrelling work
to every nation. The Chinefe have their fanzas, odes, eleg-
gies, elegues, epigrams, and fatives. The common people
also have ballads and fongs peculiar to themselves. Some of
the moft diftinguished of the literati have even thought it of
importance to turn into verse the celebrated maxims of mo-
rality,
CHINA.

ralty, the duties of the different conditions, and the rules of
civility for their use. Seldom is the Chinese poetry disdained
by obscurity, and if it ever happens, the author must pay dear
for it if his works fall into the hands of government. It is
in consequence of that rigid and severe attention which
watches over every thing in the least tending to corrupt pub-
lic manners, that all romances, without exception, are ex-
presly prohibited by the laws. The police, however, less
severe than the law, permits such novels and romances as have
an useful tendency, and in which nothing is found prejudicial
to morality. Every writer who writes against government is
punished with death, as well as all those who have had any
hand in the printing or circulation of his works. The rules
of dramatic composition established in Europe are not known
to the Chinefe. They neither observe our unities, nor any
thing that can give regularity and probability to the plot.
Their dramas do not represent a single action; they exhibit
the whole life of a hero, and this representation may be sup-
posed to continue forty or fifty years. The representation of
these is thus described by Sir George Staunton: "The com-
pany of actors successively exhibited, during a whole day,
several different pantomimes and historical dramas. The
performers were habited in the ancient dress of the Chinefe,
at the period when the personages represented were supposed
to have lived. The dialogue was spoken in a kind of recita-
tive, accompanied by a variety of musical instruments; and
each pause was filled up by a loud crash, in which the bo bo
bore no inconsiderable part. The band of music was placed in
full view, immediately behind the stage, which was broad,
but by no means deep. Each character announced, on his
first entrance, what part he was about to perform, and where
the scene of action lay. Unity of place was apparently
preferred, for there was no change of scene during the repre-
sentation of one piece. Female characters were performed
by boys or eunuchs."

Chiefs Education. According to the book of ceremonies,
the education of a child should commence at the moment
of its birth: it allows nurseries, but enjoins mothers to use
the greatest precaution in choosing them. As soon as a child
can put its hand to its mouth, it is weaned, and taught to
use its right hand. At the age of six, he is made acquaint-
ed with the numbers moral in ufe, and with the first prin-
ciples of geography. At seven, he is separated from his sis-
ters; after which he is no longer suffered to eat with them,
nor to fit down in their presence. At eight he is instruc-
ted in the rules of good-breeding and politeness. The calen-
dar becomes his study at the age of nine. At ten he is sent
to school, where he learns to read, write, and count accounts.
From thirteen to fifteen he is taught music; after which he
is instructed in the ufe of the bow and arrow, and how to
mount a horfe. When the Chinefe youth have attained to
the age of twenty, they receive the first cap, if they are
judged to deserve it: they are then permitted to wear silk
dresses, ornamented with fur, but before that period they
have no right to wear any thing but cotton. In their mode
of instruction, the Chinefe select some hundreds of charac-
ters that express the commonest objects, or those at least
which fall most frequently under the perception of the
sense, such as a man, some domestic animals, ordinary
plants, the most useful furniture of a house, the sun, the
moon, and even the heavens. These objects are engraved
or painted separately on certain substances, and under each
is put the name of the thing represented, which points out
to the children the meaning of the word. The first book
put into the hands of a child is a collection of short fen-
tences, consisting of three or four verbs each. They are
obliged to give an account in the evening of what they have
learned in the day. Youth in China have no relaxation from
the severity of their studies, but at the commencement of the
new year, and a few days at Midsummer. After this ele-
mentary treatise, they have to learn the books that contain the
doctrines of Confucius and Mencius; and while they are
learning by heart all the characters, they are taught to form
them with a pencil: for this purpose they have leaves of
paper given them, on which are written or imprinted with
red ink very large characters; these are required to
cover with black ink, and to follow exactly their shape and
figure, which infenfibly accumulates them to form the difer-
ent strokes. After this they are made to trace other char-
acters, placed under the paper on which they write; these
are black and smaller than the former. It is of great ad-
vantoge to the Chinefe literati to be able to paint charac-
ters well, because a deficiency in this respect will frequently
occasion a fudent to be rejected at his examinations when
he is candidate for his degrees. When a pupil has made
himself master of a sufficient number of characters, he is put
upon composition. To incite the youth to improvement
in this part of their education, there is a fort of competition
established in China. Twenty or thirty families, who are all
of the same name, and who consequently have only one hall
for the manes of their ancestors, agree among themselves to
send their children to this hall at stated times in order to
compete. Each head of a family in turn gives a subject
for literary contest, and adjudges the prize; but the exerci-
se of this privilege lays him under the necessity of being at
the expense of a dinner, which by his orders is carried to the
hall of competition. These contests are private, and have
no concern with the rules laid down for public education;
but every student is obliged to undergo an examination, at
least twice a year, under the inspection of an inferior ma-
azar of letters. This practice is general throughout all
the provinces in China. It happens frequently, that the
mandarins of letters order those students to be brought be-
fore them, to examine into the progress they have made in
their studies, and to excite a spirit of emulation among
them. Even the governors of cities do not think it below
their dignity to take this care upon themselves. They
order all the students, who are not far distant from their
residence, to appear at their tribunal once a month. The
author of the best composition is honoured with a prize,
and the governor treats the candidates on the day of com-
petition at his own expence. To encourage learning, there
are in every city, town, and hamlet in every village, mailers
who keep schools, for the purpose of teaching what they
call the Sciences. Besides this, parents, poffessed of the
means, provide preceptors for their children, to attend and
instruct them, to form their minds to the principles of virtue,
and to initiate them in the rules of good-breeding and the
acclimated ceremonies, and, if their age will admit of it, to
make them acquainted with the laws, and with the knowl-
dge of history. To give dignity to the examinations, the
building in which they are held has always something to
distinguish it, even in the smallest cities; but in those de-
nominated capitals of provinces, it is a real palace. When
the competition begins, the students are all flut up, each
in a small chamber, care being taken that no one con-
ceals any thing that might afford him advantage in his com-
position. They are forbidden, under the severest possible
penalties, to carry any thing with them into their closet
but pencils and ink; and from that moment they are allow-
ed to have no communication with any one.

In connection with this part of our subject we may notice,
that
who speaks to his father does it with the greatest reverence and modesty: he does not even call himself the son, but the grandson, though he may be the eldest of the family, and perhaps the father of many children himself. He will also often make use of his own name, that is, the name that he prefix'd at that period, for the Chinese have different names in bosom, according to their age and rank. The family name is that which is given them at their birth; a month after, the parents give a diminutive name to their son, which is generally that of a flower, animal, &c. This name is changed when the youth begins to make progress in his education at a public school, and the master bestows upon him some flattering appellation, which the pupil adds to his name. When he has attained to manhood, he requests a new name from his friends, and this he retains during life, unless he has the good fortune to rise to some dignity in the state, when he is honoured with one that corresponds with his talents and office. No other must be afterwards given him, not even that of his family.

Religion of the Chinese. The primitive religion of China, or at least those opinions, rites, and ceremonies, prevalent in the time of Confucius, and before that period all seems to be fable and uncertainty, may be pretty nearly ascertained from the writings ascribed to that philosopher. He maintains that out of nothing there cannot possibly be produced any thing; that material bodies must exist from all eternity; that the cause or principle of things must have had a co-existence with the things themselves: that therefore this cause is also eternal, infinite, indestructible, without limits, omnipotent, and omnipresent; that the central point of influence from which this cause acts, is the blue firmament, from whence its emanations spread over the whole universe; that it is, therefore, the supreme duty of the prince, in the name of his subjects, to present offerings to Tan, and particularly at the equinoxes, the one for obtaining a propitious field-time, and the other a plentiful harvest. These offerings to the deity were always placed on a large stone, or heap of stones, erected on the summit of a high mountain, on the supposition that their influence would be so much the greater, in proportion as they should approach the seat and fountain of creating power, like the ancient Persians, who confedered the circle of the heavens to be the ruling power of the universe, to which they also sacrificed on high mountains. To the same principle Tacitus refers, observing that the nearer mortals can approach the heavens the more distinctly will their prayers be heard. Noah also, after quitting the ark, built an altar on the mountain where it rested, and made a burnt offering, the smoke of which ascending into heaven, was pleasing to the Lord. Abraham was commanded to offer his only son Isaac on a mountain, and Balaam ascended to the top of Mount Piphah, to offer a sacrifice and to curse Israel. Thus all nations in their infancy seem to have adopted the natural idea of paying adoration to heaven from high places. The large stones or heaps of stones, that have been appropriated to religious rites in almost every part of the world, may have been introduced from the custom among savage nations, to mark with a great stone the place where their worship was intimated; such being at length deified in the opinions of their votaries, the stones that were dedicated to their memory were used in their religious worship. The peculiar homage, that, from time immemorial, has been paid to the memory of the dead by the Chinese, renders probable this explanation of the origin of their altars, or four stones, which are called Tan, and which in former times were erected on most of their high mountains. At the present day the Tan is represented, upon many of the altars erected in their temples, by four stone lions placed in the corners of the altar, as the horns were in the corners of the Jewish altars. As the people increased and spread over the empire, the inconvenience of adorning any particular mountain wastful, and the Tan was then transferred to places better adapted to general accommodation. In the city of Peking, which stands on a sandy plain, the tes-hun, or altar of heaven; the te-hun, or altar of earth; and the ten-hung-hun, or altar of ancient agriculturists, are erected on artificial mounts, within the walls of the palace; and here the emperor continues, to this day, to sacrifice at appointed times, exclusively, as the son of heaven, and the only being on earth worthy to intercede for his people. The same doctrine prevailed in the time of Confucius, who believes that the distance between the all creative power and the people is immeasurably great, that the king, as high priest, can alone offer such a sacrifice; and that this power is wholly satisfied when man performs the moral duties of life, which confect chiefly in filial piety, and unlimited obedience to the will of the prince. In the writings of Confucius appears a strong predilection for predicting events by the mythical lines of Fo-free. By the help of these lines, he pretended to foretell the events that would take place for a considerable length of time. This manner of expounding the lines of Fo-free by Confucius, the supposed system of binary arithmetic by Leibnitz, laid the foundation of consulting future delinings, at this day universally fought after by the Chinese. Government even grants bences to certain persons, who pretend to predict events and cast out evil spirits by a charm, consisting of some character written by them, according to the supposed prevailing planet. Predestination in all ages has formed one of the leading features of popular religion, but the Chinese confine the influence of lots to the events of this life. Other parts of the doctrine of Confucius were well calculated to keep alive the superstitious notions that still prevail among the Chinese multitude. He taught them to believe that the human body was composed of two principles, the one light, invisible, and ascending; the other gross, palpable, and descending; that the separation of these principles causes the death of man, when the light part ascends into the air, and the gross sinks to the earth. The word death never enters into the philosophy of Confucius, nor is it even now employed by the Chinese. When a person departs this life, the common expression is, he is returned to his family, and it was on this ground, that it became the indispensable duty of every good man to observe a strict obedience in the performance of the sacred rites in the temple consecrated to the memory of ancestors. He maintained that all who neglected this duty, would, after death, be deprived of the privilege of visiting the hall of ancestors, and of the pleasure arising from the homage bestowed by their descendants. Such a system could not fail to establish a belief in good and evil spirits profesting over families, towns, cities, houses, mountains, and other particular places.

Neither Confucius nor any of his disciples attached the idea of a personal being to the deity; nor does it form ever to have entered into their minds to represent their first cause under any image or personification. They considered the sun, moon, stars, and the elements, with the azure firmament, as the creative and productive powers, the immediate agents of the deity, and inseparably connected with him, and they offered adoration to these agents, united in one word, Tan (Heaven). The disciples of Confucius, like the Rhois, consider the whole universe as one animated system made up of one maternal substance and one spirit, of which every
every living thing was an emanation, and to which, when separated by death, from the material part it had animated, every living thing again returned. But what has been esteemed surprising is, that the followers of Confucius have never erected any image to his memory, nor paid him divine honours, as has been erroneously supposed. In every city in China, in which examinations for public offices are held, and this building is called the house of Confucius. Here on certain days the men of letters assemble to pay respect to the memory of their philosopher. In the great hall, appropriated for this ceremony, a plain tablet is erected with an inscription to this effect: “O Confucius-to-fy, our revered master, let thy spiritual part descend, and be thou pleased with this token of respect which we now offer unto thee.” Fruit and wine, flowers and perfumes, and other articles are then placed before the tablet and scented gums, frankincense, and tapers of fandal wood are at the same time burnt. This ceremony is in every respect the same as that which Confucius taught to be observed towards the mages of departed relations, who are thought to delight in hovering over the grateful odour of fruits, flowers, and the smoke of incense.

Another religion sprung up shortly after the death of Confucius. A man of the name of Lao-kung, having travelled into Tibet, became acquainted with the worship of the priests of Lama, which he thought suit his countrymen, and he accordingly established a sect under the name of Tao-tees, or fans of immortals. He maintained, like Epicurus, that to live at ease and make himself happy were the chief concerns of man. The doctrine of immortality, a branch of the Metempsychosis, was converted by Lao-Kung, into the art of producing a renovation of the faculties in the same body, by the means of certain preparations taken from the three kingdoms of nature. The infatuated people flew with avidity to the fountain of life. Princes fought after the draughts that should render them immortal, but which, in fact, in numerous instances, brought on premature death. Confident with the principle of “taking no thought for the morrow,” the priests of Lao-Kung devoted themselves to a state of celibacy, as being more free from cares and the incumbrances which necessarily attend a family connection; and, the better to accomplish this end, they associated in convents. Here they practised all manner of incantations, and their succeners perform their magic tricks as they march in procession round the altar, on which the sacred flame is supposed to be kept continually burning. They chant in unison a kind of recitative, and they bow their heads obsequiously every time they pass before the front of the altar. The great Gong is struck at intervals, accompanied by tinkling sounds, emitted by gently striking small metal plates, suspended in a frame. Their temples are crowded with large and monstrous figures, some made of wood, some of stone, and others of baked clay, daubed over with paint and varnish, and sometimes gilt. To these figures, however, they do not seem to pay any homage, but they are intended to represent good and evil genii under the various passions to which human nature is liable.

About the year 65 of the Christian era, the sect of Fo was introduced into China from Hindoostan. The name was derived from the idol Fo, supposed to be the Buddha of Hindoostan, and the chief tenets are those of the Hindus, among which is the metempsychosis, or transition of souls from one animal to another. The priests are denominated bonzes, and Fo is supposed to be gratified by the favour shown to his servants. Since the fifteenth century, many of the Chinefe literati have embraced a new fyltem, which acknowledges an universal principle, under the name of Taik, seeming to correspond with the foul of the world of some ancient philosophers. This opinion may indeed deserve the name of atheism, but it is confined to very few; and the Chinese are far from being atheists, that they go into the opposite extreme of polytheism, believing even in petty deities, who delight in displaying minute acts of magnificence. There is in China no definite religion, none is professed or encouraged by it; the emperor is of one faith, many of the mandarins of another; and the majority of the common people of a third, which is that of Fo. This last clafs, the least capable, from ignorance, of explaining the phenomena of nature, and the most ex acted to wishes which it cannot supply by ordinary means, is willing to recur to the supposition of extraordinary powers, which may operate the effects that it cannot explain, and grant the requests which it could not otherwise obtain. The Chinefe have no Sunday, nor even such a divition of time as that of a week. The temples are open every day for the visits of devotees, and perfons of that description have, from time to time, made grants, though to no great amount, for the maintenance of their clergy; but no lands are subject to ecclesiastical tythes. The common Chinese are remarkably superstitious: besides the habitual offices of devotion, the temples are particularly frequented by the disciples of Fo, previously to any undertaking of importance; whether to marry or to go a journey, or conclude a bargain or change situation, or for any other material event of life, it is necessary first to consult the superintendent deity. This is performed by various methods. Some place a parcel of consecrated flicks differently marked and numbered, which the consultant, kneeling before the altar, shakes in a hollow bamboo till one of them falls on the ground; its mark is examined, and referred to a correspondent mark in a book which the priest holds open, and sometimes even it is written upon a sheet of paper pafled upon the ifide of the temple. Polygonal pieces of wood are by others thrown into the air, each side of which has its particular mark; the side that is uppermost when fallen on the floor, is referred to its correspondent mark in the book of fate. If the first throw be favourable, the person who made it, prostrates himself in gratitude, and undertakes, in confidence, the business in agitation. But if the throw be adverse, he tries a second time, and the third throw determines, at any rate, the question. In other respects, the people of the present day seem to pay little attention to their priests. The temples are, as we have observed, always open to such as choose to consult the decrees of heaven. They return thanks when the oracle proves propitious to their wishes. Yet they more frequently call lots to know the issue of a projected enterprise, than to supplicate for its being favourable; and their worship converges more in thanksgiving than in prayer. Although the religion of Fo teaches the doctrine of the transmigration of souls, and promises future happiness to the people, on certain conditions, yet the Chinese seldom carry the objects, to be obtained by their devotion, beyond the benefits of the present life.

The temples of Fo abound with more images than are found in most Christian churches, and some that bear a greater analogy to the ancient than to the present worship of the Romans. One figure, representing a female, was thought to be something similar to Lucina, and is particularly addressed by unmarried women wanting husbands, and married women wanting children. The doctrine of Fo, admitting of a subordinate deity particularly propitious to every wish which can be formed in the human mind, would fearlessly fail to spread among those classes of the people, who are not satisfied with their prospects, as resulting from the natural causes of events. Its progress is not obstructed by the government.
The cemeteries of the dead exhibit a much greater variety of monuments than the dwellings of the living.

The funeral rites may be reckoned among the Chinese religious customs. Formerly it was usual to bury slaves alive with their dead emperors, but this cruel practice has given way to that of burning representations of their domiciles in tin foil, cut into the shapes of human beings, and of placing their statuettes, in wood or stone, upon their graves. The Chinese burying-places, planted with cypress trees, are at a distance from any church or temple, and are no otherwise consecrated than by the reverence of the people, the remains of whose ancestors are deposited in them. The people prefer those faced in pottery with all the care they can afford to follow upon them. They visit them annually, repair any breaches that accidents may have made, and remove any weeds that may have grown. No person is allowed to be buried within a city, and where there is ground that cannot be cultivated, it is always preferred for places of interment, as les habilable to be disturbed; yet the meanest peasant will respect the spot over which a heap of earth denotes a repository of the dead beneath. The last remains of a relation are interred with all the honours which the family can afford. The loss of a parent in China is esteemed the greatest that can happen to any one, and the sentiment of affection and respect towards such, while living, is not suddenly extinguished in the breach of the forebears. The heart is indulged and comforted by paying superluous duties to the mazes of the deceased. The dictates of nature in this instance are enforced by the moral laws which govern the empire. Every institution tending to maintain the habits of affectionate regard of offspring towards their progenitors, is sanctified into a precept, not to be neglected but at the peril of being accounted infamous.

The funeral processions of the great officers of state, sometimes extend for nearly half a mile in length. In the front marches a priest uncovered, next a group of musicians with flutes, trumpets, and symbols; after these the male relations of the deceased, in long white frocks, and behind them the chief mourner, supported by two or three of his relations to prevent him from tearing his cheeks and hair appear ridiculous; next follows the coffin, covered by a magnificent canopy, and borne generally on the shoulders of men; after the canopy, the female relations proceed in chairs, or in little covered carts, wearing white frocks like the men, their hair dishevelled, and broad white fillets bound round their foreheads. Over the mourners are carried umbrellas, with deep curtains hanging from the edges. Several persons are employed to burn circular pieces of paper, covered chiefly with tin foil, as they pass by burying-places and temples. These pieces, in the popular opinion, like the coin to Charon for being conveyed to the Elysian fields, are understood to be convertible, in the next stage of existence, into the means of providing the necessaries of that new life. Notwithstanding the philosophical doctrines of the learned Chinese, which exclude all notions so confounding with reason, as well as the reality of all beings not referable to the senses, they often yield, in practice, to the notions of the vulgar. The people, among other superstitions, are particularly scrupulous about the time and place of burying their dead. The delay occasioned before those difficult points are ascertained, has often detained the coffins of the rich from their last repository; many are seen in houses and gardens under temporary roofs to prevent them, in the mean time, from the weather; but necessity obliges the poor to overcome many of their scruples in this respect, and to deposit at once, and with very little ceremony, the remains of their relations in their last abode.
peror, who continues, as if it were an imitation of the deity, invisible the whole time.

The celebrated feast of lanterns, when the whole country is lighted up, from one extremity of the empire to the other, in every possible way that fancy can suggest, is an ancient religious usance, of which, at the present day, they can give no plausible account. It has been supposed that it may be derived from a common origin, with an annual illumination of the same kind mentioned by Herodotus; which was generally observed, in the catacombs of the Nile to the borders of the Mediterranean, by hanging lamps of different kinds to the sides of the houes. On this day the Chinese not only illuminate their houes, but they also exercise their ingenuity in making transparentities in the figure of different animals, in which they run through the different streets by night. The effect when perfectly dark, is whimsical enough. Birds, beasts, fishes, and other animals are seen darting through the air, and contending with each other; some with equus in their mouths breathing fire, some sending out fire-rockets, others rising into pyramids of party-coloured fire, and others bulking like a mine with violent explosions.

Throughout the whole empire of China a grand festival is celebrated on the same day, called the vesral festival. In the morning the governor of every city comes forth from his palace crowned with flowers, and enters a chair, in which he is carried amid the noise of different instruments which precede. The chair is surrounded by several litters covered with silk carpets, upon which are represented perfons illustrious for the support they have given to agriculture, or some historical painting on the subject. The litters are hung with carpets; triumphal arches are erected at certain distances; and the houes are every where illuminated. A large figure made of baked earth representing a cow comes next. A child with one foot nailed and the other iold, which represents "the spirit of labour and diligence," follows, beating the image to make it advance. Labourers furnished with implements of husbandry march behind, and a number of comedians and people in masks close the rear, whose appearance and attitudes afford entertainment to the populace. The governor advances to the eastern gate as if he intended to meet the spring, and then the procession returns to the palace in the fame order. After this the cow is stripped of its ornaments, and a number of carthens caves are taken out of its belly, which are distributed, as well as the figure itself, when broken to pieces, among the crowd. The governor then puts an end to the ceremony, by making a short oration in praise of agriculture, in which he endeavors to excite his hearers to promote so useful an art by all the means in their power. Another Chinese festival is that on the commencement of the new year, during which all affairs, whether private or public, are suspended; the tribunals are shut; the polls are dropped; presents are given and received; the inferior mandarins go and pay their respects to their superiors: children to their parents; and servants to their masters. This is called taking leave of the old year. In the evening all the family assemble to take a grand repast, when no stranger is admitted; but on the following day they become more Sociable, the whole of which is employed in diversions and feasting, and the evening concluded with illuminations. It may be worth observing in this place, that almost every intercuirse in China between superiors and inferiors, is accompanied or followed by reciprocal presents, but those made by the former are granted as donations, while those on the part of the latter are accepted as offerings. Chinese terms correspond to these are still applied to the presents passing between the emperor and foreign princes, according to the official style of the arrogated

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superiority affected by the Chinese court. But when the emperor of China has occasion to make mention of himself, he uses the most modest and, indeed, humble expressions in every thing that relates to his own person, according to the fyllem of Chinese manners; which require, in the mention of one's self, that the most abject terms should be employed, and the most exalted towards those who are addressed.

State of Knowledge in China. It is a matter of doubt whether natural philosophy or chemistry can be said to be known as sciences in this country. There are several treatises indeed on particular subjects in each, and the Chineses possess a very voluminous Cyclopedia containing facts and observations relating to them; but no traces are to be perceived of any general system or doctrine by which separate facts or observations are connected and compared, or the common properties of bodies ascertained by experiment; or where kindred arts are conducted on similar views; or rules framed, or deductions drawn from analogy, or principles laid down to constitute a science; for some there is not even a name. Of pneumatics, hydrostatics, electricity, and magnetism, they may be said to have little or no knowledge; and their optics extend not beyond the making of convex and concave lenses of rock crystal, to affix the light in magnifying, or for the purpose of burning glasses. The single microscope is in common use, but the Chinese have never hit upon the effect of approximating objects by combining two or more lenses. Their books are full of particular proecesses and methods, by which a variety of effects may be produced in chemical and mechanic arts, and much might probably be gained by the perusal of them, by perfons versed in the language of the defcribers, and acquainted with the subject of the description. As soon as the product of any art or manufacture has appeared to answer the purpose for which it was intended, it seldom happens that the discoverer is either impelled by curiosity, or enabled by his opulence, to endeavour to make any further progress towards its encreased utility. The use of metals for the common purposes of life has made them search for them in the bowels of the earth, where they have found all those that are deemed perfect except platinum. If they have not discovered the best methods of separating the precious metals from the substances among which they are found, nor of reducing the ores of others into their respective metals, they have at least succeeded in obtaining them without alloy, whenever they wish to do so. The gold is chiefly collected in small grains among the sand in the beds of rivers and torrents, which carry it down with them as they descend from the mountains. It is pale, soft, and ductile, and is often formed into bracelets, which some mandarins and many women of rank wear round the wrist, not more for ornament, than from a notion that they prefer the wearer from a variety of deceases. The Chinese beat it into leaf used for gilding, and the weavers employ it in their tiflites and embroideries. Trinkets are also made of it at Canton, which are sent to Europe as earrin ornaments. Besides the use of silver as a medium of payment for other goods when it passes according to its weight, it is likewise drawn into threads used in the silk and cotton manufactures. Bell metal and white copper are made in great perfection in China; the latter is found to consist of copper, zinc, and a little silver. The iron ore of the Chinese is not well managed, and the metal is not so soft, malleable, or ductile, as the iron of this country; and their smiths work is exceedingly brittle, clumsy, and without polish. They excel in the art of casting iron, and form plates of it much thinner than is generally known to be done in Europe. Much of the tin imported by the Chineese is formed into as thin a foil as possible, to plate it

upon
upon square pieces of paper, which are burnt before the images of their idols. With the amalgam of tin and quick-silver, they make mirrors; and their speculae, which are much used in China, are formed of crystal, which the Canton artists cut into lamine with a kind of file saw. The powder of the crystal, like that of the diamond, helps to cut and polish itself. In almost every thing the Canton artists are uncommonly expert in imitating European works: they mend and even make watches, copy paintings, and colour drawings with very great success. They supply hangings with coarse silk flossings, manufactured at Canton, though none of the natives wear rich, unless one or some young Chinese, who are fond of following the fashions of Europeans. The toys made at Canton, known under the name of balancers or tumblers, are partly filled with quick-silver. That metal is sometimes used in the same complaints as that to which it is applied in Europe as a specific; but a prejudice prevails among the common people, that it is apt to destroy the powers of one sex, and to occasion barrenness in the other.

The state of phyic is extremely low in China: there are no public schools or teachers of it; and a young man who wishes to become a physician has no other way of acquiring medical knowledge than by engaging himself as an apprentice to some practitioner. He has thus the opportunity of seeing his master's practice, of visiting his patients with him, and of learning such parts of his knowledge and secrets as the other children to communicate. The encomiums of the profession rarely exceed the skill of the practitioner. As many copper coins as are equal to about sixpence are said to be the usual fee among the people, and perhaps quadruple among the mandarins. The latter of high rank have physicians in their household; the emperor's physicians, as well as most of the domelists, are chiefly eunuchs. Medicine is not divided in China into distinct branches; the same person acts as physician, surgeon, and apothecary. The surgical part of the profession is still more backward than the other. Amputation in cases of compound fracture is utterly unknown, and death is the speedy consequence of such accidents. The mortality of the small-pox, jined to the observation that it attacked the same person but once, induced the Chinese, at an early period, to expose young persons to its infection when it happened to be mild. This led to the practice of inoculation, which is first mentioned in the annals of China at a time answering to the beginning of the tenth century of the Christian era. The general method of Chinese inoculation is, when the disease breaks out in any district, the physician carefully collects a quantity of proper matter, which is dried, pulverized, and closely shut up in a porcelain jar, so as to exclude it from the air; and in this manner it will retain its property for many years. When the patient has been duly prepared by medicine, and strictly dieted for some time, a lucky day is chosen for the sprinkling a little of the powder upon a piece of fine cotton, which they impart up the nostrils of the patient. No male physician is allowed to attend a pregnant woman, and still less to practise midwifery; in the indicancy of which, both sexes seem to agree in China. There are books written on that art for the use of female practitioners, with drawings of the flate and position of the infant at different periods of gestation, together with a variety of directions and prescriptions for every supposed case that may occur: the whole is mixed with a number of superfluous observations. In China, as in this country, there are quacks, who gain large sums of money by the sale of nostrums, the efficacy of which is set forth in hand-bills distributed among the people. There are in China no professors of the sciences connected with medicine. The human body is never, unless privately, dissected there. Books indeed, with drawings of the external structure, are sometimes published; but these are extremely imperfect, and confuted perhaps often to find out the name of the spirit under whose protection each particular part is placed, than for observing its form and situation. The phytology of the human body, or the doctrine which explains the constitution of man, is neither understood, nor considered as necessary to be known; and their skill in pathology, or in the causes and effects of diseases, is extremely limited and often absurd. The feat of most diseases is supposed to be discoverable by means of the pulse; yet they have no knowledge whatever of the circulation of the blood. They imagine that every particular part of the human body has a particular pulse alligned to it, and that these have all a corresponding and sympathetic pulse in the arm: thus they suppose one pulse to be situated in the heart, another in the lungs, a third in the kidneys, and so forth; and the skill of the doctor consists in discovering the prevailing pulse in the body, and the mummery made use of on such occasions is highly ludicrous. The bell of their medical books are little better than mere herbs, specifying the names, and enumerating the qualities of certain plants. The knowledge of these plants, and of their supposd virtues, goes a great way towards constituting a physician. Those which are most commonly employed are gin-feng, rhubarb, and China-root. A few preparations are also found in their pharmacopoeia from the animal and mineral kingdoms. In the former they employ snakes, beetles, centipedes, and the aures of fijk-worms and other insects; the meloe and the bee are used for blisters. In the latter, saltpetre, sulphur, native cinnabar, and a few other articles, are occasionally specified. Opium is taken as a medicine, but more generally as a cordial to exhilarate the spirits.

There is no branch of science which the Chinese affect to value so much as altronomy. Nothing indeed can be so well calculated to excite curiosity, and occasion admiration, as the sight which the clear atmosphere of China almost always allows to its inhabitants, of an azure firmament studded with stars. The equidistances of day and night, of summer and winter, and the different phases of the moon, exhibit appearances too striking not to claim attention in the rude as well as the cultivated fages of society. The necessity indeed of being able to mark with some degree of precision the returns of the seasons, in so large a community, must have directed an early attention of the government to this subject: and accordingly we find, that an altronomical board has formed one of the late establishments in China from the earliest period of their history. Yet so little progress have they made in that science, that the only part of its functions which can be called altronomical has long been committed to the care of foreigners, whom they affect to hold in contempt, and to consider as barbarians. The principal object of this board is to frame and to publish a national calendar, and to point out to the government the future times and feasons for its important undertakings. Even when the marriage of a prince is about to take place, the commissiorners of altronomy must appoint a fortunate day for the celebration of the nuptials, which is announced, in form, in the Peking Gazette. In this almanack are inserted all the supposd lucky and unlucky days in the year, predictions of the weather, days proper for taking medicines, commencing journeys, taking home a wife, laying the foundation of a house, and other matters of moment, for entering upon which particular times are assigned. To the superintendence of the Chinese members of this tribunal is committed the altronomical, or, a committee of whom is selected annually.
for the execution of this important task. The phenomena of the heavenly bodies, to an enlightened and intelligent mind, furnish the most grand and sublime spectacle in nature; to the ignorant and superstitious the most awful. The com-
mon people in all countries and of all ages have considered the occasional privation of the light of the two great lumina-
ries of heaven as the forerunners of some extraordinary event. The people of China have, from the earliest ages, considered a solar eclipse as omens of some great calamity; and as great pains are taken to inspire them with a belief that their prosperity is owing to the wisdom and virtues of their so-
vereign, so they are tempted to attribute whatever they think portentous to some deficiency on his part. To this convenient prejudice the emperor finds it prudent to accommodate his conduct. He never ventures upon any undertaking of im-
portance at the approach of such an eclipse, but affects to withdraw himself from the presence of his courtiers, to ex-
amine strictly into his late administration of the empire, in order to correct any error, for the commination of which the eclipse may have been an admonition, and invites his subjects to offer him freely their advice. The Chinese government observes on the event of an eclipse ceremonies similar to those that were in use two thousand years ago among the Egypt-
tians, Greeks, and Romans. When the moon is eclipsed, their musical instruments are struck up, under the notion that by their shrill noise they may affit in relieving the labour-
gods. The brazen gong is violently beat by the Chi-
inese on the occasion; and that such an event may not pass un-
observed, and the luminary may thereby be deprived of the usual affluence of music to frighten away the dragon, which they suppose to have feized upon it, the great officers of state in every city and town are instructed to give public notice of the time when it will happen according to the calculations of the national almanack. "A rude representation of the eclipse," says Mr. Barrow, "that happened while we were at Tong-choo, was stuck up in the corner of the streets; all the officers were in mourning, and all bufineses was suspended for that day." When the Dutch ambassadors were at Peking, the sun was eclipsed on the 21st January 1795, which happened to be the first day of their new year; a day observed through the whole empire with the greatest festivity and rejoicings; and almost the only day on which the bulk of the people refrain from their respective occupa-
tions. The embassador and his suite were summoned to court at the usual hour of three in the morning, and on arriving at the palace, they were told that in consequence of an eclipse of the sun, about to happen on that day, which was a most unfortunate event, postponing an unhappy year to the country, the emperor would not be visible for three days, during which time the whole court would go into mourning, and that the amusements usual on that particular day would be suspended from one end of the empire to the other. Just before the eclipse happened, the members of the mathematical board and other learned men assembled near the palace, each having in his hand a sketch of the obstruc-
tion in order to witness the truth of the astronomer's calcula-
tion. The moment the eclipse begins, they fall down on their knees and bow their heads nine times to the ground, during which is struck up the horrible crash of gongs, kettle drums, trumpets, and other noisome instruments, intending to scare away the devouring dragon.

Astronomy, as connected with the first principles of chronology, has however been in high estimation from a very early period of Chinese history. The first mention of it that has come down to us, is, where the emperor Tao instructed his Astronomers Hi and Ho, how to distinguish and determine the four seasons of the year. "Pirl," says the mighty prince, "Tao observes that Hi and Ho will calcu-
late and observe the places and motion of the sun, moon, and stars; and that they will afterwards teach the people whatever relates to the seasons. Secondly, according to Tao the equality of day and night, and the star Niao, serve to determine the vernal equinox. The equality of day and night and the star Hua point out the autumnal equinox. The longest day, and the star Ho, are the signs of the sum-
er fulcrum. The shortest day, and the star Miao, shew the winter. Thirdly, T'ao informs his two astronomers, that the Hi consists of 366 days, and that to determine the year and its four seasons, an intercalary moon must be employed. Hence it appears that the Chinefe astronomers, even at this early period, were reduced to mark the times when the sun and moon entered the different signs, together with the places of the planets, and the times of the eclipses. We know also from other works of authority, that those who neglected to announce these phenomena, were punished with death. It appears likewise, that even at that time, they knew how to determine the equinoxes and fulcrums by the length of the days and nights, and that they availed themselves of the motion of the planets, in order to compare their places with that of the sun in each of the four seasons. It is also evident, though certainly very extra-
ordinary, that the Chinefe were then acquainted with the length of a year of 365 days and six hours. The Chinefe have always fixed the beginning of the astronomical year at the winter fulcrum; but the beginning of the civil year has varied according to the will of the emperors. The Chinefe year has at all times consisted of a certain number of lunations, twelve of which form a common year, and thirteen the em-
boldening year. They reckon their lunations by the number of days which happen to fall between the moment in which the moon enters the new phase with the moon, and the moment of the conjunction following.

The Chinefe divide their days into a greater or smaller number of equal parts, but besides these they generally divide them into 12 hours, which are, of course, double the length of those adopted by us. Their day begins and ends at midnight. The path described by the sun has been known in China from the remotest antiquity, and the Chinefe have always distinguished the ecliptic from the equator. The former they call houng-tao, the yellow way; the other is named tche tao, or the equinoctial line. The year is also, with the Chinefe, divided into four equal parts or seasons, each of which has three smaller divisions, its be-
ginning, its middle, and its end, that is, a lunation for each of the three parts: it is likewise subdivided into 24 equal parts, each of which contains 15 degrees, so that the whole together makes the 360 degrees. "The Chinefe make use of a cycle of sixty years called "kiate," from the denomination given to the first year of it, which serves as the basis of their whole chronology. Every year of this cycle is marked with two letters, which distinguish it from the others; and all the names of the emperors, for two thousand years and upwards, have names in history common to them with the correspond-
ing cycle. The invariable and regular motion of the moon has been long known by the Chinefe. In the reign of Yao the astronomers were able to calculate, with sufficient preci-
sion, the times of new and full moon. The first day of the new moon, they named cho, commencement or beginning, and the day of full moon, eng, which signifies to expect, or hope: because the people expected the kindness and pro-
tection of certain spirits, which they invoked only at that epoch. To express the age of the moon, besides the numbers, they use the words inferior and inferior flinging: they lay chang-hien, a bow having the string uppermost, and hia-hien, a bow.
a bow having the string underneath. It is that they distinguish what are denominated the quarters of the moon. Their method of intercalation has varied, but it has generally admitted twenty-nine or thirty days for one lunation; the former is called a small lunation, and the latter a greater lunation. They divide the latter according to the following order: the *fossor*, or celestial bud of the north, is what we call the urus major: the *notus*, or celestial bud of the south, which comprehends the principal stars opposite to the great bear; and which, together, form a figure, almost like that of the great bear in the north. The five planets called "ou-hang" are next enumerated; these are Saturn, Jupiter, Mars, Venus, and Mercury: and lastly are mentioned 28 constellations, in which are comprehended all the stars of the zodiac, and some of those which lie near to it. M. Grub, one of the learned Jesuits who resided long in China, and who paid great attention to the astronomy of the Chinese, says they have been long acquainted with the motion of the sun, moon, and planets, and even of the fixed stars from early childhood; though they did not determine the motion of the latter till about 500 years after the Christian era.

To the five planets just enumerated they have assigned revolutions which approach very near to ours. They have no notion of their different situations, when stationary and retrograde; and as in Europe, some of the Chinese imagine that the heavens and planets revolve round the earth, and others round the sun. By reading their books we may perceive, that the Chinese have had a perfect knowledge of the quantity of the solar year; that they have also known how to estimate the diurnal motions of the sun and moon; that they have been able to take the meridian altitude of the sun, by the shadow of a gnomon; and that they have then made pretty exact calculations to determine the elevation of the pole, and the sun's declination: it appears that they have had a tolerable knowledge of the right ascension of the stars, and of the time when they pass the meridian; of the reason why the same stars, in the same year, rise and set with the sun; and why they pass the meridian, sometimes when the sun rises, and sometimes when he sets.

In China the first operations of arithmetic are very generally unknown; in the shops regular entries are made of the articles to be disposed of, and the several prices are affixed in the common Chinese characters equivalent to the words which express numbers in other languages; but not by a distinct figure of figures upon a similar sytem to that of those called Arabic by the Europeans. Their arithmetic is mechanical, and to find the aggregate of numbers, a machine called the "swan-pan" is in universal use, from the man of letters to the meanest laborer. See ABACUS and SWAN-PAN.

The knowledge of the Chinese in geography is as limited as that in astronomy. Their own empire was considered by them as occupying the middle space of the square surface of the earth, the rest of which was made up of islands. When the Jesuits went first to China, they found the charts, even of their own country, rude and incorrect, sketches without any scale or proportion, in which a ridge of mountains covered a whole province, and a river swept away half of another. At present they have neat and accurate maps of the country, copied after the original surveys of the whole empire, undertaken by the Jesuits, and completed after several years labour.

State of the Arts. Little can be said of the state of the fine arts in this country. Of their poetry we have already spoken. Mulie does not seem to be cultivated as a science, nor learnt as an elegant accomplishment, nor practised as an amusement of genteel life, except by females who are educated for sale, or by such as hire themselves out for the entertainment of those who may be inclined to purchase their favours. These women play generally upon wind-instruments, such as pipes and flutes, while the favourite instrument of the men is something like a guitar. Tumults and the lowest classes of persons are hired to play, and the merit of their performance appears to consist in the intenseness of the noise they are able to make. The gong is admirably adapted for this purpose. See GONG, and CHINESE MUSIC. Kettle drums and all different sized bells constitute part of their sacred music. They have also an instrument which consists of stones cut into the shape of a carpenter's squire, each stone suspended by the corner in a wooden frame. It is the boul of the Chinese histrions, that the whole empire of nature has been laid under contribution in order to complete their system of music: that the lines of animals, flowers of plants, metals, stones, and baked earth, have all been employed in the production of sounds. A Chinese band plays, or endeavours to play, in unison, but they never attempt to play in separate parts. They have not the least notion of counterpoint, an invention to which even the Greeks had not arrived, and which was unknown in Europe, as well as Asia, till the mornine ages. See CHINESE MUSIC. With regard to painting, they can be considered in no other light than as miserable dabbers, being unable to pencil out a correct outline of many objects, to give body to the same, by the application of proper lights and shadows, and to lay on the nice shades of colour, so as to render the tints of nature. But the gaudy colouring of certain flowers, birds, and insects, they imitate with a degree of exactness and brilliancy to which Europeans have not yet arrived; to give distance to objects on canvas, by diminishing them, by faint colouring, and by perspective, they have no sort of conception. At Yuen-min-yuen Mr. Barrow found two very large paintings of landscapes, which, as to the pencilling, were done with tolerable execution, but they were finished with a minuteness of detail, and without any of those strong lights and mists which give force and effect to a picture; none of the rules of perspective were observed, nor any attempt to throw the objects to their proper distances. In a country where painting is at so low an ebb, it would be in vain to expect much execution in sculpture. Grotelius images of ideal beings, and monstrous distortions of nature are sometimes seen upon their bridges, and in their temples, where the niches are filled with gigantic gods of baked clay, sometimes painted with gaudy colours, plastered with gold leaf, or covered with varnish. Near the gates of cities four-sided blocks of stone or wood are frequently erected, with inscriptions upon them, to perpetuate the memory of certain distinguished characters, but they are neither objects of grandeur nor ornament. The whole of their architecture is indeed unlighted and unoidal, without elegance or convenience of design, and without any settled proportions. Their pagodas are the most striking objects. See PAGODA. Their temples are mostly constructed upon the same plan. See TEMPLE. Next to these the most conspicuous objects are gates of cities, which are generally square buildings carried several stories above the arched gate-way, and, like the temples, are covered with one or more large projecting roofs. But the most stupendous work of this country is the great wall that divides it from northern Tartary, which is built upon the same plan as the wall of Peking, being a mound of earth caled on each side with bricks or stones. The astounding magnitude of the fabric consists not so much in the plan of the work, as in the immense distance of fifteen hundred miles, through which it is extended, over mountains of two and three miles in height, and across deep valleys and rivers. See WALL.

CHINA.
CHINA.

Chinese Trade, Manufactures, Agriculture, &c.

The trade of China is now encouraged by the government. Even the foreign commerce, which was formerly shut up by their jealous monarchs, has been laid open by the Tartars since the conquest, so that they now trade with Japan, Manilla, Siam, Batavia, and other parts of the East Indies. They likewise derive considerable advantage from their traffic with the Europeans. These have indeed fear to any port open to them, except that of Quang-tong, and that only at certain times of the year; neither are they suffered to fall up quite to that city, but are forced to call anchor at Whang-pu, a place about four leagues distant from foregoing place. Where, however, so crowded with trading vessels, that it looks like a large city. This trade was once very advantageous to the Europeans, who brought thicker cloths, swords, clocks, watches, looking-glasses, diamonds, crystals, telescopes, and other mathematical instruments, and sold them at a high rate; but the market is now overstocked with these commodities, and the trade hardly worth carrying on in any thing but silver exchanged for gold, which is sold higher or lower according to the time of the year; it being cheapest in March, April, and May, when there is the greatest number of vessels in the port returned from Quang-tong. But what the Chinese chiefly depend upon is their home traffic. We ought to consider every province as a separate state or kingdom; some of these abound with certain commodities, or provisions, which others want, and, to communicate which to all the rest, the bell methods have been invented, both by land and water-carriage. Thus the provinces of Ho-quang and Kyang-fi, which abound with rice, supply those that want it; Che-kyang furnishes the finest silk; Kyang-nan the finest ink, varnish, and all sorts of curious metals; Shen-fi, and Shan-fi, yield plenty of iron, copper, and other metals, horeses, mules, and furs; Fo-kyn, the best sugar and tea; and Sechewn the greatest variety of medicinal and other plants; all these are conveyed from one province to another, either by their rivers and canals, or by land-carriage; and when brought to the place of sale, are commonly vended in a few days. The next branch of their wealth arises from their manufactures, of which they have great variety. We shall only speak of some of the most considerable, such as their silk and cotton, their porcelain and Japan ware, or varnish. We begin with the silk, the invention of which the Chinese records attribute to one of the wives of the emperor Wang-ti; since which period many other emperors have been recorded for the singular care they took to encourage it, by breeding the silk-worms, spinning the silk, and delivering it to the proper workmen and women to be woven. Their example could not fail of exciting the rest of their sex to put their hands to such a profitable, as well as delightful, work, by which they were enabled to exchange their old goods, of skins, for the more easy and elegant drefs made of this new and valuable commodity. Upon the whole, that manufacture hath been well cultivated among them from time immemorial, that not only the princes, grandees, literati, and other persons of distinction, but their domestics, the merchants, tradesmen, and mechanics, can afford to clothe themselves with it; none, except those of the meanest fort, and the peasants, appearing in cotton. The quantity they send abroad of it is prodigious, and plainly proves that it employs an infinite number of hands; so that it is not without reason that China is styled the silk country. Neither are the Chinese to be less admired for their surprising ingenuity, diligence, and skill, in the management of every branch of it, the contrivance of their looms, and other instruments for spinning and weaving it in a beautiful variety of colours and patterns; their great care and skill in breeding, hatching, and propagating their worms; and their excellent way of cultivating mulberry-trees to the best advantage for their nourishment.

The Chinese appear to have strong claims to the credit of having been indebted to themselves only, for the invention of the tools required in the primary and necessary arts of life. The traveller will observe, in relation to common tools, such as the plane and anvil, that whether in India or in Europe, in ancient or in modern times, they are found manufactured in the same form, denoting one common origin. In China alone, these tools have something peculiar in their construction, clearly indicating that they are of an original invention. Thus, the flat and somewhat inclined, is among the Chinese swelled into a convex form. The common plane, too, is distinguished by some minute particulars, which characterize it to be original. There is reason to believe, that not only inventions of the first necessity, but those of decoration and refinement, were known among the Chinese in remote antiquity. The annals of the empire bear testimony to the fact, and it is confirmed by a consideration of the natural progress of those inventions, and of the state of the Chinese artists at this time. In the first establishment of an art, it is practised awkwardly, and this state is supposed to continue stationary, until at length it advances to its second period, when it becomes improved, and the artist is enabled to avail himself to the utmost of every tool and machine that can assist him. The last period of perfection is that in which the artist is become so dextrous, as to complete his work with few, or awkward tools, and with little or no assistance. And such is the character of the Chinese potter, weaver, worker in precious metals, and in ivory, and of most others in the several trades commonly practised in the country. The procés of smelting iron from the ore is well known to them, and their cast ware of this metal is, as we have already observed, remarkably thin and light. Of all the mechanical arts, that in which they seem to have attained the highest degree of perfection, is the cutting of ivory. Nothing can be more exquisitely beautiful than the fine open work displayed in a Chinese fan, the flicks of which would seem to be finely cut by the hand; for, whatever pattern may be required, as a shield with a coat of arms, or a cypher, the article will be finished according to the drawing, at the shortest notice. Out of a solid ball of ivory, with a hole in it not larger than half an inch in diameter, they will cut from nine to fifteen distinct hollow globes, one within another, all loofe, and capable of being turned round in every direction, and each of them carved full of the fame kind of open work that appears on the fans. A very small sum of money is the price of one of these difficult trifles. Models of temples, pagodas, and other pieces of architecture, are beautifully worked in ivory, and from the shavings, interwoven with pieces of quills, they make baskets and hats, which are as light and pliant as those of straw. In short, all kinds of toys and trinkets are executed in a neater manner, and for less money, in China, than in any other part of the world.

The various uses to which that elegant species of reed called the bamboo, is applied, would require a volume to enumerate. Their chairs, their tables, their fereens, their bedheads and bedding, and many other household moveables, are entirely constructed of this hollow reed. It is used on board ship for poles, for salls, for cables, for rigging, and for caulking. In hubandry, for carts, for wheel-barrows, for wheels to raise water, for fences, for forks to hold grain, and a variety of other utensils. The young shoots furnish an article of food, and the wicks of their candles are made of its fibres. It serves to embellish the garden of the prince,
and to cover the cottage of the peasant. It is the instrument in the hand of power that keeps the whole empire in awe. Indeed there are few uses to which a Chinese cannot apply the bamboo, either entire, or split into thin bars, or divided into fibres, to be twisted into cordage, or macerated into a pulp, to be manufactured into paper. The discovery of making paper from straw is of very ancient date in China. The draw of rice and other grain, the bark of some trees, and various plants, are employed in the paper manufactures of China, where sheets are prepared to large, that a single one will cover the sides of a room. The finest sort of paper for writing upon, has a surface as smooth as vellum, and is washed with a solution of alum to prevent it from bleaching. Many old persons and children obtain a livelihood by washing the ink from written paper, which is afterwards re-manufactured into new sheets; the ink is also extracted from the water, and preferred for future use. See Paper.

There is no doubt that the art of painting is of great antiquity in China, yet they never proceeded beyond a wooden block. With the Chinese the art consists in nothing more than in cutting in relief the forms of written characters on wood, daubing afterwards these characters with a black glutinous substance, and prefixing upon them different sheets of paper. It has not yet occurred to them to form moveable and separate types; they are satisfied, whenever the same characters very frequently occur, as in the public calendars and gazettes, to use types for such cut apart and occasionally inserted. See Painting.

In China, the chain-pump, nearly in its primitive state, constitutes an essential part in their slips of war, and other large vessels; the principal improvements since its first invention, consist in the substitution of boards, or balketwork for wips of draw. Its power with them has never been extended beyond that of raising a small stream of water upon an inclined plane from one reservoir to another, to serve the purposes of irrigation. They are of different sizes, and worked in different ways, some by oxen, some by treading in a wheel, and others by the hand. The power of the pulley is underflood by the Chinese, and is applied on board all their large vessels, but always in a single flat. The lever is also well known among them, and is applied to weighing all their valuable wares; and the tooth and pinion wheels are used in the construction of their rice-mills, that are put in motion by a water-wheel. But none of the mechanical powers are applied on the great scale to facilitate and expedite labour. Simplicity is the leading feature of all their contrivances, that relate to the arts and manufactures. The tools of every artisan are of a simple construction, and yet each tool is contrived to answer several purposes; thus the bellow of the blacksmith, which is nothing more than a hollow cylinder of wood with a valvular pinion, besides blowing the fire, serves for his flat when set on end, and as a box to contain the rill of his tools. The joiner makes use of his rule as a walking stick, and the chisel that holds his tools serves him as a bench to work on. The pedlar’s box and a large umbrella are sufficient for him to exhibit all his wares, and to form his little shop. Besides the variety of trades which are itinerant in China, there are many thousands of the people, in every large city, who cry their goods about, as is done in our metropolies. Barbers also are keen running about the streets with instruments for shaving the heads and cleansing the ears. They carry with them, for this purpose, a portable chair, a portable table, and a small vessel of water; and, whoever wishes to undergo either of these operations, sits down in the street, while the operator performs his office. To distinguish their profession, they carry a large pair of metal tweezers, with which they make a great noise, in order to obtain employment. There are perfons also engaged in the open streets selling off their goods by auction, and the butchers of Peking not only sell, but dress the meat for their customers, who eat in the shops what is necessary, and having paid the price, go about their business.

The Chinese government has, in all ages, bestowed the first honours on every improvement in agriculture. The husbandman is considered an honourable as well as a useful member of society; he ranks next to men of letters or officers of state, of whom he is frequently the progenitor. The felder, in China, cultivates the ground. The priest also are agriculturalists whenever their estates are endowed with land. The emperor is considered the sole proprietor of the soil, but the tenant is never turned out of possession as long as he continues to pay about the tenth part of what his farm is supposed capable of yielding. And, though the holder of lands is only considered as a tenant at will, it is his own fault if he is disposed. If any one happens to hold more than his family can conveniently cultivate, he lets it to another, on condition of receiving half the produce, out of which he pays the whole of the emperor’s taxes. A greater part of the poor peasantry cultivate land on these terms. In China there are no immense estates, no monopolizing farmers, nor dealers in grain. Everyone can bring his produce to a free and open market; no fisheries are here let out to farm. Every subject is equally entitled to the free and uninterrupted enjoyment of the sea, of the coasts, of the estuaries, of the lakes, and rivers. There are no manor lords with exclusive privileges, nor any game laws.

The Chinese never divide their fields into ridges and furrows, but plant their grains in drills on an even surface. They are not inattentive to the direction of their rows, or doubling their grain, as may be inferred from the solemn regulations, made concerning the annual ceremony of the emperor’s act of husbandry in ploughing the ground. It is felted that he shall plough with his face turned towards the south, and taking hold of the plough with his right hand, he shall turn up a furrow in that direction. The collection of manure is an object of so much attention with the Chinese, that a prodigious number of old men, women, and children, incapable of much other labour, are constantly employed about the streets, public roads, banks of canals and rivers, with baskets tied to them, and holding in their hands small wooden rakes to pick up the dung of animals, and offal of any kind, that may answer the purposes of manure; this is mixed sparingly with a portion of fill, loamy earth, and formed into cakes, dried afterwards in the sun. It sometimes becomes an object of commerce and is sold to farmers, who never employ it in a compact state. Their first care is to construct very large weterns or containing, boxlike those cakes, and dung of every kind, all sorts of vegetable matter, as leaves, or roots, or, iles of plants; mud from the canals, and offals of animals, even to the shavings collected by the barbers. With all these, they mix as much animal water as can be collected, or of common water, as can dilute the whole; and, in this state, generally in the act of putrid fermentation, they apply it to the ploughed earth. In various parts of a farm, and near the paths and roads, large earthen vessels are buried to the edge in the ground for the accommodation of the labourer or passer by who may have occasion to use them. In small retiring houses, built also upon the brink of roads and in the neighborhood of villages, reservoirs are constructed of compact materials, to prevent the absorption of whatever they receive, and draw is carefully thrown over the surface,
from time to time, to prevent evaporation. Such a value is

fet upon the principal ingredient for manure, that the oldest

and most helpless perons are not deemed wholly unuseful
to the family by which they are supported. The quantity of

manure collected by all these means is still inadequate to the
demand. It is referred, therefore, for the purpose of pro-
curing a quick successeion of culinary vegetables, and for

forcing the production of flowr, and fruit. Among the

vegetables raised in the greatest quantities, is a species of

brassica, called by the Chinese P Invoice, which resembles cox

lettuce, and is much relished both by foreigners and natives.

Whole acres of it are planted in the neighbourhood of

populous cities, and it is difficult on a morning to pass through

the crowds of wheel barrows and hand-carts loaded with this

plant, going into the gates of Peking. It is salted for win-
ter consumption, and, in that state, exchanged, in some of the

provinces, for rice. That grain and that herb, together with

onions, serve as a meal for the Chinese peasants and me-

chines. The husbandman always keeps the grain he de-

fends to low in liquid manure until it germinates, which has

the effect of halting the growth of plants, as well as de-

fending them from insects. The great object of Chinese

agriculture, the production of grain, is generally obtained

with little manure, and without letting the land lie fallow.

A mixture of earth, in due proportion, is sometimes substi-
tuted with succes in the deficiency of manure; and a sur-

face of strong loamy clay may, with the addition of sand

and water, be rendered an advantageous medium of support

of vegetable life. Sea-fod is likewise used for this pur-
pose, and, if laid on in proper proportions, it tends to prome

fermentation, which is favourable to the growth of vege-
tables. By practices similar to these, the Chinese supply the
deficiency of manure. They are constantly changing earth

from one piece of ground to another; mixing sand with

that which they find to be too adhesive, and clay or loam

where the foil appears too loose; and having thus given their

land the constituency that it requires, their next care is to

prevent it from becoming dry.

Besides the great plenty of corn, grain, and pulse of

all sorts, which almost every part of this country produces,
it hath likewise a sufficient quantity of pillage-ground, which

feeds a vast quantity of cattle of all sorts; whilst

their spacious woods and forests supply them with as great

plenty and variety of wild beasts; such as buffalos, wild

boars, deer of several kinds, elephants, leopards, tigers, bears,
wolves, foxes, and a variety of others, not known to us,
which afford the Chinese the diversion of hunting, as well
as the commerce and profit of their furs, which are commonly
very fine and valuable. This country also produces the

mulke-cat, a profitable creature. They have, likewise, a fort

of roebuck which they call byang-chang-tie, the male of which

has a bag of a very odorous substance. This creature,

which breeds mostly on the northern ridge of mountains

beyond Peking, is first hunted, then killed; the bag above

mentioned is immediately cut off and tied very hard. that it

may lose none of its effluvia. The flesh is also good to eat;

but the bag is esteemed of more value than the rill of

the carcase. The most delightful, however, of the whole

quadruped kind, is a small flag bred in the province of Yung

nan, and no where else; bought at a high rate by the

princes and nobles, merely to be kept for show in their

gardens. These are exactly shaped like the common fort,

but their size scarcely exceeds that of our ordinary dogs, on

which account they are esteemed as curiosities; but they

have a great variety of flags of different kinds in the other

provinces, some of which are reckoned as extraordinary for

their large size. Birds and fowl, both of the wild and tame

kind, are here in great plenty and variety; such as eagles,

cranes, storks, hawks, falcons, pelicans, birds of Paradise,

peacocks, peafants, partridges, turkeys, geese, ducks, swans,
cocks, and hens, and a vast variety of water-fowl on their

lakes, rivers, and canals. Among the tame and curious fort, they

have a variety of beautiful parrots, not inferior, either in

plumage, colours, or facility of talking, to any that are

brought from America; but the most surprizing and delight-
ful of all the flying kind, is the little bird called kin-kik,

or golden-hen, which is commonly found in the provinces of

Yunnan, Shen-fu, and Se-chwan. This admirable creature
derived its name from the exquisite symmetry of its shape,

the beauty, lufure, and variety of its plumage, the complete

mixture and arrangement of light and flaxe, both in its

wings and tail, and the fine plume that crowns its head:

but what renders it still more valuable among the epicures

is the delicate taste of its flesh, which, we are told, greatly

exceeds that of peafants. China seems to be designed by

nature to produce not only all the fruits which grow in

other parts of the world, but likewise many others peculiar
to its soil and climate; so that, if they have not fo great

a plenty and variety of the former, it is owing to their

neglect of cultivating them; for, in general, they grow na-

turally almost in every province, and many of the more deli-
cate kind in the southern parts to greater perfection than any

in Europe. Apples, pears, plums, quinces, apricots,

peaches, figs, pomegranates, mulberries, melonies, grapes,

oranges, lemons, citrons, melons, walnuts, egeefe, pine-

apples, and other fruits, grow almost everywhere in great

plenty. Yet they are not so curious as the Europeans in

cultivating and improving them, but content themselves

with having three or four different sorts of apples, seven or

eight sorts of pears and peaches; and as for their cherries,

they are hardly worth eating. The only fruits that exceed

ours are their pomegranates, a fine sort of muscadine grapes

of exquisite taste and flavour, and their te-fe, called by the

Portuguese macau, which is a kind of fig. Olives are here

in great plenty and variety, and, though different from ours,

have a very fine taste; but whether out of dislike, or that

they do not think it worth their while, they extract no oil

from them. Among those fruits which grow in the

southern provinces, the h-it is most esteemed. It is shaped

like a date, and hath an oblong tone. The fruit is full of

moisture, of an excellent taste and flavour when full ripe;

but dryed, and grows blackish, like our prunes, by keep-

ing. Next to that is the long-ten, or dragon's-eye, which

is round, and yellowish, the main white, and a little pin-

Both these are esteemed very wholesome, especially the late-
ter, which is taken to create an appetite. They have likewise

some singular as well as useful trees, particularly that

they flyle the pepper-tree, which bears a sort of grain like

a pea, but of too hot a nature to be eaten; but the hulk,

which is less pungent, is used by the common people.

The pea-tree produces a sort of pulse, like our common

pea, only a little more rank. Their wax-tree is so called

from the wax that is produced on it by a kind of little

worm which runs up and falls to its leaves, and quite cov-

ers them with combs. This wax is hard, firming, and consid-

erably dearer than that of common bees; though this last they

likewise have in much greater quantities. When these worms

are once used to the trees of any district, they never leave

them, unless some thing extraordinary drives them away. The

nau-mu is a tall draught tree, the wood of which is incor-

ruptible like the cedar: it is commonly used to make pillars,

doors, windows, or ornaments for palaces, temples, and large

buildings; but it is in other respects much inferior to the

tsse-tau, or ree-wood, which is of a reddish black, streaked,
and full of fine varnished, which appears to be painted by some artist. The furniture and ornaments made of this wood are much esteemed all over the empire, and sold at a greater price than those which are varnished or japanned. We omit a great variety of other valuable and curious trees, such as the cedar, ebony, sanders, pines, oaks, &c., which we have not room to describe. But that which is justly esteemed the most profitable among the Chinese, and hath most excited the envy of the Europeans, is their ti-flu, or varnish-tree, that yields the gum with which they make their fine gian-varnish or japan, which keeps such an infinite number of hands employed in most provinces of the empire, and furnishes it with such a prodigious variety of chests, cabinets, boxes, and other household ornaments, so beautifully painted and varnished, and sent abroad into most parts of the world. The next to that in usefulness is the tong-flu, or oil tree, from which a liquor or oil is drawn, not much differing from the varnish above-mentioned, and used almost to the same end, but chiefly in larger work, such as pillars, cornices, galleries, triumphal arches, and fine floors. This oil, when boiled into a consistency, not only preserves the wood over which it is laid, but gives it a fine luster, and, like the varnish, may be mixed with any colour to great advantage. China is likewise famous for producing the camphor-tree, which grows to a prodigious size, and yields often to the height of 300 feet; its wood is of a firm texture, of great use in ship-building, as well as in joiners' work, from the beautiful gloss it acquires in polishing; but the most valuable part is the gum, which the Chinese are extremely expert in extracting, piercing, purifying, and subliming.

The bark of the tree kind, worth our particular notice, is what they call tie-li-mu, or iron-wood, from its extreme hardness. It is, indeed, very remarkable for its strength and durability, beyond any other wood; the tree is as tall and spreading as our large oaks, and the wood is of a much deeper brown, as well as more weighty and tough.

Almost every part of the country being intersected by rivers and canals, abundance of water is always near at hand; and it remains only for them to contrive the means to convey as much of it as is necessary to the planted grounds. Thus they reap full and constant crops without following, and sometimes without manure. The drained cattle most generally in use are oxen, mules, and asses; horses are scarce, of a miserable breed, and incapacious of much work.

No pains, however, are bellowed to improve the breed, for the Chinese imagine that this animal requires no other attention than that of giving it food. Mistreated for the support of government are neither exorbitant nor burdensome; they consist in the tenth of the produce of the land, in a duty on salt, on foreign imports, and a few smaller taxes that do not affect the bulk of the people. The total amount of taxes and impositions, which each individual pays to the state, does not exceed four shillings a year. With such advantages and such encouragements given to agriculture, one would imagine that the condition of the poor must be better than elsewhere. Yet, in years of scarcity, either from unfavourable seasons of drought or inundations, which are perpetually occurring, in one province or other, thousands perish from an absolute want of food. There are few public charities; no poor laws; and it is not a common custom to ask alms: Mr. Barrow says he did not see a single beggar from one end of China to the other, except in the streets of Canton. The children, or next of kin, must take care of their aged relations; and the parents dispense of their children in what manner they may think best for their family interest. As several generations live together, they are subjected at a cheaper rate than if they had separate house-holds; and in cases of real distress, the government is supplied to act the parent; and whenever any of its officers, through neglect or malice, with-hold grain from the poor, they are punished with singular severity, and sometimes even with death. Another great advantage enjoyed by the Chinese subject is, that the amount of his taxes is ascertained. He is never required to contribute, by any new assessment, to make up a given sum for the extraordinary expenses of the state: except in cases of rebellion, when an additional tax is sometimes imposed on the neighbouring provinces.

We shall conclude this article with a short account of their coin. Silver and copper are the two metallic metals in China; gold being on the same footing as precious stones, purchased, like other valuable mercantiles, according to its weight and fineness. Silver, though used in payment, is not coined, but cut into pieces, smaller or larger, as occasion requires; so that its value is rated according to its weight and goodness. The scales, or rather scales, with which they weigh the silver or gold, and which they commonly carry about them in a neat japanned case, consist of a little round plate, an ebony or ivory beam, and a weight. The beam, which is divided into minute parts on three sides, is suspended by fine silk strings at one of the ends, in three different points, that they may more easily weigh their pieces. These kinds of scales are so exceedingly exact for weighing any money, or small pieces of silver, that from fifteen or even twenty crowns, down to the twelfth part of a penny, and less, may be weighed in them with great accuracy, that the one thousandth part of a crown will turn the scale. The Chinese chafe to have it in that manner rather than coined. If, like the Europeans, they had flamped pieces of determinate value, they say their country would swarm with clippers and coiners, and the dealers be forced to have recourse to their scales and touchstone. The only expeditions they have to pay any sum in silver, is to keep by them a variety of plates of that metal, beaten, either thinner or thicker; besides the ingots, which are reserved for larger sums; and these, by long use, they can cut to a very great nicety. The only coin, properly so called, in use among them, is of copper, and of a very incomparable value, fearfully amounting to the third part of one of our farthings. It is of a round figure, with some Chinese characters on each side, and a square hole in the middle, through which they may be strung to any number. They, however, had, in ancient times, a great variety of coins of gold and silver, which are now only to be seen in the cabinets of the curiosities, and more particularly in that of the late emperor Kang-hi, who caused a noble collection to be made of all that could be found of that kind in the empire, and to be deposited there as curiosities. The noble collection, pound, or liang, weighs fifteen ounces, but is divided into only ten parts, called tien, this into ten fwen, which are equivalent to about seven pence English; the fwen into ten fu of silver. The beam of the Chinese scale carries these divisions no farther; and yet, with respect to gold or silver of a cunfable weight, the division is more minute, and almost extreme imperceptible parts, for which reason it is scarce possible to convey a just idea of them in our language. They divide the h by ten, the h the ten, the ten by ten, the ten by ten, the ten by ten, and the ten by ten. There were periods at which the scarcity of specie obliged their monarchs to raise the value of the small copper pieces to excessively high, that one of them was worth ten of the same face current in former times. This scarcity of copper coin, occasioned either by some vio-
fent irritation of foreigners, who came and carried it away, or through the cautiousness of the people, who buried it in time of war, and died, without discovering where it lay hid, hath been to terribly felt, that at one time an emperor caused near fourteen hundred temples of Fo to be demolished, and all the images and copper work to be call into coin; and at other times the people have been expressly forbid the use of any veils, or other utensils of copper, and obliged to deliver up those they had to the mint.

Penal Laws and Punishments. The laws of China define, in the most periphrastic manner, almost every shade of criminal offences, and the punishment awarded to each crime, and the greatest care has been taken in contriving the scale of crimes and punishments, which are very far from being garrisonary. Of all the despotic governments existing, there is certainly none where the life of man is held so sacred as in the laws of China. A murder is never overlooked, except in the horrid practice of expelling infants; nor does the emperor himself take away the life of the manuelt subject without the formality of a regular process. So tenaciously, however, do they adhere to the principle, "At the hand of every man's brother will I require the life of man: whoso sheddeth man's blood, by man shall his blood be shed," that the good intention is sometimes defeated by requiring of the perfon laft seen in company with one who may have received a mortal wound, or who may have died suddenly, a circumstantial account, supported by evidence, in what manner his death was occasioned. In attempting to proportion punishments to the degrees of crimes, the Chinese seem to have made too little distinction between accidental manslaughter and premeditated murder. To constitute the crime it is not necessary to prove intention or malice; if a man should kill another by accident, his life is forfeited by the law. And however favourable the circumstances may be, the emperor alone has the power of remitting the sentence; a power which he rarely, if ever, exercises, to the extent of a full pardon. The process of every trial for criminal offences, of which the punishment is capital, must be transmitted to Peking, and submitted to the supreme tribunal of justice, which affirms or alters according to the nature of the case. The execution of all capital crimes takes effect once a year, at the same time; and the number, seldom above two hundred, is very small for so populous an empire. In most cases, indeed, fine and imprisonment, flagellation and exile, are the usual inflictions, except in cases of murder, and in crimes against the state or emperor. The punishment of treason extends even to the ninth generation. A traitor's blood is supposed to be tainted, though they usually satisfy the law by including only the nearest male relations, then living, in the guilt of the culprit, and by mitigating their punishment to that of exile. Theft is never punished with death; nor is robbery, unless it be accompanied with personal injury. The moderation of these punishments seems to imply the infrequency of the offence. In a variety of capital punishments, intortulation is deemed less infamous than decapitation: the separation of any part of the body from the remainder being considered as particularly disgraceful. The punishment of the Gangue, which consists of an enormous block of wood, with a hole in the middle, to receive the neck, and two smaller ones for the hands of the offender, is generally inflicted for petty crimes. This ambulatory pillory the culprit is sentenced to wear for weeks or months together, provided lie is able to walk about, but he is generally glad, for the support of his degrading burden, to lean against a wall or a tree. If a servant of a civil magistrate takes it into his head that the culprit has relented too long, he beats him with a leather whip till he rises. The punishment of the bamboo, however degrading it must appear to an European, is ordered upon a very summary hearing upon any individual not in the rank of mandarins; and a victor has not only the power of degrading lower officers, but directing, without the form of a trial, any punishment, not capital, on them. Every mandarin may make use of the haton, or pan-tze, which is a flat piece of bamboo, broad at the bottom, either when any one forgets to salute him, or when he administers public justice. On such occasions, lie sits at a table, upon which is placed a bag filled with small sticks, while a number of petty officers stand around him, each furnished with some pan-tzes, and waiting only for a signal to make use of them. The mandarin takes one of these little flicks and throws it into the hall of audience, upon which the culprit is seized, and receives five smart blows from the pan-tze; if the mandarin draws another flick from the bag, a second officer bellows five more blows, and the punishment is thus continued till the judge is pleased to make no more signals; when the criminal is expected to prostrate himself in gratitude for the paternal discipline. Some crimes are punished either with banishment, or by being condemned to drag the royal barks for a term of years, or to have their cheeks branded with a hot iron. Children who are deficient in duty, are condemned to receive a hundred blows; and if they lift up their hands against their parent, or use abusive language, they are punished with death. The flight of punishment in China is the baltandao, which is only used for chastizing those who are guilty of very trivial faults, and the number of blows is determined according to the nature of the offence. The lowest number is twenty, when the punishment is considered as paternal correction. The emperor even orders it to be inflicted upon some of his courtiers, which, however, does not prevent them from being afterwards received into favour.

The order and administration of the jails are said to be remarkably good. The debtor and felon are confined in separate places, it being thought impolitic and immoral to associate guilt with imprudence or misfortune. The two sexes are likewise kept carefully apart. Confinement for debt is only temporary; but if after the delivery of all, the debtor's property is insufficient to satisfy the demands against him, he is liable to wear a neck-pace in public, for a certain period, to induce his family, if able, to discharge the debt. If his insolvency has been incurred by gaming or other improper conduct, he is subject to corporal punishment and exile. A man may tell himself in China in certain cases, such as discharging a debt to the crown, or to afford a father in distress, or to bury him in due form. If his conduct is unimpeachable, he is entitled to his liberty at the end of twenty years; but if otherwise, he continues a slave for life, as do his children also, if he had included them in the original agreement. The emperor's debtors, if fraudulently so, are flung into a dungeon; if through misfortunes, their wives and children, and property of every kind, are sold, and they themselves are sent to the new settlements in Tartary. In China, the intercessors of the emperor are always made the first object; a property can be sequestrated against his claims. Disputes among individuals concerning property, do not fill up a large space in the tranfactions of Chinese affairs. Property, whether real or personal, is held by tenures too simple to occasion much difference of opinion as to the right to it. There are no entails nor settlements, and the little commerce they maintain with foreigners, together with the university of their own principles, customs, and opinions; but above all, the union which exists in families, among whom, elsewhere, the exclusive right of individuals occasion the greatest feuds; and the sort of community in which most of them continue in China, cut off the principal sources of dissipation.
The halls of audience are, in fact, more engaged in solicitations than in contests, and men of talents are employed, sometimes, to support the cause of others, who are young, ignorant, or incapable; but there is no particular order of men, who submit to influence, as lawyers and attorneys; or who arrive at dignities like the former. The impartiality of the judge is endeavoured to be secured by appointing no man to that office in the province of which he is a native. He is, however, liable to be swayed by the weight of presents. Such offerings are universal from an inferior to a superior, and from a pleader to his judge. They are paid by both parties, and the value of the presents is not ascertainned; it is even expected, that the offerings should be in proportion to the opulence of the donor. By the laws relating to property, women in China are excluded from inheriting, where there are children, and from disposing of property; but where there are no male children, a man may leave by will the whole of his property to the widow. The reason assigned for women not inheriting is, that a woman can make no offering to deceased relations, in the hall of ancestors. And it is deemed one of the first blessings of life, for a man to have some one to look up to, who will transmit his name to future ages, by performing, at certain periods, the duties of this important ceremony.

Natural Productions and artificial Curiosities of China.

Among the natural productions of China must be mentioned the tallow-tree, called by Linnaeus croton feliferum, from which the Chinefe obtain a vegetable fat for their candles. This fruit, in its external appearance, bears some resemblance to the berries of the ivy. As soon as it is ripe, the capsule opens and divides into two or three divisions containing kernels, each attached by a separate foot-Stalk, and covered with a white flaky fat substance. The fat is separated from the kernels by crushing and boiling them in water, and the candles made of it are firmer than those made of tallow, and free from all offensive smell; the wicks are generally made of a light inflammable wood, in the lower extremity of which is pierced a small tube, to receive an iron pin, which is fixed on the flat top of a candlestick, and thus supports the candle without the necessity of a socket. The tallow-tree is said to have been transplanted to Carolina, where it flourishes as well as it does in China. Sugar canes are very much cultivated in China; the plantations of which belong to individuals, and being but of little extent, the expense of erecting sugar-mills is too heavy to have one upon each plantation. The business of extracting the juice of the cane, and of boiling it into sugar, is therefore a separate undertaking from that of him who cultivates the plant. The boilers of sugar travel about the country, with a small apparatus sufficient for their purpose, but which a West India planter would consider as ineffectual and contemptible. It is not a matter of great difficulty to travel with this apparatus, as there are few plantations of which some part is not accessible by water-courses. A few bamboo poles and mats are deemed sufficient for a temporary building; within which, at one end, is fixed a large iron cauldron, with a fire-place and flue, and about the middle, a pair of cylinders or rollers, fixed vertically in a frame. Upon the top of the axis of one of the cylinders, prolonged above the frame, are fixed two shafts or levers, curved in such a manner as to clear the frame in turning round the rollers, and to the end of these shafts are yoked two buffaloes, who, moving round as in a common cattle mill, pref the canes between the cylinders, and express their juice, which is conveyed through a tube into the cauldron. The canes, deprived of their juices, become fit fuel, by means of which these juices are boiled into a proper confluence for granulation. The boiler of sugar endeavours to enter into an agreement with several planters at a time, so that his works, erected near the centre of their several plantations, may serve them all, without changing his establishment. During the time he is employed, the servants and children of the planter are busily engaged in carrying canes to the mill. The canes are planted very regularly in rows, and the earth carefully heaped up about the roots; and under the roots of the canes is found a large white grub, which, bred in oil, is eaten as a dainty by the Chinese. In the neighbourhood of the canes are like-wise several groves of orange trees, of the fruit of which there is a great variety in size and colour. The trees are propagated by suckers, which bear large cones, have kernels much refined by the Chinese; and every mountain, either too steep, or too rocky, to be applied to any other use, is planted to the top with various kinds of pines, but most generally with the larch, as preferred for the purposes of building.

On the sides and tops of earthen embankments, dividing the garden grounds and groves of oranges, the tea-plant is seen growing like a common shrub scattered carelessly about. Whatever it is regularly cultivated, it rises from the seed sown in rows, at the distance of about four feet from each other, and is kept very free from weeds. Visit tracks of hilly land are planted with it, particularly in the province of Fu-chien; its perpendicular growth is impeded for the convenience of collecting its leaves, which is done first in spring, and twice afterwards in the course of the summer. The largest and oldest leaves, which are the least cleft, and defined for the uses of the lowest classes of the people, are often exposed to sale with scarcely any previous preparation, but the young leaves require much trouble before they are fit to be delivered to the purchaser. Every leaf passes through the fingers of a female, who rolls it up almost to the form it had assumed before it became expended in the progress of its growth. It is afterwards placed upon thin plates of earthen ware or iron, made much thinner than can be executed by artists out of China; these plates are placed over a charcoal fire, which draws all the remaining moisture from the leaves, and renders them dry and crisp. The colour and astringency of green tea is derived from the early period at which the leaves are plucked. The tea is packed in large chests, into which it is pressed down by the naked feet of the Chinese labourers. It is sometimes made up into balls, and sometimes a black extract is drawn from it, to which many virtues are attributed. This plant is cultivated in several of the provinces of China, from the very northward by thirty degrees beyond the equator. It thrives best between that parallel and the line which separates the temperate from the torrid zone. Such immense quantities of tea are raised in China, that a sudden failure of a demand from Europe would not be likely to occasion any material diminution of its price at the Chinese markets, though it might be attended with inconvenience to particular cultivators. See Thea.

Another natural production of China is the pe-tun-te, used in the manufacture of porcelain, which is a species of fine granite, or a compound perhaps of quartz, felspar, and mica, in which the quartz seems to bear the largest proportion. It appears from experiment that it is the same as the granite found of the Cornish miners. The mucuous part, in some of this granite, often contains particles of iron, in which case it will not answer the potters' purpose. This material can be calcined and ground much finer by the mills of England than by the imperfect machinery of the Chinese, and at a cheaper rate than the prepared pe-tun-te of their country, notwithstanding the cheapness of labour there. See Porcelain.
CHINA.

The bamboo is a curious and beautiful, as well as a valuable plant. It is properly a reed, hollow, and generally jointed; it is supposed to throunph most on dry ground in the neighbourhood of running water. Its growth is quick, attaining its height, about twenty feet, in a year and a half. It has the properties of being equally light and solid, and it rises out of the ground with a trunk of which the diameter contracts as its length increases; the branches of the bamboo are few, and of a light shining green; the leaves are long and delicate. Within the hollow of its joints is frequently found a singular substance of a silexious nature, which has been used in some countries as a medicine. The Chinese reckon above sixty varieties of the bamboo, and apply it perhaps to as many uses. See Arundo.

Of all the artificial curiosities in China, their flately towers are the most striking to strangers, though built in a style peculiar to this country. There are two of these without the walls of Nan king, the most beautiful of which, fyled the Porcelain Tower, because it is lined all over the inside with China tiles, beautifully painted, is the most admired by all travellers, for its height, symmetry, and variety of carving, gilding, and other ornaments. It is of an octagonal form, nine stories, or two hundred feet high, and lofty feet in diameter; so that every floor is fifteen feet in length. The whole is built on a large basis of brick, strongly cemented, which forms a flately peron, or flight of nine or ten steps, like one of an octagonal figure which you ascend to the first story; and this peron is surrounded with a bannister of unpolished marble on the outside. The first story, or, as it is called, the hall, is the highest of all, but has no windows, nor any light but what comes in at three spacious gates, which open into it. The wall is said to be about twelve feet thick, and eight and a half high, faced with porcelain, but of the coarser sort, and not a little damaged by age. From this you ascend to the second, and thence to all the other stories, which are of equal height, by a very inconvenient stair-case, the lips of which are ten inches high, and very narrow. Every story has eight large windows, one at every front. They all open, as they mount one over the other, so as to form, in the whole, a kind of cone, or sugar-loaf; and between each of them is a bellows or fhed, which projects some feet from the wall all around, and leffens in the same proportion the higher they rise. Each room is adorned with paintings and other ornaments, after the Chinese taste, both on the sides and on the ceiling, whilst the outside is embellished with variety of work in baillo-trench, riches, and imagery. But the most beautiful part of the whole fabric is a kind of cupola, which rises thirty feet higher than the uppermost story, and is supported by a brick wall, fixed at the bottom of the floor of the eightih story. This piece seems to be included in a large iron hoop, all the way, which winds round it like a spiral line or screw, at the distance of several feet, so that the whole looks like a hollow cone rising in the air, and supporting on the top a golden ball of an extraordinary size. Such is the structure of that famed tower, which, whether of brick, marble, or whatever other material, is looked upon by Le Compte, and other authors, as the best contrived, most found and magnificent work in all the East. Nieuhoff adds two circumstances concerning it, viz. that the ball, or pine-apple on the top, is reported by the Chinese to be of mally gold; and the other, that the tower hath flood seven hundred years, and was erected by the Tartars, as a monument of their having made themselves masters of the Chinese empire; whereas Le Compte affirms it to have been, in his time, of no more than three hundred years standing, and to have been built, together with the Temple of Gratitude, by the emperor Yong lo, to which opinion Du Halde seems to subscribe. Most of these towers have in the uppermost gallery, and at every angle, small bells hanging at some distance, by chains or wires, which are easily moved by every blast or wind, and make an agreeable tinkling. But the greatest delight which these kinds of structures afford, is the charming prospect of all the country, exhibiting an incredible number of villas, orchards, gardens, meadows, towns, and monuments. They have a prodigious number of temples, both in town and country. The most celebrated of them are built in barren mountains; to which, however, the industrious and native kings have given beauty which were denied to them by nature, such as canals, cut at a great expense, to convey the water from the adjacent heights into proper refineries, for the use of the bionese and their votaries; gardens, groves, and deep grottoes, cut into the rock, to shelter them from the excesfive heat; circumstances which render these solitudest delightfully romantic. These structures consist partly of line porticoes, paved with large square polished stones, and partly of halls and pavilions, reated in the corners of the courts, having a communication with each other by galleries, adorned with statues either of stone or brass. The roofs of these buildings shine with beautiful japanned tiles, of green or yellow, and are embellished at the corners with dragons of the same colour. The rest of these buildings are built of timber, and most of them have high towers. Most of the cities have large bells set up in their high towers, by which they give notice of the different watches of the night; and those which have no bells make use of large drums. Some of their bells are of a monstrous size and weight; but the largest of all are those of Nan king and Peking. Le Compte mentions fewer they have in the latter of these cities, that weigh one hundred and twenty thousand pounds. This is nearly five times the weight of that at Erfurth in Saxony, which Kircher supposed to be the largest in Europe. But the Chinese bells are very much inferior to those of Europe in sound; their clappers are of a hard wood. Their metal is very coarsen, and full of knots, and their shape is contrived, for they are almost as wide at top as at bottom, their thickness gradually lessening from the bottom upwards; so that, upon the whole, they are mere unwieldy masses of metal, without musical tone, or any thing worth notice, but their huge, dull, heavy sound, and prodigious weight. The last artificial curiosity we shall mention, is their furpling fire-works, in which they may be justly said to excel all other nations. This was the chief use they made of gun-powder, which it is said they had among them many centuries before it was known in Europe; they used to exhibit these fire-works at their feaons fallals and other grand occasions, and in a great variety of figures and representations. They have carried this art to such perfection, that they can give to every object its true form and of its natural colour. Magan takes this to be fruit, that he saw one of them which represented a vine-arbor, that burned without ceasing, the root, branches, leaves, and grapes of which appeared in all their true shape and colour; the grapes were red, the leaves green, and the vine and branches exactly imitated nature.—Anstett Recherches. Univers. Hist. Anc. et Mod. Hist. Univer. d'Anquetil. Playfair's Chron. Sir George Staunton's Embassy. Phillips's Inland Navigation. Grofier's Description of China. Barrow's Travels. Pinkerton's Geography.

CHINA, or China-ware, in the manufactures, a fine sort of earthen ware, of a colour called porcelain: which see.

CHINA, gilding on. See Gilding on China.

CHINA, party. See Party.

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CHINA.
China, broken, a certain | See Cambodia
China pink, in Botany. | See DIANTHUS Chinensis
China rose, See Hibiscus | Rosa Chinensis.
CHINALP, in Ancient Geography, a river of Africa, the | most considerable in the Numida Maffetorum, or pre-
ferent flake of the Algerines, who call it Seth; it takes | its rife in the Sahara, or Desert, at a distance of about 80 | miles to the S.E. in N. lat. 25° 2'. The fountain which | form its source, from their number and contiguity, are | known amongst the Arabs by the name Sbihiene Aine, | or Shaamun Aion, the fountains. In its course it receives | the Midroen, the Habbeene at the town of Medina, the | Toddsah, or Silver river, the Archew, the Mine, Woraifs, | and Fagin. See SHELLIF.
CHINCHA, in Geography, a fertile valley of South | America, in the province of Peru, where the ancient Incas | had a temple dedicated to the Sun. It was formerly very | populous, but now contains about 500 families. The town, | whence the valley derives its name, is situated about 16 | miles S. of Pisco.
CHINCHE, in Zoology; Buffon calls the Vicarrra | Melifera by this name. New world of Pennant.
CHINCHILLA, in Geography, a town of Spain, in the | province of Murza; 25 leagues S.W. of Valencia.
CHINCHIMEN, in Zoology, a name given by Molina, | and Pennant to the Lutra japonica, or otter, with the | shape and appearance of a cat; its length from nose to | tail is 20 inches. Molina (Chil. 25') says, that it inhabits | the seas of Chili. It lives about in trees, and loves to | bask in the sun, on the tops of rocks; and, when taken, | has all its furs of a wild cat.
CHINCHINA, in Botany. See CHICONA.
CHINCHO, in Geography, a town of European Turkey, | in the province of Dalmatia; 6 miles E. of Spalatro.
CHINCON, a town of Spain, in New Cadile; 15 miles | E.S.E. of M. del.
CHIN COUGH, also called Kink cough, and Hooping- | cough. See Pertussis.
CHINCULAGUA, in Geography, a snowy mountain of | South America, in the Cordilleras of the Andes, in | the province of Quito, N. of Cotopaxi, and of a somewhat | lefs fize.
CHINE, in the Mange, is used for the back-bone, or | the ridge of the back of a horse. The French call it | chine; and the ancient Italian makes offinje.
CHINE, Lai, in Geography, a village of Canada, seated on | the island of Montreal, about 9 miles higher up, whither | goods are sent from Montreal in carts, on account of the | rapids in the river St. Lawrence just above the town. This | village is built on a fine gravelly beach, at the head of a | little bay near the lower end of lake St. Louis, which is a | broad part of the river St. Lawrence. Its situation is very | agreeable; and from some of the three houses belonging to | the king and to the merchants of Montreal, are charming | views of the lake and of the country on its opposite side. | In the king's three houses, the presents for the Indians are | deposed as soon as they arrive from England. In flight of | La Chine, on the opposite side of St. Lawrence, stands | the village of the Cachecnoga Indians, containing about | 50 log houses and a Roman Catholic church, built in the Cana-
dian style, and ornamented within with pictures, lamps, &c. | The number of the Cachecnoagas in this village is esti-
inated at about 150; the other Indian villages in the civil-
ized parts of Lower Canada are, one of the Canadeogas, | situated near the mouth of the Ottawas river; one of the | little Aborg, near Trons River; one of the Abera-
ches, near the same place on the opposite side of the river:
and one of the Hurons, near Quebec; but none of these | villages are as large as that of the Cachecnoagas. The bateaux | that navigate the river St. Lawrence ascend from this place | by means of poles, oars, and falls.
CHINESE CHRONOLOGY. See CHINA and CHRONOLOGY.
CHINESE COINS. See CHINA.
CHINESE LANGUAGE. See CHINA.
CHINESE NAYLOR. This subject, of which we knew so | little, except from Père du Halte, whose information did | not much enlighten us, has been so amply treated of late | years, by Père Amiot, the Abbé Rouffier, M. L. Boëde, | and the authors of the Encyclopédie Méthodique, that little | would remain to be said, if we had not other references from | which to draw that which may, perhaps, vary our narrative, | if not instruct the reader. The author of the present artic- | le, when collecting materials for his "General History of | Music in every civilized part of the Globe," did not forget | China, the most ancient, extensive, and polished, empire | that exists. He first quotes to an English gentleman, a | good judge of music, who had resided many years at Canton, | and who transmitted them to different distant provinces, | whence he obtained answers in French and Italian, from | missionaries long resident there; and our correspondent at | Canton not only transmitted to us their answers, but sent | with them a complete set of Chinese instruments; among | which there was every species of flutes, several stringed | instruments of the lute and guitar kind, the piano formerly | called jo, telon, be, and ching, the appellation to which we | shall adhere in the course of this article. The ching is a | beautiful instrument, which has a gourd, or bamboo, for | its body, and represents in the arrangement of its reeds | or bamboo pipes, the column of an organ; with these we | received the largest gong which had ever been brought to | England. These instruments were accompanied by Chinese | airs in Chinese character, of notation, and in those of Eu-
rope, with a treatise on music translated into French from | the Chinese, and a poem by the late emperor, Kien Long, on | the suppression of a rebellion in a distant province from the | capital. These are dated Canton, 1775 and 1777. Fur-
ther information from books and various other inquiring | friends, was accumulated before lord Macartney's embassy | took place; when, by his lordship's friendship and liberal | spirit of research, not only for the satisfaction of his own | mind, but the service of others, he extended his patronage | so far as to define the musical hitorian to write down a fe-
cies of questions, not only concerning music, but any thing | else that was wished to be investigated; and satisfactory | answers were received to most of the queries delivered, at | his lordship's return; drawn up by the learned and ingenious | Mr. Hütter, traveling tutor to the son of the late Sir | George Staunton, a gentleman, who, previous to the Chi-
nefe voyage, had resided a considerable time at Naples, | and is a well-informed musician. Another choral of | instruments, and a gong were added to the collection by the | kinchness and liberality of lord Macartney, and from all these | materials, we shall endeavour to furnish curious inquirers after | Chinese music, with as much information as can be com-
pressed into the space usually allowed to articles of a similar | kind.
Music has powers so opposite over human affections, that | whenever it is cultivated it is sure of at least two sets of | friends of very different dispositions, the grave and the | gay. It can equally sooth and exhilarate. The Chinese, the most | grave, formal, and rigid people on the globe, boast the | having framed the proportions of musical tones into a re-
gular sytem 4500 years ago, not only long before the time of | Pythagoras, but that of the Egyptian "Hermes Thri-
 megillus,;"
CHINESE MUSIC.

megillus," or the establishment of their mythalogues or priefets. But music, like other ancient arts, has so much depended on the tranquil and prosperous state of the nations by which it has been patronized, that, after being invented, cultivated, and brought to a certain degree of perfection, it has partaken of all the vicissitudes and calamities of states, and has been so totally lost during the horrors of invasion, revolution, and ruin, that, if, in a long series of years, prosperity should return, neither its music nor its figures is to be found, unless such fragments as, according to M. Baillaire's astronomy, we now possess of the theory and practice of the ancient Greek music. The Chinese, in their books, have preserved the numbers of their ancient feasts as we have preserved the books of Euclid and Ptolemy, which give us (according to the abbe Rouffeur) the "true dimensions of each tone, and their reciprocal generation," which are inapplicable on our key-symbols. So that music being lost after the crash of kingdoms, is again to be found by long labour, study, and experience; again to be lost, and again to be found! per annos statu feudorum.

It is well known in Europe (says and believes the amanuensis, that Egypt had its Mercury Trimegillus, (thrice great,) who, by the sweetSteel of his lyre, civilizèd mankind. It is likewise as well known that Greece had its Ophius and Amophon, who by their strains floated the course of rivers, made rocks dance, and even in the inferior regions silenced Cerberus himself; but Europe has faild to learn that China has had its philosophical musician, its Lyng-tun, its Konèl, and its Pin-mou-kia; whose strains have been equally miraculous in taming the most furious wild beasts, and in civilizing mankind, often more ferocious than beasts themselves. The first chapter in the history of every great nation is mythological, and never to be literally understood. And to say the truth, there seems at present in the music of China less enchantment than in our own. Yet the vulgar of all nation prefer their old traditional tunes to the most compositions, and most exquisite performances that have ever been heard in an opera-house.

"During the first years of my residence at Peking," says the reverend missionary, "I lost no opportunity of trying to convince the Chinese, that our music was superior to theirs. I was pretty well versed in the art; I performed on the German flute and harpschord, and thence I wished to please were not of an ignorant or mean order, but persons well educated and qualified to compare and judge; in short, persons of the first rank, who, honouring the French missionaries with their benevolence, frequently came to their house to converse with them on objects of science, and such arts as were cultivated in China.

"Les Sauvages, and Les Cyclopes, the most admired harpschord lollions of the celebrated Rameau, the most beautiful and brilliant solos of Blavet for the German flute, made no impression on the Chinese. I saw in their countenances only a cold and absent air, which convinced me that nothing I played was at all felt. I talked them one day what they thought of our music, and begged them to speak freely. They answered with the utmost politeness possible, that, "our music not being made for their ears, nor their ears for our music, it was not surprising that they did not feel its beauties, as they did those of their own country." The airs of our music (adds a doctor among them, called Haou-lin, and then in the service of the emperor) pass from the ear to the heart, and from the heart to the soul. We feel, we understand it: what you have been playing has no effect on us: the airs of our ancient music were filled of a higher idea. They were not to be heard without rapture. All our books abound with the most pompous encomiums of its charms; but at the same time they inform us how much the excellent methods employed by the ancients in producing such marvellous effects were lost, &c." If Pere Amiot had tried to convert the Chinese to a love for European music by French singing, we should not have wondered at his failure; but the instrumental pieces of Rameau and Blavet were justly admired in their day; and there have been long a neatness and precision in the execution of instrumental music in France, which has not been exceeded in any other country; so that if Pere Amiot did judge proper to touch the flutes with which he tried the feelings of the Chinese, it was natural to expect a different result.

But a similar disappointment happened to the English musicians during lord Macartney's embassy. His lordship took with him a complete military band of wind instruments, several of whom were able occasionally, to perform well on the violin and the violoncello. But the Chinese seemed wholly unmoved by the perfect execution of the bell pieces, of the bell composers, in Europe. Among the presents which his excellency took to the court of China, was a good barrel organ, made by Gray, as a curious specimen of our mechanism, upon which, besides our bell popular tunes, were set several favourite airs of our own country; to some of which a bass was added, and others were set on the barrel in their native skates, without any accompaniment whatever. The first they did not feel, and the others, perhaps, from not being played in the time and with the expression to which they were accustomed, they would hardly acknowledge. As it was well known that, with all their long cultivation of music, the Chinese had not arrived at counterpoint, or music in parts, the author of this article tried to betray them into a love of harmony, and "the concord of sweet sounds."

"Beings in possession of the melody to the hymn that is annually sung by the Chinese with the utmost pomp, reverence, and solemnity, in honour of their ancestors, in the presence of the emperor, entitled, "The Son of Heaven," attended on this occasion by his sons, all the princes of the blood, the great officers of state, the Mandarins, the letters, men of science, &c., and whose arrival is the signal for the commencement of the hymn; and the melody to this hymn being, like our plainsong, entirely composed of short notes of equal length, it was thought a good foundation on which to build harmony in plain counterpoint; and as there are many stanzas to this hymn, a fundamental base was only added to the melody at first; then a second treble; and, afterwards, a tenor; after which a little motion was given to the base, followed by other additional notes to the tenor and base, but always taking care to enforce the principal melody by one of the other parts, either in unison, or in the octave. But this had no other effect than to try the patience and politeness of the Chinese, who heard it without emotion of any kind. And when it was over, one of the Mandarins, an accomplished man of good sense and good breeding, who attached himself to our ambassador, and seemed impressed with a sincere friendship for him, said, but with the utmost politeness, that "he doubted not but that our music was very fine to ears accustomed to it; but that they were not able to understand it. The additional parts confused and bewildered them; they disputed the air, and needed it doubtful which was the principal sound, adding that much music was too complicated for them, and required more attention than they were accustomed to give to their own airs."

Such are the effects which our harmony has on the ears of the most enlightened Chinese; a fact indeed on the ears of all nations out of Europe. So that the opinion of Rouffeur, that
that "our harmony is only a Gothic and barbarous invention, which we should never have thought of, if we had been more sensible to the true beauties of the art, and to music truly natural," almost ceases to be a paradox.

We shall now endeavor to give a synopsis of the ancient musical system of the Chinese, which, if its chronology is just, must have preceded every other regular system upon earth.

The system of Chinesc music dates from the beginning of the monarchy, at least 2617 years before the Christian era; a proof, according to Pere Amiot, that the Chinese are the original authors of the system of music, which has been too long known in their country; and if it has been altered and abridged in later ages, it must have been from the corruption and decay of the first principles upon which it was founded; and from its being mixed and united with you and abridged sciences, such as divination by numbers, and judicial astrology, that men of true science have abandoned.

The Chinese had, at every period of their history, an universal system, united in all its parts, to which every thing was connected and referred, as well in politics, as physics and morality. To this system they have wished, in some way or other, to make the rules of music accord as well as those of other sciences, connected with their religions and civil establishments. And Pere Amiot, being prefixed to declare what were the peculiar excellencies of the primitive music of the Chinese, from which it derived its miraculous powers, and whether he thought they had ever known harmony or music in parts, similar to that of modern times? he answered in the affirmative; and added, that he thought the Chinese were probably the nation in the world that has best known harmony, and most universally offered its laws. But what is this harmony? It is that which conforms in the general accord of all things, natural, moral, and political, including whatever constitutes religion and government; an accord of which the science of sound is only the representation and the image." So that the expressions concerning this divine music, of which the learned millenarians and the Abbé Roussel have laboured so much to explain the laws, are all allegorical and figurative! even the form of their musical instruments was metaphorical.

Their historians tell us, that Fohi, the founder of the Chinese empire, 2617 B. C., was likewise the inventor of music; that in framing the instrument called tain, a long instrument stringed with flaken strings; the head of which was curved to represent the heavens; the back was level to represent the earth; he placed the dragon (the symbol of China) eight inches from the bridge to represent the eight points of the winds, and gave four inches to the neck of the Fong-Hoang to represent the four seasons of the year. This instrument was furnished with five strings to represent the five planets and the five elements, and its total length is fixed at seven feet two inches to represent the universality of things. By means of this instrument he began by reiterating his own birth, and containing his patriotism within just bounds; he afterwards laboured at the civilization of mankind; he rendered them capable of obeying laws, performing actions worthy of recompense, and of peaceably cultivating the earth, which gave birth to the arts. Fohi had patriarchal longevity, having reigned 115 years.

This is all symbolical and imaginary music; all that concerns real music that is intelligible is, that (according to Pere Amiot) long before Pythagoras, or any of the ancient sages of Greece, had travelled into Egypt, before the establishment of Hierophants, and even before the time of Mercury himself, the Chinese knew the division of the octave into twelve semitones produced by a gammat or series of fourths

and fifths by the Abbé Roussel's favourite triple progression. Of this series of perfect fifths, however, the ancient Chinese used only five, beginning at F, the fundamental of their system, which produced the following treble scales either way, by beginning at the top or bottom of their great L, as each distinct arrangement of sounds is called.

[Diagram of musical scale]

And by giving to these sounds a regular diatonic progression, they furnish the following scale without semitones:

[Diagram of musical scale]

Had they pursued the series of five two degrees further, they would have had E and B, which would have furnished the two semitones necessary to complete the scale in C natural.

The tain (which may be called the lyre of Fohi), all agree, had at first but five strings, which were afterwards increased to seven. But in process of time, they were again reduced to five, on which the tunes in different modes chiefly to be formed, as those that are genuine, and not adulterated by Europeans, who write them down by memory, have no semitones.

Pere Amiot's book is crowded with scales, pyramids, calculations, and diagrams, which leave us as much in the dark as ever; as to what this learned music was, which ancient sages regarded as the universal science, the science of sciences, sciences all other sciences flowed.

Father Amiot did not well know what to do with his Chinesc musical discoveries, till he saw the Abbé Roussel's Treatise on the music of the ancients; nor the Abbé how to illustrate his Pythagorean ideas, till he saw the papers of Pere Amiot, of which papers he afterwards became the editor, and published them in the sixth vol. of his Mémoires concernant l'Histoire, la Science, etc., des Chinois. In explaining and commenting the work of Pere Amiot, the Abbé had a good opportunity, which he did not neglect, of harmonizing the Chinese system with his own.

Not a passage of the ancient music is preferred, or the least
Chinese Music.

First idea suggested of what kind it literally could be; but after all these scales and calculations which seem to imply that real practical music, "which at once delighted the sense and gratified the mind, by the evidence of demonstration;" we find that it was an allegorical music, as inaudible as that of the spheres.

Father Amiot observing that the Abbé Rouffier spoke favourably of the Chinese, in his Memorie für die Musik der Anciens, says, the Abbé Rouffier might, with the assistance of the Chinese, have become the flameau; at once to enlighten men of letters and harmonists; the first by a research into ancient usages, and the last in recovering to China that kind of musical omnipotence which it formerly enjoyed, and which it has unhappily since lost.

"This is another specimen of the wide extent of father Amiot's musical creed.

But one of his countrymen, a gentleman to whom queries concerning Chinese music had been sent, who had resided many years at Peking, and who seems to have understood the subject better than Pere Amiot, says, "To hear the Chinese talk of their music in ancient times, we should suppose it to be something marvellous; they confect, themselves, that not a vestige of it remains, and never cease deploring its loss: but for my part, I can hardly believe that their ancillers had carried the art of music to such a high degree of perfection; if they had, the present Chinese could not fail to have a kind of music at least tolerable, and I am inclined to be of the same opinion as one of their letter's, who told me, that what we read in their books concerning the excellence of their ancient music, should not be understood literally, but figuratively, of the good harmony between the prince and people, and the different orders of the state."

The emperor Kan-hi, the grand-father of the late emperor Kien-long, who began his reign in 1662, and reigned 62 years (Eloge de la Ville de Moutkden, Poeme par l'Empereur Kien-long, 1770, 8vo.), was a true lover of arts and sciences, who tried to procure from the Europeans residing at Peking all the knowledge possible on every foot of subject. With their assistance he had new books written in the Chinese language upon astronomy, mathematics, geography, medicine, &c., which ought to be recorded in our histories, that if in future times it is said that excellent books on these subjects have been written in China, it might be known to whom the debt is due.

The ancient Chinese had no notation; but at present they express sounds by the characters of their language, in imitation of the Europeans. But they have no modulation, and consequently know not what is meant by a, &c., or half note.

In the southern part of China they have only five notes or tones in the octave; but in the north, bordering on Tartar, seven can be distinguished. The generation of the 12 la, or scales, in this MS. treat, differ considerably from those of Pere Amiot. But these scales, in Chinese characters, for which we have no types, though they might gratify curiosity, could convey no more intelligence to the reader concerning the practical music of the Chinese, than those in the treatise of Alyppus, in Musbonius, of the practical music of the Greeks, concerning which we know little more than the alphabet.

After the scales and table of the twelve la, or orders of sounds, combined with the five tones, or rather table of the variations of different la, the very intelligent correspondent of our zealous friend (Mr. R.) concludes thus: "This, sir, is all that I can at present communicate concerning the music of the Chinese, of which Kan-hi said with great truth, the more pains were taken to understand it, the more obscure and perplexing it became, for want of being able to trace it up to its true principles.

"It was said, whether eunuchs were employed as singers on the stage, or in the palace; and the answer was, that since from Europe had been introduced in the palace early in the reign of the late emperor, as musicians, to sing, play on instruments, and teach others; but that was not of long continuance; and now, as formerly, no other use is made of them than as guardians of the wives and concubines of the emperor and of great persons." This communication bears date, Peking, 1785.

We have a letter, likewise procured by Mr. R. from an Italian missionary, on the same subject, who had been near thirty years in China, and had been admitted into the imperial palace to perform to the emperor, among European musicians, who had been sent for, expressly, for that purpose.

Of the ancient music of the Chinese we can have no account but from books, equally fabulous with Egyptian mythology and the Grecian pantheon. But of the modern, we can form an idea, not very wide of the truth, by correspondence and conversation with intelligent persons, judges of European music, who have long resided in China, as well as by drawings of their instruments, and by the instruments themselves in our possession, and by specimens of Chinese melodies (they have had nothing else) current from time immemorial, and they are still current throughout the empire.

But the national airs of China being appropriated to particular times and occasions, are constantly recognized, felt, and understood; so that no Chinese Fontenelle need ask, "Sone ante vent-ru?" the times and the seasons would give him that trouble. Some of these airs are only publicly performed once a year, others twice, and the rest are usually confined to one particular occasion. In high antiquity the nobles of the Greeks had all appropriate names and applications; and their ancient modes the fame, which must greatly brighten their popular effects. "God save great George our King," in turbulent times, and "Rule Britannia" (which has supplant "Britons strike home") in time of war, are proofs of the effects of appropriate tunes.

But the variety after which musicians and dilettanti are ever craving in Europe, prevents all popular effects from new music, however good the composition and performance. Fine music can never have the general effect of familiar and simple airs, which require no science to comprehend. Mr. R.'s friend says, that Pere Amiot has written a treatise of great length on the music of the Chinese, chiefly the ancient, which has certainly suffered many changes from time, and which is now very difficult to verify. It is by the Europeans that the notation which the Chinese now have been furnished, from their own alphabetic characters. That given for the instruments does not correspond with the same European notes as the vocal.

The Chinese, formal and symmetric in every thing, have a specific number of airs for great occasions, which are never changed or varied.

1. The court airs, performed on the emperor's birth-day, and on days of ceremonial, but always when his imperial majesty is present.

2. Airs to inspire true concord and national felicity, performed at the beginning and end of each year, when the emperor ascends his throne.

3. Airs of immolation to virtue, when an eloge on the emperor is read, and his imperial majesty offers sacrifice in a temple to the gods of his ancestors.

4. Ditto, on another day of sacrifice.

5. When his imperial majesty dines in public.

6. Aria.
The Chinese began with simplicity, and habit has fixed that simplicity into an immovable law. The Europeans began their present polyphonic music with complication and eternal change of style; and effusions of unbounded imagination will precede simplicity, and prevent any music from living to be imperfectly comprehended, or becoming venerable for its antiquity.

It is hard to say whether it was an invention of the original inhabitants, or brought thither by colonial invaders. The instrument is called the king, is made of all shapes and sizes, hanging like a bell, and that with a covered mallet, like a gong. Its tone is as clear as if of glass or metal. This sonorous tone Pere Amiot believes to be metallic crystallized, of five different properties; hardness, weight, colour, grain, and tone. It is as hard as agate and precious stones; so that it resists the heat tempered steel. The harder it is, the higher it can be polished, and the clearer its sound. It is so heavy, that a rude piece of it, such as one man might be thought able to carry, requires four to move it. As to colour, it takes of yellow, carnation, white, red, crimson, and deep brown. It oft resembles mahoe of five colours.

The principal use made of these pieces sonorous, is giving signals for a concert to begin or end: the entrance or exit of the emperor, or other great personages, as in Europe by a great bell or cannon.

As to the pitch and tuning of these lapidary instruments, the Abbé Roufier tries hard to prove it to be from the datum F, in the triple progression.

These instruments are suspended by a ring, or rings, to a frame, and the largest give the national pitch, F, to which the rest are proportioned. (See Plute, Music.)

One of the most useful qualities of the king, is, that its pitch is never subject to variation, by heat or cold, like instruments of wood or metal.

The Chinese have such a reverence for this instrument, that they hold it preeminent to use it on common occasions, as the Germans do an organ; and think the English very profligate in using it any where but in a church.

Pliny l. 3. c. 10. mentions a sonorous flone, under the title कादीप; "Caleophonos nigra euf ; sed illius, nisie
tumum reddit."

But the Ching is the only instrument that we have received from China which would please European ears. It is composed of reeds of different lengths, arranged into columns of organ pipes. See Plute, Music. Its tone is more sweet and delicate than that of any of our wind instruments. It is not loud enough for a theatre or concert room; but in a small apartment of a mansion, if cultivated by a musician of taste and science, it might be made the most exquisite and captivating of instruments. It has from 13 to 19 pipes, which speak either by blowing or inhaling, so that a tone may be continued to any length. It never speaks till a hole is open, and as many vintages as are covered by the fingers, so many sounds will be produced; so that duets may be played on a single individual instrument, or even chords, which, if harmonically proportioned, like the tones of our instruments, would greatly delight ears well organized. But no scale has ever been sent to Europe which has come to our knowledge.

Pere Amiot evades giving one. The master of the Ching is equivalent to organist or maestro di capella. These regals, as we may call them, are of different size and compass, and composed of a different number of reeds. The small Ching, of which we have three in our own possession, has 13 pipes or reeds. which, says the Abbé Roufier, gives the 12 semitones of the scale above the generator, or principal. But query, how can we reconcile this to there being no semitones in Chinese melodies?

The belly of several stringed instruments in China is a fection of the gourd or pumpkin.

Such is that of the Ye-Cyen, which is played with a bow, and has two strings which are tuned fifth.

But the Ching has sometimes a section of the cocoa-nut for its base. This instrument is composed of many pipes; each of its reeds has a different tone, produced by a very narrow, thin, brass or copper plate, such as is used in the reed-work of an European organ.

The scale to this sweet little instrument, remains the grand delineament in Chinese music. The Chinese vocal music is not likely to please any other ears than their own. Most of them, even boys not excepted, sing in falsetto, and it seems as if a natural voice was as much disliked by them, as the original shape of a woman's foot. Nor did the officers or attendants in lord Macartney's embassy ever hear in China a base or tenor voice. This unnatural method of singing is not improved by the perpetual tumultuous motion of the voice.

The sound of a double bafe they detest; yet, notwithstanding their dislike of low tones, on their seeming to like the bassoon better than any other of our wind instruments, lord Macartney offered to give it them; but they declined the acceptance, and immediately set a joiner to work, who placing it on the ground, took the exact dimension of its several joints, keys, &c, and made one for themselves.

The Chinese have theatrical dramas, with and without music. Of the latter kind are their comedies and farce. But their tragic scenes are generally accompanied with all the noise of drums, gongs, &c., and the screaming and bawling of mandarins, after which they commonly introduce love scenes and pastoral entertainments.

All the Chinese airs which we have fecor heard, are in common time. "At Canton (says Mr. Huttner) we were surprised by an opera confiding of recitatives and airs that did not want expression. At last I observed that most of our party seemed to be highly pleased with them, and though ignorant of the Chinese language, to understand in some measure the meaning of the words, which, if I am not mistaken, was entirely
entirely owing to the excellent imitation of the different accents of the passions, and to their adequate movements and gestures. These players, natives of Nanking, reminded me of the famous harpists of ancient Rome. The instrumental music which constantly accompanied both recitatives and airs, was very pleasing and in excellent time.

"The military music of the Chinese is indeed miserable, and certainly not at all calculated to inspire courage. It has neither melody, expression, nor time. Hautbois and horns together make such a continued and jarring noise, as if they vied with each other to imitate the howling of cats. Their horns, however, have a very good tone, and resemble our serpents.

"The bell music we heard, was at the presentation of the ambassador at Gecho. After the emperor had ascended the throne, and a religious silence prevailed through the numerous assembly, we were struck with a delightful music from the great tent. The soft sound, the simple melody, the solemn progress of a flow' hymn, gave at least to my mind that elevation to which only Handel's music can raise it. For a long time I remained doubtful whether I heard human voices or instruments, till the latter were seen by some that stood nearer; they were flanged instruments, and a fort of bamboo lyra. The bell resembled those found in profane churches, but had no parts. Between each bar a semimetal metal cymbal followed the tone of the following bar, which had a very good effect; but this was probably a large pierre foncre, and the bamboo lyra was doublets a ching.

"What the Chinese judged of the ambassador's suite, I am not able to determine, but our interpreter told me, they liked their own music much better. They took great notice of the construction, receipts, and management of our musical instruments, as well as of our musical notation.

"For though the missionaries have introduced musical signs in China, they seem to be known only by a few individuals, more as a curiosity, than as the easy and most accurate method of communicating musical ideas. All the music we heard was played by rote, yet I have seen several printed Chinese books of music or musical notes.

"The gentlemen in the ambassador's suite, who are fond of music, sometimes used to take a part in the concerts performed by the band. At this some of the mandarins were surprised; upon my inquiring the reason, I learnt that they, like the Romans, thought music no proper amusement for a gentleman.

"That the exquisite harmony with which Mr. Hüttner was so surprised and pleased on the day of presentation in the great imperial tent, was produced by the Chinese, we have no doubt. That instrument, of which the tones are so extremely sweet, has harmony in itself, as every ventage in the fawzzuds, or pipes of which it is formed, when flot by a finger of the player, produce a different tone; and as many holes are as flot produce an equal number of sounds; and though we know not the scale, nor how to find the several notes, so as to form melody or harmony, yet, by chance at different trials, we have found 3ds, 5ths, 8ths, and every interval consonant and dissonant in the diatonic scale.

Mr. Barrow's account of the music that was prepared for the ambassador and his suite at Canton, is the following:

"On the arrival of Lord Macartney and his officers at the factory, they found in the midst of a garden prepared for them on the opposite side of the river, "a company of comedians hard at work in the middle of a piece, which it seemed had begun at sun-rise; but the squalling, and their shrill and harsh music, were so dreadful, that they were prevailed upon, with difficulty, to break off during dinner, which was served up in a veranda directly opposite the theatre."

"Next morning, however, at sun-rise, they set to work a-feast, but at the particular request of the ambassador, in which he was joined by the whole suite, they were discharged, to the no small astonishment of our Chinese conductors, who concluded, from this circumstance, that the English had very little taste for elegant amusements. Players, it seems, are here hired by the day, and the more incessantly they labour, the more they are applauded. They are always ready to begin any one piece out of a list of 20 or 30 that is prefixed for the principal to make his choice."

"Travels through China.

But though the music of the Chinese is feverly confounded by the gentleman of the embassy, they all agree that they are excellent actors. The best of those that perform at Canton generally come from Nanking.

CHINESE Philosophy, Poetry, &c. See China.
CHINESE Stores. See Kang.
CHINESE Wall. See China and Wall.
CHINESE Weights. See China and Weight.
CHINESE Wheel. See Wheel.

CHINEY, or CIVI, in Geography. See CHINY.

CHINEY, a town of China, is the third rank, in the province of Tche-kiang; 10 leagues S. of Chao-hung.

CHING, or CHING-TING-FU, a town of China of the first rank, in the province of Pe-te-lu-li, situated near a fine river, of an oblong figure, and walled, and near 4 miles in circuit. Under this are 32 cities, 5 of the second, and 27 of the third rank. Upon the adjacent mountains N. of it, which produce a great variety of medicinal herbs, are several superb monuments erected to the heroes of the Chinese, and one in particular, consecrated to the memory of the first emperor of the dynasty of Han.

CHING-CHEW, a city of China of the first rank, in the southern district of the province of Hou-quang.

CHING, or CHING, in Zoology, the name given by Molina, who has described it, (Culi c.60,) to the Rivera Chingle, or black wazle, with changable calls of blue, with a row of white spots from head to tail. In shape and general form, it resembles the Chincha, which feel. It is a native of Chili; and Molina says, that the fish turning from it is owing to a certain green oil, ejected from a follicle or receptacle near the tail. The Indians are said to value the skin of this species on account of its beauty, and to use it for various purposes, quits, c. c. &c. Shaw.

CHING-HAI, in Geography, a town of Asia, in the kingdom of Corea, 60 miles E.S.E. of Kang-teenth.

CHING-HO-ANG, a mountain of China, in the province of Tche-kiang, near its capital, Hang-chien, or Hang-teenth-flou; on which stands a high tower, which, by the help of a large water glass that is made to turn the hand of a dial, shews the hour of the day at a considerable distance: the figures of the hours being gilt, and about 18 inches long.

CHING-KYANG, or CHING-ANG-FOU, a city of China, of the first rank, in the province of Yunnan.

CHINGOLEAGUL, a small American island, near the coast of Virginia. N. lat. 37° 50'. E. long. 75° 26'.

CHING-GONGO, a river of Hindustan, which rises in the Ellichpou country, and runs into the Godavery, 16 miles S.W. of Nereeul.

CHING-NGHAN, or CHING-NAN-FOU, a city of China, of the first rank, in the province of Quang-ti.

CHING-TU, or CHING-TAO-FOU, a city of China, the capital of the province of Se-chwen, or Se-tchuen, formerly the residence of the emperors, and one of the largest
and most beautiful cities of China; but in 1646, it was almost entirely destroyed during the civil wars which preceded the last invasion by the Tartars; its temples, bridges, and the ruins of its ancient palaces, are still objects of admiration to strangers. Father Martini, in his Chinese Atlas, mentions a singular bird that is seen in the neighborhood of this place, called "tong-hoa-fang," or the bird of the flower; "tong-hoa," from which the vulgar pretend that it is produced, on account of the resemblance of its plumage to the colour of this flower; so that it is called the "living flower." This city has under its jurisdiction 6 cities of the second, and 15 of the third rank.

CHINAIA, Sr., a town of France, in the department of Hérault, and chief place of a canton, in the district of St. Pons. The place contains 28,38, and the canton 710,5 inhabitants; the territory includes 230 kilometres, and 10 communes.

CHINZ, a town of Peru, in the province of Farfílan, situated on the Perion gulf; 140 miles W. of Cíchara.

CHIN KEIOU, a town of China, of the third rank, in the province of Ho-nan; 15 leagues N.E. of Yen-hing.

CHIN-LI, a town on the N.W. coast of the island of Ho-nan, of the third rank; 12 miles W. of King-tshên-tou.

CHIN-MOU, a town of China, of the third rank, in the province of Chên-fê, on the river Kin; 50 miles N.W. of Kia.

CHINNA, in Ancient Geography, a town of Europe, in Dalmatia. Polonymia. This is named Cinn in Antioch's itinerary.

CHINNABALABARAM, in Geography, a town of Hindooostan, in the Mofor country; 87 miles N.E. of Sereigapetum. N. lat. 12° 25', E. long. 77° 54'.

CHINNAPUTTU, a city of Hindooostan, with a fort of stone, in the Nuzam's territories, 97 miles, or about 564 geographical miles W.N.W. from Sairone-Dancapour.

CHINNOR, an instrument of music among the Hebrews, consisting of thirty-two chords. Kircher has given a figure of it.

CHINON, in Geography, a town of France, and principal place of a district, in the department of the Indre and Loire; situated on the Vienne, and defended by a strong castle. The place contains 6156, and the canton 15,549 inhabitants; the territory includes 247.5 square kilometres, and 13 communes. It is distant 8 leagues W. S.W. from Tours, and 21 S.E. from Saumur.

CHING-I, in Ethnology, the name given by some writers to the Tibet peaceock, Pavo Tibetanus, which see.

CHINSE, in Sino Language, is used for thrilling oxum in to a frain or chin, with the point of a knife or chisel.

CHIN-SHAN, or the Golden Mountain, in Geography, an island of China. Situated in the middle of the river Yangtze-kiang, which rises almost perpendicularly out of the river, and is intersected with gardens and pleasure-houses. Art and nature seem to have combined in giving to this spot the appearance of enchantment. It belongs to the emperor, who has built upon it a large and handsome palace, and on the highest eminence several temples and pagodas. The island also contains a large monastery of priests, by whom it is chiefly inhabited. In one of the plates annexed to the "Emphasis to China," we have a view of this island.

CHINSURAH, called also Howgly, a town of Hindooostan, in the province of Bengal, situated on the western bank of the Ganges, 40 leagues from its mouth at Calcutta, about 10 from Patna, and 17 miles W. from Calcutta. The Dutch, who established a settlement in this place, obtained it by gift, or rather by purchase, from the Mogul government. It is partly built along the river, and requires three-quarters of an hour to walk round it. On the land side it is closed by barrier-gates; within, it is very irregularly built; it has many markets or bazaars, which are plentifully supplied with all kinds of goods and provisions; that of the money-changers, which is a long and broad street, is the handomest. The principal houses are built of brick, with terrace-roofs, in the Moorish style; they consist only of one story, and are whitened on the outside with lime, which gives them an elegant appearance. Little wood is used in the buildings, because it is liable to be destroyed by the white ants. Instead of glass windows, frames of twisted cane are used. The apartments, thus guarded from the extreme heat which prevails for four or five months in the year, are spacious and airy, and provided on the fourth floor with galleries or porches, resting upon pillars. On the terrace-roofs the inhabitants take the evening air, and sometimes pass a part of the night with their friends. The houses, or rather the huts, of the poor Bengalees are mostly made of mud and straw, and receive their light through the entrance. The town has a handsome little church with a steeple. The lodge, formerly belonging to the Dutch East-India Company, is an oblong figure with stone walls, and called Guldenuf fort. A battery of 21 pieces of cannon is thrown up, by the river side, for the purpose of firing salutes. Howgley is a Moors fort, about half an hour's walk from Chimbhurah; but it is not in a very defensible state. The English are now in possession of Chimbhurah.

CHIN-TCHEN, a town of China, of the third rank, in the province of Chên 8; 25 miles N. of Tseng.

CHINY, or Chinee, a town of France, in the department of the Sambre and Meuse; and chief place of a canton, in the district of Dinant, seated on the Semoy, 9 leagues W. of Luxembourg. The place contains 1257, and the canton 5978 inhabitants; the territory includes 275 kilometres and 18 communes. Before the revolution, this town was the capital of a comte in the duchy of Luxembourg, which was of great extent, and included 13 cities or capital towns, and it was sometimes called imperial. After passing through the possession of several proprietors, since Bruz, the 12th archbishop of Cologne, and chancellor of the empire, erected it into a comte, about which time it was surrounded with walls; it was adjudged to the house of Austria, by the treaty of Ryswick.

CHIN-YANG. See CHEN-YANG.

CHIHO peer, a name given to a small species of pears, called also the honey-pears. The fruit resembles the little mulberry in its sweet flavour. Its skin is yellow streaked with red; its flesh is round, white, and not hang in clusters, but singly on the tree.

CHIJOCCO, ANDREW. In Geography. Of the life of this ingenious and learned physician, we have few memoirs. We only know he was a native of Verona, where he appears to have practiced medicine, towards the end of the 17th and the beginning of the 18th centuries, and that he died there on the 3d of April, 1724. From his works it is that we obtain the information that he was well versed in the learning of the classics; that is, that he was unacquainted with the writings of Aristotle, and of Galen, whose dogmas he everywhere defies; and that he was more than moderately imbued with critical and polemical literature. The following are among the most esteemed of his productions: "Quaestionum Tabaram et Medicam Litera transt.," 4vo, 1744. He defended the practice of giving antimonial vomits, and infuses the tincture of hasty excreta more frequently in the body, than in the kaduce." "Dicroa de Sacra Litera, de contagiis, &c. Carmina decrptur," 4to, 1797. He also gives a full description of the flowers, fruits, and vegetables, of the country.
character of this poem, which we have not seen, also of his defence of the Sibyls of Frazerius, against the
fictions of Scaliger. "De Aereus Verom's elen cens, 1597, 4to: from the general longevity of the inhabitants,
many of them having attained a great age, he argues for
the salubrity of the soil and atmosphere of that city. He
also wrote a treatise on contagious fevers, and of the utility
of bleeding, with the view of removing obstructions: Also
"De Collegiis Veroniis illustribus Medici: &c," 1623, 4to: The account of the writings of the per-
tems commemorated, which should have formed a principal
feature in the work, is very imperfectly performed." Haller
Bot. Med.


Eff. Ch. Corolla quadripartit; divisions extremely long; drupes with a striated nut.

lanceolate, somewhat pubescent underneath; drupes globu-
lar," Lam. A shrub from six to ten feet high. Leaves opposite, petioled, entire, from five to seven inches long, and
about three broad. Flowers white, in pendulous panicle
racemes; segments of the corolla eight or nine lines long,
whence it has been called fringe-tree. Lam. A native of
South Carolina and Virginia, in moist places on the banks
of rivers; flowering in June. 2. C. zeylanica. Linn. Sp.
Pl. 2. Mart. 2. Linn. Decay. 2. Illuf. 2. tab. 9. fig. 2. (C. cotinifolia, Willd. Arbutus zeylanica cotitii folia, Pulk. Alm. 241. fig. 4.) "Pedicules panicled, many-
flowered." Linn. "Leaves egg-shaped, villous underneath;
drupes inerfylly egg-shaped." Lam. Nearly allied to the
preceding, but differs in the shape of the leaves; the seg-
ments of the corolla also, as figured by Pluknet, are five
in number, and shorter in proportion than those of C. viri-
ngica. A native of the island of Ceylon. 3. C. parviflora, Lam.
Pl. 3. (C. zeylanica, Willd. ? Thunia mutata, Linn. jam. Sup. 89.) "Leaves elliptical, quite smooth, veined;
flowers purple, nodding." Lam. A native of Ceylon.
2. Wild. 3. (C. caribæa, Jacq. Collec. tab. 6. fig. 1.
Linn. Illuf. 5.) "Pedicel striatominous; the last flowers
somewhat epicate; calyces villous; leaves lanceolate-ob-
long; anthus acuminate," Swartz. "Leaves smooth on both sides, very acuminate; calyces ciliated." Jacq. A
tree fifteen feet high, with a darkly ah-coloured bark.
Leaves about half a foot long, an inch and a half broad, op-
oppose, on short pedicles, quite entire, thickish, firm, thinning.
Flowers snow-white, with long linear segments; bractes at
the divisions of the peduncles, opposite, small, narrow, con-
cave, sharp, somewhat villous; calyx deeply cleft; segments
egg-shaped, acute, somewhat villous, ciliated at the edge;
styles twice as long as the calyx. Jacq. A native of the
tab. 39. fig. 6. "Drupe egg-shaped, attenuated at both
ends, angularly furrowed." Fruit described and figured by
Garriner from a specimen belonging to the botanic gar-

CHIOCOCA occyma, Jacq. See CESTRUM occultum.

CHIOCOCA paniculata, Linn. Jun. Lam. See Psycho-
Tria paniculata.
eden at Levden. Plant unknown. 7. *C. inaequalis*, Swartz. Prod. 13. Wild. 5. (C. meyaea, Vahl. Syn. 2. 1. Mart. 4. Caravus, Schrebri, Gmel. Sys. Veg. 1. 26. Mayerea, guianensis, Aub. Guin. tab. 31. Lam. Encyc. Illust. tab. 72. Juss. 319. Vent. 2. 312.) "Panicles axillaries, trichotomous; flowers all distinct; authors obsolete." A shrub five or six feet high, covered with a whitish bitter bark. Leaves five inches long and two broad, oval-oblong, entire, thin, firm, ending in a point; petals short, few and hard at the base. Flowers bracteate, small, white, of an agreeable smell Fruit oblong, about the size of an olive; the fleshy part two lines thick, violet, succulent, bitter. To deference to the high authority of Swartz and Vahl, we have placed this plant under the present genus; although we are slow to believe, if we can rely on the accuracy of Anubt's description, which appears to be the only original one in existence, a very considerable alteration must be made in the genuine character, before it can be fairly admitted. This alteration, however, we have not ventured to make, much doubting whether it would not be better to follow the French botanists in keeping it distinct. See *Mayrepa*. A native of the forests of Guiana.

CHIONIS. In *Ornithology*, one of the synonymous names of the Sheshthell, *Vagnalis alba*. Poult. Lat. &c.

CHIONITE. In *Antient Geography*, a people of Asia, neighbour, and allies of the Persians, according to Ammianus Marcilalinus, who inhabited the vicinity of the Calypian sea, near the Gilonian and Albani.

CHORME, a band or crew of galley-lives, and of Bonavaghers, or volunteers, who pull the oars in a galley.

CHIOS, now Skio, in *Antient Geography*, an islet of the Egean sea, about 500 leagues in circuit, lying between Lesbos and Samos, and opposite to the peninsula of Ionia, from which it was probably detached, as it is now separated from the continent only by a canal or strait three leagues wide.

To the ancients this island was known by the names of Athalia, Maris, and Pithyusa; but the most prevalent name was Chios, which some have derived from the Greek word *chios*, signifying snow, the mountains of the island being often covered with snow; but others, as Siodorus, are of opinion, that the name of Chios was borrowed from the Syrinx, in which language it signifies m小時ch, with which this island abounds. Athanesius calls it a rugged and mountainous country; however, it produced excellent wine, and, on that account, it is highly commendcd by the ancients. Athnesius fuggefits, on an ancient authority, that the Chians were taught the manner of cultivating the vine by Oenopion, the son of Bacchus, and that they communicated this art to the rest of mankind. He adds, that the first red wine was made in this island. Strabo mentions the quaries of this island; and Phyllus says that here was discovered the first Jasper; but its chief produce is mitalize. Vitruvius mentions a spring in Chios, the water of which deprived those of their tenes who tailed of it, and therefore passengers were warned of the danger by an epigram inscribed over it.

Chios was also the name of the chief town of the island, which was seated on the eastern coast, in the most pleasant and fruitful part, and, according to Strabo, was 40 itdias in circumference. This city pretended to be the birth place of Homer; however this be, it had the honour of producing several extraordinary persons: such were Ion, who flourished in the eighty-second Olympiad, and is celebrated as an elegant writer of tragedies.—Theopompos, the disciple of Iocrate, who, as some have thought, excelled his master, and wrote several books, and who flourished in the reigns of Artaxerxes Ochus in Perse, and Philip the father of Alexander the Great, in Macedon.—Theopompus, the contemporary of Theopompos, who wrote some learned epistles, and the history of Libya; and Metrodorus, a philosopher and physician, and the author of several books relating to physic, who flourished in the reign of Artaxerxes Mnemon, king of Persia, and, according to Suidas, was preceptor to Hippocrates and Anaxarchus. This city had a spacious harbour, capable of containing 80 vessels. Strabo says that this island was first peopled by the Pelasgi: D'Orous maintained that Macaron and his followers settled here, after they had made themselves masters of Lidos; but Herodotus's opinion, that the Chians were Ionians, has been more generally received. Their first government was monarchical; but Hippocrates, one of their kings, being murdered by his subjects, for a pretended alms offered to the bride of one of the chief men of the island, the Chians formed themselves into a republic. In process of time, by the assistance of Hicocrates, they formed their republic on the plan of that of Athens; but they did not long enjoy the blessings of liberty, being, like the other small states of Greece, brought under subjection by their democratic tyrants. In ancient times, the Chians seem to have been a numerous and powerful people. They afforded the Mileians against the kings of Lydia; but after the defeat of Cretes by Cyrus, they submitted, with the other islanders, to the conqueror; and in recompense for having delivered up Pahyas the Lydian who had excited his countrymen to revolt against the Persian, Mazares, the Persian general, conferred upon them the city of Atarneas in Mysea, reduced by the Persians; they were employed in all their naval expeditions, and they served Darius against the Scythians. However, in the Ionian revolt, the Chians readily joined Ariltagoras, the last of the Persian yoke, and equipped 100 ships, each of which had 40 chofen citizeus on board. In the battle at Lade they distinguished themselves by their persevering valor; but at length, abandoned by their allies, they were overpowered, and obliged to run their ships aground at Mycale; whence they marched into the territory of Ephesus. Arriving thither in the night, while the women were celebrating the rites of Ceres, the Ephesians supped them to be robbers, who were come to trip the women, falled out of the city with their whole force, and killed them on the spot. After the defeat of the Ionians, Hiltius, who had been the principal cause of their revolt, availing himself of the assistance of the Lesbians, reduced the whole island. But Hiltius, unable to maintain possession of it, abandoned it to the Persians, who punished the Chians with the utmost severity. The most handsome of their youths they made eunuchs, and their daughters they sent to the king of Persia, after having destroyed their houses and temples, and ravaged their territories, and reduced the few inhabitants that remained to a state of slavery. Having for some time continued subject to the Persians, they recovered their liberty, and flourished, according to Thycydides, above all the states of Greece, Lacedemon alone excepted. They were favoured by the Athenians, who obtained the supreme command, above all their other allies, being exempted from tribute, and obliged only to furnish a certain number of ships. After some severe contests with the Athenians and with the Lacedemonians, they returned to their ancient confederacy, in which they continued till the social war, when, becoming weary of their alliance with Athens, they joined the Rhodians and others, with a view of emancipating themselves from the Athenian yoke. After a war which lasted three years, they concluded an advantageous peace. Until the destruction of the Persian empire, they enjoyed uninterrupted tranquility, and then they, together with the
the other Greek states in Europe and Asia, became subject to the Macedonian princes. Their city was unsuccessfully besieged by Philip, father of Pericles; and when he had abandoned the siege, they joined the Aegarians in their war against him, and Pericles, king of Bithynia; and, in consequence of this impious alliance, their territories were laid waste, and all the open places in the island were utterly destroyed by the troops of the confederate princes. For the afflication they afforded to the Romans in their wars against Phleges and his son Pericles, and Antiochus the Great, king of Syria, they were not only declared free, but honoured with the appellation of the friends and allies of the people of Rome. Sulla recommenced their perverting attachment to Rome, by restoring them to the possession of all their ancient rights and privileges, which they maintained, without disturbance, living in ease and plenty, till the reign of Theophanis, who reduced Chios, with the other islands of the Aéran sea, to the state of a Roman province; but at the same time he allowed the Chians to live according to their own laws, under the superintendence of a Roman pretor, whose province comprehended all the islands in the Aéran sea, from the mouth of the Hellespont to Rhodes. See Scio.

CHIOS, a town of the island of Euba. Steph. Byz. CHIOURLIC, in Geography, a town of European Turkey, in Romania, the see of a Greek bishop situated on a river of the same name; 50 miles N.W. of Constantinople.

CHIOZ, a town of Poland, in the patriciate of Sandomir; 35 miles N. of Malogoscz.

CHIOMMA, a small island of the Adriatic, near the coast of Italy, not far from the mouth of the Drinata, with a town of the same name, the see of a bishop, suffragan of Venice, containing three churches and eight monasteries; 31 miles S. of Venice. N. lat. 45° 15'. E. long. 12° 14'.

CHIPAWAS. See CHEPENYAN.

CHIEPAU, (Buffon), in Ornithology, the anus freepera of Linnaeus.

CHIPEOS, (Buffon). In Geography, see Pampas del Sacramento.

CHIPEWYAN. See CHEPENYAN.

CHIPENHAM, a market and borough town of Wiltsire, in England, is situated on the banks of the river Avon, and on the great road leading from London to Bath; at the distance of 95 miles west of the former, and 13 east from the latter. It is noted in the Anglo-Saxon annals as a principal place of residence for the Welsh-Saxon kings, and was bequeathed by the great Alfred to his youngest daughter, Ethelfleda. Of the ancient history of this town we have little on record; the most to be depended on is, that when Alfred, with his inferior forces, had conquered the Danes, and made them sign a treaty, by which they engaged to quit the kingdom, they treacherously pollished themselves of this place, and, being strengthened by numbers of their countrymen, soon obliged the Saxons to disperse, and their monarch to seek security in defensive, and take refuge in the cottage of a weaver.

This town, in the time of Richard II., belonged to the Hungerford family, but reverting to the crown by the death of Lord Hastings, was given, by Richard III., to John Howard, duke of Norfolk. It was restored by Henry VII. to the heirs of its former possessors.

Chippenham was a borough by prescription; but queen Mary, by charter, dated the 21st day of May, in the first year of her reign, ordained, "that the village, town, and borough of Chippenham, should be a free borough, corporate in deed, fact, and name for ever, of one bailiff and twelve burgesses." The charter then states the limits of the borough, names of burgesses, manner of appointing them; and for keeping in repair the bridge and causeway, gives to the bailiff and burgesses several parcels of grounds, the names and extent of which are specified, and called the "borough lands." This, with many other charters of the kingdom, were surrendered into the hands of Charles II. A.D. 1684. Another charter was granted by James II. in the first year of his reign, by which the same privileges were restored, and the revenues of the corporation were valued at 51. 5s. 8d. The free houses, at this period, amounted to 149 in number; and the spots then occupied are the only parcels of free land where burbage hounes are still kept up, and the inhabitants of which, with the bailiff and burgesses, have the exclusive privilege of returning two members to parliament. The town is populous, and of considerable extent; the principal street is about half a mile in length. Chippenham, like many other towns in this part of the country, is celebrated for its clothing and manufacturing factories. The church is a large pile of building, displaying some curious specimens of ancient architecture; but the greatest part of it is modern. On the north of the town there is a handsome free-stone bridge of twenty-one arches, ornamented with balustrades, lamps, &c. and near the middle a road branches off to Bath and Bifflo. Close to this is a large modern factory. On the banks of the river are several dying-houses. Chippenham has a weekly market on Saturday, and four annual fairs. By the last returns made to parliament of the population, &c. of the county, here were 683 hounes, and 3366 inhabitants, most of whom were employed in manufactures. For more copious particulars relating to the borough history, and manufactures of the town, see Beauties of Wiltshire, 2 vol. 1st.

CHIPPEWAY, FORT, a small blockaded fort of Lower Canada, situated on the borders of a creek of the same name, about 200 yards distant from Niagara river. The fort occupies about one road of ground, and consists of a small block-hace, enclosed by a blockade of cedar posts, about 12 feet high, which is merely sufficient to defend the garrison against musket shot. Adjoining to the fort, there are about seven or eight farm houses, and some large dore-houses, where goods are deposited preparatory to their being conveyed up the river in bateaux, or across the portage in carts, to Queenston. A canal from hence to Queenston would be extremely convenient. About 15 men, under the command of a lieutenant, are usually quartered at fort Chippeway, who are mostly employed in conducting, in bateaux from thence to fort Erie, the llores for the troops in the upper country, and the presents for the Indians.

CHIPPEWAY River, a river of N. America, that runs south-westward into the Mississippi river, in that part where the confluent wates form Lake Pepin, in N. lat. 44°, and W. long. 93° 54'.
none of the varnish which they use for their vesseis; they next take the vesseis when dried, and not yet baked, to the wheel, and turning them hastily round, they, with a pencil dipped in this paste, cover the whole circumference with a thin coat of it. After this, the vesseis are again dried; and the border made with this paste appears of a pale greyish colour when it is thoroughly dry. They work the paste downwards in the common way, covering both this edge and the roll of the vessei with the common varnish. When the whole is baked on, the colour given by the ashes disappears, and the edges are as white as any other part; only when the baking has not been sufficient, or the edges have not been covered with the second varnishing, we sometimes find a dusky edge, as in some of the ordinary thin tea-cups.

It may be a great advantage to our English manufacturers to attempt something of this kind. The willow is known to make a very light and black charcoal; but the elder, though a thing seldom used, greatly exceedeth the young green shoots of this shrub, which are almost all pith, make the lightest and the blackest of all charcoal; this readily mixes with any liquor, and might be very used in the same way that the Chinese make the charcoal of the bamboo cane, which is a light hollow vegetable, more resembling the elder shoots than any other English plant. It is no wonder that the fixed salt and oil contained in this charcoal should be able to penetrate the yet raw edges of the ware, and to give them in the subsequent baking a somewhat different degree of vitrification from the other parts of the vesseis; which, though if given to the whole, it might take off from the true vitrified state of that ware; yet at the edges is not to be regarded, and only serves to defend them from common accidents, and keep them entire.

The Chinese use two cautians in this application: the first in the preparation: the second in the laying of it on. They prepare the bamboo canoe for burning into charcoal, by peeling off the rind. This might easily be done with our elder shoots, which are so succulent, that the bark flakes off with a touch. The Chinese say that if this is not done with their bamboo, the edges touched with the past will not be in the baking: this does not seem indeed very probable; but the charcoal will certainly be lighter made from the peeled flicks, and this is a known advantage. The other caution is, never to touch the vesseis with hands that have any greasy or fatty substance about them; for if this is done, they always find the vesseis crack in that place. Obs. sur les Cout. de l’Alde.

CHIPPINGAVEL, or CHEAPINGAVEL, in our OLE

CHIPPING-NORTON, in Geography. See Norton.

CHIPPING-ONGAR. See Ongar.

CHIPPING-BODSBURY. See Bodsbury.

CHIPPIONA, a town of Spain, in the country of Seville, seated on a rock near the coast of the Atlantic; 35 leagues from Seville, in the diocese of Lucar Serremeda.

CHIQUE, in Commerce, a weight in Smyrna, equal to 5lb. 7oz. 12dr. aver., weight.

CHIQUITOS, a chain of mountains in South America, lying between 15° and 23° of S. latitude. This chain of primitive mountains unites the Andes of Peru and Chili with the mountains of Brazil and Paraguay, stretching from La Paz, Potosi, and Tucuman, through the provinces of Moxos, Cuiquitos, and Chaco, towards the government of the mines, and of St. Paul in Brazil. The highest summits appear to be between 15° and 25°; the rivers there falling to that of Amapas, or the of La Plata.

CHIQUITOS, INDIOS, or Little Indians, a name given by the Spaniards to Indians of South America, on account of the extreme smallness of the doors of their houses. The country lies between Santa Cruz de la Sierra, a province of the second bishopric in the archdiocese of Chaco, or new vice-royalty of Buenos Ayres, and the lake Xarayes, where the river Paraguay has its rise, and being encroached by the current of others, forms the famous river de la Plata. The Indians who inhabit the mountains are said to have been pressing to this nation about the close of the 15th century, and their facts is reported to have been so great that, in 1533, they had formed seven towns, each consisting of above 200 families, and the number of their cultivants has since considerately increased. These Indian Chiquitos are well made and active; and their courage has been often experienced by the Portuguese, who used to make incursions, in order to carry off the inhabitants for slaves; but the valor of these people has taught them to defend from such inman attempts, and, for their own safety, to keep within their limits. The arms of these Indians are muskets, lances, and poisoned arrows. Though their language is different from that of the other nations of Paraguay, the same customs nearly obtain here as among the other Indians. These Chiquitos have no regular religious orders, nor civil life, but in matters of public concern they listen to the advice of their old men, and usually follow it. The dignity of cacique is not hereditary, but conferred according to merit, as the reward of valor in war. The union among them is imperfect. Their society resembles a republic without any head, in which every man is master of himself, and upon the least disgust, separates from those with whom he seemed to be connected. The tree which bears the quinquina or cinch's bark, is frequent among the Chiquitos; and vanilla is also found among them, though not equal to that of New Spain.

CHIRAC, an island on the N.W. coast of New Mexico, 15 leagues to N.N.W. from Hurrarda cape; having the town of Landecho, about midway between them, and the river of Champa: two leagues beyond it. Chiria by Chila is another small island; and both abound with cattle, especially sheep and hogs.

CHIRAC, PETR., in Geography, born at Conques, a small town in Languedoc, in the year 1670, was at first intended for the church. In 1678 he was sent by his father to Montpellier, to complete his education. As the allowance made for his provision was scanty, he undertook to instruct the son of an eminent apothecary at Montpellier in classical literature and by conversing with that family was induced to turn his mind to the study of medicine. In this he made such progress, that Michael Chicoineau, chancellor of the university, placed two of his sons under his tuition. As he had paid particular attention to the study of anatomy, he was soon enabled to give lectures in that branch of science. In 1687, he was admitted doctor in medicine and under the patronage of Barbeau, the full physician at Montpellier, obtained a considerable share of practice. In 1692 he was appointed by the Duke de Noailles, physician to the army of Roussillon, and at the siege of Rolete, in which the army was engaged, was singularly successful in stopping the ravages of the dysentery, with which the men were severely afflicted. He was next appointed physician to the port at Rochford, and obtained similar credit for his successes in treating the diseases called "Le Mal de Siam," then epidemic there, and for his management of persons affected with the small pox, whom he frequently directed to be bled, contrary to the generally received opinion, and practice in that complaint. After residing two years at Rochford, he returned to Montpellier, much elated with the successes, and consequent reputation he had acquired. At Montpellier he continued until the year 1706. In this interval
val he published his hypotheses on the structure of the hairs. He supposes them to be derived from the tendons of the skin, and to contain in their bulbs, and to the extent of about two inches, a medulla: Also "De Marti Cordis," in which, he contends, depends upon an innate power in its muscular fibres. These opinions engaged him in controversies with Senac, Velleius, and other anatomists, which were on his part conducted with great acrimony. In 1726 he accompanied the duke of Orleans, who went with the army, first to Italy, then to Spain. On his return he went to Paris, where he penned the remainder of his life. In 1715, Homb-berg, the duke's physician, being dead, he was advanced to that honour. He was soon after made honorary member of the Academy of Sciences, and in 1718, on the death of M. Fagan, he was appointed superintendent of the royal garden. Some time after he projected a plan for the improvement of medicine. A society was prepared to be formed of thirty or forty physicians, who were to hold their meetings at Paris. They were to collect the correspondence, and observations on the methods found most successful in curing diseases, of physicians and surgeons to public institutions, in all parts of Europe. From these he hoped a code of practical maxims might be drawn, that would have been generally beneficial. A more useful project, or one promising more advantage to the public, could not well have been conceived, and it would have succeeded, had it been proposed by a character least haughty and obstinate. It failed through the want of the concurrence of his brethren, who wished to humble, rather than increase, his importance. His reputation, however, was not diminished by their jealousy and opposition. In 1727 letters of nobility were awarded to him, and in 1739 he was made first physician to the king, though, as he was then 80 years of age, it could scarcely be with the view of using his affluence. Two years after he died. By his will he left a considerable legacy to the university of Montpellier, for the foundation of two lectureships, one on comparative anatomy, the other for the explanation of Borelli's doctrine on animal motion. For an account of the remainder of his works, see Haller Bib. Elyo. Dict. Hist. Gen. Biography.

CHIR, in Geography, a town of France, in the department of the Loire, and chief place of a canton in the district of Orange; one league S.W. of it. The place contains 2092 and the canton 7067 inhabitants; the territory comprehends 23243 square metres and 8 communes.

CHIRACA, in Medicine, from 20 feet, the hand, and 20 years, I.J. coarse, the goat in the hand. The goat attacks the segments about the hand and writ occasionally, as also those of the feet. The local and general symptoms which accompany it, are the same in both instances, and require similar treatment. See Podagra.

CHIRAMAXIUM, in Antiquity, a kind of chariot, or conveyance, which was drawn by men instead of horses. This word is derived from 20 tet, the hand, and ago, a chariot.

CHRICEES, or CHIRCEES, a small town of Hindoos- tan, about 14 league from Amedabud. It has a great number of the tombs of the kings and princes of Gujarat, which have led the Indians to believe, that it was, in ancient times, the capital of that kingdom; but it is more probable that it was only the burial-place of their kings, and that Amedabud was the capital. The Dutch, in 1620, established a factory in this place for the purchase of indigo; but it was aban- doned before the year 1672.

CHIRCHED. See Churches Scot.

CHIRENS, in Geography, a town of France, in the depart- ment of the Yorre, and district of La Tour-du-pin; 5 leagues N.N.W. of Grenoble.

CHIRIZOUR, a town of Asia Minor, in the province of Korontan; 63 miles S. of Mosul.

CHIRIGUANOS, or CHIRIGUANAS, a tribe of Pagan Indians in South America, bordering on the Chiquitos, who have always refused to hit them to the missionaries; though the fathers who visit them, when accompanied with some Chiquitos for their facility, occasionally succeed in making a few converts, who are sent to their towns, and there lead a civil life. This custom occurs after some misfortune that happens in the wars continually carried on between them and the Chiquitos; when in order the more easily to obtain a peace, and to prevent being exterminated by the Chiquitos, they lead for missionaries; but soon diffuse them again, pretending that they cannot hear to see punishments inflicted on persons merely for deviating from the rules of reason. This, it is alleged, is a proof that the object of their wish and aim is an unbounded licentiousness of manners.

CHIRIPHE, in Ancient Geography, a town of Asia, in Babylonia, according to Ptolemy; siterate near the marshes of Arabia Delma.

CHIRIQUI, or CHIRIQUITA, in Geography, a town of New Mexico, in the province of Veragua, on the coast of the Pacific ocean, with a harbour about a league from the sea, and 5 miles from the town: 30 leagues west of St. Jaguer. N. lat. 14° 20'. W. long. 83° 0'.

CHIRITES, in Natural History, a name given by authors to a fome refmiribing the human hand. The accounts we have of it say, that it is of a white colour, and of the nature of gypsum or paller stone; and that it represents the palm of the hand with the fingers, and their nails on the other side. This seems to have been a name given to some fingle specimen in a cabinet of fome collectors; for it is certainly no distinct species of felli, but a mere hystr nature, in the configuration of some accidental piece of gyp-fum.

CHIRIVICOLA, in Geography, a town of Naples, in the province of Capatanata; nine miles S.W. of Viella.

CHIROGRAPH, Chirographum, compounded of chiro, hand, and graph, a script. I write, q. d. hand-writing, every public instrument or gift of conveyance, attested by the subscription and crosses of witnesses, so called in the time of the Saxons, which being somewhat changed in form and manner by the Normans, was by them styled "charta." In succeeding times, for the prevention of frauds and concealments, they made their deeds of mutual covenant in a "script" and "scrip," or in a part and counterpart; and in the middle, between the two copies, they drew the capital letters of the alphabet, and then tallied or cut asunder, in an indelible manner, the sheet or skin of parchment; which being delivered to the two parties concerned, were proved authentic, by matching with and corresponding to one another; and when this prudential custom had for some time prevailed, then the word "chirographum" was appropriated to such writings. When they amicably made a chirograph or deed, which required a counterpart, they engraved it twice on the same piece of parchment, counterpart, leaving a space between, wherein was written chirograph; through the middle whereof the parchment was cut, sometimes straight, sometimes indently; and a moiety given to each of the parties. This was forwards called divincula and charta divisa; and was the same with what we now call charter-party.

The first use of these chirographs with us, is said to have occurred in the time of King Henry III. According
According to some, a deed was properly a choregraph, when it was subscribed by the hand writing of the vendor, or debtor, and delivered to the vendor, buyer, or creditor. These authors make the choregraph differ from a "syngraph," in this; that in the latter, the word syngraph was wrote in the middle, and cut through, in the manner just observed of choregraph. These authors therefore make the syngraph and the choregraph a different thing.

Choregraph was also anciently used for a fine: the manner of inscribing the fines, and cutting the parchment in two pieces, is still retained in the office called the choregrapher's office.

CHIROGRAPHER of fines, an officer in the common pleas, who inscribes lines, acknowledged in that court, into a perpetual record (after they have been examined and sealed by other officers); and writes and delivers the indentures of them to the party. He makes two indentures: one for the buyer, the other for the seller: and a third inscribed piece, containing the effect of the fine, and called the foot of the fine; and delivers it to the exchequer breviary.

The same officer also, or his deputy, proclaims all fines in court every term, and inforizes the proclamations on the back-side of the foot; keeping always the writ of covenant and the note of the fine. The choregrapher shall take but 4s. for a fine, on pain of forfeiting his office, &c. Stats. 2 Hen. IV. c. 8. 23 Eliz. c. 2. 2 Inst. 458.

CHIROGYLUM, in Ancient Geography, an island of the Mediterranean, placed by Pany on the coast of Lyca. CHIROGRACY, from κηραγενής, band, and μετρηος, divination, the art of divining the fate, temperament, and disposition, of a person, by the lines and incisions of the hard: this is otherwise called palmistry.

We have a great number of authors on this vain and trifling art; as Artemidorus, Fludd, and Johannes de Indagine. Tafriencis, and M. de Chavre, are esteemed the best.

Chiron, in Biography, denominated, by Plutarch, the "wife centaur," was born in the first age after Dacaliana's deluge, commonly called the golden age, according to Sir Isaac Newton; who adds, that he formed the constellation for the use of the Argonauts, when he was 88 years old; for he, as well as his daughter Hippo, are said to have been practical astronomers. By this account, Chiron must have flourished in the earliest ages of Greece, as he preceded the conquest of the golden fleece and the Trojan war. He is generally called the son of Saturn and Philyra, and is said to have been born in Thessaly, among the centaurs, who were the first Greeks that had acquired the art of breaking and riding horses. See Centaurs.

Chiron was regarded by the ancients, as one of the first inventors of medicine, botany, and surgery, or chirurgery, which some etymologists have derived from his name. He inhabited a grotto, or cave, called "Chironicum Specus," at the foot of Mount Pelion, which, from his wisdom, and universal knowledge, became the most famous and frequented school throughout Greece. Almost all the heroes of his time were ambitious of receiving his instructions; and Xeropenon classed in the number of his disciples, several of the most illustrious personages of antiquity; and yet he has omitted, in his enumeration, some of his most celebrated scholars. Among these we may reckon the Grecian Bacchus, who, as it is pretended, was the favourite scholar of the centaur, and learned of this master, the ravels, orgies, Bacchandia, and other ceremonies of his worship. Plutarch says, that Hercules studied music, medicine, and justice, at the school of Chiron; but among all the heroes who have been disciples of this centaur, no one reflected so much honour upon him as Achilles, whose renown he in some measure shared, and to whose education he particularly attended, being his grandfather by his mother's side. Apollodorus informs us that the study of music employed a considerable part of the time, which he bestowed upon his young pupil, as an incitement to virtuous actions, and a bridge to the imputation of his temper. One of the best remains of antique painting now subsisting is a picture upon this subject, dug out of Herculanum, in which Chiron is teaching the young Achilles to play upon the lyre. See Achilles.

The death of this philosophical musician was occasioned, at an extreme old age, by an accidental wound in the knee with a poisoned arrow, shot by his scholar Heracles, at another. After his death he was placed by Museus among the constellations, from respect for his virtues, and gratitude for the great services which he had rendered the people of Greece. Accordingly, Sir Isaac Newton alleges, (Chron. ly. p. 171.) as a proof that the constellations were formed by Chiron and Museus for the use and honour of the Argonauts, that nothing later than that expedition was delineated on the original sphere; and the fame author intimates, that Chiron lived till after the Argonautic expedition, in which he had two grandsons. The ancients have attributed to Chiron several writings; among which, according to Suidas, he precrites, υπονομεν, in verse, composed for the use of Achilles; and a medicinal treatise on the "Diseases incident to Horses," and other quadrupeds, περιδιαιτηθων; and the lexicographer even pretends, that it is from this work that Chiron derived his name. Fabrius (Bib. Græc. vol. i.) gives a list of the works attributed to Chiron, and discusses the claims which have been made for others to the same writings; and in vol. xiii. he gives him a distinguished place in his catalogue of ancient physicians. Burnet's Hist. Musc. vol. i.


Gen. Ch. Cal. Periarchu one-leaved, five-cleft, erect, permanent; segments oblong, acute. Cor. monopetalous, falver-shaped, or almost wheel-shaped, regular; tube fearlessly longer than the calyx; border five-cleft, spreading; segments egg-shaped, open. Stam. Filaments five, short, attached to the tip of the tube; anthers oblong, erect, convinging, spirally twisted after shedding the pollen. Pfål. Germ superior, egg-shaped; style filiform, a little longer than the stamens, declining; stigma capitate, ascending. Pericarp. Capsule or berry egg-shaped, two-celled. Linn. Smith (one-celled; Lam. Gært.) valves indexed. Smith. Stnls numerous, small, attached to the sides of the receptacle. Efl. Ch. Corolla falver shaped. Stamens inserted into the tube; anthers finally becoming spiral. Style declining. Pericarp superior, two-celled; valves indexed. Smith. Obl. In some of the species the anthers have not been observed to become spiral.

than the internodes. Stem about two feet high, glabrous, with few leaves near the top. Leaves opposite, sessile, erect, smooth, quite entire. Picnium terminal, dichotomous, erect, few-flowered; bracts opposite, awl-shaped; segments of the calyx, narrow, lanceolate, very acute, as long as the tube of the corolla; corolla divided half way down; segments oval lanceolate, acute, spreading. A native of the Cape of Good Hope.

3. C. feidsidei, Linn. Sp. Pl. 127. Mart. 3. Linn. Encyc. 3. Ilid. 3. Willd. 1. Stem stipes; leaves linear-lanceolate, longer than the internodes. Stem a foot or more, herbaceous, cylindric, soft and striate. Leaves opposite, filiform, forked at the decurrent, cottony and glandular. Flowers purple, disposed three or four together in a terminal panicle; peduncles longer than the leaf; lateral ones with a pair of awl-shaped bracts; segments of the calyx lanceolate-awl-shaped, keeled; tube of the corolla the length of the calyx; segments acute, longer than the tube. (AUTHORS NOT BEING STATED)

4. C. felmpijfructa, Linn. Linn. 4. “Leaves lanceolate, ifi-lic, deciduous; calyx tube” the tube.” Border of the corolla longer than the tube. A native of the Cape of Good Hope. From a specimen in the herbarium of La Mare.


Smith Flor. Brit. Eng. Bot. Pl. 417. Woodville Med. Bot. tab. 157. Schmidel bohmen. 1. n. 130. (Centaurium; Linn. Sp. Pl. Mart. Lam.) Common centaur. “Stem herbaceous, dichotomously panicked; leaves ovate-lanceolate, three-nerved; calyx shorter than the tube.” Root annual, small, branched. Stem about a foot high, erect, Falte, with four sharp edges, then broadened from the bottom. Leaves opposite, filiform, quite entire, smooth. Flowers pink-coloured, proceeding from the fork of the stem, filiform, expanding o’/ to a bright ftd; calyx funnel-shaped; segments awl-shaped, calyx, adnate to the tube of the corolla, and only half as long as the tube of the corolla. Petals spreading, shining; segments elliptical, somewhat concave; ament of 12 to 15; Bicn capitatus; with a transverse notch. Whole plant smooth, and very bitter. A native of dry gravelly pastures in Great Britain, and other parts of Europe. Obs. Dr. Bollocks, and Mr. Shepherd of Liverpool, have observed two remarkable varieties growing intermixed with the common plant on the sandy shores of that neighbourhood. The first resembles the common plant in its size, general appearance, and the form of its flowers; but differs in having narrow, spatulate-linear leaves; the segments of its calyx elongated and narrowed, exceeding the tube of the corolla. The other is a much humbler plant; with broad, angular leaves; small, clustered flowers; segments of the calyx longer, but not so much narrowed as in the preceding variety. Dr. Smith expresses a doubt whether they may not be distinct species. See Flor. Brit. vol. iv. p. 172. 12. C. polechella, Willd. 7. Sert. Act. Holms. 1. 1783, 2. 1835. tab. 3. fig. 8. 9. Smith Flor. Brit. Eng. Bot. Pl. 458. (Centaurium centaurium; Linn. Sp. Pl. Centauriun minus plantare; Vull. Parif. 32. tab. 6. fig. 1.) “Stem herbaceous, sometimes simple, but generally branched, and often much lo; leaves egg-shaped; segments of the calyx awl-shaped, a little shorter than the tube. Root annual, small, branched. Stem scarcely two inches high, dichotomous, with four sharp edges. Leaves ovate-elliptical; lower ones very broad; upper ones lanceolate, shining, three or five-nerved. Flowers pink-coloured, from the fork of the stem, often p-swelled, erect; calyx tive-cleft to the base; segments awl-shaped, attenuated, free, about the length of the tube; corolla very slender; segments of the border elliptic-lanceolate; anthers not twisted so much as those of the preceding species, feebly making one turn. A native of dry places about the sea coast in Great Britain and other parts of Europe, flowering in August and September. 13. C. impertusa, Willd. 10. (C. Vaillantii; Schmidt bohmen. 1. n. 132. Centaurium plantare flore inaperto; Vul. Parif. 32. tab. 6. fig. 2.) “Stem herbaceous; much branched, dichotomous; leaves oblong, three-nerved; segments of the calyx awl-shaped, somewhat spreading; border of the corolla connivent.” Allied to C. centaurium, but not a variety of it. A native of pastures on the continent of Europe. 14. C. ficata, Willd. 12. (Gentiana ficata; Linn. Mart. Lam. Centaurium minus ficatum; Buth. p. 278. Prod. tab. 130.) “Stem herbaceous, biped; leaves lanceolate, three-nerved; flowers alternate, filiform. Differs from C. centaurium chiefly in the disposition of its flowers. Root annual. Stem from five to ten inches high, erect, branched, angular. Leaves opposite, filiform; lower ones egg-shaped; middle ones lanceolate; upper ones linear-lanceolate, almost awl-shaped. Flowers purple, sometimes white, filiform, alternate, forming a loose terminal spike; segments of the corolla very acute. A native of moit places in Italy and the south of France. 15. C. lindiiis, Linn. Sp. Pl. 2. M. 6. Linn. Encyc. 6. Ill. 10. Bot. Mag. 511. “Stem somewhat
somewhat shrubby; leaves linear, glaucous; calyces cloven half way down; segments rather obtuse. Stem a foot high or more, slender, cylindrical, smooth, branched near the top. Leaves saucer-shaped, narrow, acute, felled, smooth, rather cleft. Flowers pale red solitary, at the summit of the upper branches; calyx a little bell-shaped, narrowed at the base; tube of the corolla shorter than the calyx; segments of the border oval-oblong, almost erect; anthers not becoming spirial. A native of the Cape of Good Hope. 16. C. baccifera, Linn. Sp. Pl. 7. Matt. 9. Lam. Encycl. 7. ill. 11. Willd. 14. Curt. tab. 147. Bot. Mag. 213. (Centaurium pulcherrimum, Comm. Rat. tab. 9.) "Stem shrubby at the base, much branched, four-corned; leaves linear, green; pericarp resembling a berry." Root perennial. Stem two feet high, cylindrical, naked near the bottom, panicked upwards; branches slender, smooth, compound. Leaves near an inch long, opposite, narrow, acute, smooth, spreading, decurrent. Flowers pale red, small, terminal, on short peduncles; calyx short; segments almost obtuse, keeled; tube of the corolla shorter than the calyx; segments oval-oblong; anthers not becoming spirial. Linn. Pericarp resembling a berry, succulent, somewhat transparent, globular, didymous, red, or faffron-coloured, one-celled; skin very thin; pulp watery; receptacles two, spongy, fixed to the internal side of the berry, corresponding with the external groove; two-lobe, within; lobes curved back to the sides. Gart. A native of Africa. Mr. Curtis (Bot. Mag.) observes, that the feed-veil is by no means a proper berry. For when cut transversely, it is hollow, and divided into two cells, the sides of which are fleshy, and do not appear to split in any regular manner for the discharge of the seeds. 17. C. fruticosus, Linn. Sp. Pl. 8. Matt. 10. Lam. Encycl. 8. ill. 12. Bot. Mag. 37. (Centurian, Comm. Rat. tab. 8. Burm. Afr. tab. 74. fig. 1.) "Stem shrubby; leaves linear-lanceolate, fleshy, somewhat toothed; calyces somewhat egg-shaped, inflated, pubescent." Stem a foot and half high, woody; branches upright; cylindrical, pubescent. Leaves an inch and half long, opposite, oblong. Flowers bright red, at the summits of the branches; anthers spirial. Gartner observes, that the feed-veil of this species has somewhat the appearance of a berry, but less so than the preceding, lying entirely concealed within the calyx. It is egg-shaped, acuminate, red, and finally divides by the future into two valves; so that it is a proper capsule, and forms the connecting link between C. baccifera and the other species. We are even inclined to conjecture, that the feed-veil of C. baccifera, if observed in its left stage, may be found to split into regular valves. A native of Africa. 18. C. demeana, Bot. Mag. 757. Ventenat Hort. Cell. 31. "Stem shrubby, somewhat toothed; leaves crowded, deciduous, oblong, obtricate; calyces globular, five-cleft." According to Ventenat it is distinguished from the preceding by its smaller stem, its very short branches, its larger flowers, and more globular calyx, deeply divided into five segments, and its broader leaves growing in two ranks. But Dr. Sims observes (Bot. Mag.), that there are so many intermediate varieties, as to leave it doubtful whether it be a genuine species. It has been long known in the English nurseries by the name of latifolia. 19. C. angyptiferus, Bot. Mag. 813. "Stem shrubby, smooth; leaves linear, spreading; calyces egg-shaped; segments connivent; segments of the corolla wedge-shaped, ending abruptly in a remarkable tooth-like point." Whole plant smooth. Tube of the corolla longer than in the preceding, extending considerably beyond the calyx. Raised from Cape seeds by Mr. Whiteley of Brompton. 20. C. tetragona, Linn. jun. Sup. 131. Matt. 8. Lam. Encycl. 11. ill. 12. Willd. 16. "Stem shrubby; leaves egg-shaped, three-cleft, rather obtuse; segments of the calyx rather obtuse, keeled." Flowers large, yellow. A native of the Cape of Good Hope. CHIRONIA maritima. Wild. See GENTIANA maritima. CHIRONIA dodcandra, Linn. Sp. Pl. 8. See CHLORA dodcandra. CHIRONIS, Villa, in Ancient Geography, a town of Greece, in the Peloponnesus, according to Polybius: who places it near the town of Messala, and says that it was destroyed by pirates. CHIRONIUM, in Medicine, is sometimes used to signify a great ulcer, and of difficult cure. CHIRONOMI, on the Greek Stage, were those actors who performed, without using words, by the motion of the hand. CHIRONOMIA, in Antiquity, the art of representing by the motions of the hand, and other gestures of the body, any past transactions, whether of true or fabulous history. This made a part of a liberal education among the ancients: it had the approbation of Socrates, and was ranked by Plato among the political virtues. CHIROPAN, in Geography, a bay on the W. coast of New Mexico, situated in about N. lat. 72; into which the river of Para discharges itself, about 130 miles from Pitya. This bay being full of islands is seldom frequented. CHIROTHECA. See GLOVE. CHIROTHECA marina, in Natural History, the name under which Rumphius describes Spongias aculeata, which see. CHIROTHESIA, the imposition of hands on conferring any priestly orders. The word comes from χερος, manus, and ποιειν, pont, which signifies the laying hands upon another. CHIROMONIA, the stretching forth, or holding up of hands, in electing any magistrate, &c. The word comes from χερος, manus, and τενειν, teni, the action of stretching out the hands; and because the ancients gave their suffices by stretching out their hands, they gave the name chironomia to the election of magistrates. This custom was first established in Greece; as appears from an oration of Demothenes against Neka, and that of Lichines against Ctephylos: hence it passed to the Romans. From profane authors it passed to ecclesiastical ones; and was used by them, not only in speaking of elections, but also of ordinations. See IMPOSITION, and ORDINATION. For the difference between chirothelia and chironomia, see Harrington's Preceptor of Popular Government. CHIRP, in Ornithology, is the name of the first sound which a young bird utters, as a cry for food, and is different in all nations, if attentively regarded; so that the hearer may distinguish the species of the birds, though the note should hang out of his sight, and be heard. This cry is weak and curious; it is dropped entirely as the bird grows stronger, nor is it afterwards intermixed with its song; the chirp of a nightingale (e. g.) being hoarse and disagreeable. The chirp consists of a single sound repeated at very short intervals, and is common to nightingals of both sexes. Phil. Trans. vol. liii. CHIRURGEON, an obsolete word, from χερος, the hand, and γεωργος, work; denoting a manual operator, and now always pronounced, as well as written, SURGEON. The conduct of surgeons was formerly so much under the guidance and control of physicians, that Dr. Samuel Johnson defines a surgeon to be "one whose duty it is to act in external maladies by the direction of the physician." See the article SURGEON. CHIRURGERY, belonging to the practice of a surgeon,
geon, and now universally written and pronounced Sur-

CHIRURGICAL, pertaining to surgery, or manual operations.

CHIRURGIEN noir, in Ornithology, the Black Jacana, PARRA nigra of Gmelin, is so noted by Buffon.

CHIRRY, in Geography, a town of France, in the department of the Oise and district of Compiegne, 3 miles S.S.W. of Noyon.

CHISELY 1nd, in Agriculture, a term appropriated to that sort of land which breaks, when it is turned up by the plough, into pieces like the chips made by the hom-puter's child in the hewing of stones. It is of a middle nature, between the tandy land that falls off from the plough-share, like bran or sawdust, and the clayey, that is raised in large globes.

It is of several colours, grey, brown, reddish, and blackish, and usually contains a large quantity of sand, and no small number of pebbles.

CHISHULL, EDMUND, in Biography, a learned divine and antiquary, was born at Eyworth, in Bedforshire, and educated at Corpus Christi college, Oxford, where he obtained the degree of master of arts in 1693, and was also chosen a fellow of his college; previously to this he had published a Latin poem, on the battle of La Hogue, and in 1694 he published another ode on the death of the queen, which is preferred in the third volume of the Musæ Anglicæ, though it does not display poetical fervour so much as a true classical taste. Four years afterwards Mr. Chishull obtained a traveller's exhibition from his college, and failed for Smyrna. Before he left his native country, he preached a sermon to the Levant company, which was published, and which obtained for him the chaplainship to the English factory at Smyrna, in which station he continued till the spring of 1702. In June 1705 he was admitted to the degree of bachelor of divinity, and soon after he engaged in a controversy with the learned Mr. Dodwell, by publishing "A Charge of Heresy maintained against Mr. Dodwell's Dis-course concerning the Mortality of the Soul," which is reckoned one of the principal books written in this controversy. In 1707 Mr. Chishull preached a sermon against the absurdities and enthusiasm of the French prophets, which he published in the ensuing year, with an historical appendix, containing collections applicable to all such prophecies as were condemned in the sermon. Immediately after this he was presented with the vicarage of Walthamlow in Essex, and in 1711 he was appointed one of the chaplains in ordinary to queen Anne. Besides the above, he published several other theological discourses; of which, one was on ducings, preached before the queen, and published by her special command. As an antiquarian, one of his first works was entitled "Inscriptio Sigae antiquillni na abnormalities, this was illustrated with a learned commentary; to which he afterwards added "Notarum ad Inscriptionen Sigaram appendices." These pieces were afterwards incorporated in his "Antiquitates Africane." When Dr. Mead published his Harveian oration in 1724, Mr. Chishull added to it, as an appendix, "Differtatio de Nummis quibusdam a Smyrnæis in Medicorum honorum percollos," This dissertation excited a controversy concerning the condition of physicians at ancient Rome. The question was whether they were usually vile and detestable beings; or, at least, some among them, those who enjoyed the privileges of a free condition. The greatest literary work of Mr. Chishull was entitled "Antiquitates Africane;" it ran through several editions, and the "Patri-"

num Ancyranum," This work was printed by subscription to which Dr. Mead contributed fifty-one guineas. The inscriptions contained in it were collected by confidit Sherrard, Dr. Piccinini, and Dr. Lilly, afterwards bishop of St. Aphas; they were afterwards deposited in the Earl of Oxford's library, and are now preserved in the British Museum.

Mr. Chishull added to his "Antiquitates:" two small pieces addressed to the Rev. John Horn. He formed a delin of publishing a second volume, the printing of which was actually begun, when death put a stop to its progress, and it has never been ascertained in what manner the manuscripts were disposed of. In 1731 Mr. Chishull was presented with the rectory of South-church in Essex, where he did not long enjoy. He died at Walthamlow on the 15th of May 1733, sincerely regretted by his friends, and by those who were capable of daily appreciating his learning and talents. One of his contemporaries, Dr. Taylor, styles him "Vir celeberrimus ingenii acuminis et literarum peritissimus, quius excellens maxime," and Dr. Mead has allowed on a very high encomium in the preface which introduced Mr. Chishull's dissertation on the Smyrna coins; he likewise testified a sincere regard to the memory of his friend, by publishing an account of his travels in Turkey. Mr. Chishull's knowledge of the ancient languages gave him an excellent character as a divine.

CHISOING, or CISOING, in Geography, a town of Flanders, with an abbey; 2 leagues N.N.W. from Orcheis.

CHISME, or CHISME, a sea-port town of Afsatiki Turkey, on the west coast of Natalia, opposite the island of Scio, between which and the continent is a narrow strait, where the Turkish fleet was destroyed by the Russians in the year 1779; 40 miles W. of Smyrna. The ancient name of this town was Cyllus. N. lat. 38° 24'. E. long. 36° 16'.

CHISSAMA, a province of the kingdom of Angola in Africa, situated under the 9th degree of S. lat. near the mouth of the river Coanza. It is a Portuguese settlement, consisting of three commanderies, whole despotic governors exercising a tyrannical cruelty over the natives. The soil abounds with a peculiar salt, formed of a briny water, which the inhabitants call into oblong pieces like bricks, about 5 or 6 inches long, and exchange with the Portuguese for meal, oil, and other commodities. This salt is reckoned of such excellent quality, not only for food, but also for physic, that the merchants convey it through all Ethiopia, and derive from it an extraordinary gain. The province abounds likewise fine honey and wax, but water is extremely scarce, as this province has no rain from May to October, and its mountains are destitute of springs; so that the inhabitants who are near the Coanza supply themselves from that river, at the hazard of being devoured by the wild beasts, which swarm along its banks.

CHISSEL, an instrument much used in sculpture, masonry, joinery, carpentry, &c.

There are chisels of different kinds; though their chief difference lies in their different fize and strength, as being made of steel well hardened and tempered; but they have different names, according to the different uses to which they are applied.

The chisels used in carpentry and joinery are, 1. The former, which is used first of all before the paring chisel, and just after the work is scribed. 2. The paring-chisel, which has a fine smooth edge, and is used to pare off or smooth the irregularities which the former makes. This is not struck with a mallet, as the former is, but is pressed with the shoulder of the workman. 3. The miter former, this is used for cleaning acute angles at the point, or corner of its narrow edge. 4. The mortise-chisel, which is narrow, but very thin and strong, to ensure hard blows; and it is cut in a very
very broad basil: its use is, to cut deep square holes in the wood, for mortises, 5. The gorge, which is a chisel with a round edge; one side Whereof serves to prepare the way for an auger, and the other to cut such wood as is to be rounded, hollowed, &c. 6. Socket chisels, which are chiefly used by carpenters, &c. to have their flanks made with a hollow flank, that they may receive a strong wooden peg, fitted into it with a mallet. These chisels are distinguished according to the breadth of the blade, into half-inch chisels, three-quarter of an inch chisels, &c. 7. Ripping-chisels, which is a bucket chisel of an inch blade, having a blunt edge, with no blade to it; its use is to trip or tear two pieces of wood sundry, by forcing in the blunt edge between them.

CHISEL, in Geography, a foot in the state of the Tremper, 21 miles from the English ferry on New River, 43 from Argillev, and 105 from Long island, on holiton. CHIT, is the name of an instrument used in cleaning lather.

CHITARONE, A large Semitic guitar.

CHITARRA. Lat. See Guitar.

CHIT, in Geography a towns of the island of Cyprus, near Larnaca, much celebrated among the ancients. See CITHUM.

CHIFFIQUE, Du, lake, called also Phileum lake, a L. of North America, separated from lake Miron, in N. lat. 55° 7', by a short, narrow, and small tract. It is not more than 7 miles long, and its course is about N. W. and is succeeded by the lake Des Bois, which runs about 24 miles in a S.S.E. and N.N.W. course, and is full of islands; the passage to it being through an intricate, narrow, winding, and shallow channel for 8 miles.

CHITON, in Zoology, a genus of Testacea, or shells, the animal inhabitant of which is a deres (see Dories), and the shell, which is multivalved, consisting of several segments or valves disposed into the back.

Species.

HETERODUS. Shell of six diurated valves. Schrot.

This is of a moderate size; the color blackish-grey, with white spots and dots, and very finely marked with minute granulated lines. A native of America.


Inhabits America. The farm is an oblong, oval, narrow, with tubercles above disposed in a quincunc, sides convex, mixed with white and marked with brown undulated bands; back greenish, with a broad deep band of black.

ACULEATUS. Shell of eight valves, diurated; body somewhat acutated. Linn. A. monac. Acad. Limax marginata, Rumpf.

An Asiatic species. The shell is tuberculated, oval, rough on the upper part, with narrow, pubescent, somewhat curved, unequal red prickles.

PASCALURUS. Shell of eight valves; body with a tuft of hair on each side of the valves. Schrot.

Described as a native of the coast of Barbary; the valves are cuneiform, smooth, and slightly crenated; the lateral tufts of hair white.

SQUAMOSUS. Shell of eight valves and semi-durated; the margin covered with minute feakes. Linm. &c.

There are many varieties of this species; one (3) is rough and variegated, Obtusus fischeri variegatus, Gmel. And another smooth and variegated (3) Chiton levis variegatus, Gmel. The obtusus gillicum of Argenville, and Chiton fumosus,吁tia setentus; of Schroeter, are also deuided varieties of this species. The valves are partly granulated, and partly fluted very finely; the extreme valves lustrated. Found chiefly in America.

RUBENS. Shell of eight valves; somewhat diurated, the first curved; body red. Linn. Fr. Stur.

This is of an oval and sub-elliptic form, with the back caraolated or elevated into a keel. Colour tawny, with a darker streak on the back bordered with white; margin of the animal brown or yellow with red spots and dots. Inhabits the North Sea. Chemnitz describes a variety of this species that is marked with white and red.

PUNCTATUS. Shell of eight valves, smooth; body with excavated dots. Gmel. Chiton Punctatus, Gmel. Linn. Colva Punctata, m. & m. Linn. nat. cur. A general inhabitant of Europe, Asia, and Africa.

ALBIS Shell of eight valves, smooth, first emarginated behind; body white.

This is of an oval shape. It inhabits the North Seas. Linn. Fabre. &c.

CENTRUS. Shell of eight valves, fimbriated; body reddish, with a fimbriated elevated border. O. Fabr. Found among the rocks of the Bide in the Nonya Sea. It is of a small size, measuring only two inches in length; the form is depressed, and narrower below, with a longer longitudinal groove down the back, one on each side the middle dorsal ridge. Colour reddish when the animal is alive.

COLORUS. Shell of eight valves, thick; outside sea green; inside snowy white, edged with black. Gmel. &c. Native country unknown. The size is rather large.

CERASINUS. Shell of eight valves, smooth, and cherry-coloured, with snowy marginal teeth. Chemn. &c. Native place unknown.

MAGELLANICUS. Shell of eight valves, thick, black; brown; above convex, with a black fimbriated band in the middle of the back, and lateral yellowish edge. Gmel. Saba. &c.

Inhabits the limits of Magellan. This species is of a large size; shell fine green, bordered with brown, and black within the middle.

PURPUSUS. Shell of eight valves, brown, smooth; insides and teeth of the margin brown; back with triangular black spots, and obscure yellowish bands on each side. Chemn. &c.

This is found in India. It is of a narrower form than the last; marginal teeth are numerous, and largest on the two extremity valves; and the back is more elevated and carinated.

MACULATUS. Shell of eight valves, smooth; within sea-green; margin covered with greenish white feakes; an arrow part of the middle valves, and lides of some spotted with brown. Chemn. A rare species. Country unknown.

MARMORATUS. Shell of eight valves, smooth, black and white variegated; middle valves greenish within. Gmel. Chemn. &c.

Inhabits the American seas. Size variable: colours black and white, variously disposed in alternate blackish and white bands, spots, and valleys; the fibrous border tumid with alternate white and black spots, and obscure yellowish bands on each side. Gmel. A variety with seven valves is described by Schröeter.

GRANULATUS. Patchy, above flat, with numerous elevated dots disposed in regular series; border broad, crenate, with alternate black and white patches. Chemn.

A native of the American ocean. Valves usually eight, rarely seven.

PIXUS. Shell eight valued, above smooth, patchy, black variegated with white. Chemn.

Inhabits the American and Red seas. This is allied to the preceding species. The inside of the shell is black in the
the middle, at the sides greenish; and the back is marked with alternate black and white spots, bands, and veins. Rarely found with only two or three valves.

**INDEX.** Shell of eight valves; whittish ash colour, with the border fleshy; middle valves very finely punctured. Chemn. A native of the American seas.

**MEX{
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**CHIT Ting,** fab-cylindrical, with thin wall. Fab. inhabits the Norwegian seas, near Bergen. Size very small.

**CHITTEN,** fab of eight valves, carinated, diaphanous, and banded; each of the extreme valves very finely punctured. Chemn. This species is of a small size, and inhabits the Norwegian seas. Within the colour is whitish, with alternate blackish and paler bands.

**CHITTEL,** or CHITTIP, or CHITTIP, probably the ancient UPHAR, in Geography, a town of Hindoostan, in the country of Guzerat, celebrated for its manufacture of chintzes; 172 miles S.W. of Amadabad. N lat. 24° 22'. E. long. 75° 3'.

**CHITRO,** a town of European Turkey, in the province of Macedonia, situated in the bay of Salamchi; 56 miles S.S.E. of Edessa. N lat. 40° 50'. E. long. 2° 10'.

**CHITISE,** in Buymy, the name of a Chinese tree, called also Sette.

**CHITTAGONG,** CHITTICONG, or ISLAMABAD, in Geography, the name of a province of the poutinoff, which separates the gulf of Bengal from the Chineese sea, between the Burampioter river and the borders of Arracan, and the Birmen empire. Its chief town of the same name, situated at a considerable distance from the river Nest, which bounds the British and Birman territories, is the seat of the provincial government, and residence of the English magistrature. The banks of the river are covered with deep jungles, interspersed with bracken spots of cultivation, and a few wretched villages, inhabited by the poore clans of herdsmen, and the families of roving hunters, whose occupation it is to catch and tame the wild elephants, with whom the foresters abound. Such unfrequentad places afforded to perfons, concerned in a lawf. traffic, an affluence, where they escaped the cognizance of the English officers of justice, and furnished the emperor of the Birmans with occasion for complaint and remonstrance, or rather for aggressions on the territries of the English East-India company, which terminated, after a threatened conflict, in compromise and conciliation. The Portuguese made their first settlement in this country. The capital, called afoe, Islamabad, is 1° 43'. E. of Bafalor, in N lat. 22° 50', and E. long. 91° 5'. From this town the coasts of Arracan and Pegu take a S.S.E. course to Cape Negro, the extreme point of Pegu to the S.W. the latitude of which is under 16 degrees, and distance from Islamabad about 117 geographic miles.

**CHITTELDROOG,** a town of Hindoostan, and capital of a province of the same name, in the Mysore country; though which passes the river Hagner. It is distant 85 miles N.W. from Binaupetam, and 95 E. of Bednore. N lat. 19° 30'. E. long. 75° 5'.

**CHITTENDEN,** a county of America, in the state of Vermont, situated on the lake Champlain, between Franklin county on the N. and Addison on the S.; the Mule river passes through its N.W. corner, and Otter river divides it nearly in the centre. Its chief town is Burlington. This county contained, by the census of 1790, 44 towns, and 7395 inhabitants. Since that time the northern counties have been taken from it. In that matter its line nor number have been ascertained. Also, a township in Rutland county, and state of Vermont, containing 159 inhabitants. The road over the mountain passes through this township. It is distant 7 miles E. from the fort on Otter creek, in Pittsfield, and about 60 N. by E. from Bennington.

**CHITTENGO,** or CANNIDGE, a considerable stream, which runs northercly into lake Oneida, in the state of New York.

**CHITTEPUT,** a town of Hindoostan, in the Carnatic; 14 miles N. of Ginger.

**CHITTIGON, or ISLAMABAD.** See CHITTAGONG.

**CHITTIM,** in Scripture Geography, denotes, according to Balafras, the Cuthimans, who inhabited Sufiana, near Babylon, and who, marching under Nebuchadnezzar, contributed to the siege of Tyre. Bochart supposes the Romans to be meant by Cuthim; but as the Cuthimans are never called Chttim in Scripture, and the Romans were not concerned in the siege of Tyre, mentione by the prophet I'asha (ch. xxiii. v. 1, &c.), Calmer supposes that the appellation of Chttim is applied to the Macedonians, and that the prophet speaks of the country of Macedonia as an island, denoting it the land of Chttim, after the manner of the Hebrews, who thus call peninsulas and maritime counties. However, there seems to be no sufficient reason for retaining the term Chttim to Macedonia, which was not particularly a maritime country, but it may include all Greece, and more especially the islands of the Archipheage, and perhaps up the Bolphorous, since vessels might navigate from thee to Tyre, as they now do to Egypt, &c. The Greek colonists, differing about the Mediterranean, might also be comprehended under the denomination; and, consequently, Sicily, Sardina, and a great part of Italy.

**CHITTING,**
CHITWA, in Geography, a town of Hindooften, in the Carnatic; 38 miles N.W. of Arcot, and 70 W. of Madras.

CHITWA, a town of Hindooften, in the Bahar country; 87 miles S. of Patna, and 72 S.S.W. of Bahar.

CHITWA, in the Materia Medica, a name used by some authors for a kind of Agnum abietis, which is reddish, and of a very fine scent.

CHITWA, in Geography, a town of the peninsula of India, in the province of Cochin, near the coast of Malabar. N lat. 10° 37' 15". E. long. 76° 5'.

CHIVA, a town of Spain, in the province of Valencia; 15 miles W.N.W. of Valencia.

CHIVALRY, See CHEVALAGE.

CHIVALRY, an Antiquity, an institution which, according to some writers, took its rise from the crusades, but according to others, gave occasion to that enterprise, and which, though founded in captivity, and productive of extra­vagance, had a very considerable influence in refining the manners of the European nations, during the 12th, 13th, 14th, and 15th centuries. This institution naturally arose, says Dr. Robertson, (obi infra,) from the rise of society at that period. The feudal state was a state of perpetual war, rapine, and anarchy; during which the weak and unarmed were exposed to perpetual insults or injuries. The power of the sovereign was too limited to prevent these wrongs; and the administration of justice too feeble to redress them. Against violence and oppression there was scarcely any protection, besides that which the valour and generosity of private persons afforded. The fame spirit of enterprise which had prompted so many gentlemen to take arms in defence of the oppressed pilgrims in Palestine, incited others to declare themselves the patrons and avengers of injured innocence at home. When the final reduction of the Holy Land under the dominion of Infidels, put an end to these foreign expeditions, the latter was the only employment left for the activity and courage of adventurers. The objects of this institution were to check the insolence of overgrown oppressors, to succour the distressed, to relieve the helpless from captivity, to protect or to avenge women, orphans, and ecclesiastics, who could not bear arms in their own defence, to redress wrongs, and to remove grievances. These were considered as acts of the highest prowess and merit. Valour, gallantry, and religion, were blended in this institution, humanity, courtesy, justice, and honour were its characteristic qualities; the enthusiastic zeal produced by religion served to give it singular energy, and to carry it even to a romantic excess; men were trained to knighthood by long previous discipline; they were admitted into the order by solemnities no less devout than pompoms; every person of noble birth courted the honour; it was deemed a distinguishing privilege, inferior to royalty, and monarchs were found to receive it from the hands of private gentlemen. These various circumstances contributed to render a whimsical institution of sublimal benefit to mankind.

Another ingenious writer, who traces the origin of chivalry to the crusades, thus represents the occasion and manner of its introduction. On the crumbling of the western empire into small states, with regular subdivisions of vassals and their chiefs, who looked up to a common sovereign, it was soon found that these chiefs had it in their power to make themselves very formidable to their masters; and just in that crisis of European manners and empire, the Saracens having expelled Christianity from the East, the western princes seized the opportunity, and with great craft turned the warlike genius of their feudataries, which would otherwise have preyed upon themselves, into the spirit of crusades against the common enemy. See CROSS. But when, afterwards, the ardour of the crusades was somewhat abated, though not extinguished, the pious princes and their families had fitted it into established monasteries. At this juncture, when the relics of the spirit of their vassals had little employment abroad, and was restrained, in a consider­able degree, from exerting itself with success in domestic quarrels, it broke out in all the extravagance of "knights-errantry." Military fame, acquired in the Holy Land, had enticed the adventurers to the insignia of arms, the source of heraldry; and inspired them with the love of war and the passion of enterprise. Their late expeditions had given them a turn for moving in quest of adventures; and their religious zeal had inflamed high nations of priests, judges, and chivalry. The scene of action being now more confined, they turned themselves from the "world's debates," to private and personal amusements. Chivalry was employed in refining humble and faithful vassals from the opinions of petty lords; their women from savage lust; and the lowly heads of hermits (a species of calein monks, much re­verenced in the Holy Land) from rapine and outrage. In the mean time the courts of the feudal sovereigns became magnificent and polite; and, as the military institution had fulfilled, military merit was to be upheld; but, delitute of its former objects, it naturally softened into fictitious images and courteously exercised of war, in "julls" and "tournaments," where the honour of the ladies supplied the place of zeal for the holy sequeleure; and thus the courtesy of elegant love, but of a wild and fanatic species, as being engraved on spirit­ual enthuiasm, came to mix itself with the other charac­ters of the knights-errant.

Dr. Hurd, in his "Letters on Chivalry and Romance," observes, that chivalry, properly so called, and under the idea of a distinct military order, conferred in the way of investiture, and accompanied with the solemnity of an oath and other ceremonials, as described in the old historians and romances, was of later date than the feats of Charlemagne and our Arthur, and seems to have sprung immediately out of the feudal constitution. This constitution produced a very great change in the politics of Europe; and its first and most sensible effect was the erection of a prodigious number of petty tyrannies, exercised by the great barons over their dependent vassals. These barons, though closely attached to the service of their prince by the conditions of their tenure, became kind of absolute sovereigns, at least with regard to one another; and as their aims and interests often interfered, the feudal state was, in a great degree, a state of war; the several combinations of feudal tenants were so many separate armies under their head or chief; and their castles were so many fortresses, as well as palaces, of their petty princes. Hence arose the peculiar encouragement which was given to the use of arms, under every different form of attack and defence, as the safety of these different communities, or the ambition of their kiders, might require.

This condition of the times is supposed by the ingenious prelate to have given rise to that military institution, which we know by the name of "Chivalry." In the intervals of peace, the military discipline of the followers of these independent nobles was not to be relaxed, nor their armour suffered to cool, by a total diffuse of martial exercises. To this circumstance, he conceives, may be traced the proper origin of "julls" and "tournaments." Those images of war, which were kept up in the castles of the barons, and, by an useful policy, converted into the amusements of the knights, when their arms were employed on no serious oc­casion. See just and TOURNAMENT.
CHIVALRY.

From the circumstances of the feudal government, which gave rise to chivalry, the author accounts for the various characteristics of this singular profession. Hence were derived the passion for arms, the spirit of enterprise, the rewards of valor, the splendid of equipage, and, in short, everything that raises our ideas of the heroes, gallantry, and magnificence of the sons of Mars. He also proceeded their romantic ideas of justice, their passion for adventures, their eagerness to run to the succour of the distressed, and the pride they took in redressing wrongs and removing grievances, which are distinguishing characteristics of genuine chivalry. Moreover, the courtesy, affiliation, and gallantry, for which these adventurers were so famous, are but the natural effects and consequences of their situation. The castles of the barons were the courts of those little sovereigns, as well as their fortresses; and the refort of their vaillants, in honour of their chiefs, and for their own proper security, would render that civility and politeness, which are seen in courts and insensibly prevail there, a predominant part in the character of these assemblies. Besides, the prudence of the ladies, in those courts and circles of the great, would operate so far on the chivalric knights, as to give birth to the attentions of gallantry: and as violations of chastity were the most atrocious crimes which they had to charge on their enemies, they would pride themselves in the magnificence of being its protectors; this virtue furnishing the fairest and finest claim of the sex itself to such protection, it is no wonder that the notions of it were, in time, carried to so Platonic an elevation. To this purpose the great matter of chivalry expresses his sentiments on the subject:

"It hath been throu' all ages ever seen,
That, with the praise of arms and chivalry,
The prize of beauty still hath joined been;
And that for reason's special privy:
For either doth on other much rely;
For He meecmons molt fit the fair to serve,
That can her bold defend from villany;
And She molt his service doth deserve,
That taint is, and from her faith will never forwe.

Spenfer, b. iv. c. 5.

As to the character of religion, which was so deeply imprinted on the minds of all knights, and was essential to their infliction, insomuch that, it is said, "the love of God and of the ladies," went hand in hand in the duties and ritual of chivalry, two reasons may be aligned for this singularity; viz., the superlition of the times in which chivalry arose, which was so great, that no institution of a public nature could have found credit in the world, that was not consecrated by the churchmen, and closely interwoven with religion; and also the condition of the christian states, which had been harassed by long wars, and had but just recovered a breathing time from the brutal ravages of the Saracen a.miss. The remembrance of what they had lately suffered from these grand enemies of the faith, made it natural and even necessary to engage a new military order on the side of religion. See RECREANT. The preceding characteristics of chivalry, which Dr. Hurd deduces from the essential properties of a feudal government, are made to result from the spirit of crusades, by those who trace their origin to these military enterprises; whereas this author considers the latter as only an accidental effect of the former. He allows, however, what indeed cannot be reasonably contested, that chivalry as it is represented in books of romance, (so much posterior to the date of that military institution) took its colour and character from the impressions made on the minds of men by the spirit of crusading into the holy land. Accordingly there are, as he apprehends, two distinct periods, which ought to be carefully observed in a deduction of the rise and progress of chivalry. The first is that in which the empire was overturned, and the feudal governments were everywhere introduced on its ruins, by the northern nations. In this era, that new policy settled itself in the west, and operated so powerfully as to lay the first foundations, and to give the remote causes of what we know by the name of chivalry. The second, which is when these causes had taken a fuller effect, physicists themselves in that signal enterprise of the crusades; which not only concurred with the spirit of chivalry, already pulling it in the minds of men, but brought a prodigious increase, and gave a singular vigour and force, to all its operations. In this era, chivalry took deep root, and at the same time shot up to its full height and size. From this last period the Romances both in prose and verse, derive all their ideas of chivalry. See ROMANCE. But it was, as our learned prelate conceives, the former period that gave birth to this institution; as he infers not only from the reason of the thing, but from the clearer information of authentic history. For there are traces of chivalry, in its most peculiar and characteristic forms, to be found in the ages preceding the crusades; and even jults and tournaments, the image of serious knight-errantry, was certainly of earlier date than that event. Our author, referring to the "Memoirs of the Academy of Inscriptions and Belles-Lettres," T. xx., proceeds to show that there is a remarkable correspondence between the manners of the old heroic times, as painted by their great romancers, Homer, and thence which are represented to us in books of modern knight-errantry; and this is a fact which is accounted for by the assistance of another, viz., that the political state of Greece, in the earlier periods of its history, was similar in many respects to that of Europe, as broken by the feudal system into an infinite number of petty independent governments.

This similitude is illustrated in the following particulars.
The military enthusiasm of the barons is but of a piece with the fanaticism of the heroes, as they are exhibited by the Gothic romances and by the Greek poet. We also hear much of knights-errant encountering giants and quelling savages, in books of chivalry. These giants were opprobrious feudal lords, occupying their strongholds or castles; and their dependants of a lower form, who imitated the violence of their superiors, and though delithete of castles, had their lurking places, were the savages of romance. The greater lord was denominated a giant, for his power; the less, a savage, for his brutality. Another terra of the Gothic ages was monsters, dragons, and giants. In all these respects, Greek antiquity very much resembles it. For what are Homer's Labyrinth and Cyclops, but bands of lawless savages, with each of them, a giant of enormous size at their head? And what are the Greek Jason, Minos, and Minos, but knights-errant, the exact counterparts of Sir Lancelot and Amadis de Gaul? Moreover, the oppreession which it was the glory of the knight to avenge, were frequently carried on, as we are told, by the charms and enchantments of women. Similar to stories of this kind are those of Calipho and Circe, the enchantresses of the Greek poet. Besides, robbery and piety were favourable to both; so far were they from reflecting any different on the ancient or modern redressors of wrongs. To account for this odd circumstance, we ought to recollect, that in the feudal times, and in the early days of Greece, when government was weak, and unable to redress the innocent injures of petty sovereigns, it would be glorious for private adventurers to undertake this work; and if they could
could accomplish it in no other way, to pay them in kind by
downright plunder and rapine. Their manners, in another
respect, were the same. Barbarity was in credit with both.
Whilst they were extremely watchful over the chastity of
their own women, that was the only safeguard, they were
armed lawful prise. Or, if at any time the demands of war
at home  were compulsory enough to cover the facts by an
ingenious fiction. The off-spring was regard divine. We
also find, at this period, the grandilocutions of character,
and tenderness of the particular, that took upon them the
names of the heroic ages. Achilles was at once the most
relentless, vindictive, implacable, and the friendliest of
men. Similar to this is the repetitio antithesis that occurs
in the Gothic romances, where it is almost true what
Butler says humorously of these heroic beings, that
"They did in fight but cut work out
To employ their countries about."

These contradictions in the characters of ancient and
modern men of arms can be reconciled only by observing, that,
as in these latter times dangers and disasters of all sorts
abound, there would be the same demand for compulsion,
gentleness, and generous attachment to the unfortunate,
those especially of their own class, as of the retainers, rage,
and animosity against their enemies. Further, if we advert
to the main games which ancient Greece delighted to
celebrate on great and solemn occasions, we shall perceive
that they had the same origin, and served the same purpose,
as the tournaments of the Gothic warriors. And, lastly,
the passion for adventure, to natural in their situation, would
be as naturally attended with the love of praise and glory.
Hence the same encouragement, in the old Greek and Gothic
time, to panegyrists and poets: the bard being as welcome
to the tables of the feudal lords, as the AODIOLO of old
to those of the Gothic heroes.

Bishop Warburton (in a note to Locke's Labour lost) and
Warren (Dict. pref. to the History of English Poetry, vol. 1)
invoke to the hypothesis which traces the first idea of
chivalry and romance to Spain, where it was introduced
by the Saracens or Arabsians, who having been for
some time settled on the northern coasts of Africa, entered
Spain about the beginning of the 8th century. Maddox,
in his "Introduction to the History of Denmark," followed
by Pinkerton's (Hist. of the Scythians and Goths) and Percy
(in the Ancient Metrical Romances), ascribes to the texts
and rites of chivalry a Scandinavian origin. An anonymous
writer, however, is of opinion, (Month. Magaz. Feb. 1813)
that neither Moorish Spain, nor Gothic Scandinavia gave
this very decisive impulse to the chimer of early modern
civilization; but rather Armories, and the connected
princes of Britain. In support of this opinion it is urged,
that all the European nations take their renaissance of
chivalry from the French; and that the heroic age of
Europe in the north of France; that the older races of
chivalry have especially celebrated the heroes of Greece
or Lycia; and are therefore of Armoric origin, that the
time derived from the language of Armorica, and true
chivalry, though of obscure origin, is also probably Armorican.
Accordingly it is all said, that chivalry resembles in
the spirit of its operation, a confederacy of country-gentle
men, to ward off from each other the dangers and evils
of anarchy. A defensive, not an offensive spirit characterizes
the obligations of a knight; and his oath required him to
protect the church against heathens, ladies against ravens,
orphans gild enroaching guardians, and the conquered
equal against infliction. An exclusive care for the interests of
gentlemen distinguishes the practice of the initiates; and
whilst the personal rights of women of the lower classes were
never crossed by the feudal process, the order of ladies were regarded
with superstitious politeness. Such features, it is felt, seem
to be rather the relics of a receding than the tokens of a
reviving civilization. The whole spirit of chivalry, the nobility
of the towns, the prowess of the feudal princes, and its
religious character imply an advancement in society, to which
the Scandinavians could not be attuned. The second reference
for ladies cannot have proceeded from the Mahomedan
Armories alone, as the anonymous writer maintains, it was
adapted by its political circumstances, its Christianity,
and its long participation of Roman culture, to become the
source of such peculiarities. Some certain, however, be it
admitted that a strong resemblance to those barbaric
orders which were common to the Nordic provinces of Gaul
and Britain, which retain, till this time among the Welsh,
that some influence. See ROMANS.

Chivalry, whatever may be the source of its original
in England during the more recent years of the 14th and
15th century, Edward III had revived under Edward I. This
phase was one of the most remarkable features of the era, in
which it flourished, and both delighted and excited its
followers. As a proof of this, it will be sufficient to
consider, that when he was on his return from the Field
after his father's death, and knew at his presence was
ardently desired in England, he accepted an invitation to
a tournament at Chalons in Burgundy, where he displayed
his skill and valour to great advantage, and gained a com-
plete victory. Edward III, was no less true of chivalry, and
encouraged it both by his example and his income.
Having formed the design of affixing his crown to the crown
of France, he laboured to imbue his faithful with the spirit
of chivalry, and to inculcate his virtues as possible into his
service. With this view, he instituted several tournaments,
which he solicited the masters who delighted in such arts of
combat, or who were skilled in hospitality, and loaded such of them as
excelled in martial sports with honours and rewards, in order to
attract them to his person and engage them to fight in his cause
with the same fire, and at the same time, to maintain the
most honourable order of the garter, which he, as his own
commander-in-chief, the Black Prince, was the first to
understand. Their first companions were persons famous for
their victory at tournaments, and in real wars. The reigns of
Edward I and Edward III continued not a little to promote
valour, munificence, and a kind of gaudy among persons of
condition, who aspired to the honours of knighthood, which were then
objects of ambition to the greatest princes. At
the home courts, it was felt, that the nobility who resided
in the feverish rates of Cambrai, were the focus of
activity. Although this may be regarded as an engine
and the tournaments, the spirit of the nobility and the
courtiers were fixed by the same virtue. By these lines, in other
places of an inferior character could obtain the
knighthood, which were conferred with much solemnity in
the annual public occasions, and in the presence of the most
notable assemblies. After the candidate had taken
practically of his proctors, and other virtues, to make that
formation, he had prepared himself for the morning of his
life, consisting of his must, his defence, and his arguments;
he took an oath, which consisted of 24 articles, in
amongst other things, the two that he would be a good,
brave, loyal, just, generous, a diligent, knight, a champion
of the church and clergy, a protector of the ladies, with a
redresser of the wrongs of widows and orphans. To a purpose.
purpose we may observe, that when Alphonso V. king of Portugal, conferred the honour of knighthood on his son, he commanded him to kneel down by his side, and instructed him in the nature and duties of the order into which he was admitted; and, amongst other things, directed him to consider, that as the priesthood was instituted for divine service, so was chivalry for the maintenance of religion and justice. A knight, he adds, ought to be the husband of widows, the father of orphans, the protector of the poor, and the prop of those who have no support; and who they do not act thus, are unworthy to bear that name. Those who acquitted themselves of these obligations in an honourable manner were favoured by the fair and courted by the great; but those who were guilty of base dishonourable actions, were degraded with every possible mark of infamy. (See Knight.) All this could hardly fail to have some influence on the conduct of those who were invested with that dignity; though, from the rudeness of the times, and the general dilution of manners which then prevailed, that influence was probably less than might have been expected. However, the spirit and practice of chivalry did actually produce a very beneficial effect. “I will venture to say,” as Lord Lyttelton observes (Hill. Hen. II. vol. iii. p. 161, 8vo.) “that from the 9th to the 16th century, the brightest virtues which dignified either the history of this nation or that of any other people in the whole Christian world, were chiefly derived from this source. Had it not been for the spirit of chivalry, the corruption of religion, the want of all good learning, the superstition, the ferocity, the barbarism of the times, would have extinguished all virtue and sense of humanity, as well as all generous sentiments of honour, in the hearts of the nobility and gentry of Europe; nor could they have been able to repel the military enthusiasm of the Saracens and the Turks, without the aid of another kind of fanaticism, which was excited and nourished in them by means of that spirit.”

“This singular institution,” says Dr. Robertson (ubi infra), “in which valor, gallantry, and religion, were so strangely blended, was wonderfully adapted to the taste and genius of martial nobles; and its effects were soon visible in their manners. War was carried on with less ferocity, when humanity came to be deemed the ornament of knighthood no less than courage. More gentle and polished manners were introduced, when courtesy was recommended as the most amiable of knightly virtues. Violence and oppression decreased, when it was reckoned meritorious to check and to punish them. A scrupulous adherence to truth, with the most religious attention to fulfill every engagement, became the distinguishing character of a gentleman, because chivalry was regarded as the school of honour, and inculcated the most delicate sensibility with respect to that point. The admiration of these qualities, together with the highest distinctions and prerogatives conferred on knighthood in every part of Europe, inspired persons of noble birth, on some occasions, with a species of military fanaticism, and led them to extravagant enterprises. But they imprinted deeply on their minds the principles of generosity and honour. They were strengthened by every thing that can affect the senses or touch the heart. The wild exploits of those romantic knights who fell in quest of adventures, are well known, and have been treated with proper ridicule. The political and permanent efforts of the spirit of chivalry have been less observed. Perhaps, the humanity which accompanies all the operations of war, the refinements of gallantry, and the point of honour, the three chief circumstances which distinguish modern from ancient manners, may be ascribed to a great measure to this ameliorated institution, seemingly of little benefit to mankind. The sentiments which chivalry inspired had a wonderful influence on manners and conduct during the 12th, 13th, 14th, and 15th centuries. They were so deeply rooted, that they continued to operate after the vigour and reputation of the institution itself began to decline.” In a word, chivalry, which is now an object of ridicule, was, at the period to which we have above referred, a matter of the greatest influence, and had no little influence on the manners of mankind and the fate of nations. Robertson's Ch. V. vol. i. Henry's Hist. vol. viii. Lyttelton's Hist. vol. iii. Third's Moral and Political Dialogues, vol. iii. Memoirs of Ancient Chivalry, &c. translated from the French of M. de St. Palaye, by the translator of the Life of Petrarch (Mrs. Dobson), 8vo. 1754.

CHIVALRY, or chivalry, in Latin, a tenure of land by knight-service; whereby the tenant was anciently bound to perform service in war, to the king, or to the man or kind of whom he held by that tenure.

By a statute of 12 Car. II. cap. 24. all tenures by chivalry, in capite, &c. are abolished. See Court and Guardian.

CHIVALRY, Court of. See Court.

CHIVAZZO, or Chivas, in Geography, a town of Piedmont, situated near the union of the river Oco with the Po, on a large plain, part of which is converted to tillage, and produces Turkey corn, but towards Zigianno a barren waste in many places, covered with a kind of reddish heath. It is defended with ancient and new walls, battions, and large fosses filled with water; and well supplied with artillery and a numerous garrison, especially in time of war. Its situation is so advantageous, that those who are masters of it are said to possess the key of the country of Turin, the Canavos, the country of Vercelli, Monteferrat, and Lombardy, all which they may enter at pleasure. It has several churches and convents; 11 miles N.E. of Turin, and 12 S. of Ivrea. N. lat. 43° 1' E. long. 7° 43'.

CHUDENDO, in Italian Music, to conclude; as chindendo col ritornello, col prima, signifies to end with a ritornello, or some passus which has been before sung in some parts of the piece.

CHIVEN, in Ornithology, a name given by some old writers to the fly-catcher, Moschacca grisea.

CHIVERNY, in Geography, a town of France, in the department of the Loir and Cher, situated on the south side of the Conon; 3 leagues S.E. of Blois.

CHIVES, or Chives, in Botany, the small knobs growing on the ends of the fine threads, or filaments of flowers: by Ray, and others, called also spicis. See Anthrae.

Dr. Grew calls the filaments, or threads themselves, on which the spicis are fixed, the chives.

Chives, a very small species of the onion kind, is also called by this name. See Allium.

CHIUM marinar, See Marble.

Chium vinum, Chian wine, or wine of the growth of the island of Chios, now Scio, is commenced by Diodorus, as affording a good nourishment, fit to be drunk; lets diluted to intoxicate, ended with the virtue of refreshing delusions, and a proper ingredient in aphthamical medicines. Hence Scribonius Largus directs the dry ingredients in colofia for the eyes, to be made up with Chian wine.

CHIUN, or Chives, in Hebrew Antiquity. We meet with this word in the prophet Amos (ch. v. 29) cited in the Acts of the Apostles, (ch. xiv. 45.) St. Luke reads the passage thus: "Ye took up the tabernacle of Moloch, and the altar of your god Ramphan, figures which ye made to worship them." The import of the Hebrew is as follows: 4 X, "Ye
"Ye have borne the tabernacle of your kings, and the pedestal (the chion) of your images, the altar of your gods, which ye made to yourselves." The Septuagint in all probability read refrigerium or raphan, instead of chion or chiron, and took the pedestal for a god.

Some say that the Septuagint, who made their translation in Egypt, changed the word chion into that of raphan, because they had the same signification. M. Bajnace, in his book entitled Jewish Antiquities, after having discussed a good deal upon chion or raphan, concludes that Moholch was the sun, chion, char, or raphan, the moon.

CHIURA, in Zoology, a name given by Carlen, Oviedo, and some others, to the Opolium, Dodephus opolium.

CHIUSA, L., in Geography, a town of Italy, in the Venetian, belonging to the state of Venice; 9 miles N.W. of Verona.—Allo, a town of Italy in the Friuli, seated on a small river, called the Fella, which runs into the Tagamenta; taken by the French in 1797; 14 miles N. of Friuli.

CHIUSANO, a town of Naples, in the province of Principato Citera; 13 miles S.S. E. of Benevento.

CHIUSELLE, a river of Piedmont, which runs into the Ore; 1 mile W.S.W. of Foglio.

CHIUSI, a town of Italy, in the country of Sienna, containing about 1000 inhabitants, the fee of a bishop; 31 miles S.S.E. of Sienna.

CHIUSO, Ital. Cloae, concealed, locked up: as in Mufic, canone chiron, is a canon, not in score, but written entirely on one leaf, sometimes without any indications of keys, signals when the several parts come in, or information of any kind to point out the solution. See Canon.

CHIUSTENGI, in Geography, a town of European Turkey, in the province of Bulgaria; 70 miles E. of Silhislia. N. lat. 43° 2’. E. long. 27° 30’.

CHIUTAYA, Kutiya, or Kutaja, a town of Aflatic Turkey, and capital of a district in Natalia, situated at the foot of a mountain, in a fertile and healthy country, and defended by a casle on a rock. It contains several monasteries, and three Armenian churches; 136 miles S.S.E. from Constantinople. N. lat. 39° 14’. E. long. 30° 44’.  

CHIZE’, a town of France, in the department of the Two Sovers, and district of Niort, situated near the Bouteonne; 3½ leagues S. of Niort.

CHIZILABBAD, a town of Afia, in the kingdom of Kurditian; 70 miles S.S.E. of Kerku.

CHLÆNA, in Antiquity, a kind of thick, shaggy, upper garment; its use was very ancient; for we find Homer makes his heroes first put off their chlamys, and afterwards their tunics or coats.

CHLAMYDA, in Botany, Genr. See Phormium.

CHLAMYDULA, in Antiquity, a small upper garment worn by children. See Chlamous.

CHLAMYDS, among the Romans called paludamentum, in Antiquity, a military habit, worn by the ancients over the tunica. Chlamys was the same, in time of war, that the toga was in time of peace; each belonged to the patricians. It did not cover the whole body, but chiefly the hind-part; though it also came over the shoulders, usually the left shoulder, so as to leave the right arm at liberty, and was fastened with a buckle on the breast. There were four or five kinds of chlamys: that of children, that of women, and that of men, which laft was divided into that of the people, and that of the emperor. The conful and generals, before they set out for the field, went to the capitol dressed in this robe, in order to pray and make vows to the gods, and throw it aside on their return, entering the city in the toga.

CHLIENN, in Geography, a town of Bohemia, in the circle of Königgrätz; 16 miles S.E. of it.

CHLIASMA, in Medicine, a warm fomentation of the moist kind: as pyria is of the dry kind.

CHLOEIA, in Antiquity, a festival celebrated at Athens, in honour of Ceres, to whom, under the name χλοία, e. g., they sacrificed a ram.

CHLOPAN, in Geography, a town of Poland, in the patinate of Vollynia; 72 E.N.E. of Lucko.


Gen. Ch. Calyx eight-leaved; leaves linear, permanent. Cor. monopetalous, falver-shaped; tube shorter than the calyx, costing the germ; border eight-cleft; segments lanceolate, longer than the tube. Stam. Filaments eight, very short, frted in the throat; anthers linear, erect, shorter than the segments of the corolla. Pyfl. Germ ovate-oblong; style filiform; stigma four-cleft. Peric. capsule ovate-oblong, somewhat compressed, furrowed, one-celled, two-valved; valves incurved on the side. Seeds numerous, minute.


Sp. 1. C. perfoliata. Linn. Syll. Nat. 1. Mart. 1. Lam. Ence. 1. Wild. 1. (Gentiana perfoliata; Linn. Sp. Pl. Centaureum lateum perfoliatum, Bauh. Pin. 278.) Yellow centaury. "Leaves perfoliate." Root annual, small, twisted. Whole herb glaucous, intensely bitter. Stem from three inches to three feet high, erect, cylindrical, dichotomous near the top. Leaves quite entire, smooth, egg-shaped, acute. Flowers from the forks of the item, solitary, peduncled, of a golden hue; leaves of the calyx generally eight, border of the calyx generally eight-cleft; filaments generally eight; stigma red, two-cleft; segments bifid. A native of a calcareous soil in England, and the southern part of the continent of Europe. 2. C. quadrifolium. Linn. Syll. Nat. 2. (Gentiana: Linn. Sp. Pl. Plant.) "Leaves growing by four." Stem about seven inches high, simple, somewhat quadrangular, jointed. Leaves in whors, linear, a little broader towards the top, rather obtuse, the length of the internodes. Peduncles five, terminal; the fifth intermediate; each with two opposite bracts about the middle; corolla eight-cleft as in the preceding, but the segments smaller. A native of the south of Europe. Linnaeus supposed it a hybrid plant produced from Chlora perfoliata, and Linum quadrifolium. 3. C. doecandra. Linn. Syll. Nat. 3. Mart. 4. Lam. Ence. 3. Wild. 3. (Chromia; Linn. Sp. Pl. Gentiana; Gron. Virg.) "Leaves opposite; corollas twelve-cleft." Flowers flesh-coloured; calyx twelve-cleft; segments linear, erect; corolla twelve-cleft, longer than the calyx; segments lanceolate. Stamens twelve; anthers oblong, spiral; germ roundish; style long, twisted; stigma simple. A native of Virginia. 4. C. imperfoliata. Linn. jun. Sup. 218. Mart. 2. Lam. Ence. 4. Wild. 5. "Corolais six-cleft." Root annual. Stem about four inches high, herbaceous, quite simple, erect, quadrangular. Leaves opposite, filifl, half-embracing the stem, egg-shaped, smooth, acute, shorter than the internodes. Flower yellow,
low, larger than the leaves, terminal, peduncled; calyx one-lobed, campanulate, the length of the corolla, held beyond the middle, spreading, permanent; segments lanceolate; corolla monopetalous, lacerated; tube short, spreading; border longer, with six oval segments; filaments falcate, awned, a little longer than the tube, and attached to it; anthers roundish; germ oblong; styles two, aggriguated together; stigma obtuse. A native of Italy. The fruit of this plant is unknown, and nearly all its known parts of fructification are totally at variance with the generic character; it cannot therefore be a chora, as that genus is at present understood, notwithstanding its agreement in habit with C. perforata, from which the generic character was originally formed. C. dodecandria is in the same predicament; and, on account of its spiral anthers, had perhaps better have been left with Chironia, where Linnaeus once placed it.


Eff. Ch. calyx none. Petal scale-like, three-lobed, fixed to the side of the germ. Anthers adnate to the inner side of the petal. Berry one-seeded.

Sp. C. inconspicuous. A floriferous underbush. Stems about a foot high, cylindrical, procumbent at the base, throwing out roots from the lower knots. Leaves about two inches long, and opposite, oblong-ovate, rotund, somewhat wrinkled, spreading, flat, permanent; pectoles thor, opposite, uniting at the base into a kind of ring, which supports two awl-shaped erect filipes. Flowers pale yellow, in a terminal panicle composed of opposite spikes, arranged in pairs on a common receptacle, each accompanied by a small scale-like bracte. The ripe fruit is marked towards the top with the scars of the corolla, and its bracte, which, as Juffieu observes, proves it to be truly inferior. A native of China and Japan, and cultivated by the Chinese in their gardens. It was introduced into the royal garden at Kew in 1781, by Dr. James Lind.

CHLORAS, in Zoology, one of the synonyms of Simia. Linn. Briffler.

CHLORUS, in Ornithology, a name given by Turner and others to the common yellow-hammer, Emberiza Citrinella; which see.

CHLORUS, is also a name assigned by several of the early writers to the golden oriole, Oriolus galbula.

CHLORION, of GfNger, in Ornithology, the golden oriole, Oriolus galbula of Linnaeus.

CHLORIS, Chloë urticaei usoneo Pappo dicta. Briffl.

See Emberiza citrinella.

CHLORIS indica, Briffl. the yellow finch. See Fringilla lutyrina.

CHLORIS labamansis. Briffl. See Fringilla bicolor.

CHLORITE, in Mineralogy, Saint Erde, or pearls of the Cornith mines, a species of the mutrician genus in the arrangement of Kirwan, (Vol. I.) which he distributes into 3 families. The first is in a loose form; colour, grana-green, or greenish-brown, or dark-green inclining to black; external liatre 0.1.; it feels greatly, shews a white break, and gives an earthy smell when breathed on. It is found in seashells; its beautiful, combining other stones or heaped together. It melts into a dull black compact flag, and then becomes magnetic. By the analysis of Mr. Hespfiner it contains 0.4757 magnesia, 0.375 flex, 0.017 argill, 0.0176 cais, and 0.1929 iron. Tab. Briefe. 43. According to Hespfiner, it contains 0.415 flux, 0.3947 magnesia, 0.0133 argill, 0.0115 cais, 0.1015 iron. 4. Clay, 1790.56. The third family is flatly. It is said to abound with garnets and magnetic iron stone.

CHLOROPSIS, in Ornithology, the common water-hen or moor-hen of Will. Penn. &c. The common gallinule of Latham Syn. and falica-chloropus of Linnaeus and Guettin, which see.

CHLOROSIS, in Medicine, the green-flecked, from χλωρος, green, or pale, a disease peculiar to young women, about the period of the commencement of menstruation; the most obvious and characteristic symptom of which is an extremely pallid complexion, frequently with a tinge of yellow, sometimes verging towards green. It has hence been also called occasionally, from the days of Hippocrates, igitur albus, or substantive jaundice.

This disease usually commences with languor, latitude, and indisposition to motion or exertion; and a failure of animation or depression of spirits. The stomch is deranged in its functions, and various symptoms of dyspepsia, such as heartburn, nausea, acid eructations, &c. appear; the appetite for natural food is diminished, and a depraved appetite for indigestible substances, such as chalk, or earth, ensues. The respiration becomes short and difficult, especially upon every slight exertion, such as ascending the stairs, or any activity; and on these occasions the heart is frequently seized with palpitation. The patient complains of considerable pain in the loins and head, and frequently in the whole of the muscles of the limbs. The bowels are often irregular in their evacuations, most frequently inclined to constipation. The skin over the whole body becomes extremely pallid, sometimes nearly white, more frequently fallow, and in the advanced stages a flight greenish-tinge is occasionally observed; the lips lose altogether their redness; and the eyes become of an excruciatingly white whiteness. As the disease proceeds, the legs and feet become edematous, especially in the evening, and the serum flows into the cellular membrane of the eyelids, which are swelled and livid in the morning, and at length into that of the whole body, producing a general anaesthesia. In this condition of the body, some of the viscera, as the stomach, liver or spleen, become occasionally affected with some organic diseace, the functions generally fail, and the patient dies, tabid or dropsical. This termination, however, is rare; for the chlorosis, in general, is readily removed by medicine and regimen. It
It is obvious, from this enumeration of the symptoms, that the disease is connected with a great debility or atony of the whole system, and especially of the circulation. Hence the languor and lassitude, and pains in the muscles, especially on being exercised; hence the imperfect secretions of the stomach and liver, and indigestion, which give rise to flatulency, constipation, &c.; and hence the deficiency of that healthy complexion of the skin, which the free and vigorous circulation of the blood through the cutaneous vessels produces. The pain of the back, which is an almost constant symptom of chlorosis, arises partly from the state of atony in the muscles, as in other diseases where the strength is much impaired, but chiefly perhaps from the disordered state of the uterus.

The chlorotic condition of the body is so commonly connected with a partial or complete retention of the menstrual discharge, or amenorrhoea, that the latter is frequently considered as an almost synonymous term, and by the females themselves all the symptoms of chlorosis are attributed solely to the amenorrhoea. This, however, is undoubtedly an erroneous notion. The general debility of the system is the common cause of the menstrual retention, and of those other symptoms which constitute chlorosis, both the one and the other are symptoms of the general morbid state of the habit. Thus all the symptoms of chlorosis occur occasionally when the menses continue to appear at the regular periods. Many of the symptoms are sometimes observed, in which neither the colour of the skin, which characterizes chlorosis, is present, nor are the catamenia suspended. And a fullness of the catamenia, where the chlorotic condition does not take place, is a very common occurrence. Indeed, whatever occasions a considerable reduction of the strength, at any period of life, generally causes a suppression of the menses; such as a want of nutritive food, watching, chronic diseases, &c. But it is chiefly about the period, when the discharge of the menses first appears, or when it has already appeared partially, but not yet attained its regularity, that this debility, which induces chlorosis, is readily excited. Why the body should at that period be thus easily affected, it is very difficult to explain satisfactorily.

The causes which induce chlorosis are more easily ascertained. Whatever contributes to reduce the strength of the system, or greatly to disturb the digestive organs, at the period of life just alluded to, tends to produce a chlorotic condition. Hence the occasional causes of chlorosis are as various as the sources of debility. Fatigue, loss of sleep, deficiency of nutritive food, previous diseases, exposure to cold, a sedentary mode of life, grief, and other depleting passions, are frequent causes of this disease. But of all the mental causes, love, which "feeds on the damask cheek," and to be the most common source of chlorosis. The habit, therefore, of all conditions of society are favourable to the frequent production of the complaint. The crowded and close streets, the small unfertilized tenements, in which young females of the poorer class, occupied in sedentary occupations, fearlessly ever enjoy the benefit of free air, together with their scanty and poor diet, render this class of girls very susceptible to the attacks of chlorosis. And to the words of an intelligent physician, "we cannot be surprised that young ladies of the highest rank should suffer equally; eight months of the year they fit on thick carpets, in close rooms, heated by register stoves; have large fires kept in their bed rooms, never lie out except in carriages, and are often too much restricted in their diet. The weakens and extreme irritability, induced by this mode of living, not only bring on the chlorotic state, but after the slightest exposure to damp or cold air, render them also liable to be affected with pains and inflammations of the bowels, rheumatism, headache, cataarrh, phthisis, &c." See William Diff. of London, p. 175.

With respect to the prove style of chlorosis, perhaps little is satisfactory can be said. As the disease is not commonly connected with a retention of the catamenia, and occurs solely, or almost solely, at this period of life, when the organs defined for the work of generation are evolved, or attain their mature condition, the general laxity and debility of the system, upon which all the symptoms, even the amenorrhoea, depend, have been attributed to some morbid condition of the ovaries. Thus a celebrated professor has remarked, that as a certain state of the ovaries in females prepares and disposes them to the excite of venery, about the very period at which the menses first appear, it is to be presumed that the state of the ovaries and that of the uterine vessels are in some measure connected together; and as generally symptoms of a change in the state of the former appear before those of the latter, it may be inferred, that the state of the ovaries has a great share in exciting the action of the uterine vessels, and producing the menstrual flux. But analogous to what happens in the male sex it may be presumed, that in females a certain state of the genitals is necessary to give tone and tension to the whole system; and therefore that, if the stimulus arising from the genitals be wanting, the whole system may fall into a torpid and flaccid state, and from thence the chlorosis and retention of the menses may arise. Cullen, first lines, 1701. This hypothesis produces the recommendation of ingenuity, but it does not remove every difficulty. It is not clear that the morbid condition of the ovaries, like that of the uterine vessels, or of the constitution at large, is not rather a consequence of the general debility, than a cause of it.

It is fortunate, that in this, as in many other diseases, concerning the nature of which physicians have differed in sentiment, we have a more solid basis than that of hypothesis, on which the cure is accomplished; namely, experience. In the disease in question, as general debility is the apparent source of all the symptoms, so experience has shown, that those expedients and medicines which relieve the strength of the constitution, remove all the symptoms of the disease. In a state of mere debility of the system, unconnected with any organic disease, although medicine can do much, yet much is also to be done by regimen and the general conduct of the patient. One of the most powerful means of strengthening the frame is regular exercise in the open air. This should, therefore, be steadily and daily referred to, according to the condition of the constitution, increasing the quantity and degree of it in proportion to the increasing powers of the patient. It is most effectual in the pure air of the country, and hence it is advisable to refer to it, where it is in the power of the patient, as a regularity of diet and hours will also materially aid the general plan. It is, doubtless, in these circumstances principally, that numbers of chlorotic females speedily recover their strength, complexion, and the healthy functions of the uterus, at the watering-places, where exercise, temperance, regularity, and good air, contribute to the attainment of health. And among those who are unable to obtain that fort of benefit, the effects of medicines are aided in a most important degree by regular exercise in the open air.

A variety of medicines have been employed by different practitioners for the cure of chlorosis and amenorrhœa; some, with a view of strengthening the flaccid and languid system, and others, with a view of stimulating the uterine vessels in particular. The latter, from their supposed effect, in
in exciting the flow of the menes, have been termed emmenagogues.

Among the general tonic, or strengthening medicines, iron, or, as it is improperly named, field, in its different preparations, is the most valuable and effectual remedy. Some physicians have gone so far as to consider it as a specific in chlorosis, a notion which, though in itself absurd, implies the general success with which they have employed this medicine. It has been administered in almost all its preparations with advantage; most frequently in the form of a sulphate, or saline compound with the sulphuric acid, (ferrum vitriolatum of the Pharmacopoeias), or of rutf (ferri rubigo). A mixture, which was administered with considerable success by Dr. Grifiths, and is now celebrated under his name, has been universally employed; it consists of the ferrum vitriolatum, with the vegetable alkali, and myrrh. It is obvious, however, that the result of this mixture must be a decomposition of the sulphate of iron, a formation of a neutral salt (the sulphate of potash) and a precipitation of the oxyd of iron in an impalpable powder. Instead, therefore, of taking the salt of iron, the patient swallows a nauseous mixture of Glauber's salt, with the oxyd of iron, and myrrh. This precipitate, freed from the Glauber's salt, is a carbonated oxyd of iron, and may be collected and given in a more simple form, or combined with other ingredients; it is, perhaps, the least offensive to the stomach, and one of the most efficacious preparations of iron. Being in a more impalpable powder, it may supersede the ruf of iron, which has been long administered with success, as it may be retained on the stomach in a larger dose. In whatever form the iron is given, it contributes greatly, with exercise and good air, to improve the digestive powers, and to promote a more perfect assimilation of the food, and also, by accelerating the circulation, to re-store the impeded secretions, and the languid action of the uterine, as well as the other parts of the system. The small quantity of iron contained in the chalybeate waters is very minute, in comparison with the quantity which may be received into the system in the forms of artificial combination; and the advantages of a watering-place are therefore probably not to be imputed to this source, as has been already hinted.

With the same intention of supporting the strength, other tonic medicines may occasionally be employed; such as the various bitters, bark, gentian, &c.; combined with cordials, where the action of the stomach is extremely feeble; or with anticitrants, such as magnesia, where there is a prevalent acidiety in that organ. The aromatic gums, or gum-rhins, seem to afford a grateful stimulus to the digestive organs, and are often conjoined with the preparations of iron, especially in the form of pills. The cautious application of cold, where there is still sufficient energy in the constitution, has been attended with great benefit, as in the form of a shower-bath; and a bath of the temperature of about 80°, such as that of Buxton, has proved efficacious. But on the whole, the practice may be considered as unsafe, until the patient is in a state of convalescence, and has regained a considerable portion of her strength.

In the writings of the older physicians many medicines are enumerated under the title of "Emmenagogues," and their specific action on the uterus is contended for; and among the vulgar, at present, several articles are believed to be poissled of that power, which they administer on every occasion of menstrual floppage. But the evidence in favour of the existence of such powers is so unsatisfactory, that the notion of a specific emmenagogue is now generally discredited. The melampodium, or black hellebore, was recommended in the strongest terms by Dr. Mead; he affirmed that it rarely failed to produce the menes, and that, when it did, hemorrhages occurred from some other part. But frequent experience has not confirmed this extraordinary encomium. The medicine is a strong general stimulant. Savin is another hot and irritating vegetable, which has been said to exert powerful effects on the uterus, which it perhaps may sometimes excite, in common with some of the body, by its diffusible stimulus. Dr. Home (Clinical Obs. and Exp. p. 385.) considers it as possessed of emmenagogue qualities.

There are two other classes of medicines, which sometimes induce a flow of the menes, by their action upon the parts adjoining the uterus; these are purgatives which stimulate the rectum or lower end of the intestines; and those medicines, which, being carried off in the urine, dilate the bladder; such as cantharides, the balsams, and other terebinthinate sublimates. The powers of the latter are but slight; but an acid purgative is perhaps one of the most direct promoters of the catamenia in the catalogue of the Materia Medica. The pedunculus is occasionally employed to relieve the menstral discharge, and frequently with the desired effect, it is to be referred to about the regular period at which the discharge is expected, and when the pains of the back, &c. are present, a disposition in the constitution to perform its healthy function. The strong stimulus of the electric fluid has been frequently directed to the region of the uterus, by falling into the veins, and the effect of bringing on the catamenia. Like the remedies just mentioned, it is very uncertain in its operation, and may be referred to with the greatest prospect of success at the approach of the regular period.

We have said nothing of the rubia tinctorum, or madder, and some other sublimates extolled as emmenagogues; nor of the inspiration of oxygen gas, recommended by Huseland and Dr. Thornton, because the evidence in favour of these remedies is altogether unsatisfactory.

But after all that is said respecting emmenagogues, it must be remembered, that the amenorrhoea, or retention of the menes, is not the cause, but one of the symptoms of the chlorotic condition; and, therefore, that a partial stimulus to the uterus can but partially remove the disease, which will escape only with the removal of the general debility.

It may be added, that the natural stimulus to the uterus is the exercise of venery, and that where marriage is impending, it may be delicately recommended to be accelerated according to circumstances.

Dr. James Hamilton of Edinburgh, in a valuable treatise on purgative medicines lately published, observes, that chlorosis is often attended with a torpor of the intestines and coniputation, and that the daily use of purgatives, in laxative doses, until the black and solid stools assume a natural appearance, is followed with great success. It will not be denied, that a sluggish action of the bowels frequently accompanies chlorosis, and that the colour of the stools is dark in consequence of the morbid secretions of the intestines and the liver, and also that the state of the canal, though perhaps an effect of the first instance, becomes a cause of aggravation to the dis ease in general. Hence, there is an obvious necessity of observing a regularity of the intestinal evacuations in this disease. And hence, perhaps, Dr. Friend found mercury a good emmenagogue, and Dr. Darson referred the dis ease to torpor of the liver. Nevertheless, the general languor and debility oppose the idea of active purgation, and suggest the propriety of combining the general tonic plan, with a careful relaxation of the bowels.


CHLORUS.
CHOBAT, in Ancient Geography, a river of Asia, placed by Pliny in Cilicia.

CHLUMETZ, in Geography, a town of Bithynia, in the circle of Konungvaruz; 5 miles S. of it.

CHMICLOWKA, a town of Poland, in the palatinate of Bracau; 46 miles E.N.E. of Bracau.

CHNA, in Ancient Geography, a name which, according to Steph. Byz. was formerly given to Phoenicia; but according to Bochart, it is the diminutive of Canaan.

CHNIM, in Geography, a strong town of Bosnia, belonging to the Venetians; 13 miles S. of Banjaluka.

CHNUMBIS, or CHNUS, in Ancient Geography, an ancient town of Egypt, placed by Ptolemy in the name of Thebes.

CHNUS, in Hippocrates, is a fine soft wool, to which he compares an exquisite flax, on account of its softness.

CHOAKING the left, in Rigging, denotes placing the bight of the leading part, or fall of a tackle, close up between the nelt part and jaw of the block.

CHOAM.YU SO, in Geography, a town of China, in the province of Quang-tung; 16 leagues E.S.E. of Kao-techen.

CHOAN, in Grecian Antiquity, so called from the χαν, a libation, an epithet applied among the Athenians to sacrifices that were offered for appeasing the manes of the deceased. They consisted of honey, wine, and milk.

CHOANA, in Ancient Anatomy, a cavity in the brain like a funnel, called also peri.

CHOANA, in Natural History, one of the synonymous names of Madrepora indufidaflerina. Guatl. (tcll. 24.) calls it Choana faxa crsparata rugofa, minimum poris.

Choana, or Choaya, called Chasana by DioDorus Siculus, in Ancient Geography, an ancient town of Asia, in Media, according to Ptolemy. — Also, an ancient town of Asia, placed by Ptolemy in Baktriana. — Also, a town placed by the fame geographer in Parthia.

CHOANI, the name of an ancient people placed by Pliny in Arabia Felix. — Also, a people placed by Marcian of Heraclea in Europe, near the Borylthenes and the Alauri.

CHIOAPA, in Geography, a small harbour on the coast of Chili in South America, in about 8. lat. 31° 42'

CHIOARA, in Ancient Geography, the name of a country of Asia, placed by Pliny in the western part of Parthia.

CHOARAXES, a river of Asia, which served as a boundary between the Colchide territory and Armenia, according to Strabo.

CHOARENA, or CHORAINA, a district of Asia in the country of the Parthians according to Strabo; it was that region of Parthia which was nearest to India.

CHOASPA, a town of Arachofia, according to Ptolemy.

CHOASPES, a river of India, according to Strabo. It discharged itself into the Cophes on the confines of Arachofia.

CHOASPES, or CHOASPIS, the modern Alwaz, a river of Asia, the source of which is placed by Pliny in Media, and he says it ran into the Pactigiris. According to Strabo, this river had its source in the country of the Uxians, traversed Sufiana, and discharged itself into a lake which also received the Euxus and the Pactigiris. This river is said to have flowed into the Perian gulf by a separate mouth, though it had a communication with the Tigris. Herodotus says, that the Choaspe washed the walls of Sufa, and that the Perian kings drank no other water besides that of this river, which they carried about with them in silver vessels, with which they went. Pliny places the city of Sufa on the banks of the Euxus, or the Ulac of the prophet Daniel, and according to this writer, the Persians drank no other water; whence it is inferred, that the Choaspes and the Euxus were the same river, at least at Sufa. From this city they flowed in one stream, and were afterwards distinguished, sometimes by one name, sometimes by the other. Although the ancient Sufa decorated the banks of this river, the modern towns of Kibd and Abwaz are of small account.

CHOASPITES, in Natural History, a name given by the ancients to a species of the erythrophalus, a gem of a colour between yellow and green. It was called choaspis from the name of a river in which it was frequently found.

CHOATRAS, or CHOBATRAS, in Ancient Geography, a mountain of Asia, which branched out from the Gordyean mountains on the confines of Asia and Armenia, and which separated Media from Affria.

CHOBAR, a river which discharged itself into the Euphrates. See CHOBARAS.

CHOBAT, a town of Africa, in Mauritania Cæsariensis, called in the Itinerary of Antonine Coba, represented as a municipium, and placed between Mufflibius and Iggilis.

CHOBATA, a town of Asia in Albania, placed by Ptolemy between the rivers Albanus and Canus.

CHODOLTIVO, in Geography, a town of Poland in the province of Volynia; 36 miles W. of Lucko.

CHOBUS, KIMHAN, in Ancient Geography, a river of Asia in the Colchide territory, between the Charius and Simgama, according to Arrian. Pliny calls it Cobus, and adds, that it had its source in mount Caucarus, and traversed the country of the Suanus. It ran from the north to the south, and fell into the Euxine sea to the north of the mouth of the Phasis.

CHOC, SHOCK. This word or term is employed, in Military Language, to express the act of two corps encountering or engaging each other. In speaking also of two hostile corps, who have only had a brush, or some skirmishing, it is said, that there has been choc, a shock between them.

CHOC Bay, in Geography, a bay on the W. coast of the island of St. Lucia, a little to the N. of Carnage bay.

CHOCCHARMO, a town of Asia in Thibet; 27 miles N.E. of Tofon-Hotun.

CHOCHE, in Ancient Geography, a town of Arabia Defera.

CHOCHE, a village of Asia, situated near the Tigris, according to Arrian.

CHOCK, in Sea Language, a wedge used to confine a case or other heavy body, to prevent it from fetching away when the ship is in motion.

CHOCK is also a triangular piece of wood fastened occasionally in the flap at the arse of the block: on the base of which wedges are driven to force the block into its place.

CHOCK is also a short mail for boats, by which they are towed along.

CHOCKS, denote, in Mart-Making, pieces made to fashion out some part that is wanting, or to place between the head of a lower mail and heel of a top-mail.

CHOCO, in Geography, a province of South America, in the vice-royalty of New Granads, bounded on the N. by the province of Darien and Cartagena, on the E. and S. by Popayan, and on the W. by the Pacific Ocean. The soil, climate, products, &c. are similar to those of Popayan.

CHOCOLATE, a kind of cake or confection, prepared of certain drugs; the basis or principal wherof, is the cacao. See THEOBROMA.

The trees that produce these nuts grow plentifully on the banks of the river Magdalena in South America, and in other situations where the soil is adapted to them; but those
in the jurisdiction of Cartagena are said to excel those of the Caracaces, Maracaibo, Guayaquil, and other parts, both as to the size and goodness of the fruit. The Cartagena cacao or chocolate is little known in Spain, being only sent by way of presents; for, as it is more esteemed than that of other countries, the greater part of it is consumed in this jurisdiction, or sent to other parts of America. It is also imported from the Caracaces, and sent up the country; that of the Magdalena not being sufficient to supply the great demand of these parts. The former is mixed with the latter, as it serves to correct the extreme oiliness of the chocolate when made only with the cacao of the Magdalena. The latter, by way of distinction from the former, is sold at Cartagena by millers, whereas the former is dispolved by the bulhet, each weighing 110 pounds: but that of Maracaibo weighs only 95 pounds. The cacao tree abounds in the districts of Guayaquil, and is generally not less than 15 or 20 feet high. It begins from the ground to separate into four or five items, according to the vigour of the root from whence they all proceed. They are commonly between four and seven inches in diameter; but they first grow in an oblique direction, so that the branches are expanded and separated from one another. The length of the leaf is between four and six inches, and its breadth three or four. It is very smooth, soft, and terminating in a point, like that of the China orange tree, but differing from it in colour: the former being of a dull green, and having no glows which is observable on the latter; nor is the tree so full of leaves as that of the orange. The pods, that contain the cacao, grow from the item, as well as from the branches. The first appearance is a white bloom, whose pithil contains the embryo of the pod, which grows to the length of fix or seven inches, and four or five in breadth, resembling a cucumber in shape; and fricated in a longitudinal direction, but deeper than the cucumber. These pods are proportionable in their dimensions to the item or branch, to which they adhere in the form of excrecences, some smaller and others larger. When two happen to grow in contact, one of them attains all the nutritious juice, and thrives on the decay of the other. The colour of the pod, while growing, is green, like that of the leaf; but when arrived at its full perfection, it gradually changes to a yellow. The shell that covers it is thin, smooth, and clear. When the fruit is arrived at its full growth, it is gathered; and being cut in sections, its pulp appears white and juicy, with small seeds regularly arranged, and at that time of no greater confidence than the rest of the pulp, but whiter, and enclosed by a very fine delicate membrane, full of liquor, resembling milk, but transparent and somewhat viscid: in this state it may be eaten, like any other fruit; its juice being a sweetish acid, but thought in the country to promote fevers. The yellowness of the pod indicates that the cacao begins to feed on its sublimate, to acquire a greater confidence, and that the buds begin to fill; the colour gradually fading till they are fully completed, when the dark brown colour of the shell, into which the yellow has deviared, indicates that it is a proper time to gather it. The thickness of the shell is now about two lines, and each seed found included in one of the compartments, formed by the transverse membranes of the pod. After gathering the fruit, it is opened, and the seeds taken out and laid in skins kept for that purpose, or more generally on vijuela leaves, and left in the air to dry. When fully dried, they are put into leather bags, sent to market, and sold by the carga or load, which is equal to 84 pounds; but the price is not fixed, as it is sometimes sold for six or eight rials per carga, though less than the charge of gathering; but the general price is between three and four dollars, and at the time of the armadas, when the demand has been very large, rife in proportion. This tree produces its fruit twice a-year, and in the same plenty and goodness of quality. The quantity gathered through the whole jurisdiction of Guayaquil amounts at least to 50,000 cargas. The cacao trees so much delight in water, that the ground where they are planted must be reduced to a mere; and if not carefully supplied with water, they die. They must also be planted in the shade, or defended from the perpendicular rays of the sun. Accordingly, they are always placed near other larger trees, under the shelter of which they grow and flourish. No foil can be better adapted to the nature of these trees than that of Guayaquil, as it favours them in both respects; in the former, as confiding wholly of savannahs, or wide plains overflowed in winter, and in summer plentifully watered by canals; and with regard to the latter, it abounds with other trees, which afford them the requisite shelter. The culture of this tree requires no other attention besides that of clearing the ground from the weeds and shrubs that are abundant in so wet a soil. This, indeed, is so necessary, that, if neglected, these vegetables will, in a few years, destroy the cacao plantations, by robbing the foil of all its nourishment. See Guayaquil.

The name chocolate is also given to a drink, prepared from the above-mentioned cake, of a dulcif colour, soft, and oily; usually drank hot, and esteemed not only an excellent food, as being very nourishing, but also a good medicine; at least a diet, for keeping up the warmth of the stomach, and afflicting digestion.

The Spaniards were the first who brought chocolate into use in Europe; and that, perhaps, as much out of interest, to have the better market for their cacao-nuts, vanilla, and other drugs which their West Indies furnish, and which enter the composition of chocolate, as out of regard to those extraordinary virtues which their authors so amply enumerate in it. The qualities above mentioned are all that the generality of physicians, and others, allow it.

Chocolate, original manner of making. The method first used by the Spaniards was very simple, and the same with that in use among the Indians: they only used cashew-nut, maize, and raw sugar, as expressed from the canes, with a little achiotte, or rocon, to give it a colour: of these four drugs, ground between two stones, and mixed together in a certain proportion, they made a kind of bread, which served them equally for solid food, and for drink; eating it dry when hungry, and steeping it in hot water when thirsty. The Indians, to one pound of the roasted nuts, put half a pound of sugar, diffused in rose-water, and half a pound of flour of maize.

This drink the Mexicans called chocolate, from chaco, found; and alte, or atte, water; q. d. water that makes a nofe: from the nofe which the instrument, used to mill and prepare the liquor, made in the water.

But the Spaniards, and other nations, afterwards added a great number of other ingredients to the composition of chocolate; all of which, however, vanilla alone excepted, spoil rather than mend it.

Chocolate, method of making, now in use among the Spaniards of Mexico. The fruit, being gathered from the cacao-tree, is dried in the sun, and the kernel taken out, and roasted at the fire, in an iron pan pierced full of holes; then pounded in a mortar; then ground on a marble stone, with a grinder of the same manner, till it be brought into the confidence of a pail: mixing with it more or less sugar, as it is to be more or less sweet. In proportion as the pail advances,
CHOCOLATE.

It is to be kept in brown paper, put up in a box; and then in another, in a dry place.

CHOCOLATE, Laws relating to. By 43 Geo. III. c. 68. all your duties of customs are repealed, and the foregoing worders are repeated; and an act for confinements of the persons of any British colony or plantation in America, and of theproduce of any other country or place, on importation, 6d. per cwt. For the conditions, regulations, and restrictions, with which cocoa-nuts shall on importation be secured in warehouses, see 10 Geo. c. 12. 6 Geo. III. c. 72. A 3 Geo. III. c. 118. When taken out of such ware- houses for consumption in Great Britain, they are charged with a duty of 26. per lb. By 42 Geo. III. c. 67. all former duties of excise are in like manner repealed, and in lieu thereof the following are imposed; viz. for every lb. weight of cocoa-nuts of the produce of any British colony or plantation in America, imported into Great Britain, 12s. 4d.; for ditto, if imported into Great Britain by the East India company, 25s.; for ditto, of all other cocoa-nuts imported into Great Britain, 32s. 10d.

Cocoa-nuts shall not be taken out of the warehouses, either for home consumption or exportation, but upon payment of the inland duties. 21 Geo. III. c. 55. §. 10. 11. Cocoa-nuts for which the duty has been paid, or the chocolate made of such nuts, may be exported, on security given that they shall not be re-imported; and under certain regulations, specified in 27 Geo. III. c. 13. §. 12. Every person, who shall keep a shop, &c. and have in his custody above 6 lbs. of chocolate or cocoa-nuts, shall be deemed a dealer in the said commodity, 11 Geo. c. 30. §. 4. By 20 Geo. III. c. 55. no person shall trade in chocolate without an annual licence, for which he shall pay (by 4. Geo. III. c. (60) 51. 6d. under penalty of 200l. Housfs of manufacturing and sale are to be entered, on pain of forfeiting 200l. and costs, &c. 10 Geo. III. c. 10. §. 10. The said houses shall be marked over the doors with the words "dealer in cocoa-nuts, chocolate, &c." on pain of 200l. 19 Geo. III. c. 6. §. 15. Any dealer buying these commodities of any person, not having his shop, &c. to marked, shall forfeit 100l. Any person, not having entered his shop, &c. who shall paint over his door the above said words, shall forfeit 500l., besides other penalties. If any person, not being a dealer, shall buy these articles, not having these words over his door, he shall forfeit 12l. Notice shall be given to the next officer of the custom, of bringing in these commodities into any shop, &c., and a certificate duly signed, expressing that the duties have been paid, and that they were condemned and forfeited, and all the quantity and quality thereof, &c. shall be delivered, on pain of forfeiting the same and treble value. And a permit shall be given to the buyer, &c. 10 Geo. c. 10. §. 11. 13. Officers shall enter at all times by day warehouses, shops, &c. and survey, the owner affixing and keeping all weights and seales, on pain of 100l. and forfeiture of the commodities, which may be seized by the officer. 10 Geo. c. 10. §. 12. 10 Geo. III. c. 44. §. 1. 28 Geo. III. c. 57. §. 15. Deceiving or obstructing the officer incurs a forfeiture of 100l. 28 Geo. III. c. 77. §. 8. Search shall be made for goods concealed, and if any person obstruct the officer, he shall forfeit 100l.; and if any factor or dealer shall concei

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any of the said goods, he shall forfeit the same and treble value; and if any person shall obstruct the officer in seizing such goods, or endeavour to rescue the same after seizure, he shall forfeit 50l. 10 Geo. c. 10. § 13. 39. 40. If any article made of reemolbe cocoa shall be found in the possession of any dealer, under the name of American cocoa, or English or British cocoa, or any other name of cocoa, it shall be forfeited, and the dealer shall forfeit 100l. 4 Geo. III. c. 119. § 5. The molder of chocolate, within the half, weekly, and elsewhere every 6 weeks, enter in writing at the next office the weight of chocolate made by him, and clear off the duties. On pain of 50l; nor shall he, after default in payment, sell or deliver any out till the duty is paid, on pain of treble value. 10 Geo. c. 10. § 17. 18. He shall also produce at the place and time of entry the chocolate made, (on pain of 20l. for every pound not produced,) which shall be tied up with thread in papers of 1 lb., ½ lb., or ¼ lb. each, and neither more or less; which shall be marked or stamped by the officers. 32 Geo. II. c. 10. § 16. Offences against these regulations incur a forfeiture of 25l. The counterfeiting of the stamp, or the knowingly filling of any chocolate, or the fixing of any paper with a stamp on such chocolate, as has not been entered, and on which the duties have not been paid, incurs the penalty of a forfeiture of 500l., and of commitment to the next county jail for 12 months. 10 Geo. c. 10. § 22. 11 Geo. c. 30. § 13. Notice shall be given by those who make chocolate for private families, and not for sale, three days before it is begun to be made, specifying the quantity, &c.; and within three days after it is finished, the person for whom it is made shall enter the whole quantity on oath, and have it duly stamped, and pay the duty, under penalty of forfeiting the same and treble value. Nor shall any person be permitted to make into chocolate for their own private use lees than half a hundred weight of cocoa-nuts at a time. 10 Geo. c. 10. § 23, 24. 25.

Mr. Henly, an ingenious druggist, discovered that chocolate, fresh from the mill, as it cools in the tin pans into which it is received, becomes strongly electrical; and that it retains this property for some time after it has been turned out of the pans, but soon loses it by heating. The power may be once or twice renewed by melting it again in an iron ladle, and pouring it into the tin pans as at first; but when it becomes dry and powdery, the power is not capable of being revived by simple melting; but if a small quantity of olive-oil be added, and well mixed with the chocolate in the ladle, its electricity will be completely restored by cooling it in the tin pan as before. From this experiment he conjectures, that there is a great affinity between phlogiston and the electric fluid, and indeed they bear not the same thing.

Phil. Trans. vol. liv. part 1. p. 94, &c.

Chocolate Creek, in Geography, a head-water of Tioga river in the state of New York, whose mouth lies 10 miles S.W. of the Painted Pott.

Chocolate-but trees, in Botany. See Theodroma.

CHOCOLOCO-CA, in Geography, called by the Spaniards Catro Fircaya, a town of Peru, famous for its silver mines, which are at the top of a mountain always covered with snow, and 2 leagues from the town. Its wine also is plentiful and good. See CASTRO FIRCEA.

CHOCOPE, a town of South America, in the country of Peru, and jurisdiction of Truxillo, 13 or 14 leagues distant from St. Pedro, and 11 leagues from Truxillo, in 8° lat. 7° 4′ 40″. The town consists of between 80 and 90 houses, covered with earth: occupied by between 60 and 70 families, chiefly Spaniards, with some of the other calls, but not above 20 or 25 Indian families. It has a large and de-
cent church, built of bricks. In 1726 a rain which continued 40 nights, from 4 or 5 in the evening till about the same time in the morning, entirely ruined the houses, and even the brick church, so that only some fragments of its walls remained. Two years afterwards a similar phenomenon occurred, which lasted 11 or 12 days, but much less violent and destructive. For an account of the adjacent country, see GEOGRAPHY.
equal laws, and were very severe and impalpable against offences, were no less celebrated for the procuring of corn and oil and other provisions, and for supplying the Romans with them after they had experienced the want of them. The colour of the blue robe, it is said, befits the severity of their nature and their names, and the balance are the well-known emblem of justice, as well as an intimation of scarcity.

Lowman (Paraphrase of the Revolutions) refers this period of prophecy to that interval, which succeeded the reigns of Trajan and Hadrian. Antoninus Pius succeeded Hadrian A.D. 138. Antoninus the philopber, partly with Verus and partly alone, and after him Commodus, governed the Roman empire, till within a few months of the reign of Severus, who began his empire, A.D. 193, a space of about 50 years. The fourth general persecution was within this period, nearly 60 years after the third general persecution by Trajan, A.D. 167. Moreover, it appears from the concurrent testimonies of Tertullian (ad Sept. c. 5.), Aurelius Victor, Julius Capitol. Antoninus Pius, and Anton. Philo. and Xiphilin ex Dion. that a severity of provisions, approaching to famine, which occurred in every reign of the Antonines, continued to the empire of Severus, who exerted himself in redressing this evil; and thus the reign of Severus appears to be a proper termination to the judgment of this prediction.

CHOREADES, in Ancient Geography, an island of the Ionian sea, on the coast of Italy, near the Iapigian promontory. Thucydides.—Alfo, islands of the Euxine sea, near the Hellespont, supposed by Ortoius to have been the Cymean sile.—Alfo, a name given to the Barbaric islands.—Alfo, islands of the Persian gulf. Alfo, islands on the coast of Eubea, near mount Chaphares, where Ajax is said to have fallen shipwreck, after having violated Cufandra.—Alfo, a town of Alfris, in the country of the Myfons, inhabited by Greeks. Steph. Byz.

CHOREAGIA, a place of Thrace, in the vicinity of Constantinople.

CHOREEAS, a place of the island Eubea, according to Herodotus.

CHOREEAT, a lake of Peloponnesus in Siconya, according to Herodotus.

CHOREINÆ, in Antiquity, a kind of sea shells, with which the ancient Greeks used to give their suffrage, or vote.

CHOREIUS SALTIUS, in Ancient Geography, a forest of Peloponnesus, placed by Paulianus near the town of Genfis, in Melfenia.

CHOREOGYLLUS. See Hedge-Hog.

CHOES, or the Lenaean, in Antiquity, an Athenian festival in honour of Bacchus, celebrated on the 12th of the month Anthednon. It lasted only one day; and as the inhabitants of Attica were only permitted to be present at the celebration of this festival, authors referred their new pieces for the greater Dionysia, which were performed a month after, and which attracted from all parts an infinite number of spectators. It was usual at the festivals of Bacchus, to present tragedies and comedies to the public, and the authors thus contended for victory. See Dionysia.

CHOES, in Ancient Geography. See Cepheus and Cow river.

CHICER, French, a chorus, or a musical composition of never less than three or four vocal parts, in which the harmony is complete, and performed simultaneously by all the voices, enforced by the orchestra. See Tenor, and Base.

CHOHAN, in Geography, a circar of Hindooftan, in the country of Allahabad.
body of the church, separated by a grate, where the religious sing the service.

Choir music, musical song in a chorus, as in churches. It is sometimes used for musica pianissima, cantus fermo, or what we call plain chant, or song. See CHANT and CHORAL Service.

CHOIROS, in Ichthyology, a name given by Aristotle, and others of the old Greek writers to the Ceratodus or Actinopterus of the Latins. This fish has been called by a variety of names, but it is a species of perch, the Percus scolopax of modern naturalists, and the pope or ruffe, of the English fishermen. It is by no means so abundant as the common perch, neither is it of the same family, for it has only one dorsal fin, while the common perch has two; it is also a smaller fish, seldom exceeding the length of six or seven inches. The body is more elongated, and the back less prominent and arched. The colour is oliveaceous green on the back, yellowish on the sides, and spotted with black; belly whitish. Donov. Brit. Fishes. See Perna scolopax.

CHOISEUL, in Geography, a town of France, in the department of the Upper Marne; 4 leagues N. of Langres.

CHOISEUL Bay, a bay that lies on the N.W. coast of the islands of Arctides, W. of Port Praslin. The ancient inhabitants, like those of Port Praslin, powder their hair with line, which burns it and gives it a red appearance.

CHOISEUL Bay, a bay that lies on the S. side of Magellan Straits, between Swallow Harbour and the channel of St. Barbara.

CHOISY, Francis-Timoleon de, in Biography, was born at Paris in the year 1664. He is reckoned among the celebrated writers and extraordinary characters that have flourished in France. In his infancy he was taught to pay the greatest deference to persons of rank, and to endeavour to attach himself to those who might hereafter promote his interests. He was intended for the church, but the habits of his youthful years were irregular, and he afforded opportunity for scandal to the decent part of society, by appearing perpetually in public in female habiliments. He was handsome and delicate, and having been accosted by his mother, from his childhood, to appear in this disguise, the habit of it had grown into a kind of passion. He palled some years under the name of the countes de Barres, indulging in gallantries which were inspired or facilitated by his assumed character. Such, indeed, were the manners of the higher ranks in France, that he was admitted at court in the Confraternity, and few were found in that circle who did not encourage a character which they ought to have frowned at with indignation. Of these few was the duke de Montaufier, who meeting him one day in the queen's drawing-room, said in a tone of angry contempt, "Sir, or madam, I know not how to address you, you ought to die of shame for appearing dressed like a woman, when God has done you the favour to make you a man: Go, hide yourself." While he lived in this state he had been inducted to the office of abbé, and it was not till he was thirty years of age, that he thought it expedient to change his course of life, and to obliterate the remembrance of the scenes that he had exhibited, from his own mind, as well as from the minds of others. He went to Italy in 1676, and took an active part in promoting the election of Innocent XI. and was so far beneficial to the interests of the pontiff, that he was employed to draw up a letter from the French cardinals to Louis XIV. for the purpose of engaging him in his favour, who had been devoted to his enemies. De Choisy succeeded, but gained nothing by it but the honour of being the first to kiss the toe of the new pope. On his return to France he was attacked with a severe illness, which excited in him compassion for the poor, and the poet's terrible apprehensions for the future. He at length recovered, and during his convalescence he held religious conversations with the abbé Dangeau, the result of these were published in four dialogues: on the Immortality of the Soul; on the Existence of God; on Religious Worship; and on Providence.

From this period, 1684, de Choisy engaged in a new career: in the following year he went on an embassy from the sovereign of France to the king of Siam, whom the Jesuits had represented as willing to become a convert to Christianity. But on arriving at Siam, he found that the royal conversion was no more than a comedy planned by the Jesuits, in order to procure an embassy that might be serviceable to their commercial plans, and that the embassador and himself were intended to act parts in their favour. He was resolved that the voyage should not, with regard to himself, be without its uses: he took priest's orders, and he was apparently very much impressed with the sacredness of his new character. He would not venture to say masstills till he had been a month on board the ship which brought the mission back to France. He then became a zealous preacher to the crew, who were much edified by his pious exhortations.

He brought home with him a complimentary messsage from the king of Siam to his patron the cardinal de Bouillon, who unfortunately was not in favour at court. Louis was therefore displeased that this mark of distinction should have been obtained for his disgraced minister. Choisy, finding himself slighted, retired to a religious retirement, and employed himself in writing a life of David, and a translation of the Psalms. These he was allowed to present to his sovereign, whose smiles now abundantly repaid him for past neglect. He was immediately elected a member of the French academy; and his eulogy on the death of cardinal de Richelieu in 1687 was greatly admired. He was indeed a very useful member of that society, and drew up a sort of journal of all that passed at its meetings, which on account of the anecdotes that were interwoven with it, was not published by the academy, though it was printed in the Opuscules of the abbé d'Olivet in the year 1734. De Choisy was chief of 1697 dean of the cathedral of Bayeux, which was the highest post he ever obtained in the church. He early adventures, of which he himself has given an account, afforded him a distinguished ecclesiastical preferment. Besides the life of David, he published lives of Solomon, St. Louis, and of several of the French monarchs; but his most considerable work was an Ecclesiastical History, in eleven volumes, which was undertaken at the desire of Fauquet; and it comprised the most interesting facts of general history, written on a plan of ing and popular plan. His last work, which did not appear till after his death, was Memoirs of Louis XIV. in 2 vols. 12mo. This has been reckoned the most agreeable of his writings. His style and manner were particularly adapted to the composition of memoirs; yet in all the biographical pieces which he drew up, he has been charged with having paid too little regard to truth. He published a translation of the celebrated "Imitation of Jesus Christ;" to the first edition of which he prefixed a print of Madame de Maintenon on her knees before a crucifix, with the following inscription: "Hearken, O daughter, and consider the rhings that are here: forget also thine own people, and thy father's house: that the king greatly desire thy beauty." The text was in the subsequent editions omitted. To this writer has been ascribed a licentious work, in which his own gallantries are supposed to have been portrayed:
it is entitled Memoirs of the Countes de Barras. This was not printed till the year 1736; but the abbe de Choisy died in 1744, after completing his eightieth year. His character could not command the respect of the really wise, nor the estimation of the truly virtuous. After he had reformed the manners of his youth, which cannot be too severely rebated, he exhibited those symptoms of triviality which were highly unbecoming his rank and station in life. He was nevertheless beloved, on account of his disposition, which was kind, and of his manners, which were gentle, easy, and very instructing. Gen. Bueq. De Presby.


CHOIX, Port a. lies on the N.W. side of Newfoundland, N. by W. from the bay of Highgournachat, and S.E. from point Riche.

Chlo, Old Port a, a semicircular bay on the N.W. side of Newfoundland, round point Riche from the E. to the W.; the N.W. point of which is called Point Perral. Within this point are several islands; but the interior bay is impassable.

CHOFER, a town of Asia, in Tibet; 145 miles E.S.E. of Lhasa.

Chore-Word, in Botany, See Orobranch.

CHOLAGOGUE, in Medicine, tr. m χολαγογος, to excite, to cause a flow of bile.

CHOLALIAN, in Geography, one of the most considerable states on the eastern slope of the mountain of Popoca-pep, in Mexico. This, and the state Haemastizeno, having, with the affinities of the Tlascals, shaken off the Mexican yoke, re-established their former autocratical government.

CHOLARGUS, or Collargos, in Ancient Geography, a town of Greece, in Attica, belonging to the Acamantida tribe, according to Steph. Byz. and Suidas.

CHOLAWIA, in Geography, a town of Lithuania, in the parish of Mink; 42 miles S. of Mink.

CHOLEESNA, in Ancient Geography, a town of Asia, in Sogdiana, situated near the Oxus.

CHOLEDOCHUS, in Anatomy, a term derived from χολη, bile, and δοξα, glory. The hepatic duct, having been named by the ancient, takes the name of ductus communis choledochus, and proceeds to open into the duodenum. For a further account of this duct, see Liver.

CHOLELITHUS, in Medicine, from χολη, bile, and λιθος, a stone, a term applied to the concretions, which occur in the gall-bladder and biliary ducts. See Gall-stone.

CHOLER. See Bile.

CHOLEREA, χολερεα, sometimes written with the addition of the word morbus, disease, is so called from χολη, bile; the leading character of the disease being a copious evacuation of bilious matter both by vomiting and by stool.

The phenomena of cholera, as well as the successful mode of treating it, have been well known, and described, in very similar terms, by physicians from the earliest dawn to the present times. In the writings of Hippocrates, Arcteus, Celsus, Sydenham, and Cullen, we trace the same opinions respecting the disorder, and the same precepts as to its cure. The attack of this complaint is generally sudden. The bowels are fleeted with gripping pains, and the stools, which are at first thin and watery, as in a common diarrhea, are passed frequently; the stomach is felted with hicknfly, discharges its contents, and rejects what is swallowed. In the course of a few hours the matter vomited, as well as that which is discharged by stool, appears to be pure bile, and passes off both ways in considerable quantities. The gripping pains of the intestines now become more severe, in consequence of the extraordinary irritation of the passing bile, which excites them to partial and irregular spasmatic convulsions. These spasmns are often communicated to the abdominal muscles, and generally to the muscles of the lower extremities; so that the cramps in the legs become very distressing. The stomach is also affected with considerable pain, and a fent of great heat, in consequence of the same irritation: there is usually great thirst, and sometimes a feverish head-ache, from the symmetry of the head with the stomach. The skin becomes very hot, and the heat of the skin is increased. A great degree of dryness and languor, and faintness, amounting even to syncope, speedily comes on, in consequence of the sudden and copious evacuation of the fluids; sometimes attended with a colliquative sweat, coldness of the extremities, and such like symptoms,” Sydenham says, “as frighten the bystanders, and kill the patient in 24 hours.” Syd. sect. iv. chap. 2. In this climate, however, though the powers of life are often too rapidly reduced by an attack of cholera, as to excite considerable alarm for the safety of the patient, yet it seldom terminates fatally. Though both the pulse and respiration are hurried and irregular during the course of the disease, yet, it is remarked by Dr. Cullen, that there is no proper fever, but merely a few feverish symptoms, as these symptoms are generally removed entirely by those remedies which quiet the spasmatic affections attendant on the disease.

It is scarcely necessary to point out the diagnosis of cholera, and the diseases which bear some resemblance to it, since the discharge of almost pure bile by vomiting and stool, simultaneously or alternately, is not observed in any other disease. Vomiting and purging do, indeed, frequently occur at the same time, as after a surfeit, or taking a large quantity of indigestible food, or from other causes; but the matter discharged is not biliary. The practice, however, must be similar in both; the object being to get rid of an irritating matter from the intestinal caecal in both cases, which, in the true cholera, is bile, in the other influences a mass of undigested aliment.

The true cholera occurs in temperate climates, only during the hot season. Sydenham remarks, that it appears as certainly in the month of August, as follows in the early spring, or cucking at the approach of summer; and that the patient, when recovered, becomes frail and thin, in which state it begins. This observation, however, does not accord with the experience of the present times. Cholera is now seen perhaps more frequently in September than in August; and cases occasionally occur, though it be not epidemic, considerably earlier than August; even in June or May. Sydenham seemed to consider the copious use of the summerfruits as the general cause of cholera; although the observa-
that notion. "For though the same causes," he remarks, "wholly remain, so that many should be seized with this disease, as well in September as in August, by reason of eating too much fruit, yet we see the same effect does not follow." Probably this notion, which is still adopted by many practitioners, originated merely from the concurrence of the season of the disease, with that of the ripening of fruit. But when it is considered that the hot season is also coincident; that in all hot countries the bilious febrifugia is usually increased, and thus gives rise to this and similar dif-eases; that in this climate cholera attacks those who procure much fruit, and those who are unable to procure it, indiscriminately; and that the disorder ceased, even while the fruit remained abundant, according to Sydenham; there can remain little doubt that it is the heat of the atmosphere which produces cholera. Hence it is, that cholera is sometimes most prevalent in August, sometimes in September, according to the earlier or later occurrence of a high temperature; and that after a few hot days, even in May or June, a few cases of the disease are sometimes observed to ensue. It has been remarked, however, that, both in hot climates, and in the hot feasons of mild climates, occasional falls of rain have been particularly followed by an epidemic cholera. In some cases, indeed, it is probable that the heat of the season may give only a predisposition, and that certain inguinal, sudden change of temperature, or other causes in this state, readily excite the disease. Hence various circumstances are enumerated by authors, as having produced cholera; such as cold drink, drudg purgeatives, acids, fear, &c. But it is certain that the disease constantly appears during a hot season, ofReady temperature, and often without any obvious change or error in the diet or manner of life.

In the cure of cholera, which conflicts in the production of a large quantity of bile by the liver, and its necess ary passage through the alimentary canal, the experience of all ages wholly concurs. A summary of this experience is given by Dr. Cullen in such copious terms, that we shall prefer transcribing it.

"In the beginning of the disease the evacuation of the redundant bile is to be favoured by the plentiful exhibition of mild diluents, both given by the mouth and injected by the ars; and all evacuant medicines, employed in either way, are not only superfluous, but commonly hurtful.

"When the redundant bile appears to be sufficiently washed out, and even before that, if the spasmodic affections of the alimentary canal become very violent, and are communicated in a considerable degree to other parts of the body, or when a dangerous debility seems to be induced, the irritation is to be immediately obviated by opiates, in sufficiently large doses, but in small bulk, and given either by the mouth or by glycer.

"Though the patient be in this manner relieved, it frequently happens, that when the operation of the epigus is over, the disease shews a tendency to return; and, for at least four days after the first attack, the irritability of the intestines, and their disposition to fall into painful spasmodic contractions, seem to continue. In this situation, the repetition of the opiates, for perhaps several days, may come to be necessary; and as the debility commonly induced by the disease favours the disposition to spasmodic affections, it is often useful and necessary, together with the opiates, to employ the tonic powers of the Peruvian bark." First Lines, p. 1462.

Thus, by commencing the cure with the free use of di luents, we partly contribute to the expulsion of the bilious matter, and partly correct its astringency. To employ evacuant, as Sydenham quaintly observes, is to increase the disturbance, and, as it were, to endeavour to quench fire by oil; and, on the other hand, to commence with opiates, is shutting up the enemy in the bowels.

Although this simple and rational practice has flood the teft of experience from the earliest date, yet other modes have been occasionally resorted to as auxiliary, or superfcic- ing it. The Columbo-root has been employed, it is said, with considerable efficacy in the cure of cholera. Dr. Percival, speaking of this root, says, "in the echoboa murous it alleviates the violent torments, checks the purging and vomiting, corrects the putrid tendency of the bile, quiets the inordinate motions of the bowels, and speedily recruits the exhausted strength of the patient." In confirmation of this, he adds, that an eminent surgeon, who, in 1758, had the care of an hospital-ship in the East Indies, gave the Columbo-root in that climate (in the dose of half a drachm or more), to a great number of patients, often twenty in a day, attacked with this disease. "He seldom employed any means to promote the discharge of the bile, or to cleanse the stomach and bowels, previous to its exhibition; and he generally found that it soon stopped the vomiting, which was the most fatal symptom, and that the purging and remaining complaints quickly yielded to the same remedy. A mortality on board his ship, after he used this medicine, was remarkably less than in the other ships of the same fleet." Percival's Essays Med. and Exp. vol. ii. p. 7. We have seen the Columbo-root remain on the stomach, when almost every thing else was rejected in this disorder; but we think it may also that we have observed the mischiefs inflicted by Sydenham from stopping the evacuation; the purging has assumed the form of dityentery.

Dr. Douglas (see Edin. Med. Essays, vol. v. part ii. p. 619.) recommends a simple, but, he affirms, an efficacious remedy, after the bile has been conformationally thrown off; namely, a decoction of oat-bread, boiled as brown as possible, but not burnt. A copious draught of this is extremely powerful, he says, in settling the nausea and vomiting. If the patient is greatly exhausted, he renders it more cordial by an admixture of wine. This, Dr. Douglas remarks, is nearly the practice of Celsus, who recommends, first, repeated draughts of warm water to clear the stomach, and a little after that, he advices the patient to take wine and water mixed with polenta. Now this was, according to Piny, barley, fried or toasted brown, and ground to powder; it was an astringent, and good for a diarrheac. Dr. Douglas supposes that wheat bread, or meal, treated in the same manner, would answer every purpose.

The warm bath, or warm fomentations, have been used with advantage, when the spasmodic affections of the bowels were severe. And in other instances cold drink has been given with beneficial effects. Dr. Cleghorn observes, (Obit. on Diseases of Muniqera, p. 224.) "The Spanish physicians have often sufficed me, that they found nothing more beneficial in violent deplorable choleras than drinking of cold water: which practice is recommended by many of the ancients." Thus Aretaeus remarks, "Sin autem omnia antiqua illecera dejecta fuerint, et bividi humores trancient, biliosionem vomitus et diabetis adit, siihium, animas, virtum labfactors, tunc frigidii aqua symphy doua aut tres propinaudi sunt ad ventris affinitionem, ut retrogradus humorum curfus cohiscatur, atque ilodium arcens refrigeretur.

C1101 ET, in Geography, a town of France, in the department of the Maine et Loire, and chief place of a canton in the district of Beaupic, 9 leagues S.S.W. of Anges.
gert. The place contains 4,799 and the canton 15,220 in-
habitants: the territory includes 347.8 kilometres and 12
communes. N. lat. 47° 5', W. long. 9° 56′.
CHOLIMMA, in Ancient Geography, a town of Asia,
placed by Ptolemy in Greater Armenia.
CHOLLE, a town of Asia, in the Palmyrene. Ptolemy.
—Allo, a town of Africa, according to Appian.
CHOLVE, Cape de la, in Geography, the most prominent
part of the coast, on the N.W. part of the island of Corfu,
between the Gulf of Floriozu to the S.E. and the harbour
of Cali to the S.W.
CHOLIDE, in Ancient Geography, a people of Greece,
CHOLM, or KOLUM, in Geography, a town of Raffia,
in the government of Phalos, seated on the River Lovat, and
also one of the 9 districts included in this government;
180 miles S. of Petersburg. N. lat. 57°. E. long. 1° 14′.
CHOLMADARA, in Ancient Geography, a town of
Asia, in the Comagene, seated on the right bank of the
Euphrates, N.E. of Samosata and near it.
CHOLMGO, or KOMOSORI, in Geography, a town
and district of Raffia in the government of Archangel,
faced on the well ride of the Dvina; 28 miles S. of Arch-
angel.
CHOLOBAPHIS, in Natural History, a name given by
some of the ancient Greeks to a peculiar kind of emerald
which was inferior to many others, and was of a colour tend-
ing to yellow.
It is plain that the Romans called all the green cry-
flats found in copper-mines by the name of emeralds; for they
express in their descriptions all the defects we find in their
cryflats, such as their having hairs, or subitance like hairs,
within, as also faults, and the like.
CHOLOBETANA, in Ancient Geography, a country of
Asia, in Armenia.
CHOLEE, an ancient town of Pontus Galaticus, in Cap-
padocia.
CHOLOMA, or CHOLOSIS, signified, according to Ge-
en, any distillation of a member or deprivation of it with
respect to motion. It is taken also, in a particular sense, for
halting or lameness of a leg, arising from luxation.
CHOLONG, in Geography, a town of Asia, in Thibet;
57 miles N.N.W. of Chou-mahing-Hotun.
CHOLTITZ, a town of Bohemia, in the circle of Chru-
dim; 6 miles N. of Chrudim.
CHOLUA, in Ancient Geography, a town of Asia, in
Greater Armenia.
CHOLULA, in Geography, a town of Mexico, in
the province of Tolcan, which formerly formed an in-
dependent state. It was held by the people of Mexico as
a sacred spot, and the sanctuary of the gods, with a temple,
in which they offered more victims than in that of Mexico;
5 leagues from Tolcan. The treachery of the Cholulans
was very severely punished by Cortes, when he took pos-
fession of this place in 1519. The Spaniards and Tolcanas,
under the direction of their commander, fell upon the multi-
tude, and killed the streets with bloodshed and death.
The temples which afforded a retreat to the priests, and some of
the leading men, were set on fire, and they perished in the
flames. This scene of horror continued two days; during
which, the wretched inhabitants suffered all that the destruc-
tive rage of the Spaniards, or the implacable revenge of their
Indian allies, could inflict. At length the carnage ceased,
after the slaughter of 6,000 Cholulans, without the loss of
a single Spaniard. Cortes then released the magistrates,
whom he had previously seized, and reproaching them bit-
terly for their intended treachery, declared, that as justice
was now appeased, he forgave the offence, but required them
to recall the citizens who had fled, and re-establish order in
the town. Bartholom de las Casas says, there was no occasion
for this mistake, and that it was an act of wanton cruelty,
perpetrated merely to strike terror into the people of New
Spain. But the zeal of Las Casas often deceived him.
On the other hand Bern. Diaz affirms that the first
missionaries sent into New Spain by the emperor, made
a judicial inquiry into this transactions; and having examined
the prudens and elders of Cholula, found that there was a real
conspiracy to cut off the Spaniards, and that the account
given by Cortes was exactly true. However this be, the
severity of the punishment was certainly excessive and atro-
cius. Robertson's Amer. vol. ii.
CHOMA, in Ancient Geography, a town of Asia Minor in
Lyca, according to Ptolemy; which had been episcopal.
Allo, the name of a place of Peloponnecis, in Arcadia,
according to Paunias.
CHOMARA, a town of Asia, in Baetritania. Ptol.
CHOMASI, a people of Baetritania, mentioned by Mela
and Pline.
CHOMEL, JAMES FRANCIS, in Biography, born at
Paris, towards the end of the 17th century, studied medicine
at Montpellier, where he took his degree of doctor in
1738. Returning to his native city, he soon so far dis-}
gnified himself as to be appointed physician and counsellor
to the king. The following year he published, "Universelle
Medecine Theorique et Pratique, fea Physiologie, ad ufm
cholre accommodata," 12mo.; and in 1734, "Traite des
Eaux Minerables, Sans et Douches de Vieii, 12mo." This
work passed through several editions. To that of the year
1738 the author added a preliminary discourse on mineral
waters in general, with accounts of the principal of the me-
dicinal waters found in France. His eldest brother,
CHOMEL, PETER, John Baptiste, studied medicine at
Paris, and was admitted to the degree of doctor there in
1697. Applying himself more particularly to the study of
botany, while making his collection, he sent his observa-
tions to the Royal Academy of Sciences, who elected him one of
their members. He was also chosen, in N vember 1728,
deal of the faculty of medicine, and the following year, was
re-elected but died in June 1750. Besides his "Memoirs"
sent to the Academy of Sciences and his "Defence de Tourne-
fort," published in the Journal des Savans, he published
"Abrégé de l'Histoire des Plantes utiles," Paris, 1724,
12mo. This was, in the year 1715, increased to two, and
in 1750, to three volumes in 12mo., and is esteemed an
ufible manual.
CHOMEL, JOHN BAPTISTE. Lewis, his son, educated
also at Paris, took his degree of doctor in Medicine, in
1753. He was several years physician in ordinary to the king,
and in November 1754 was chosen dean of the faculty.
He died in 1765. He published in 1745, "An Account of the
Disent:; then 174. enme amongst sallest, and builts of great
effects in the cure, which was elected, he says, by using fettar,
imbed with white helbore; "Diferation histoire, fur la
Mal de Gorge Gengre aux qu ils a regne parmi les Enfans,
in 1748;" the maignant tore throat, first tratd of in this
country by Dr. Forbing, about ten years later than this
period. Chomel recommends bleeding, vomiting, and buf-
ters, and bad then recours to cordials. "Effai histoire fur la
Medicine en France," 12mo. 1702. He also wrote, " Vie
de M. Morin," and " Eloge historique de M. Louis Durat,"
which

CHOMELIS, in Geography, a town of France, in the department of the Upper Loire; 4 1/8 leagues N. of Le Puy.

CHOMERAC, in Geography, a town of France, in the department of the Ardèche, and chief place of a canton, in the district of Privas; 3 miles S.E. of Privas. The place contains 1566 and the canton 6,223 inhabitants: the territory includes 110 kilometres and 9 communes.

CHOMONCHOUAN, a lake of Canada; 73 leagues N.W. of Quebec. N. lat. 49° 20'. W. long. 75° 40'.

CHOMSK, a town of Lithuania, in the palatinat of Brzez; 50 miles E. of Brzez.

CHONAD, a town of Hungary, seated on the Ma- roch, the see of a bishop, suffragan of Colocza; 25 miles N. of Temefvar.

CHONÉ, in Ancient Geography, a town of Acha Minor, in Phrygia. It had been episcopal and metropolitan.

CHONAS, in Geography, a town of France, in the department of the Ilie, and district of Vienne; 15 miles S. of Vienne.

CHOND, a town of Arabia; 190 miles S.W. of Amen- zinfabn.


Gen. Ch. Calyx common calyced, cylindrical; scales of the cylinder numerous, parallel, linear, equal; those of the base few, very short. Corolla compound uniform; florets all flat-shaped, linear, truncated, four or five-toothed; herma- phrodite ones very numerous, in several ranks. Stam. Filaments long, capillary, very short; anthers forming a hollow cylinder. Pist. Germ somewhat egg-shaped, flat; style filiform, the length of the lamens; fligmas two, reflexed. Peric. none, except the permanent common calyx. Seeds ovate, compressed, mucrinated; down capillary. Rec. naked.


Sp. 1. C. junca. Ruby gum-lacceory. Linn. Sp. Pl. Gert. tab. 1358. fig. 6. Jacq. Auff. 3. tab. 427. Baath. pi. 70. (C. vinvulna; Baath. ill. 2. 1821. fig. 1. Rais. hist. 227.) "Root-leaves runcinate; stem-leaves linear, entire." Root perennial. Stem two or three feet high, branched, erect, hard, villous near the bottom, smooth and fibrated above. Flowers yellow, flatter, like those of Lettuce, solitary or in bunches, sessile or on short peduncles; flipes of the down long, attenuated above. A native of the southern parts of Europe, flowering in July and ripening its seeds in September. 2. C. cripeolae, Murray Swt. Veg. 715. Mart. Lam. Willd. (C. junca: Linn. Syst. Nat. 52.) "Leaves arrow-shaped, embracing the stem; leaf simple; flowers nearly sessile, lateral." Root annual. Stem a foot and half high, fibrated, purple at the base, bespinkleed with a few white bristles. Leaves resembling those of Turritis, undivided, oblong, rough about the edge, and especially about the keel, with white hairs, glossy on the upper surface; lower ones with small teeth. Flowers yellow, purplish underneath, alternate, on a peduncle nearly longer than the calyx, with one or two bracts; calyx fibrated, beee with black tubercles and a white bristle; calyee very short, with awl-shaped permanent kafkis. It may perhaps be associ- ated with the genus Crepis. Native country unknown.

Such is the description of this plant copied verbatim by all recent botanists from the Syllema Nature of Linnaeus, where it unaccountably appears under the name of junca to the total exclusion of the well-known original junca of the Species Plantarum. No one since Linnaeus appears to have seen even a dried specimen; and as it is not known whence it came, or whether it is gone, it must surely be considered as a vagabond of very dubious character. 3. C. nudicilia, Linn. Mant. 2. Mart. Lam. Willd. (Laetica nudicilia; Murr. in Comment. gott. 1722. tab. 4.) "Stem nearly naked; flowers Panicled." Stems few, a foot high, panic- led, straight, cylindrical, glody, furnished with a small leaf or two. Root leaves runcinate, obtuse at the end, ciliated with small teeth. Flowers pale yellow; calyx right-leaved, glody, inarticulated below with a few caducous leaves; ray conflating of about twenty-four florets; disk composed of flowers resembling the florets in colour; down fusile. Seeds black. A native of the East Indies, and not of North America or of Egypt, as Linnaeus supposed.

Obi. La Marg has included in his chondrella the whole Linnaean genus prenanthes, and has divided it into two sections.

1. With florets in several ranks, comprehending the three preceding species with the crepis pulchra of Linnaeus, which, he says, cannot be a crepis, as its calyee conflatis of clove scales.

2. With florets in a single rank, the prenates of Linnaeus. The only point at issue is, therefore, whether a difference in the number of ranks in the florets of the ray be sufficient to constitute a generic character; for it is evidently no consequence whether the down be fibrated or sessile. We shall adhere to the Linnaean distribution.

See Prenantes.

CHONDILLA, secta tragojopodes; Bocc. Sic. See Scor- zoner a reticulata, Linn. Sonchus chronochiloides, Willd.

CHONDILLA tinctoria; Herm. Lvsbd. See Scorzone- ra tinctoria, Linn. Sonchus, L.

CHONDILLA palastris longifolia; Ral Supp. See Son- chus maritima.

CHONDILLA wetera; Baath. hist. See Sonchus tenuiflora.

CHONDILLA viscosa bulblis; Baath. pin. See Laetica bulbofum.

CHONDILLA curcula latisfolia, and curcula altera; Baath. pin. See Sonchus penicillata.

CHONDILLA angustifolia folio; Jaff. Aat. 1709. See Prenantes tenofina.

CHONDILLA viminata, viscosa, manfelsiaca; Baath. pin. and viscosa conque solutis oblatis. See Prenantes viminata.


CHONDILLA hieracii folio annua; Tour. See Crepis palustris, Linn. Prenantes hieracifolia, Willd.

CHONDILLA vinina refeta; Shaw's Travels. See Pren- nates farfurnifolus.

CHONDILLA orientalis cicorii sytyrofria folio; Tour. See Prenantes chrysifolus.

CHONDILLA purpurascens petida; Baath. pin. See Crepis petida.

CHONDILLA verrucaria; Baath. pin. See Lapsana curnuha, Linn. Zanteluus verrucosf, Gert.

CHONDILLA cornua cyani capitule; Baath. pin. See Catananche cornua.

CHONDILLA cyanoides lutes; Bocc. mus. Bar. ic. See Catananche lutes.

CHONDILLA zeilanica; Barm. zeyt. See Cacalia son- chefolia.

CHONDILLA bulbofum syriaco; Baath. pin. See Erioger- ton bulbofor.

CHONDILLA folius angustis ad oras fumulatis; Plum. Sp. See Pectis pumila.

CHONDILLA
CHONDROGLOSSUS, in Anatomy, a name applied, by Albinius, and some other anatomists, to a number of the hyoglossus muscles which arise from the corona mamms of the os hyoides. See Tongue.

CHONDROPTERYGII, in Ichthyology, the sixth, or last order of fishes, in the Linnean system. All fishes that have the gills cartilaginous are comprehended under this order; as acipenser (sturgeon), chimaera syphus (shark), perissus (faw-fil), rija (ray), and petromyzon (lamprey). See article Ichthyology.

The word is derived, by Arctioli and others, from χόνδροες, a cartilage, and πτερυγια, a wing or fin, and may therefore be understood as comprehending all fishes that have a cartilaginous instead of bony skeleton. The French term chondroptérygiens applies precisely to this description of fishes in the latter to the former rank.

CHONDROS, in Ancient Medical Writers, the same as alcira. It signifies also some gummos concretion, as of mastic, or frankincense. It is, besides, the Greek word for a cartilage.

CHONDROSYNDESMUS, signifies a cartilaginous ligament. The word is derived from χόνδροες, a cartilage, and συνδέος, a ligament.

CHONE, or CHONIS, in Ancient Geography, a town of the Oenotrians in Italy, the capital of a country of the same name, near the territory of Crotona.

CHONG, the name of a spirituous liquor, similar to whisky, extracted in B'utan from grain. It is slightly acid and spirituous, and externally prepared by the infusion of a meal of grain in a large of fermentation. Capt. Turner, in his Embassy to Tibet (p. 24, &c) has detailed the process employed in the preparation of it. Wheat, rice, barley, and other kinds of grain are indiscriminately made use of for this purpose. To a given quantity of grain is added rather more water than will completely cover it, and the mixture is placed over a slow fire till it begins to boil; it is then taken up, and the water drained from the grain, which is spread abroad upon mats, or coarse cloths, to cool. When it is cold, a ball of the composition, here called "Bakka," (which is the blossom of the Caecilia farracea Linnei, collected and rolled together in small balls), is crumbled, and floured over the grain, and both are well mixed together. The usual proportion is a ball of the size of a nutmeg to two pounds of grain. The grain thus prepared is put into baskets lined with leaves, and pressed down with the hard flints, to draw off the superfluous moisture. It is then covered with leaves and cloths, to defend it from the external air, and put in a place of moderate warmth, where it is suffered to stand three days. It is afterwards deposited in dry earthen jars; a little cold water is sprinkled upon the top in the proportion of about a tea-cup full to a gallon of grain; the vessel is then covered close, and the cake fortified with some strong compoit, or flay clay. It remains thus at least 10 days, before it is fit for use; and, if it be suffered to continue longer, it always improves by age.

To make the chong, when required, they put a quantity of the termented mass into some copacious vessel, pouring boiling water upon it, sufficient completely to cover it, and stirring the whole well together. A short time is sufficient for it to digest; a small wicker basket is then thrust down in the centre, and the infusion, called Chong, immediately drains through, and occupies the vacant space. This liquor is, at entertainments, expeditiously distributed to the guests; the segment of a gourd, fastened upon a staff, serving the purpose of a laddle. Each person holds a shallow wooden cup upon the points of his fingers, for its reception, and is seldom satisfied with one supply. This liquor, which is slightly acid, and without any powerful spirit, furnishes a grateful beverage; and it is usually drank warm. From chong an ardent spirit is obtained by distillation; this spirit is denominated "Arra," it is fiery, and powerfully incenrating.

CHONG-TCHEOU, in Geography, a town of Afn, in the kingdom of Corea; 25 miles S.W. of Ou-tchou.

CHONNAMAGARA, or CHONNARARGA, in Ancient Geography, a town of India, on this side of the Ganges. Probable.

CHONOS gulf, in Geography, or the archipelago of Geys-
tecas, lies towards the southern extremity of the continent of Chili, in the southern Pacific Ocean. The most remarkable island in it is that of Chiloé, which lies. The islands, called Chonos, are inhabited by Indians, who use the fallen flower of the species of fern, called the kva-wood, as common food. To the south of Chilloé and the archipelago of Chonos is the peninsula of the three mountains, followed by three considerable islands, that of Campana, lat. 43° 17' 22", explored by Mallespera; that of Madre de Dios; and that of St. Francis, by some called Roca Partida. The rigour of the climate renders these islands of little importance.

CHOOK-TCHOO, in Geography, one of the Ladrone islands, under the lee of which the ships of the embassy to China came to anchor, in 12 fathoms water, on a muddy bottom. N. lat. 21° 35'. E. long. 115° 44'. See Ladrone.

CHIOZ, a town of France, in the department of the Ardennes, and district of Recot.

CHOP-CHURCH, or CHURCH-CHOPPER, in Law, a name, or rather nick-name, given to paupers, who make a practice of exchanging benefices.

Chop-church occurs in an ancient statute of King Henry VI. as a lawful trade, or occupation; and some of the judges say, it was a good addition. Brook holds, that it was no occupation, but only a thing permissible by law.

CHOPER, or KOPPER, in Geography, a river of Asiatic Russia, which runs into the Don, near Choperskaia.

CHOPERSK, or KOPERSK, formerly Novokraskaya, a town of Asiatic Russia, in the government of Saratoff, situated on the Choper; and one of the 11 districts of the government: 140 miles W. of Saratoff, and 498 S.E. of Petersburg.

CHOPERSKAIA, a town of Russian Tartary, in the country of the Collaes, on the Don: 191 miles N.E. of Alphoi, and 40 south west of Archangel."
CHO
on the ground with his books about him. He was afflicted with the
fehe, and died under an operation in 1636.
CHOPIN, or CHOPPE, a French and Scotch liquid
mixture, containing half their pint.
CHOPS, in Geography. See SWAN ISLAND.
CHOPTANK, a large navigable river of America, on
the eastern shore of Maryland, which discharges itself into
Chesaapeake bay.
CHRISTE-BAY, lies on the W. side of the island of
St. Lucia, between Gros Iflet bay on the N. and Carenage
bay to the S.
CHORA, in Ancient Geography, a place of Thrace on the
Euxine sea, at a small distance N. E. of Mauroon-Tichos
and near Gnoo.—Also, a place of Gaul, on a river of the
same name. (La Cure) between Avalon and Anzérie. The
abbé de Beuf supposed it to be Glevant; but M. d'Avuille
places it on the confines of the diocese of Auxerre, on the
side of Aetum, in the situation which now bears this name.
Sanfon has confounded it with Corbel. It is
mentioned in the Notitia Imperii in the following terms:
"praefectus Sarmentorum gentilium a Chora Pariisii uique."
CHORAGIUM, in Antiquity, was used to denote the
funeral of a young unmarried woman.
Some think it should be written coragium, from χοράς, χοράς,
and χοράς. But Prouiett chooses rather to derive it from
chorus because a chorus or company of virgins always at-
tended such funerals.
CHORAGUS, in Antiquity, he who had the superin-
tendence of the chorus, whose business it was to take care
they observed the rules of the music, and performed their
parts with decorum.
It was the province of the master of the chorus, in the
absence of the poet, to exercise the actors for a long time
before the representation of the piece. He beat the mea-
sure with his feet, his hands, or by other means which
might give the movement to the performers in the chorus,
who were attentive to his gestures. It was also his duty,
not only to guide the voices of those who were under his
direction; but he gave them lefions in the two kinds of
dances which were adapted to the theatre. See DANCE.
Choragi were likewise certain Athenian citizens chosen
annually, who were obliged to be at the expense of
players, singers, dancers, and musicians, as often as there
was occasion, at the celebration of their public festivals on
occasion of the greater Dionysia, or festivals of Bacchus,
which were celebrated with extraordinary magnificence, when
tragedies and comedies were exhibited in the theatre;
and hymns in honour of Bacchus, accompanied with flutes,
were chanted by the chorus in the Odeum. Each of the ten
Athenian tribes appointed a choragus to lead his chorus, who
was to be at least 30 years of age, and whose province it
was to choose the performance and to prepare them for the
exhibition by previous instruction. With this view the
chorus for some months previous to the festivals took the
performers, that they might be duly instructed, into his house,
and provided for their support; so that it was an office of great
importance. At the festival he appeared, as well as his follow-
ers, with a gilt crown, and a magnificent robe. These
functions, consecrated by religion, were still further ennobled
by the example of Aristocles, Epaminondas, and the greatest
men, who deemed it an honour to discharge them; but
they were so expensive, that many citizens declined the
dangerous honour of sacrificing part of their fortunes to the
precarius hope of rising by this means, to the first offi-
CHORAMNEI, in Ancient Geography, a savage people
of Asia, in Peria, who, according to a passage of Ctesias,
cited by Steph. Byz., ran to futility that they were able to
overtake a flag.
CHORAN-KIAMEN, in Geography, a port of Chinefe
Tartary; 20 miles W. S. W. of Nimgoua.
CHORASAN. See KOHRASAN.
CHORASMI, in Ancient Geography, a people men-
tioned by Athenaeus and placed in Asia. They occupied the
territory to the north and east of Parthia, and extended
themselves, according to T'okmen, to Sogdiana. Accordingly
they were found in the vicinity of the river Aces, and of
the plain through which this river flowed. They chiefly inha-
bited the mountains, and, according to Strabo, they were not
very remote from the Bactrians and Sogdians.
CHORASMENI, a people of Asia, mentioned by Ar-
rian, who places them in the neighbourhood of the country of
the Amazons and of the Colchide territory.
CHORASMIA, a country of Asia, in Sogdiana, ac-
cording
C H O

cording to Ptolemy, whose situation he assigns near to that of the Malagew, Alto, a town of Aria, E. of the Parthians.

CHORAULES, Lat. A mundif.

CHORAILSRTIA, Lat. A female minifred.

CHORAZIN, in Ancient Geography, a town of Palestine, in Galilee, which our blessed Lord deplores for incruciity.

(Math. xii. 42) Dr. Lightfoot expresses his surprize how such a woe should be denounced against it, when we do not read, in the whole N. Testament, that our Lord had ever been there; however we read that he had frequently been at Bethsaida and Capernam. Now, Chorazin being placed by Dr. Lightfoot between these two towns, and being, according to St. Jerome, but two miles distant from Capernam, and in many maps at a small distance from Bethsaida, and it being expressly said that mighty works were done in her, Christ must, without doubt, have been often there.

CHORD, or Cord, primlyly denotes a flender rope or cordage. The word is formed of chorda, and that from χορδή, a gut; whereof flings may be made.

CHORD, CHORDA, in Anatomy. See CHORDA.

CHORD, CHORDS, in Geometry, a right line connecting the two extremes of an arc. Or, it is a right line, terminated at each extreme in the circumference of a circle, without passing through the centre; and dividing the circle into two unequal parts, called segments. Such is the line AB, Plate III. Geometry, fig. 43.

Chord of the complement of an arc is the chord that subtends the rest of the arc; or so much as makes up the arc a semicircle.

The chord is perpendicular to a line drawn from the centre of the circle to the middle of the arc, as CE; and has the same disposition to it, as the chord, or string of a bow, has to the arrow: which occasioned the ancient geometers to call this line the chord of the arc, and the other the sagitta, or arrow, the former of which names is still continued, though the latter is diffus'd. What the ancients called sagitta, is now termed the versed sine.

Half the chord of the double arc BD, is what we now call the right sine; and the excess of the radius beyond the chord DE, the versed sine.

The chord of an angle, and the chord of its complement to a whole circle, are the same thing; the chord of fifty degrees is also the chord of 310.

It is demonstrated, in geometry, that the radius CE, bisecting the chord BA in D, does also bisect the arc in E, and is perpendicular to the chord AB and vice versa; and again, if the right line NE bisect the chord AB, and be perpendicular to it; that it passes through the centre, and does bisect both the arch AFB, and the circle ANB.

Hence we derive several useful corollaries: as, 1. To divide a given arc AB into two equal parts; draw a perpendicular to the middle point D of the chord AB; this bisects the given arc AB.

2. To describe a circle, that shall pass through any three points, A, B, C, fig. 44. From A and C describe arcs intersecting in D and E; and also others. G and H, from C and B: draw the right lines DE and GH; the point of intersection I, is the centre of the circle to be described through A, B, and C.

Demonstration. For the points A, B, and C, are in the periphery of some circle; and therefore the lines AC and CB are chords, but ED is perpendicular to AC, and GH to BC; D and E bisect AC, and G and H bisect BC; whereof each passes through the centre. Now as DE and GH only intersect in I, I will be the centre of a circle, passing through the given points, A, C, and B. Hence, assuming three points in the periphery, or arc, of any circle, the centre may be found, and the given arc completed: hence, also, if three points of one periphery do agree or coincide with three points of another; the whole peripheries agree, and therefore the circles are equal.

And hence, lastly, every triangle may be inscribed in a circle.

The chord of an arc AB (fig. 13.) and the radius CE, being given; to find the chord of the half-arc AE. From the square of the radius CE, subtract the square of half the given chord AD, the remainder is the square of DC; from which, extract the square root; and then DC subtracted from the radius EC, leaves DE. Add the squares of AD, and FO; the sum is the square of AE; whence, the root being extracted, we have the chord of the half arc AE.

Chords, line of, is one of the lines of the sector and principal. See its description and use under Sector and Plain Scale. See also Sine.

Chords, or Cords, in Ml. 52, denote the firings, or lines, by whose vibrations the liftuation of sound is excited; and by whose divisions the several degrees of time are determined. They are called cords, or chords, from the Greek χορδή, a name which the physicians give to the intestines; in regard the firings of musical instruments are ordinarily made of guts: though others are made of brafs or iron wire; as tofe of flpiets, harpichords, &c. See String.

Chords of gold wire in harpichords, yield a sound almost twice as loud, as thofe of brafs; cords, or firings, of steel, yield a febler sound than thofe of brafs; as being both lefs heavy, and lefs ductile.

Mr. Kevalt observes, that of late they have invented a way of changing the chords, to render the sound stronger, without altering the tone.

The fifth chord of bas viols, and the teeth of large organs, confist of fifty threads, or guts; there are fome of them a hundred feet long twisted and polished with equineum, or horfe-tail.

Chords for the division of: 1. To find such part of a chord AB, as shall conftitute any concord, v.g. a fifth, or any other interwal, with the whole.

Divide AB into as many parts, as the greatest number of the interval has units; v.g. the fifth being 2: 3, the line is divided into 3. Of these take as many of the lifter number, v.g. 2: 3AC, then is AC the part sought; that is, two lines whose lengths are to each other as A B to AC, make a fifth.

Hence, if it be required to find several different ficctions of the line AB, v.g. such as shall be fifth, and 3d g.; reduce the given ratios 2: 3, 2: 3, and 4: 5, to one fundamental; the feries becomes 30, 24, 20: 15. The fundamental is 30, and the fictions found are 24, the third g.; 20, the fifth; and 15, the octave.

2. To find fcveral ficctions of a line AB, that from the leaf, gradually to the whole, ftiall contain a given feries of interwalogs in any given order; viz. fo that the leaf to the next greater contains a third g.; that to the next greater, a fifth; and that to the whole, an octave.

Reduce the three ratios 4: 5: 2: 3: 1: 2, to one feries; hence we have 81: 10: 15: 30: divide the line into the number of parts of the greatest extreme of the feries; viz. 30, we have the fictions fought at the points of division, anfwering...
frowing to the several numbers of the series, viz. at the points C, D, and E; so that AC to AD is a third, AD to AE a fifth, and AE to AB octave.

3. To divide a line AB into two parts, to contain between them any interval, v. g. a fourth.

Add together the numbers containing the interval of the two parts as the sum contains, v. g. 7; taken to any of the given numbers, v. g. 4, or C, gives the thing sought.

4. For the harmonical division of Chords. To find two sections of a line, which with the whole shall be in harmonical proportion, with regard to their quantity.

Take any three numbers in harmonical proportion, as $3, 4, 6$; and divide the whole line into as many parts as the greatest of these three numbers, v. g. 6; and at the points of division answering to the other two numbers, v. g. 3 and 4, you have the sections sought.

5. To find two sections of a line, which together with the whole shall be harmonical, with respect to quality or tune.

Take any three numbers, concords with each other, v. g. 2, 3, and 8, and divide the line by the greatest; the points of division answering to the other two, give the sections sought.

6. To divide a Chord, A D, in the most simple manner, so as to exhibit all the original concords.

Divide the line into two equal parts at C, and subdivide the part C B into two equal parts at D; and again, the part C D into A —— $| C D | E —— B$
two equal parts at E.

Here A C to A B is an octave; A C to A D a fifth; A D to A B a fourth; A C to A E a third; A E to A D a third $\frac{1}{2}$; A E to E B a fifth $g$; and A E to A B a sixth $l$. Malcolm's Treat. of Music, ch. 6. sect. 1, 2, 3.

To find the number of vibrations made by a musical chord or string, in given time, its weight, length, and tension being given.

Before we proceed to the solution of this problem, we shall premise and demonstrate the principle on which it is founded; and, with this view, we shall adopt the method of demonstration presented to the Royal Society by Dr. B. Taylor, and published in the Philosophical Transactions, No. 357; or Jones's Abr. vol. iv. p. 351.

Lemma 1. Let A D F B, A $\Delta$ F, B, (Plate III. Geometry, fig. 45.) be two curves, the relation of which is such, that the ordinates $C A D$, $\Delta$, $E F$, being drawn, it may be $C A D : E F = \Delta$. Then the ordinates being diminished ad infinitum, so that the curves may coincide with the axis $A B$; the ultimate ratio of the curvature $\Delta$ in $C D$ will be in the curve of $D$, as $C A \Delta$ to $C D$.

Demonstr. Draw the ordinates $C \beta d$ very near to $C D$, and at $A$ and $D$ draw the tangents $D i$ and $A \alpha$, meeting the ordinate $D i \beta$ in $\beta$. Then because of $C \beta d : C \beta : C D$ (by hypothesis), the tangents being produced will meet one another, and the axis, in the same point $C$. Whence, because of similar triangles $C \beta D P$ and $C \alpha D P$; and $C \beta P$ and $C \alpha P$, it will be $c \beta : c \alpha :: C \beta C D :: c \beta : c \alpha$ (by hypoth.): $\beta \alpha$ : $(c \beta - c \alpha) : d t (c \beta - c \alpha)$. But the curvatures in $A$ and $D$ are as the angles of contact $\Delta \alpha$ and $\alpha D$; and because $\Delta \alpha$ and $\alpha D$ coinciding with $C$, those angles are as their subtended $\beta \alpha d t$; that is, by the proportion above, as $C A \Delta$, $C D$. Therefore, &c. Q. E. D.

Lemma 2. In some instance of its vibration, let a string, stretched between the points A and B, fig. 46, put on the form of any curve $A \beta B$; then the increment of the velocity of any point $o$, or the acceleration arising from the force of the tension of the string, is as the curvature of the string in the same point.

Demonstr. Conceive the string to consist of equal rigid particles, which are infinitely little, as $o p$, $o q$, &c. and at the point $o$ erect a perpendicular $o R$, equal to the radius of the curvature at $o$, which let the tangents $p t, q t$, meet in $t$, the parallels to them $t r, s r$, in $t$, the chord $p r$ in $r$. Then by the principles of mechanics, the absolute force by which the two particles $p o$ and $o q$ are urged towards $R$, will be to the force of tension of the string, as $t s$ to $t p$; and half this force by which one particle $p o$ is urged, will be to the tension of the string, as $t e$ to $t p$; that is, (because of similar triangles $t e, t p, R$) as $t p$ or $o p$ to $t R$ or $o R$. Wherefore, because of the force of tension being given, the absolute accelerating force will be as $o p$ or $o R$. But the acceleration generated is in a compound ratio of the ratios of the absolute force directly, and of the matter to be moved inversely; and the matter to be moved is the particle $o t$ or $o p$. Wherefore the acceleration is as $\frac{1}{o R}$; that is, as the curvature in $o$. For the curvature is reciprocally as the radius of curvature in that point. Q. E. D.

Prob. 1. To determine the motion of a stretched string.

In this and the following problem, we suppose the string to move from the axis of motion through an infinitely little space; that the increment of tension from the increase of the length, also the obliquity of the radius of curvature, may safely be neglected.

Therefore let the string be stretched between the points A and B, fig. 47, and with a bow let the point $o$ be drawn to the distance $C o$, from the axis A B. Then taking away the bow, because of the flexure in the point C alone, that will first begin to move (by Lem. 2.). But no sooner will the string be bent in the nearest points $a$ and $d$, but theses also will begin to move; and then E and e; and so on. Also because of the great flexure in C, that point will first move very swiftly; and hence the vibrating being increased in the next points D, E, &c. they will immediately be accelerated more swiftly, and at the same time the curvature in C being diminished, that point in its turn will be accelerated more slowly. And, in general, those points which are slower than they should be, being accelerated more, and the quicker left, it will be brought about at last, that the forces being duly attempered one with another, all the motions will converge together, and all the points will at the same time approach to the axis, going and returning alternately, ad infinitum.

Now, that this may be done, the string must always put on the form of the curve $A C D E B$, the curvature of which, in any point E, is as the distance of the same $E a$ from the axis; the velocities of the points C, D, E, &c. being also in the ratio of the distances from the axis C, D, E, &c. For in this case the spaces C x, D x, E x, &c. described in the same infinitely little time, will be as the velocities; that is, as the spaces described C x, D x, &c.

Wherefore the remaining spaces k x, l x, &c. will be to each other in the same ratio. Also (by Lem. 2.) the accelerations will be to one another in the same ratio. By which means the ratio of the velocities always continuing the same with the ratio of the spaces to be described, all the points will arrive at the axis at the same time, and always depart from it at the same time. And therefore the curve A C D E B will be rightly determined. Q. E. D.
Moreover the two curves $ACDEB$ and $A \times \frac{r}{2} B$, being compared together, by Lemma 1, the curvatures in $D$ and $E$ will be as the distances from the axis $D$ $S$ and $E$ $S$, and therefore, by Lemma 2, the acceleration of any given point in the string will be as its distance from the axis. Whence (by Sect. 10, Prop. 51, of Newton's Principia), all the vibrations, both great and small, will be performed in the same periodical time, and the motion of any point will be similar to the oscillation of a body vibrating in a cycloid. Q.E.I.

Cor. Curvatures are reciprocally as the radii of circles of the same degree of curvature. Therefore let $a$ be a given line, and the radius of curvature in $E$ will be equal to $\frac{a}{E}$.

**Prob. 2.** The length and weight of a string being given, together with the weight that stretches the string, to find the time of a single vibration.

Let the string be stretched between the points $A$ and $B$, fig. 48, by the force of the weight $P$, and let the weight of the string itself be $N$, and its length $L$. Also let the string be put in the position $A F \parallel C B$, and at the middle point $C$, let $C S$, a pendulous string, be raised equal to the radius of the curvature in $C$, and meeting the axis $A B$ in $D$; and taking a point $p$ near to $C$, draw the perpendicular $p c$ and the tangent $p t$.

Therefore it appears, as in Lemma 2, that the absolute force by which the particle $p C$ is accelerated, is to the force of the weight $P$, as $e$ to $p f$; that is, is $p C$ to $C S$. But the weight $P$ is to the weight of the particle $p C$, in a ratio compounded of the ratios of $P$ to $N$, and of $N$ to the weight of the particle $p C$, or of $L$ to $p C$; that is, as $P \times L$ to $N \times C$. Therefore, compounding these ratios, the accelerating force is to the force of gravity, as $P \times L$ to $N \times C$. Let therefore a pendulum be constructed, whose length is $CD$; then (by Sect. 1, prop. 52, of Newton's Principia) the periodical time of the string will be to the periodical time of that pendulum as $\sqrt{N \times C S}$ to $\sqrt{P \times L}$. But by the same proposition, the force of gravity being given, the longitudes of the pendulums are in a duplicate ratio of the periodical times. Whence $\frac{P \times L}{N \times C} \times \frac{a a}{C D}$, or writing $\frac{a a}{C D}$ for $CS$ (by Cor. Prob. 1.), $\frac{P \times L}{N \times a a}$ will be the length of a pendulum, the vibrations of which are isochronous to the vibrations of the string.

To find the line $a$, let the absciss of the curve be $A E = x$, and the ordinate $E F = x$, and the curve itself $A F = x$, and $C D = b$. Then (by Cor. Prob. 1.) the radius of curvature in $F$ will be $\frac{a a}{C D}$. But $d$ being given, the radius of curvature is $\frac{\pi x}{x}$. Whence $\frac{a a}{x} = \frac{d x}{x}$, and therefore $a a = \frac{d x}{x} + a a$. Here the given quantity $\frac{a a}{x}$ $+ \frac{d x}{x}$ is added, that it may be $\frac{d x}{x}$ in the middle point $C$. And hence the calculus being completed, it will be $\frac{d x}{x} = \frac{d x}{b x} \times \frac{d x}{x}$. Now let $b$ and $x$ vanish in respect to $a$, that the curve may coincide with the axis, and it will be $\frac{d x}{x} = \sqrt{c b \times c b}$. Now, with the centre $C$, and radius $D C = b$, fig. 49, a quadrant of a circle $D P E$ being described, and making $C Q = x$, and erecting the perpendicular $Q P$; then the arc $D P$ being $= y$, it will be $y = \frac{b x}{a z}$. Whence $y = \frac{a}{b} z$, and $x = \frac{a}{b} y$. And making $x = b = C D$, in which case it is also $y = \text{quadrantal arc } D P E$, and $z = A D = \frac{1}{2} L$; it will be $\frac{1}{2} L = a \times \frac{D E}{C D}$, and $a = L \times \frac{C D}{2D E}$. Let it be therefore $C D = 2 D E$; diameter of a circle; circumference :: $d : e$; and it will be $a a = L \times \frac{d d}{e e}$. Therefore this value being substituted for $a a = \frac{N}{P} \times L \times \frac{d d}{e e}$ will be the length of a pendulum, which will be isochronous to the string. Therefore let $D$ be the length, whose periodical time is $t$, and $\frac{d}{e} \times \sqrt{\frac{N}{P} \times L}$ will be the periodical time of the string. Q.E.I.

For the periodical times of pendulums are as the square roots of their lengths.

**Cor. 1.** The number of vibrations of the string in the time of one vibration of the pendulum $D$, is $\frac{1}{d} \sqrt{\frac{P \times D}{N \times L}}$.

**Cor. 2.** Because $\frac{d}{e} \times \sqrt{\frac{1}{D}}$ is given, the periodical time of the string is as $\sqrt{\frac{N}{P} \times L}$. And the weight $P$ being given, the time is as $\sqrt{\frac{N}{L}}$. And the strings being made of the same thread, in which case it is as $N$, the time will be as $L$.

If we take $L$ for the number of inches and decimals contained in the length of the chord, and the proportion of the tension to the weight of the chord as $n$ to $1$, then the number of vibrations of the chord in one second is (by Cor. 1.) $\frac{355}{113} \sqrt{\frac{39.12 \times n}{L}}$. Where $\frac{355}{113}$ denotes the proportion of the circumference to the diameter of the circle; and $39.12$ is the length of a pendulum vibrating seconds, in inches and decimals of an inch, English measure. This last expression coincides with Mr. Euler's rule (Tentam. Nov. Theor. Muf. p. 6, 7.), only we here express in English what he gives in Rhinland measure. To illustrate this rule by an example: suppose the length of the chord to be 18.7 inches, its weight 6\frac{1}{2} grains, and the tension or weight extending this chord to be 8lb. troy, or 450.605 grains. Then $L = 18.7$, and $n = \frac{450.605}{6.2} = 7432$. The number of vibrations therefore by the rule will be $\frac{355}{113} \sqrt{\frac{39.12 \times 7432}{18.7}} = 391.4$. See Taylor's Method. Inclem. Prop. 29. MacLaurin's Fluxions, § 920. Smith's Harmonics, Prop. 23 and 24. Malcolm's Music, ch. ii. § 2.

By logarithms the rule may be thus expressed $L + W = C = V$. Where $L$ is the logarithm of the ratio of a pendulum, vibrating seconds, to the length of the given string, $W$ the logarithm of the ratio of the tension to the weight of the string; $C$ the logarithm of the ratio of the circumference
The length of the string is reckoned from one bridge to the other, or from one resting place to the other. The tension of the string is measured by the weight which is suspended to one end of it. If instead of stretching a string by suspending a weight to it, the string be twisted round a peg, after the manner commonly used in musical instruments, then the tension will be expressed by a weight; meaning a weight which may be capable of stretching the string as much as it is stretched by turning the peg.

If various chords differ in tension only; then the number of vibrations which each of them performs in a given time, is as the square root of the stretching weight. Thus, if a chord be stretched by a weight of 16 pounds, and another chord be stretched by a weight of 9 pounds; then the former will perform 4 vibrations in the same time that the latter performs 3 vibrations.

If cylindrical chords differ in thickness only, then the number of vibrations which they perform will be inversely as the diameters, viz., if the diameter of a chord be equal to twice the diameter of another chord, then the former will perform one vibration in the same time that the latter performs two vibrations.

By a proper adjustment of the lengths, thicknesses, and stretching weights, similar chords may be caused to perform any required number of vibrations; which is evidently derived from the preceding paragraphs.

The actual number of vibrations, which are performed by a given stretched cord, may be determined, without any great error, by using the following rule; provided the length and weight of the stretching part of the chord, and likewise the stretching weight be known. Rule. Multiply the stretching weight by 39.12 inches (which is nearly the length of the pendulum that vibrates seconds). Also multiply the weight of the chord by its length in inches; divide the first product by the second; extract the square root of the quotient; multiply this square root by 8.1416, and this last product is the number of vibrations that are performed in one second of time by the given chord. — The resilience of the air, as also some other fluctuating causes of obduction, not being noticed in this rule; it is most probable that the real vibrations are not quite so numerous as they are given by the rule.

The pitch in music is denoted by the number of vibrations that are performed in a given time, or by the length of the string which emits each of those sounds; for it has been already shown that, when stretched strings are alike in all other respects, excepting in their lengths, then the duration of a single vibration of each string is proportionate to the length of the string; or (which amounts to the same thing) that the number of vibrations performed by each string in a given time, is inversely as the length of the string.

If you take several strings, or chords, precisely of the same length, the same form, and the same thickness, and stretch them equally by suspending equal weights at their extremities, or otherwise; and their respective lengths be made of the due proportions; then these strings, when struck, will express the proper musical sounds or tones, and the whole set is called a "Scale of Music." See Scale, String, and Vibration.

Mr. Euler informs us, that he found the chord, making 392 vibrations in a second, to be at unison with the key called a in a, that is, an octave and sixth major above the lowest C in our harpsichords or violincellos. Consequently the note C, being to a as 3 to 10, will make 118 vibrations in one second. And the highest C, or c'', as Mr. Euler calls it, being four octaves above the lowest c, will make 1888 times in one second of time. Mr. Euler inverts the limits of the human ear to be, with respect to gravity, two octaves lower than C; and with respect to strumens, two octaves higher than c''. See Interval and Vibration.

Chord is sometimes also used for accord. Thus we say, the common chords to such a base note, meaning its third, fifth, and octave. See Accord.

Chord is also used, in Music, for the note or string to be touched or founded, in which sense it is applicable to all the intervals of music.

Chord is also a technical term in music, implying a combination of not less than three sounds, as the third and fifth to any base, or the

8 which compose what, in practice, is called a common
5 chord:
3 which may be written and played three several ways, as

8 3 5 The first of these is called the common
5 8 3 chord; the second, the chord of the 6th; the
3 5 8 third, the chord of the 4th; yet still each of these is but the common chord to C, the fundamental or principal base, revered. See Common chords, Fundamental Base, Accompaniment, and Thorough-bass.

CHORDA Tympani, in Anatomy, a very slender nervous twig, forming a communication between the facial nerve, (portio dura of the 7th pair) and the lingual branch of the inferior maxillary. In its course it crosses the cavity of the tympanum. See Nerves and Ear.

Chorda, Lat. the string of a lute, harp, violin, &c.

Chordale Mobiles, Lat. in Ancient Music, strings in the tetrachords which were changeable in the chromatic and enharmonic genera.
CHO

CHORDAE flabiles, flanges at the top and bottom of tetrahedrons of the ancient lyre, of which the tuning was never altered by change of genius.

CHORDAPSUS, in Medicine, a term used by some of the ancient physicians, to denote a violent pain in the abdomen. There is a difference among them as to the precise figure or figure of the term; some giving it only to spasmodic affections of the bowels, and others to inflammatory pains, or to both. Celsus (lib. iv. cap. 13) observes, that Diocles Carpusius denounced the acute disease of the small intestines chordapsus; and that of the large intestines, which is sometimes chronic, ideas; but he adds, that by most physicians the former is called ileus, and the latter colic. Celsus Aurelianus remarks, that some physicians denominate the acute disease (or ileus) chordapus, because the intestines are fretted, as it were, like clers. But he adds, that others apply the term to pains of the bowels in general, among whom are Hipocrates, Protagora, and Euromphon the Gildian. De Acut. Morbo. m. 17.

By some the word is derived from χορδή, a string, and ἀπόφθεγμα, a figment, because the bowels are hard and are fretted like a cord to the hand, applied to the abdomen; by others, probably with more correctness, from χορδή, a string, and ἀπάτεω, to cheat, from the tension and affection of the bowels during these pains. For Celsus Aurelianus observes, the ancient Greeks used the term χορδής for intestine. See Cole and Enteritis.

CHORDEE, in Surgery, (from χορδής, the string of a musical instrument;) denotes a painless, involuntary, and sometimes dilated, resection of the penis, happening at all times, but more commonly when the patient is warm in bed; under which circumstance the penis becomes hard and painful to the touch, and is most frequently curved downwards in a considerable degree. It sometimes remains, after the heat of urine, and other symptoms of gonorrhoea, are gone off; but is usually more severe during the continuation of the inflammation, and becomes more or less violent, according to the greater or less urgency of that symptom.

Mr. Benjamin Bell states, that chordee is the effect of inflammation, arising from irritation, communicated from the nerves of the urethra to those of the contiguous muscles, whereby those unequal degrees of contraction are produced over the whole sublimity of the penis, which universally take place in this disease.

Mr. Hunter says, the chordee appears to be inflammatory in some cases, and spasmodic in others. Speaking of the inflammatory, he says, "When the inflammation is not confined merely to the surface of the urethra and its glands, but goes deeper and affects the recticular membrane; it produces an extravasation of coagulable lymph, as in the adhesive inflammation, which, uniting the cells together, destroys the power of dilatation of the corpus spongium urethrae, and makes it unequal in this respect to the corpora cavernosa penis; and therefore a curvature on that side takes place in the time of erection, which is called a chordee. The curvature is generally in the lower part of the penis, arising from the cells of the corpus cavernosum penis of that side, having their folds united by adhesions, sometimes, as it were spontaneously, at other times, in consequence of the inflammation attending bad chances. Besides this effect of inflammation, when the chordee is violent the inner membrane is probably so much upon the stretch, as to be in some degree torn, which frequently causes a profuse bleeding from the urethra, that often relieves, and even sometimes cures. As chordee arises from a greater degree of inflammation than common, it is an effect which may, and often does, remain after all infection is gone, being merely a consequence of the adhesive inflammation."
nervous disorders, with which it exhibits only a few symptoms in common.

The disease, anciently denominated *febrity* or *febrity* (γυμνη εκτύμβων), appears to resemble chorea in several circumstances, inasmuch that some modern authors have considered the terms as synonymous. Sauvages treats of chorea under the appellation of *febrity*. *Chorea*. Nol. Meth. Ch. IV. See Langius, Epit. Med.—But the definitions of febrity, left us by the ancients, fearcely apply to chorea, as it has been understood since the time of Sydenham. Galen describes it as a sort of paralysis of the legs, which renders the patient unable to walk in a straight direction; he turns from one side to the other, crossing the left foot over the right, or the right foot over the left, or both alternately; and sometimes elevates the feet as if ascending a great acclivity. This description will also apply to a partial or incontinent palsy of the lower extremities: and indeed the term itself excludes the notion of any affection of the muscles of the arm, or superior parts of the body. Piny mentions the febrity, as a disease which occurred together with the febry (febrity) among the Roman soldiers encamped near the Rhine, in consequence of drinking for a considerable time the waters of a certain spring. He designates it in a few words: "'Compages in genibus solvere tur!' which seem to imply a simple paralysis of the legs. Nat. Hist. lib. xxx. cap. iii.

The disease, of which we now treat, is widely different in its nature: and the appellations of *Chorea Santit Viti, Salus Viti, &c.* imply that it has been first distinguished from other affections in modern times. The writers, however, who have adopted these appellations, have by no means agreed in the conceptions of symptoms to which they apply them. The connection of the name of this febry (Vitus) with a convulsive disease seems to have originated among the continental writers, during the days of fanaticism and superstition in the seventeenth century. Gregorius Horlius and Juncker relate, that a superstitious belief prevailed in Germany, among the people addicted to worship the images of the fants, that by preening grits, and dancing before the image of St. Vitus, on his festival in the month of May, they should live in health and safety during the ensuing year; and that for this purpose they repaired to a chapel dedicated to this fante, where they danced night and day, until they were seized with a delirium, and fell down in a sort of trance. They then returned home, having undergone a supposed renovation. But on the return of May, in the following year, they began to perceive a relapse and agitation of their limbs, as if a fresh regeneration were become necessary, and were compelled to assemble again in the chapel, on the festival of the fante. This Juncker attributes to the force of imagination and habit! There were two chapels sacred to St. Vitus, the one near Ulm, the other near Ravensberg; both famous for the annual assemblies of dancing fanatics. Gregorius Horlius affirms that he had converted with several persons, who re-attended to this superstitious dance, as a preparative to disease, and who were frenesi advocates of its efficacy; one of them had paid the annual visit for the space of 24, and another for 50 years. Greg. Horli. Opera Med. tom. ii. lib. ii. obi. 45. Juncker Conspic. Patholog.

Such is the origin of the appellation given to this disease. It was applied, it would seem, in the first instance, chiefly to cases of infancy, in which there was an extraordinary disposition to violent exercise; whether of running, dancing, or otherwise; and as well to the temporary delirium of the fante, as to the more permanent derangement of the maniac. Such were two cafes related by Platerus, if they are not altogether fabulous; in one of which, a woman danced vehemently, night and day, until the skin was worn off her feet. Obst. Med. lib. i. p. 88. Tulpius records the history of a man fitzed with a familiar inanity, who ran about night and day, until he suffered the most prodigious peripherations, and was unable to cease from his exertions, except when over-powered by sleep. Obs. Phys. lib. i. obs. 16. See also Jo. Rud. Camerar. Sylophz Mon. cent. xi. obs. 84—88.

Our countryman, Sydenham, was the first writer, we believe, who described the series of symptoms, which is now comprehended under the term, *chorea*, or *Saint Vitus's Dance*; and he has been copied or followed, in this description, by most of the ablest writers on the subject. Sydenham, however, speaks of it as a disease, which was vulgarly called *chorea fanéti Viti* in his time. Dr. James Hamilton, in a late excellent treatise, on the utility of purgative medicines, has, from a more extensive experience in the disorder, given a more correct and ample view of chorea. It is characterised by the following symptoms.

The approach of the disease is commonly slow, and is indicated by a loss of the usual vivacity and playfulness, by a variable and often ravenous appetite, a dwelling and hardness in the lower belly in most cases, in some a lank and soft belly, and, in general, a conplicated state of the bowels, which is aggravated as the disease advances. Slight irrefractory involuntary motions are frequently observed, especially o the muscles of the face, which are thought to be the effect of irritation, and are the harbingers of the more violent convulsive motions, which now attract the attention of the friends of the patient.

These convulsive motions vary considerably. The muscles of the extremities, and of the face, those moving the lower jaw, the head and the trunk of the body, are, at different times, and in different intervals, affected by it. In this state the patient does not walk readily; his gait reembles a jumping or starting; he sometimes cannot walk, and seems palsied, nor can he perform the common and necessary motions with the affected arms. In a word, when the patient wishes to be at rest, the muscles are perpetually moving, and distorting the limbs, face, and trunk; and when any motion is attempted by the will, it is performed irregularly, and with difficulty, after several useless efforts. *Thus if the patient take a cup of drink in his hand, he performs,* as Sydenham has remarked, *"a thousand ridiculous gesticulations, before he is able to bring it to his mouth; for he cannot direct it in a straight line, his hand being drawn higher and thither by the convulsions, but is compelled to move it about for some time, till at length, reaching his lips, he flings the liquor suddenly into his mouth, and drinks it greedily, as if the poor creature designed only to excite the laughter of the spectators."

These convulsive motions are more or less violent, and are constant, except during sleep, when, in most instances, they cease altogether: but sometimes they continue, and, when the disease is greatly aggravated, even severer, in much that the sleep becomes unfound and disturbed by the incessant motions. Although different muscles are sometimes successively convulved, yet, in general, the muscles affected in the early part of the disease, remain to during the course of it. The disease advancing, articulation becomes impeded, and is frequently completely suspended. Deglutition is also occasionally performed with difficulty. The eye loses its luster and intelligence; the countenance is pale and expressive of vacuity and languor. These circumstances give the patient an appearance of fatuity; and indeed there is little doubt, that, when the disease has subsided for some time, fatuity, to a certain extent,
Chorea.

interrupts the exercise of the mental faculties. Fever, such as afflicts morbus, is not a necessary attendant on chorea; nevertheless, in the advanced periods of the disease, fecundity and wasting of the muscular bulk take place, the consequence of constant irritation, of abating appetite, and impaired digestion, the common attendants of protracted chorea; and which, doubtless, may, in some instances, have been the forerunners of death; although no fatal instances of chorea have been recorded.

Chorea attacks the male and female sex indifferently; and those chiefly who are of a weak constitution, or whose natural good health and vigour have been impaired by confinement, or by the use of scanty or improper nourishment. It appears most commonly from the eighth to the fourteenth year of life; but sometimes, especially in females, it has been observed at the age of sixteen or eighteen years. Sydenham Schedul. Monitor, de nov. febris ingreñi. —

Hamilton Obs. on Purgative Med.—Biffet Med. Eflays and Obi.

Although chorea, in the precise form above described, seldom, if ever, attacks adults, yet a series of irregular, disturbing, and unwholesome motions in the muscles of the extremities, abdomen, neck, and face, occasionally occur in adults, which bear a great resemblance to the motions of the chorea of children; and what curiously arises from this disorder is sometimes connected with a derangement of the biliary system and the organs of digestion; sometimes with anxiety or distress of mind; sometimes it is combined with symptoms of hysteria, and we have seen it succeed to a state of mental irregularity and deprecation, bordering on melancholy. Dr. Darwin has attempted to distinguish these motions from those of chorea; but he has obviously mistaken the nature of the latter. He has termed the disease of adults, connusio dolorifica, (painful convulsion,) because the excitation of the muscles, he affirms, is made to relieve some uneasy sensation, especially the pains left after rheumatism in young and delicate people: but in chorea, "the undue motions only occur when the patient endeavours to exert the natural ones; are not attended with pain; and cease when he lies down without trying to move." See Zoonomia, Cls. IV. 2. 3. and Cls III. 1. 1. This statement, however, is incorrect; since, as we have before mentioned, the motions of chorea are almost incessant, and ever being filled with invertebrate cafe. An intelligent young man, who now labours under this convulsion, expressed his conviction, that Dr. Darwin's conception is correct, and affirmed, that he could, by a strong exertion of the will, prevent the motions from taking place at any time, but that such exertion was extremely painful, and was followed by languor and distressful sensations. Whether this be also the case in the chorea of children, we know not; since their immature understanding precludes the possibility of making the experiment.

Many cafes have been assigned to chorea. It is often attributed to the presence of worms in the alimentary canal, and to the repulsion, or drying up of cutaneous eruptions: Dr. Darwin seems to have conceived that its most common cause was the repulsion of the itch. Rheumatism, acute fevers, diæases of the stomach, the use of mercury, terror, and other strong mental impressions, are also enumerated among the occasionals causes of chorea; but these relate chiefly to those convulsive affections which occur in adults. Dr. Monro, the son, used to affirm, in his lectures, that he had several times observed the diæase to occur in children about the period of the second dentition, when the former set of teeth remained, or when the new set were filling through the gums; and that he had speedily cured the diæase, by drawing the first teeth, or lancing the gums. Dr. H—

ilton believes that chorea is connected with a flagitious action and conglutination of the bowels, and the consequent large accumulation of feaces in the canal. He observes, with regard to one of his patients: "This boy was emaciated and exceedingly puny, and his abdomen was lank; yet, from the 15th day of December, when the commencement of his recovery was observable, to the 25th day of the same month, the quantity of feaces decharged was more wonderful, such as I had never seen before. If an enema is given during the above period, to have nearly equalized in weight, that of the whole body of the exterminated patient." Page 68.

The cure of chorea has been variously attempted, according to the particular notion entertained by the practitioner, of the nature and cause of the disease. All the remedies, however, which have been adopted, may be considered as belonging to two classes, tonics and evacuants; such as tone, on the one hand, to support the strength of the constitution, and to diminish the susceptibility of irritation, or, on the other, to evacuate the bowels, or lessen the quantity of the circulating fluid. The two plans of cure have been combined with lucius.

The systems of modern medicine, and more particularly the diapeutistical doctrines of Brown, have led their followers to conclude that every antifeptic: remedy is calculated for the cure of which tones and stimulus medicines are alone adequate, and to which the slightest evacuation is greatly detrimental. Numerous examples of chorea, among the relics, are recited in the periodical journals, in which a cure was obtained under the employment of medicines of this nature. Thus we find cures attributed to the use of affatina, valerian, mule, camphor, the flowers of cardamine, and belladonna; to electricity and the cold bath; to Peruvian bark and other vegetable bitters; and, of late years, more particularly to the virtues of the metallic tonics, especially the oxyed of lime, and sulphate of zinc, the ammoniated copper, and nitrate of silver. See Biffet loc. cit. Edinburgh Med. Com. vol. x. and xii. Memoirs of the Lond. Med. Soc. vol. iii. Forthgill, Phil. Tran. 1779, &c. Under the administration of remedies of this class, the diæase unquestionably occasionally disappears; sometimes in consequence of the casual extirpation or removal of the irritation which excited it; and sometimes, no doubt, from the direct effects of the medicines, in rendering the body less susceptible of the ill effects of the existing irritation, in flight cafes. It is certain, however, that the symptoms of chorea have often continued with unmitting severity, under the employment of the most powerful of tereic tonics and anti-spasmodic medicines, during many months, with even for years; terminating only, on some occasions, about the age of puberty, and even leaving the unconquerable remains of its grotesque and irregular motions imposed on the young sufferer for life.

To the opposite mode of employing evacuants, especially purgatives, different physicians have been led by some peculiar notion of the diæase which they entertained; which, however different, conducted them to the same conclusion. Sydenham ascribed the convulsions of chorea to a humour failing upon the nerves, (humor aqvus in nervis aqvas,) and stimulating them to extraordinary action: hence he inferred that the indications of cure were to diminish or remove this supposed humour by blood-letting and purging; and to strengthen the nerves, by administering tonics and anti-spasmodics in the intervening days. He cured five cafes, the only ones that he had seen, by this method. It is probable, however, that the purgatives were the only useful evacuants that Sydenham employed, and the protracted curés may be attributed partly to the interruption of the use of them,
them, and partly to the debilitating effects of blood letting, which appears to be decidedly prejudicial, and is no longer recommended. But the general diffuse of purgatives is chiefly to be attributed to the opinion of Dr. Cullen, and the more dogmatic doctrines of Dr. John Brown, which inculcate that all spasmodic diseases are diseases of debility; and, consequently, that all evacuations are hurtful, and strengthening or stimulating medicines are required.

But Dr. Hamilton, in a late excellent treatise "On the Utility of Purgative Medicines," has brought forward the refult of a long experience in the infirmary at Edinburgh, which establishes the propriety of the purgative plan in the cure of cholera. He has seen twenty cases of the disease, and has generally found it connected with a state of irregularity in the action of the bowels, frequently with a tumid abdomen, and has effected many and comparatively speedy cures by the regular administration of purgative medicines. It appears that, so far from increasing the state of debility, the evacuation of the intestines contributes to relieve the strength, by reducing the functions of the vitreous. He particularly recommends the inspection of the faces of the patient, as a guide to the practic-er in the administration of his medicines, and to the alteration of the dose as circumstances may require. The usual practice of Dr. Hamilton is, to administer three grains of coloquint, with six or eight of jalap daily, till the feces begin to assume a natural appearance, and the spasmodic symptoms to abate, which are generally observed at the same time. By this plan, he affirms, that "chorea is speedily cured, generally in ten days or a fortnight, from the commencement of the course of purgative medicines."

The torso of the intestines in this disease is, however, sometimes extremely great, and, in such instances, more active purgatives must be resorted to, and repeated until the end is accomplished. In the early stage of the disease, while the intestines yet retain their sensibility, and before the accumulation of feces is great, gentle purgatives, repeated as occasion may require, will readily effect a cure, or rather prevent the full formation of the disease. But in the confirmed stage more sedulous attention is necessary. Powerful purgatives must be given in successive doses, in such a manner that the latter doses may support the effect of the former, till the movement and expulsion of the accumulated matter are effected, when symptoms of returning health appear. Whoever undertakes the cure of cholera by purgatives must be decided, and firm to his purpose. The confidence which he allines is necessary to carry home, to the conviction of the patient, conviction of ultimate success. Their prejudices will otherwise throw insurmountable obstacles in the way. Half measures, in instances of this kind, will prove unsuccessful; and were it not for perseverance in unloading the alimentary canal the disease would be prolonged, and recurring, would place the patient in danger, and thus bring into discredit a practice which promises certain safety.

Here, as in all other cases of extreme debility induced by disease, the recovery is at first slow and gradual. A regular appetite for food, a more intelligent eye, and lightened constancy, cheerfulness, and playfulness of temper, inciting aptitude for fiercer motions, the restoration of arti- culation, and of the power of deglutition, a renovation of flesh and strength succeed each other, and being more and more confirmed, are, ere long, followed by complete recovery.

For some time after these salutary changes take place, the state of the bowels must continue an object of attention. An occasional stimulus from purgatives will be requisite to support their regular action, and to render their healthy Vot. VII.

tone, the only security against the recurring accumulation of feces, and of a confestent relapse. About this time also, remedies, poiffied of tonic and stimulant powers, may be used with propriety and effect; they restore energy to the torpid bowels, aid the purgative medicines in obviating colicinenvs, and thus confirm a recovery already advanced. Vegetable bitters, or the preparations of feeb, may perhaps be most useful for accomplishing these ends. I have not felt the necessity of having recourse to medicines of this kind: under a proper regimen of light and nourishing food, and of exercise in the open air, my patients, in general, quickly recover their strength. But many practitioners find it advantageous to make use of a liquid upon tene medicines; and the usual routine of practice demands them." Page 99, et seq.

This tone of confident experience from a cautious and sagacious practitioner, supported by the successful practice of Svedenham, De Haen, Stoll, &c. will, doubtless, have its due influence on the general practice. For a detail of cases treated in this way, the reader may consult the appendix to Dr. Hamilton's treatise, the Edinburgh Medical and Surgical Journal, No. 1 vol. i. 1805, and Maximilian Stoll. Ratio Medendi, pars 4th.

From five cases described in the Edin. Journ. the writer observes that the following facts appear to be established:

18. From the exhibition of even two or three cathartics, the involuntary motions and other symptoms were much abated.

20. Although the cathartics were continued daily for a consideruble length of time, the patient, instead of becoming more debilitated, became stronger, and walked with a firmer pace.

2d. During the progress of the cure, if at any time the cathartics did not produce an evacuation, the involuntary motions recurred, and all the symptoms were aggravated.

4th. The feces, before the exhibition of the cathartics, were small in quantity, and, in every instance, black and fetid.

And, lastly, when the disease was cured, the appearance of the feces became natural.

Thus the connection of the disease with the state of the alimentary canal and its contents appears very convincingly, and the disappearance of the symptoms was proportionate to the obvious effects of the remedies; affording a degree of evidence in favour of the practice, such as is seldom obtained in medicine.

CHOREOGRAPHY, as defined by Noverre, is the art of expressing a dance in writing, by means of different characters or notes in a similar manner to music; with this difference, that a good musician will read 300 bars in an instant, and an excellent choreographist will not be able to decipher 200 bars of a dance in two hours.

Thoinet Arbeau, canon of Langres, was the first who acquired reputation by a treatise in 1588, which he entitled "Orchesographia." He wrote below the notes of the air such movements and steps of the dance as he thought suitable. Beauchamps afterwards gave a new form to choreography, and perfected the sketch of the ingenious Thoinet Arbeau: he found the means of writing the steps by signs to which he added a different signification and value; so that he was declared the inventor of this art by a decree of the French parliament. Feuillet applied himself entirely to this art, and has left several works on the subject.

It was much used in France by the ballet-masters till about the year 1754, when it was confirned by Cahusac "Traité Hill. de la Danse anc. et mod." and by the admirable Noverre in his "Lettres sur la Dance, 1760," who regarded it as too mechanical, and incapable of expressing the grace of
the countenance of the performers. "I learned choreography, (says Noverre,) and have forgotten it; if I thought it useful to my plans, I would learn it again. The bellet dancers and most renowned ballet-masters disdain it, because it teems to be of no real use. If all the figures and steps of the great dancers were to be recorded, it would reduce the art to servile imitation; like modern Latin, where no expression or word must be used for which classical authority during the Augustan age cannot be produced." Mr. Steel published an essay in 1775, towards establishing the melody and measure of speech to be expressed and perpetuated by peculiar symbols.

By means of a great number of new charactars, the author undertook to record in his notation not only how Garrick played his principal parts in general, but any particular night, how, from different degrees of animation and feeling, he varied from himself. But we believe this ingenious book was not only never well understood by the public, but never entirely read by any individual purchaser.

The choreographic art, we believe, is now wholly laid aside in France, and we have heard nothing of it in England for a long time. In 1716, however, Mr. Ellis, a celebrated English dancing-master in London, applied the choreographic art to country dances, and published a little book engraved on copper, in which beneath a line of music he delineates, on the same page, the steps and movements in characters. Mr. Weaver, a billlet-master, who wrote after Richard Steele's request, the three spectatours on dancing, Nos. 67, 334, and 370, translated, at the request of Mr. Isaac, another eminent dancing-master, from the original of M. Feuitillet, this then new art of dancing by notation, to which all the dancingmasters of eminence subfcribed; and we remember it in general use even in the country, among the professors of the Art. Mr. Weaver, besides his professional knowledge, was a man of infinite wit and considerable learning, who, after retiring from the capital, ended his days at Shrewsbury, where he had established a boarding-school of great reputation, and continued teaching to dance till he was 90 years of age. At his balls the children, besides the minuet, rigadon, and loulre, performed figure dances, such as the wooden-foot dance, Mars and Venus, with Vulcan's discovery and imprisonment of the lovers in a cage, in Pantomimes &c. in which our own juvenile vanity was highly excited by being honoured with a part. See Dance.

CHOREIS, in Ecclerical History, rural or country bishop, an officer in the ancient church, about whose function the learned are extremely divided. The word comes from χωρεός, a region or little country, and πατήρ, a bishop, or overseer.

The choreiepoci were suffragan or local bishops, holding a middle rank between bishops and prebysters, and delegated to exercise episcopal jurisdiction within certain districts, when the boundaries of particular churches, over which separate bishops presided, were considerably enlarged.

It is not certain when this office was first introduced; some trace it to the close of the first century; others tell us, that choreiepoci were not known in the East till the beginning of the fourth century; and in the West, about the year 439. In a council held at Antoch, in 344, they were forbidden to ordain priests or deacons, and had only the power of appointing prelates to inferior offices in the church. They ceased, both in the East and West, in the tenth century; when rural deans and arch-prelates were instituted in their places. After this the sylen of diocesan episcopacy was fully established.

CHOREIS, in the name of a dignity held suffragan in some cathedralls, particularly in Germany; signifying the same with chori episcopus, or bishop of the choir. The word, in this sense, does not come from χωρεός, place, but χωρης, choir, &c. In the church of Cologne, &c. the urll chantor is called choreipocus.

CHOREUS, a foot in the ancient poetry, more commonly called trochæus, or trochee.

CHORIACK, or Cerfucan, in Geography, a town of Arabia, in the country of Oman, pillaged by the Portuguese in 1508; 64 miles S.E. of Jafiir.

CHORGES, a town of France, in the department of the Higher Alps, and chief place of a canton in the district of Embrun; 10 miles W. of it. The place, which was burnt by the duke of Savoy in 1692, contains 1577 and the canton 4242 inhabitants; the territory includes 1471 kilometers and 8 communas.

CHORIAMBUS, in the Latin Poetry, a foot compounded of a choras, or trocheus, and an iambus.

It consists of four syllables; of which the first and last are long, and the two middle ones short: as fidiulium.

CHORIER, Nicholas, in Biography, a lawyer and man of letters, was born at Vincennes in Dauphine in 1669. He spent the greater part of his life in the profession of an advocate at the parliament of Grenoble, employing his leisure in the composition of historical and literary works. He died at Grenoble in 1693. The principal of his writings are "La Philosophie de l'homme," "Histoire general de Dauphine," 2 vol. fol. of which the abbe Leuglet says that Chorier is an author of little accuracy, and that the knowledge of a fact fenced him to build a history upon it. In these and many other volumes Chorier appears in the character of a grave scholar and industrious inquirer; but his name must defend with infamy on account of a licentious work, entitled "Aloizet Toletanx Satyre Sodalie de Arcanus Amoris & Veneris," which he published under the name of a lady celebrated for her learning.

CHORIN, in Geography, a town of Germany, in the circle of Upper Saxon, Ueker mark of Brandenburg; 6 miles S. of Neu Angermunde.

CHORINEUS, in Entomology: the Papilio or butterfly of this name in Cramer's exotic insects is the Papilio Faunus of Fabricius. Spec. Inf., and Pop. Citius of that author's Mammals, and Entomologia Syntemat. See Papilio Citius.

CHORION, in Anatomy, one of the membranes of the human ovum. It surrounds the amnion, and contains therefore that membrane, with its fluid. (the liquor amnii,) the fetus, and the navel string. See Generation, female organs of.

CHORIST, or CHORISTER, a chantor or singer in the choir.

CHORIZANTES, in Ecclerical History, the name of a sect in Germany, ann. 1774, laid to be demonsiacs that assembled in streets and churches.

We may suppose their enemies called them demonsiacs. Du Cange does not mention any of their texts.

CHORLEY, in Geography, a market and manufacturing town of Lancashire, England, is situated near the springs of the Chor, which issues from several springs on the east side of the town, and flowing through one part thereof along the picturesque and pleasant valley of the river Yarrow southwards, and for many miles round, are great numbers of bleaching grounds and printing works, with some cotton factories intermixed. Chorley has an ancient chapel, lately made
made parochial, supposed to be of Saxon structure, dedicated to St. Lawrence, the walls of which are ornamented with coats of arms and Saxon characles: the windows with hieroglyphic paintings. Here are other places of worship, a grammar-school, a poor-house, six alm-houses, and Sunday-schools. At the south end of the town is a dungeon or prison for the confinement of malefactors or disorderly persons. The bishop of Chelten holds his court twice a-year by proxy. The cotton manufactory, in all its branches, is carried on with great success, as also the trade of bleaching and printing cottons, fullers, calicoes, and muffins. The town and its vicinity abound in mines of coal, lead, and alum; in beds of gravel, sand, and marl; in rocks of stone, and quarries of flag and flate, ashlar and mill-Bone. Chorley is N.W. of London 208 miles, and contains, according to the latest return, 805 houses, and 4516 inhabitants; the population as well as the trade having greatly increased for several years past. Here are two weekly markets, one on Thursday, plentifully supplied with every necessary article of life, the other on Saturday, for meat and vegetables only. Another market for silk continues for two or three days in the week, when all sorts in feason, fresh and salt, are brought from Lancaster and Preston. Four fairs are annually held here, three for horned cattle, and one for toys, small wares, and Yorkshire clothes; All-houses, six alm-houses, and Sunday-schools.

CHORNOY Kuban river, a branch of the Kuban, falling northward into the sea of Azoph to the E. of Caffa or Caffa-Braits; probably the same with Aganyal, at the mouth of which, on the W. side of the river, stands the town of Amuev.

CHIRO favorita, in the Italian Musie, a chorus, in which are employed the bell voices and instruments to sing the recitatives, play the ritornellos, &c. It is otherwise called the little chorus, or chora recitante.

Choro flourato, a composition of two, three, or more choruses. It is often met with instead of tutti or da capella, which mean the grand chorus. A solo, a tre, a quatro chorus, is for two, three, or four choruses. When after the name of a part we find primo, 1° chorus, we must understand that it is to be played in the first chorus; if 2, 2°, or secondo chorus, the part must be sung or played in the second chorus. And consequently it shews, that the composition is for eight voices or different parts.

CHOROANA, in Ancient Geography, a small country of Asia, which Ptolemy places in Parthia. Strabo calls it Choroneas.

CHOROBATES, from χοροβντω, to overrun a country, a kind of water-level, used among the ancients; composed of a double square, in form of a T, decribed by Vitruvius.

CHOROCHOAD, in Ancient Geography, a town of Asia, in Armenia.

CHOROCITHARISTRIA, in Musie, he who accompanies dances on the cithara or harp.

CHORODNA, or CHORODAX, a town of Asia in Persia Propria.

CHOROGRAPHY, the art of making a Map, or description of some country, province, or district. The word comes from χορογνωσις, region, and γνωσις, I defcribe. Chorography is distinguished from Geography, as the description of a particular country is from that of the whole earth. And from Topography, as the description of the fame country is from that of a single place, town, or district in it.

CHOROIDEA TUNICA, in Anatomy, or choroid coat of the eye, is the vacular and delicate membrane, which invests the globe of the eye within the fclerotes. See Eye.

CHOROIDES Plexus, a vascular production of the pia mater, contained in the lateral ventricles of the brain. See Brain.

Choroides, in Optics, is applied to the inner and posterior tunic of the eye, immediately under the sclerotes. It is soft, thin, and black; and its inner, or concave surface, is very smooth and polished. It has its name from its being interposed with sifts. Its anterior part is called the vortex; or rather the iris, as the internal surface is called the Ryschian coat.

Next under the choroides is the retina. Ruyfch, indeed, says, he has found another tunic between the choroides and retina; and denominates it from himself, tunica Ruyfchiana. He adds, that it grows firmly to the choroides, that it is over-looked in the common dissections.

But Verheyen, though he found the choroides of a bird divisible into two membranes, could never separate those of the human eyes; and therefore he thinks there needed not any new name. The choroides is, for the most part, black in men; though it appears often, as M. Pequet has observed, in very different shades: in lions, camels, bears, sheep, cattle, dogs, cats, and mole flines, it is of a shining colour, like the brillians of silver, or the lufire of oriental pearl; and makes what naturalists cal! the topis, or colour of the eye.

Mufchenbroeck also says (Introduct, vol. ii, p. 748) that in many animals, as the lion, camel, bear, ox, flag, sheep, dog, cat, and many birds, the choroides is not black, but blue, green, yellow, or sone other colour.

M. Marriotte maintains, that vifion is performed rather in the choroides than in the retina; in which he agrees with Bar. Torinus, and is feconded by M. Mery; but most other authors are of a different sentiment.

He was led to this hypothesis by observing that part of the retina, at the interion of the optic nerve, is insensible to the impression of light, and that in this part the choroides is wanting.

He was confirmed in opinion, that the retina could not be the seat of vifion, because of its transparency; though M. Pequet observes in reply, that it is very imperfectly transparent, only resembling oiled paper. He urges likewise the greater sensibility of the choroides than that of the retina, as is evident by the alternate contraction and dilatation of the iris, which is a continuation of the choroides, in light and shade.

It has been replied, that some creatures, such as the porcupine and sea-calf, have the optic nerves inserted into the axes of their eyes, exactly opposite to the pupil; and hence it has been inferred, that, in these animals, the retina is perfectly sensible to the impression of light, at the interion of the nerve. This fact, according to Dr. Porterfield, overturns Marriotte’s hypothesis of the choroides being the principal and immediate organ of sight.

Mr. Le Cat strenuously defends Marriotte’s opinion, that the choroid coat, which is the production of the pia mater, and not the retina, is the immediate organ of vifion. The retina, according to him, is to the choroid what the epidermis is to the skin; receiving the impression of light, and preparing it for its proper organ. Mr. Michell has likewise urged some farther considerations in favour of the choroides as the proper seat of vision, deduced from its greater sensibility, and from the variety of its colours in different animals, according to their situation and necessity. He adds that the choroides is in no case transparent, and has no reflecting surface beyond it, and that it is better formed as an organ of distinct vision than the retina.

To the hypothesis of the seat of vision being in the choroides,
CHORUS, a river of the Colchide, according to the
periples of Scylax.

CHORTACANA, an ancient town of Asia, situated
in the northern part of Arisa, according to Diodorus Siculus. Strabo and Quintus Curtius
call it Artacana.

CHORUM, an ancient place of Thrace.

CHORUS, in Drama and Poetry, one or more persons,
present on the stage during the representa-
tion, and supposed to be by flanders without any particular role or instinct in
the action.

Tragedy, in its origin, M. Dacier observes, was no
more than a single chorus, who trod the stage alone, and
without any other actors; fusing dialectics, or hymns, in
honour of Bacchus, so that the chorus was the basis or founda-
tion of the ancient tragedy. Thespius, who lived about
566 years before the Christian era, to relieve the chorus,
added a second, who, during a dialogue between these two persons or actors,
in which he contrived to interweave some interesting story,
brought his actors on the stage, adorned with proper scenery and
decorations; and at the same time greatly reduced the
fusing of the chorus, to make more room for the recitation.

Every thing introduced between the four fongs of
the chorus, they called by the term episoden; and these four
fongs made the four intervals, or acts of the piece.

But when once tragedy began to be formed, those reci-
tives, or episodes, which at first were only intended as neces-
"sary parts, to give the chorus a breathing time, became now
the principal parts of the performance; and whereas, before,
they were taken from various subjects, they were now all
drawn from one and the same, or the subject of the story in
which the actors were principally concerned.

The chorus, as the subject demanded, was composed
of men and women, old men or youths, citizens or slaves,
priests, soldiers, &c. to the number of 15 in tragedy, and
24 in comedy; and the persons of it were always supposed
to be of inferior condition to the principal characters of
the piece. As it usually represented the people, or at least a
part of them, foreigners, even though settled at Athens,
were forbidden to act in the chorus, for the same reason
as they were prohibited from being present in the general ar-
my of the people. The actors, who composed the chorus,
came on the stage preceded by a flute-player, who regu-
lated their steps, sometimes one after the other, but more
frequently, in tragedy, 3 in front and 5 in depth, or 5 in
front and 3 in depth. In comedy, they were usually ar-
anged 4 in front and 6 deep, or 6 in front and 4 deep.

The chorus by degrees, became inflected and incorpo-
rated into the action, to which it served as an addition or orna-
ment. Sometimes the chorus was to speak, and then their
chief, whom they called Corypheus, spoke in behalf of all the
rest: the singing was performed by the whole company;
so that when the Corypheus struck into a song, the chorus
immediately joined him.
Besides the four songs, which made the division of the piece, and which were managed by the chorus, the chorus sometimes also joined the actors in the course of the representation, with their plaints and laments; on occasion any unhappy accidents befal them.

Thus, in the course of the piece, the chorus sometimes performed the part of an actor, and sometimes it formed the interlude. In the first cafe it took a part in the action, and sung or declaimed with the persons of the drama, the corollary speaking for it. On certain occasions it was divided into two parts, headed by two leaders, who related certain circumstances of the action, or mutually communicated their hopes and fears. Scenes of this kind, which were almost always sung, were sometimes concluded by the union of the two parts of the chorus. In the second cafe the chorus confined itself to lamenting the calamities incident to humanity, or imploring the assistance of the gods for the dramatic peripage whose fate it espoused. In the interlude the chorus sung; and the actors declaimed when the chorus was silent; but when it entered into dialogue with the actors, its coryphæus recited with them, or they sang alternately with the chorus. During these scenes the chorus rarely quitted its place. In the interludes, and especially in the first, it executed different evolutions to the sound of the flute. The verses which it sung were like those of the ode, diffus'd in florishes, antiphrases, epodes, &c. At the first florish, the chorus performers prided from right to left; at the first antiphrase, from left to right, in an equal time, and repeating the same air to other words. They afterwards flapped, and turning towards the spectators, sung a new melody. Frequently they repeated the same evolutions with sensible differences in the words and music, but always with the same correspondence between the march and the counter marches.

The proper function of the chorus, when tragedy was formed, and that for which it seemed chiefly retained, was to shew the intervals of the acts; while the actors were behind the scenes, the chorus engaged the spectators; their songs chiefly turned on what was just exhibited; and were not to contain any thing but what was suited to the subject, and had a natural connection with it: so that the chorus concurred with the actors for advancing the action.

It is a fault observed in Euripides' tragedies, that his choruses are detached from the action, and not taken from the same subject. There were some other poets, who, to save the pains of composing choruses, and adapting them to the piece, contented themselves with inventing songs, which had no relation at all to the action. These foreign choruses were the less pardonable, as the chorus was esteemed to act a part in the piece; and to represent the spectators, who were looked on as interluders therein; insomuch that the chorus was not always to be mute, even in the course of the acts. In the modern tragedies the chorus is laid aside, and the muse supplies its place. At first the chorus was not a mere ornament added to the drama, or a contrivance designed to render it more perfect: but, in reality, the dramatic dialogue was an addition to the chorus, which was the original entertainment. In process of time, the chorus, from the principal, became only the accessory in tragedy; till at last, in modern tragedy, it has altogether disappeared; which forms the chief distinction between the ancient and the modern stage.

That which occasioned the suppression of the chorus was its being incompatible with certain compases, and secret deliberations of the actors. For it is in no-wis probable, that such machinations should be carried on in the eyes of persons interested in the action. As the chorus, therefore, never went off the stage, there seemed a necessity for laying it aside, to give the greater probability to those kinds of intrigues which require secrecy.

M. Dacier observes, there was a chorus, or grew, also in the ancient comedy; but this too is suppressed in the new: chiefly because it was made use of to represent vice, by attacking particular persons.

The chorus in comedy was at first no more than a single person, who spoke in the ancient composes for the stage; the poets, by degrees, added to him another; then two, afterwards three, and at last more: so that the most ancient comedies had nothing but the chorus, and were only so many lectures of virtue.

The suppression of the chorus has given rise to a question, much agitated between the partisans of the ancients and the moderns, whether the drama has gained or suffered by the abolition of the chorus. It must be admitted, that the chorus tended to render tragedy both more magnificent and more instructive and moral. It was always the most sublime and poetical part of the work; and being carried on by singing, and accompanied with music, it must, without doubt, have diversified the entertainment, and added to its splendour. The chorus, at the same time, uniformly conveyed lessons of virtue. It was composed of such persons as might most naturally be supposed present on the occasion; inhabitants of the place where the scene was laid, often the companions of some of the principal actors, and therefore, in some degree, interlaced in the issue of the action. This company, which, in the days of Sophocles, was restricted to the number of 15 persons, was constantly on the stage, during the whole performance, mingled in discourse with the actors, entered into their concerns, faggotted counsel and advice to them, and on all the incidents that were going on, and during the intervals of the action, sung their odes, or songs, in which they addressed the gods, prayed for favours to the virtuous, lamented their misfortunes, and delivered many moral and religious sentiments.

The office of the chorus is thus described by Horace (De Art. Poet.):

"Astoris partes chorus, officinique virile
Defendat: ne quid medius intercinct actus
Quod non propolito conducat, et herce apta
Ille bonis favatque, et conciliatur amicus,
Et regat iratos, et amet peccare timentem
Ille dapes laudet mense brevis, ille fulbren
Jutitiam, legeficet, et apertis ostia portas.
Ille regat commilla, dedicat poetar, et orct
Ut redeat miseras, abeat fortuna superba."

"The chorus must support an actor's part,
Defend the virtuous, and advise with art;
Governing the choleric, and the proud appease;
And the short feasts of frugal tables praise;
Applaud the justice of well-govern'd states,
And peace triumphant with her open gates.
Intrusted secrets let them ne'er betray;
But to the righteous gods with ardour pray.
That fortune, with returning smiles, may best
Aff'end worth, and impious pride deprest;
Yet let their songs with apt coherence join,
Promote the plot, and aid the jilt design."

Francis.

The judgment of two such critics, as Horace in the passage above cited (i. i.), and also Arbtonthus (τον | τον τον γιατί τον γιατί), and the practice of wise antiquity, concerning the suppression of the chorus, it should be needless, one would think (says Dr. Hurd, Notes on the Art et Poetry),
Poetry), have become a fundamental rule and maxim of the drama. And so indeed it appears to the French writers. The most admired of the French tragic poets ventured to introduce it into two of his latter plays, and with such success, that, as one observer, "it seemed, in all reason, have disabused its countrymen on this head?" Peffai, historique de M. Racine, que les (chours) a fait revivre dans Athalie et dans Ellyer, devront, co female, nous avoir detrompez fur cet article. (P. Bruniol, vol. i. p. 107.) And before him, our Milton, who, with his other great talents, possessed a supreme knowledge of antiquity, was so struck with its use and beauty, as to attempt to bring it into our language. His "Samphor Agonides," was, as might be expected, a master piece. But even his credit hath not been sufficient to restore the chorus. Hear a late prospector of the art declaring, "De choro nihil difficult, quia non eft essentiarum dramatis, atque a neutron penitus, quid, ut justice, natura, oporteat. ([P. Poet. vol. ii. p. 115.]) Whence it hath come to pass, says Dr. Hurd, that the chorus hath been thus neglected is not now the enquiry. But that this critic, and all such, are greatly out in their judgments, when they presume to censure it in the ancients, must appear (if we look no farther) from the double use, inferred by the poet. For, 1st, A chorus interposing, and bearing a part in the progress of the action, gives the representation that probability (Le Theatre des Grecs, vol. i. p. 107.), and striking resemblance of real life, which every man of sense perceives, and feels the want of upon our stage; a want, which nothing but such an expedient as the chorus can possibly relieve. And, 2nd, The importance of its other office (Ile bonis favecur, &c.) to the utility of the representation, is so great, that, in a moral view, nothing can compensate for this deficiency. For it is necessary to the truth and decorum of characters, that the manners, had as well as good, be drawn in strong vivid colours; and to that end, that immoral sentiments, forcibly exprested, and speciously maintained, be sometimes imparted to the spectators. Hence the sound philosophy of the chorus will be constantly wanting, to rectify the wrong conclusions of the audience, and prevent the ill impressions that might otherwise be made upon it. Nor let any one say, that the audience is able to do this for itself: Euripides did not find even an Athenian theatre so quick-fashioned. The folly is well known (Sen. Ep. 115.), that when this painter of the manners was obliged, by the rules of his art, and the character to be fulfilled, to put a run of bold sentiments in the mouth of one of his persons, the people instantly took fire, charging the poet with the impudent villany, as though it had been his own. Now if such an audience could so easily mistake an attention to the truth of character into the real doctrine of the poet, and this too, when a chorus was at hand to correct, and diffuse these judgments, what must the cafe, when the whole is left to the fancy and penetration of the people? The wiser fort, it is true, have little need of this information. Yet the reflections of sober sense on the course and occurrences of the representation, clothed in the noblest drefs of poet, y, and enforced by the joint powers of harmony and action (which is the true character of the chorus) might make it, even to such, a no unpleasant or profitless entertainment. But then, we are a small part of the ut of the chorus; which in every light is seen so prominent to the truth, decorum, and dignity of the tragic scene, that the modern stage, which hath not thought proper to adopt it, is even, with the advantage of, sometimes, the judicious moral pairing and sublime imagery, but a very faint shadow of the old; as must needs appear to those who have looked into the ancient models, or, dwelling themselves of modern prejudices, are disposed to confut the dictates of plain sense. Dr. Hurd, for a fuller view of the important benefits arising to the drama from the observance of Horace's rule, refers to 1st tome of the History of the Academy of Inscriptions and Belles Lettres; or, he says, it may be sufficiently refer the English reader to the tragedies of "Elfida" and "Caractacus," which furnish a better apology than he could make for the ancient chorus.

To the above reasoning it has been replied by Mr. Colman, in his "Translation of Horace's Art of Poetry," 1740, that the judgment of two such critics as Aristotle and Horace, cannot be decisively quoted as concerning with the practice of wise antiquity, to establish the chorus. Neither of these two critics, it is said, have taken up the question; each of them giving directions for the proper conduct of the chorus, considered as an embellished and improved part of tragedy, and indeed originally, as they both tell us, the whole of it. Aristotle, in his "Poetics," has not much on the subject; and from the little he has said, more arguments might perhaps be drawn in favour of the omission than for the introduction of the chorus. It is true that he says, in his 4th chapter, that "tragedy, after many changes, paused, having gained its natural form." This might, at first sight, seem to include his approbation of the chorus, as well as of all the other parts of tragedy then in use; but he himself expressly tells us in the same chapter, that he had no such meaning; saying, that "to enquire whether tragedy be perfect in its parts, either considered in itself, or with relation to the theatre, was foreign to his present purpose." In the passage from which Horace has, in the verses above cited, described the office, and laid down the duties of the chorus, the passage referred to by Dr. Hurd, the words of Aristotle are not particularly favourable to the institution, or much calculated to recommend the use of it. For Aristotle there informs us, "that Sophocles alone, of all the Grecian writers, made the chorus conducive to the progress of the fable; not only even Euripides being culpable in this instance; but other writers, after the example of Agathon, introducing odes as little to the purpose, as if they had borrowed whole scenes from another play."

Mr. Colman concludes upon the whole, that, whatever may be the merits, or advantages of the chorus, the judgment neither of Aristotle nor of Horace can be adduced in recommendation of it. As to the probability given to the representation, by the chorus interposing and bearing a part in the action, the public, he adds, who have lately seen a troop of fingers assembled under the stage, as a chorus, during the whole representations of "Elfida" and "Caractacus," are competent to decide for themselves how far such an expedient gives a more striking resemblance of human life, than the common usage of our drama. As to its importance in a moral view, to correct the evil imprestion of vicious sentiments, imparted to the spectators; the story told, to enforce its use for this purpose, conveys a proof of its inefficacy. To give due force to sentiments as well as to direct their proper tendency, depends on the skill and address of the poet, independent of the chorus. M. Dacier, as well as Dr. Hurd, confines the modern stage for having rejected the chorus, and having left thereby "at least half the probability and its greatest ornament" so that our tragedy is "but a very faint shadow of the old." Learned critics, however, ought to consider, that if it be expedient to revive the chorus, all the other parts of the ancient tragedy must be revived along with it. Aristotle mentions mimic as one of the fixed parts of tragedy, and Horace no sooner introduces the chorus, but he proceeds to the pipe and lyre. It is a chorus be really necessary, our dramas, like those of the ancients,
ents, should be rendered wholly musical; the dancers also will then claim their place, and the pretensions of Veltis and Noverre must be admitted as classical. Such a spectacle, if not more natural than the modern, would at least be consistent; but to introduce a group of declamatory actors, speaking in one part of the drama, and singing in another, is as strange and incoherent a medley, and full as unseemly, as the dialogue and airs of the "Beggar's Opera." Admitting the full force of Mr. Colman's arguments, nothing, it may be said, though somewhat hardly, but the most invincible pedantry can with for the revival of the ancient chorus on the modern stage.

Notwithstanding the advantages, which were obtained by means of the chorus, it is alleged, (see Blair's Lectures, vol. iii. part 45,) that the inconveniences on the other side are so great, as to render the modern practice of excluding the chorus far more eligible upon the whole. For if a natural and probable imitation of human actions be the chief end of the drama, no other persons ought to be brought on the stage, than those who are necessary to the dramatic action.

The introduction of an adventitious company of persons, who have but a flight concern in the business of the play, is unnatural in itself, embarrassing to the poet, and though it may render the spectacle splendid, tend, without doubt, to render it more cold and uninteresting, because it becomes more unlike a real transaction. The mixture of music, or song, on the part of the chorus, with the dialogue carried on by the actors, is another unnatural circumstance, removing the representation still farther from the resemblance of life.

Besides, the poet is subjected to innumerable difficulties in so contriving his plan, that the presence of the chorus, during all the incidents of the play, shall conflict with any probability. The scene must be constantly, and often absurdly, laid in some public place, that the chorus may be supposed to have free access to it. To many things that ought to be transacted in private, the chorus must ever be witness; they must be the confederates of both parties who come successively upon the stage, and who are, perhaps, conspiring against each other. In short, says Dr. Blair, the management of a chorus is an unnatural concomitant to a poet; it requires too great a sacrifice of probability in the conduct of the action; it has too much the air of a theatrical decoration, to be consistent with that appearance of reality, which a poet must ever preserve in order to move our passions. The origin of tragedy among the Greeks, as we have above observed, was a chorale long, or hymn, to the gods. There is, therefore, no wonder, that on the Greek stage it so long maintained possession. But it may confidently, as Dr. Blair thinks, be asserted, that if, instead of the dramatic dialogue having been superadded to the chorus, the dialogue itself had been the first invention, the chorus would, in that case, never have been thought of. One use, however, might still be made of the ancient chorus, which would be a considerable improvement of the modern theatre; if, instead of that unmeaning, and often improperly chosen music, with which the audience is entertained in the intervals between the acts, a chorus were then to be introduced, whose music and songs, though forming no part of the play, should have a relation to the incidents of the preceding act, and to the dispositions which these incidents are presumed to have awakened in the spectators. By these means, the tone of passion would be kept up without interruption; and all the good effects of the ancient chorus might be preserved, for inspiring proper sentiments, and for increasing the morality of the performance, without those inconveniences which arose from the chorus forming a constituent part of the play, and mingling unfeasibly, and unnaturally, with the perfunqueries of the drama. See DRAMA, and CHORUS infra.

Chorus, to give the, among the Greeks, was to purchase a dramatic piece of the poet, and defray the expenses of its representation.

The person who did this was called choragus. At Athens, the office of choragus was imposed on the archontes; and at Rome on the curates.

Chorus, in Musc. It has already been said, (see Chorus) that there are choruses of various kinds: ecclesiastical choruses, such as those in the mass of Roman Catholics, in the service of the Lutheran church, in the polyphonic and hymnology of the Celibates, and in the cathedral service of the church of England. In this last, a species of music has been retained to English words, such as had been cultivated in all Christian churches before the reformation, to Latin words. In our choral music, fugues, canon learning and complication, with what was called by the Puntans curious facing, have been allowed to have place with propriety in our services and anthems on Sundays and festivals, regarding them as the voice of prayer, supplication, or jubilation, by voices of different pitch, harmonized; but always with one mind, addressing the Supreme Being, sometimes together, and sometimes after each other, as the psalms and responses are uttered in a parish-church, but with less regularity and reverence.

To dramatic choruses there are many objections, on the side of probability, to elaborate counterpoint, when different perfunqueries are uttering different words at the same time, all talking together, without listening to each other. This is unnatural, and as difficult to perform without book, as if it were extempore.

There are few dramatic situations where a chorus, even in plain counter-point, can have place with propriety. It may happen, indeed, that the representatives of a whole people at once shall cry out with joy, sorrow, or even demand concessions with united clamour; as the citizens in Metastasio's oratorio of Betulia liberata did, to surrender the town, uttering the same words in the language of the piece, in fang or declaimed. This may, for a short space, be reconciled to probability; but for a whole nation to continue a long discourse in the same words, is improbable, unless they were supposed to be formed into an harmonie, and gotten by heart, as a hymn to some divinity, or on a solemn celebration of rites.

A distinction should therefore be made between an extemporaneous chorus, and a chorus repeated by memory, as well as between an oratorio chorus performed by book, and an opera chorus sung in action by heart. Handel, whose sublime choral genius enabled him with facility to produce choruses of all kinds, never exerced that genius in composing elaborate choruses for his operas, all which were as short and simple as those of the Italians in present use; all built on a short air easily retained in memory. But Sacchini, and other Italian masters, finding how much Handel was admired and revered for his oratorio choruses, composed some to be performed in action on the stage; but though many of these, particularly Sacchini's, were admirable productions, full of grace, pathos, and dramatic effect; yet, being performed by occasional fingers, unaccustomed with the Italian language and vocal expression, they produced no other effect than that of exciting as much laughter as our early operas did, when sung half in Italian and half in English. See Speculator, No. 18.

An ecclesiastical chorus may be extended to what length the composer pleases; but a dramatic chorus, analogous to the fable, and situation of the interlocutors, must be of a length,
length and character suitable to the drama, and the scene in which it is introduced. See Genera, and Ancient Greek Music.

CHORZENA, in Ancient Geography, a country of Asia, in Greater Armenia, situated according to Strabo, towards the north, in the mountains of Caucasus, and belonging to Iberia and the Colchide.

CHORZIANI, a people of Asia, in the Aitiant territory, a country of Armenia; placed by Ptolemus in the environs of fort Cithara. 4 journeys from Theophractus.

CHOSCIABAD, in Geography, a town of Persia in the province of Kerman; 57 miles S.W. of Sirgun.

CHOSE, thing. This word, in Latin, is used in various circumstances, and with various epithets: as,

Chose in action, which is not any thing corporeal, but only a right, e.g. an annuity, obligation, covenant. &c. the possession of which may, however, be recovered by a suit or action at law; from whence the thing so recoverable is called a thing, or chose, in action. Thus money due on a bond is a chose in action; for a property in the debt veils at the time of forfeiture mentioned in the obligation, but there is no possession till recovered by course of law. If a man covenants with me, or promises, to do any act, and fails in it, by which I suffer damage, the recompence for this damage is a chose in action, for though a right to have recompense veils in me, at the time of the damage done, yet what and how large such recompense shall be, can only be ascertained by verdict; and the possession can only be given me by legal judgment and execution. If a person diffuses me of land, or takes away my goods, my right or title of entry into the lands, or action and suit for it, and so for the goods, is a chose in action; a condition and power of re-entry into land upon a feuility, gift, or grant, before the performance of the condition, is of the nature of a chose in action. Co. Lit. 214. 6 Rep. 50. Dyer, 244. If one has an ad

vowson, when the church becomes void, the presentation is but as a chose in action, and not grantable, but it is otherwise when the church is void. Dyer, 296. Where a man hath a judgment against another for money, or chattels, these are choses in action. An annuity in fee to a man and his heirs is grantable for ever; but it has been held, that an annuity is a chose in action, and not grantable. 5 Rep. 89. Fitz. Grant. 44.

Chose in action may also be called chose in jussio, as having no real existence, and not being properly in possession: being a thing, as it is expressed, rather in potentia than in fact.

No chose in action could, by the ancient common law, be transferred or assigned; but this is now allowed; and the form of doing it is in the nature of a declaration or trust, and an agreement to permit the assignee to make use of the name of the assignor, in order to recover the possession: and when a debt or bond is assigned over, it must still be fixed in the original creditor's name: the person to whom it is transferred being rather an attorney than an assignee. The king, however, is an exception to this general rule; for he might always either grant or receive a chose in action by assignment; and our courts of equity, confiding that in a commercial country almost all personal property must necessarily lie in contract, will protect the assignment of a chose in action, as much as the law will that of a chose in possession. The legal possibility and convenience of assigning a chose in action, which our ancestors to long doubted, have been sufficiently evinced from the introduction and establishment of paper credit by indentures upon bills and notes.

Close local, is something annexed to a place, e.g. a mill.

CHOSE of History, something moveable, and which may be transported from place to place.

CHOSE in Possession. See Possession, and Property.

CHOSISTAN, in Geography. See Chosistan.

CHOSROES I. or Khosrou, in Biography, king of Persia, celebrated as the Magnanimous, was the third son of Cabades or Cobad, by whose appointment he succeeded to the throne in 5%1, to the prejudice of his elder brothers. The example of his father, a prince of a proud and imperious disposition, and who was a bitter persecutor of those who did not embrace the Persian religion, had, in some measure, blunted the moral feelings of the son, who commenced his reign with acts of great severity. A conspiracy was indeed formed in behalf of his brother, which having discovered, he put to death all who were in any respect engaged in it. He then executed Mazdak, the head and leader of a new sect, who preached a community of all things, even of property and women; and he treated the Jews with still greater rigour than they had experienced from his father. He next removed such governors of provinces as, during his father's reign, had rendered themselves obnoxious to the people, and for the better administration of justice, he divided his dominions into four viceraphys, viz. tho:he of Affyrria, Media, Persia, and Bactriana. At his accession to the crown, Persia was involved in a war with the Roman empire under Justinian, to whom he granted a peace, having accepted a large sum of money as its price. This peace, which was denounced perpetual, was soon broken, and in 529, Chosroes invaded Syria, and marched to Antioch, which he soon reduced to ashes. After an unsuccessful attempt upon Dara, he returned across the Euphrates laden with spoil, leaving his generals to contend with Belarius, who had come to the defence of the Roman empire. Chosroes then made an expedition into Colchos, at the extremity of the Euxine sea, whether he had been invited by the inhabitants as their protector from the oppression of Justinian. It would not comport with our limits to follow this prince in all his expeditions: he went on conquering, and received as tokens of homage, embassadors from the greatest potentates of the East, at his splendid palace at Ctesiphon, one of the wonders of that part of the world. In the midst of his prosperity one of his sons, whom he had by a Christian slave, railed the standard of rebellion; but in an engagement with the general sent against him by his father, he lost his life. Chosroes, having invaded Syria, marched to the opposite quarter of his vast dominions, and entered Arabia Felix, where he dispossessed many usurpers of their power, restored the ancient lords, and sued the people with so much kindness that he obtained the title of just. Towards the conclusion of Justinian's reign, Chosroes was attacked with a dangerous disease, from which he sought relief from the physicians of Constantinople, whose aid he borrowed of the emperor. This interchange of kindness did not prevent a renewal of hostilities between the two empires after the accession of Julian. Chosroes took the field, and reduced and sacked the principal cities of Mesopotamia and Syria. These and other serious disasters obliged the imperial court to solicit a truce, which Chosroes granted for three years. In the mean time Tiberius succeeded to the imperial throne, who improved the discipline and strength of his army so as to be able to contend with and finally overcome the Persian monarch. Chosroes, in his retreat, was so closely pursued, that he was forced to pass the river Euphrates on an elephant, while several of his lords and great men were drowned in attempting to follow him. The Roman general took up his winter quarters in the Persian provinces, an indignity which Chosroes severely felt, and which, joined to the infirmities...
CHOASTITE, a town of Bohemia, in the circle of Czastau; 2 miles N. of Czastau.

CHOTIEBOR, a town of Bohemia, in the circle of Czastau; 8 miles N.E. of Tentech-Brod.

CHOTIN, in Czestochowa, a name given by Adamkow to a hill of the cone kind, found in the Well Indies. Cosa, jom- 

PHILIPPINES, or Kitchmisk, in Geography, a town of Ruby, in the government of Charkow, or Karkof; 

fed on the Vorstia; 52 miles N.W. of Charkov, and 

CHOTOW, a town of Lithuania, in the palatinate of Minsk; 22 miles S.W. of Minsk.

CHOTUSITZ, a town of Bohemia, in the circle of 

Czastau.

CHOTZEMITZ, a town of Bohemia, in the circle of 

Czawim, near the Ehrle.

CHOTZEN, a town of Bohemia, in the circle of Chru-

dim: 3 miles N.E. of Bohemiam.

CHOVACOURT, a river of North America, in Ca-

nada.

CHOUAN, in Ichthyology, synonymous with Chevannes, names by which the Linnaean Cyprinus cæpius is known in 

some parts of France.

CHOUAN, in the Materia Medica, the name of a small fish, called by some also carmine feed. It is a very light and 

chaffy feed, in a great measure resembling worm-feed, 

of an acid taint, and a yellowish-green colour, but is larger 

than worm-feed. It is brought into Europe from Turkey, 

and many parts of the Ealt, and the choice should be made 

of such as is largest, cleanest, of the greenest colour, and 

leak marked with specks or holes. It is not used in medicine, 

but is of some value among the people who make carmine 

for the painters. It is called Santoonium viridé, or the green 

worm-feed, in our catalogue of the Materia Medica, but is 

unknown in the shops. Lemery.

CHOUANS, in Modern History, the denomination of a 

powerful body which sprung up in France, during the late 

revolution, derived from three sons of a blacksmith of the 

name of Chouan, near Foquest. They were at first no 

better than highway-robbers; but their number was in-
creased by the Gystem of terror, which induced all perfons, 
declared to be suspected by Robespierre's government, to 
fly for safety to the woods, and joim the Chouans. They 
were at last fai'd to amount to near 30,000 men, differed 
in different bodies through the woods of Brittany, from 
the north to the south, from Foquest to Vannes; and they 
gave occupation to upwards of 80,000 republicans, who were 
encouraging to enclote them in that great extent, and starve 
them into a surrender. They submitted to organization and 
discipline, and dropping the trade of robbers, declared for 
the king, and put themselves under the command of officers 
of reputation.

CHOUANG-LEOU, in Geography, a town of China, 
of the third rank, in the province of Se-chéuen; 10 miles S.W. of Tching-tong.

CHOUANG-TAL, a town of Tartary, in the country of 

Hami; 9 miles N.W. of Tchantoni.

CHOVANNA-MANDAR, in Botany, Rhed. Mal. 
Burm. Ind. See Bauhinia variegata & parpurea.

CHOUCAIR de la nouvelle Géotis, in Ornithology. The 
Corvus papiaen of Latham is described under this name by 
Buffon.

CHOUCAS, the generic name under which several spe-
cies of the Corvus genus are described by Buffon, and later 
French writers; as choucast, the jackdaw, Corvus monedula, 
Linn. — Choucas mouflache, & Choucas ou Cap de Bourre Effe-

Vol. VII.
CHOU, in Geography, a town of Asia, in the kingdom of Corea; 35 miles N.E. of Haimen.

CHOU-LOU, in Geography, a town of China, of the third rank, in the province of Chieh-li; 12 leagues W. of Kien-kiang.

CHOU-SONG, in Geography, a town of China, on the coast of Tien-tcheou, a city of China, of the first rank, in the province of Kiang-si; 712 miles S. of Peking. This town is situated on the bank of a river, in a fertile country; and the adjacent mountains contain mines of lapis lazuli, N. lat. 38° 25', E. long. 113° 14'.

CHOU-CHANG, a town of China, of the third rank, in the province of Tche-kiang; 12 leagues W. N.W. of Tchü-teho.-Alo, a town of the third rank, in the province of Kiang-si; 6 leagues W. of Kien-kiang.

CHOU-CHANG, in Geography, a town of China, of the third rank, in the province of Tche-kiang; 712 miles S. of Peking. This town is situated on the bank of a river, in a fertile country; and the adjacent mountains contain mines of lapis lazuli, N. lat. 38° 25', E. long. 113° 14'.

CHOU-VUEN, a town of Asia, in the kingdom of Corea; 35 miles N.E. of Haimen.

CHOU-LAI, William Du, in Biography, a Lyonnaise gentleman, and one of the earliest Frenchmen who applied to antiquarian pursuits. He lived at the summit of the mountain Gourgillon, where the ground could scarcely be dug without discovering Roman inscriptions, medals, stelae, lamps, &c. Du Chou made a collection of these remains, with a view of deciphering them; the fruit of his labours he published in a "Dissertation on the Calixtenation and Military Discipline of the Romans, their Baths and Antiquities, and Greek and Roman Excavations." This work was printed in folio at Lyons, in 1556. It was afterwards reprinted in 1558, in 4to, with the addition of a "Dissertation on the Calixtenation and Military Discipline of the Romans, their Baths and Antiquities, and Greek and Roman Excavations." The work in this form has been highly celebrated, and translated into the Latin, Italian, and Spanish languages. The Latin edition was printed at Amsterdam in 1681, 4to.

CHOU, in Geography, a river of the duchy of Luxembourg, or the department of the Forêts, in the Ardennes, which discharges into the Meuse.

CHOULE, a town of India, on the coast of Corea, with a fortified harbour for small vessels, belonging to the Portuguese; 25 miles S. of Bombay. N. lat. 18° 37'; E. long. 73° 40'.

CHOU-LOU, a town of China, of the third rank, in the province of Pe-ch'ing; 12 miles S.W. of Choung.

CHOU-LI, a town of China, of the third rank, in the province of Pe-ch'ing; 12 miles S.W. of Choung.

CHOU-CHI, a name given in India to houses built for the accommodation of travellers, which are frequent in every part of the country, and are useful, whilst they are noble monuments of Indian munificence and humanity. The structure of these choulties is described by Dr. Robertson (Hist. Disq. concerning India), as one evidence of the high state of civilization to which the Indians had attained. On the ceilings of these buildings, as well as in other ancient edifices, the twelve signs of the zodiac are frequently delineated; and from their resemblance to those which are now universally used, it is highly probable, says this judicious historian, that the knowledge of these arbitrary symbols was derived from the East. Col. Call has published a drawing of the signs of the zodiac, which he found on the ceiling of a choulty at Verapettah, in the Madura country. (Phil. Trans. vol. lxi. p. 357.)

CHOU-PATOU, in Geography, a town of Asia, in the country of Tibet; 265 miles E. of Laffa.

CHOURAGUR, a town of Hindoostan, in the country of Gurry Mundela; 57 miles S.W. of Gurrah.

CHOURTONG, a town of Asia, in the country of Tibet; 2.5 miles E.S.E. of Laffa.

CHOUS, in the Eastern Military Orders, the title of the menders of the diana of janizaries. There are several degrees of honour in this post. When a pension is first advanced to it, it is called chabuck, or little chous; after this he is advanced to the alloy chous, that is, the mender of the ceremonies; and from this, having passed through the office of pettus, or procurator of the effects of the body, he is advanced to be the bar chous.

CHOUSGIMAYAN, in Geography, a town of Peeld, in the province of Chorascan; 220 miles N.N.E. of Uiestro.
CHOU-TCHUEN, a town of Asia, in Corea; 30 miles S. of Haimen.

CHOUX, in Natural History, a name given by the French to a species of shell-fish of the cardiform or buccarum kind. Fabius Columba has elegantly described it, and Lifer has given a figure of it twice over, in two different parts of his book. There is another species less elegant, and wanting the hollowed ribs. See Cordiformis.

CHOUYANG, in Geography, a town of Asia, in Corea; 40 miles N.E. of King-kiaoo.

CHOUZE, a town of France, in the department of the Indre and Loire; seated on the Loire; 4 leagues E. of Saumur, and 6 leagues N.W. of Tours.

CHOWAN, a county of North America, in Edenton district, North Carolina, on the N. side of Albemarle found; containing 5011 inhabitants, of whom 2588 are slaves. The chief town is Edenton.—Alfo, a river of North Carolina, which falls into the N.W. corner of Albemarle found. At its mouth it is 3 miles wide, but quickly becomes narrower, as you ascend it. It is formed 5 miles from the Virginia line, by the confluence of Micherrin, Nottaway, and Black rivers, all which rife in Virginia.

CLOUDER-BEER, a provincial phrase of Devonshire, denoting a cheap and easily prepared drink, highly commended for preventing the fever in long voyages, or for the cure of it where it may have been contracted. It is prepared in the following manner: take twelve gallons of water, in which put three pounds and a half of black store; boil it for three hours, and having taken out the fir or spuce, mix with the liquor seven pounds of molasses, and just boil it up; strain it through a sieve, and, when milk warm, put to it about four spoonfuls of yeast to work it. In two or three days fop the bung of the cask, and in five or six days, when fine, bottle it for drinking. Two gallons of molasses are sufficient for an hoghead of liquor; but if molasses cannot be procured, treacle or coarse sugar will answer the purpose.

CHOWRY, in Geography, one of the Nicobar islands, in the Indian Sea. N. lat. 8° 27'. E. long. 93° 32'.

CHO-YANG, a town of China, of the third rank, is in the province of Hou-quant; 10 leagues E.N.E. of Siang-yang.

CHOZALA, or CHOIZALA, in Ancient Geography, a town of Africa, in Mauritania Cafrarisiens; situated at the foot of a craggy rock, about 4 miles S.E. of Julia Cafrica.

CHOZEVA, in Geography, a town of Siberia, on the river Tchitun; 180 miles E.S.E. of Emifick.

CHRABAZA, in Ancient Geography, a town of Africa Propria. Ptolemy.

CHRABRATE, in Natural History, a name given by the writers of the middle ages to a politicelled flame, said to have great virtues against disorders of the liver and spleen, and many other imaginary qualities. It appears by their descriptions to have been no other than the common bubble crytal.

CHRAS, in Geography, a town of Bohemia, in the circle of Boleflau; 6 miles S.E. of Mchik.—Alfo, a town of Bohemia, in the circle of Claudiun; 5 miles S.E. of Claudiun.

CHREBAT Chandaya, a range of mountains, between Russian Tartary and Chinefe Tartary. N. lat. 52°. E. long. from 60° 14' to 104° 14'.

CHREBAT Dirjak, a range of mountains similarly situated with the preceding. N. lat. 52° to 53°. E. long. 60° 14'.

CHREMETS, in Ancient Geography, a river of Africa, the mouth of which is placed in the Atlantic Ocean by Aristotele and Helychius; supposed to be the Zaire.

CHREMPS, in Ichthyology, a name given by the old Greek writers to the fish hence called chromis.

CHRENDI, in Ancient Geography, a people of Asia, in Hurania. Ptolemy.

CHRENECRUDA, a term occurring in Writers of the Middle Age, and expressing a custom of those times, but its signification is doubtful. It is mentioned in Leg. Saliaca, Tit. 61, which says, who kills a man, and hath not where withal to satisfy the law, or pay the fine, makes oath that he has delivered up every thing he was posseffed of; the truth of which must be confirmed by the oaths of twelve other persons. Then he invites his next relations by the father's side to pay off the remainder of the fine, having first made over to them all his effects by the following ceremony. He goes into his house, and, taking in his hand a small quantity of dust from each of the four corners, he returns to the door, and, with his face inwards, throws the dust with his left hand over his shoulders upon his nearcft of kin. Which done, he trips to his flirt; and, coming out with a pole in his hand, jumps over the hedge. His relations, whether one or several, are upon this obliged to pay off the composition for the murder. And if these (or any one of them) are not able to pay, iterum super illum chreneurga qui paguerior ofi, iactat, & ille totam legem componat. Whence it appears, that chreneurga jactare, is the fame with throwing the dust, gathered from the four corners of the house. Golofaus and Spelman tranflate it viridem herbae, green grafts, from the German, gruen krant, or from the Dutch, green, and gruen, grafts. Wendelins is of a contrary opinion, who thinks that by this word denotari purificatis approbationem, from chren, pur, chyle, clean; and krenen, to prove; fo that it must refer to the oaths of the twelve jurors. Be this as it will, king Childsbert reformed this law by a decree, chap. 15, both because it favoured of pagan ceremonies, and because several persons were thereby obliged to make over all their effecta: De chreneurga lequ, quam paganorum tempore observabat, incepto nonquam valens, quia per ipsam eccele multorum pastelas.

CHRES, in Ancient Geography, a large river of Libya, on the western coast of Africa, and near the island of Cerne, according to the Periplus of Hannon.

CHRESTOIA, in Geography, a town of Ifria; 9 miles E.S.E. of Capo d'Ifria.

CHRETIES, in Ancient Geography, a lake of Libya, containing, according to the Periplus of Hannon, three islands.

CHRETIEN, FLORENT, in Biography, a French poet and man of letters, was born at Orleans in 1541. He was educated in the Protestant religion, and having made considerable progress in literature, was appointed preceptor to Henry IV. of France. He wrote poems in the learned and dead languages, as well as in his own. In the French he composed a severe satire against Rouard, with whom he had a quarrel. He translated Oppian, some plays of Aristophanes, and other Greek works into the French. He composed tragedies and Greek epigrams, and also learned and considerable annotations on various classical authors. He died at the age of 55, having first been reconciled to the Catholic church. Though he wrote satires, his temper was mild and friendly, and his mind was elevated above mean and servile complaisance, and he was incapable of uttering a sentiment that he did not believe.

CHRETFINA, in Geography, a town of Spain, placed by Ptolemy in Lusitania Propria.

CHREWITZ. See Greitz.

CHRISM, from chrism, + aminta, oil consecrated by the bishop, and used in the Romish and Greek churches, in the 5 B administration.
administration of baptism, confirmation, ordination, and extreme unction, which is prepared on Holy Thursday with much ceremony. In Spain it was anciently the custom for the bishop to take one third of a foil for the chrism distributed to each church, on account of the balsam that entered its composition.

Du Cange observes, that there are two kinds of chrism; the one prepared of oil and balsam, used in baptism, confirmation, and ordination; the other of oil alone, consecrated by the bishop, used anecdy for the catechumens, and still in extreme unction.

The Maronites, before their reconciliation with Rome, besides oil and balsam, used musk, saffron, cinnamon, roses, white frankincense, and several other drugs mentioned by Rynaldus, in 1541, with the doses of each. The Jafuit Dandini, who went to mount Libanus in quality of the pope's nuncio, ordained, in a synod held there in 1596, that chrism, for the future, should be made only of two ingredients, oil and balsam; the one representing the human nature of Jesus Christ, the other his divine nature.

The action of imposing the chrism, is called chrismation; this the generality of the Roman divines hold to be the next matter of the sacrament of confirmation.

The chrismation in baptism is performed by the priest; that in confirmation by the bishop; that in ordination, &c. is more usually called unction, which see.

CHARISMATE, CHRISMAMIS DEVARIS, OR CHRISMALES DEVARIS, a tribute anciently paid to the bishop by the parish-clergy, for their chrism, consecrated at Easter for the ensuing year: this was afterwards condemned as simoniacal.

CHRISMON, CHRISTMAS, has been said to have been anciently the face-cloth, or piece of linen laid over the child's head when it was baptized. Whence, in our bills of mortality, children who die in the month, or such as have not been baptized, are usually called chrifonos. The time between the child's birth and baptism was also called chrifonos.

But the chrism was, in reality, a white vesture or garment, which, immediately after the child was baptized, was put upon it by the priest, who with the act pronounced these words: "Take this white vesture as a token of the innocence, which, by God's grace in this holy sacrament of baptism, is given to thee, and for a sign whereby thou art admonished so long as thou livest, to give thyself to innocence of living, that, after this transitory life, thou mayest be partaker of life everlasting. Amen." As soon as the priest had pronounced these words, he anointed the infant upon the head, saying, "Almighty God, the father of our Lord Jesus Christ, who hath regenerated thee by water and the Holy Ghost, and hath given unto thee the remission of all thy sins; may he vouchsafe to anoint thee with the unction of his Holy Spirit, and to bring thee to the inheritance of everlasting life. Amen." From this anointing, or chrism, the white garment obtained the name of "Chriftom," which, after being worn a few days, was presented to the priest to be kept in the church, or vestry, in order to be produced as evidence against the perfon whose chrism it was, if he afterwards denied the faith in which he was baptized. These ceremonies were retained, for some time after the reformation, in the church of England, which ordered the mother of the child, if the child was then alive, to offer, when she was churched, the chrism, and other accoutemon offerings. If the child died before its mother was churched, the chrism was not given to the priest, but employed as a thurif, in which the body was buried; and hence it is that chrismos are now enumerated in the weekly bills of mortality, very absurdly; because, children who die unbaptized are called chrifomath, though the chrism, when it was used, was never put on till baptism was administered. Whitty on the Book of Common Prayer, &c.

CHRISTOM, an appellative synonymous with MESSIAH, usually added to Jesus and, together with them, denoting the Saviour of the world. The word χρισμα signifies anointed, from χρίνην, unction, I anoint. Sometimes the word Christ is used singly, by way of autonymy, to denote a person sent from God, as an anointed prophet, king, or priest.

Christ, says La Chastanier (de Vera Sapientia, l. iv. c. 6.) is no proper name, but one denoting power; for the Jews used to give this appellation to their kings, calling them Chrirh, or anointed, by reason of their sacred unction. But he adds, "the Hethite, as milltike, call Jesus CHRIH, Cherfris."

Accordingly, Suetonius, speaking of Claudius, and of his expelling the Jews from Rome, says, that he banished them because they were continually promoting tumults, under the influence of one "Chrielis." "Judaius, impulso Christo, affide tumultuarum, Romae expulsit."

The names of Messiah and Christ, which, as we have already observed, are synonymous, were originally derived from the ceremony of anointing, by which the kings and the high-priests of God's people, and sometimes the prophets (1 Kings, xix. 16.) were consecrated and admitted to the exercise of their holy functions; for these functions were accounted holy among the Israélites. As this consecration was considered as adding a sacrament to their persons, it served as a guard against violence, from the respect that was paid to religion. The term "anointed," in Hebrew "Mefialiah," and in the Greek of the LXX, "Chrilh," was, in its original use, applicable to the whole Office of kings and priests, both god and bad, of the people of Israel. But, as the king and the high-priest were the heads of the whole nation, the one in civil, the other in religious matters, the term "anointed," that is "Messiah" or "Christ," might not improbably serve, by a figure, to denote the chief, head, or principal of any class or people. This, however, is the opinion of the learned Grotonius. Accordingly the high-priest is sometimes distinguished from ordinary priests by the title of "the anointed priest," in the LXX Eilijorfla, 15; but the word is sometimes applied, when, in the literal sense, no anointing had been used. Thus it is applied to Cyrus, the Persian monarch, by the prophet Isaiah: (Isai. xlv. 1.) The word was also employed to denote those especially favoured of God, as were the patriarchs Abraamn, Isaac, and Jacob; concerning whom he is represented by the psalmist (Ps. cv. 15.) as having said; "touch not mine anointed." From scripture there is no ground for concluding that any one of them was in the literal sense anointed. But the most eminent use and application of the word concern the title of that illustrious personage, typified and predicted from the beginning; who is described by the prophets, David (Ps. ii. 1.) Isaiah (ch. xli. 1.) and Daniel (ch. ix. 25, 26.) under the character of "God's anointed," the "Mefiiah," or the "Christ." As to the use of the term in the New Testament, if we were to judge by the common version, or even by most versions into modern tongues, we should consider it rather as a proper name, than an appellative, or name of office, and should think of it only as a surname given to our Lord. To this mistake our translators have greatly contributed, by seldom prefixing the article before "Christ," though it is rarely wanting in the original. The word "Chritos" was at first as much an appellative as the word "baptiz" was, and the one was as regularly accompanied with the article as the other. Yet our translators who would always say "the "baptiz"
CHRISTian name, never to be understood in the New Testament as a proper name, but always as having a direct reference to the office or dignity? It may be replied, that this word, though originally an appellation, came at length, from the frequency of application to some individual, and only to one, to supply the place of a proper name. It would also very much accelerate this effect that the name "Jefus" was common among the Jews at that time, and this rendered an addition necessary for distinguishing the persons. To this purpose Grotius remarks, that in process of time the name "Jefus" was very much dropped, and "Christ," which had never been used before as the proper name of any person, and was, for that reason, a better distinction, was buttressed for it; infomuch that, among the Heathens, our Lord came to be more known by the latter than by the former. This ufe seems to have begun soon after his ascension. During his life, it does not appear that the word was ever ufed in this manner: pax, the contrary is evident from several passages of the gospels. The Evangelists wrote some years after the period above mentioned; and, therefore, they adopted the practice common among Chriftians at that time, which was to employ the word as a surname for the fake of distinction. See Matt. 1. 18, Mark. 1. 1. In all the three places it is Ιησους, Jefus Christ, not Ιησους του Χριστου, Jefus the Chrift, or the Mofhiah. Afterwards, in their history, Matthew and Mark neither name him to themselves, nor mention this name as given by him of any of his contemporaries. The word was never applied to him as a proper name, whilfe he remained on this earth. It was at that time always ufed as the denomination of the dignity or office to which some believed he entituled, others dilbeciled, and men doubted. The fame reason which induced our translators to have rendered Ιησους του Χριστου uniformly "the baptifl" with the article, fhould have led them to render Ιησους του Χριστου, "the Chrift," or the Mofhiah, with the article. By not doing this, they have thrown much obscurity on some passages, and weakened others. Upon the whole we may conclude, that one mark of distinction, by which the title Ιησους may be difciminated from the name, is its being attended with the article. When the article is inferted between the words Ιησους and Χριστου we have reason to consider the latter as ufed emphatically, and pointing directly to his office.

As a conclusion of this subject it may be added, that the word Ιησους is frequently ufed by St. Paul as a trope, denoting sometimes the Chriftian spirit and temper, as in Gal. iv. 19. Eph. iv. 20. Campbell's Prelim. Disc. to the four Gospels, vol. i. p. 165, &c.

CHRIST, Order of, a military order, founded in 1317, by Dionysius I. King of Portugal, to animate his nobles against the Moors.

Pope John XXII. confirmed it in 1319, and appointed for the knights the rule of St. Benedict. Alexander VI. permitted them to marry.

This order had been under the control of 12 grand masters, when Pope Adrian VI. in 1522, confirmed the administration of it on John III. In 1551, pope Julius III., vested in the crown a perpetual right to the grand mastership: from which time the kings of Portugal have taken the title of perpetual administrators of the order, which consists of 417 commandaries. Before the grand mastership was united to the crown, it was by election of the knights, who are now under the same regulations, and enjoy the same privileges, as those of the order of Calatrava in Spain.

According to the statutes, the candidate should prove himself noblemen of blood for four generations; but this is usually dispensed with by the sovereign. The badge of the order is a cross patté-guêrs, charged with a cross argent, pendant to a collar of gold, composed of three rows of chains; on common days the knights also wear round their necks a scarlet ribbon with the badge of the order pendant to it. They have their residence, at first, at Callromarin; afterwards they removed to the city of Thomaí, as being nearer to the Moors of Andalusia and Estremadura.

CHRIST is also the name of a military order in Livonia, instituted in 1205, by Albert bishop of Riga. The professed end of their institution was to defend the new Christians who were successively converted in Livonia, but were persecuted by the heathens.

The first occasion of their institution is said to have been as follows: In 1158 some merchants of Bremen, bound to Wifby, in the isle of Gothland, driven by ftrees of weather, landed at the mouth of the Luna, trafficked with the natives, and gradually established a settlement. A German monk of the Augustine order, who accompanied the new colonists, acquired the language of the country, converted several of the natives to christianity, and perfused them to be baptized. According to the custom of that barbarous era, an order of knighthood, first called "the knights of Christ," and afterwards with greater propriety "the knights of the sword," was instituted for the propagation of Christianity by force of arms. These military missionaries, equally fanatic and languidary, gradually overrun the country, and reducing the ancient inhabitants, rendered them at the same time Christians and slaves. In 1231, these knights, being incorporated in the Teutonic order, styled themselves "knights and lords of the cross," and purchased Ethelonia, in 1251, from the king of Denmark. Walter Plenchurch, chief or general, having obtained from the grand master of the Teutonic order the jurisdiction of Livonia, was considered as independent, and admitted by Charles V. among the princes of the empire. The knights continued in possession of Ethelonia and Livonia, until the impolitic conduct of their masters, and civil difficulties, incited the ambition of the neighbouring powers, and involved the country in a series of bloody wars. See LIVEONIA. These knights wore on their cloaks a sword with a cross over it; whence they were also denominated "brothers of the sword."

CHRISTBURG, or Geography, a town of Prussia, in the territory of Cobern; 12 miles S.E. of Marienburg.

CHRISTBURG, or Alt-CHRISTBURG, a town of Prussia, in the territory of Oberland; 4 miles S.W. of Pruefheim.

CHRIST-CHURCH OF CHRIST-CHURCH-TWYNESS, but more correctly Twynham or Twycon-ca, as it was called in the Saxon Chronicle, is situated near the sea-coast on the S.W. verge of Hampshire, England, between the rivers Avon and Stour, which unite their streams at a short distance below the town, and then afterwards join with the waters of the ocean at Chrift-Church Bay. It is a market and borough town; and though it presents no claim to a British or Roman origin, it certainly has been a place of note in the Anglo-Saxon dynasties. From their Chronicle it appears that Ethelwold, cousin-german to Edward the Elder, took
took possession of it during his short-lived revolt. Christ-Church is mentioned in Doomeaday as a Royal Manor; and continued to be a part of the crown demeine till it was given, with other possessions of immense value, by Henry I. to Richard de Reparisi, or Redvers; who is supposed to have strengthened the town by walls, and to have erected a castle here. Its erection is attributed to Edward the Elder: that it must have been built previously to the twelfth century is evident from the *fodidum caelitii* being expressly mentioned in a charter granted to the priory by Baldwin, son of the above Richard de Redvers. This family retained possession of the town, except a short alienation by the marriage of an heiress, till Isabella de Fortibus released it to Edward II. The borough, manor, and hundred of Christ-Church, after passing through the families of Sir William de Montacute, Richard Neville Earl of Salisbury, and several others, were purchased by the right honourable George Rofe in 1795. Parts of the castle, by which the town was formerly defended, are now standing: the principal appear to be portions of the keep, and of the flat apartment or governor’s refidence. The latter is upwards of forty feet long, and above thirty broad; its walls, like those of the keep, being of immense thickness. On the ground floor are a number of loop holes, formed by a large semicircular arch within, lessen’d by degrees, and terminating in a chink. The access to the upper apartments was by a stone spiral staircase, part of it is yet remaining. “The place for receiving the floor of the first story is very visib; it seems to have had one room only, lighted by three large windows on the east, and as many on the west side; they were all included in the semicircular arches, formed of stones very neatly cut, and divided by a small pillar in the centre. In the east side, and somewhat north of the centre, was a very large fireplace, worked circularly into the main wall, having also a high cylindrical stone chimney, seemingly the only (original) one in the building. At the north end there appears to have been a large arched window: the columns and part of the internal arch are still remaining and answer to a handsome semicircular arch on the outside, decorated with zigzag ornaments. From what remains of the ornamental parts of this building, it appears to have been elegantly finished, and cased with squared stones; most of which, however, have been taken away: by the ruins of several walls, there were some ancient buildings at right angles to this hall, stretching away towards the keep.” (Grote’s Antiquities, vol. ii.) The priory of Christ-Church was, according to Camden, founded early in the Saxo(non times: its inmates were peculiar canons of the order St. Augustine, and the establishment, as early as Edward the Confessor’s reign, confided of a dean and twenty-four canons. The church and convent were given by William Rufus to the minion of his tyranny, Ralph Flambard, bishop of Durham, who in his early days held this deanery. This pretate determined to rebuild the church, and the other conventual edifices, which he found extremely out of repair, on a scale more extensive and superb than their original construction; and for this purpose freed the revenues of the canons, merely allowing to each a bare subsistence. Codrice, then dean, strenuously opposing this arbitrary measure, was deprived of his dignity, and forced to seek an asylum on the continent; but had afterwards permission to return and re-assume his office. The bishop having thus subdued all opposition to his designs, levelled the ancient building with the ground; and, having completed his undertaking, solemnly dedicated the church to Christ. At the dissolution, its revenues were valued, according to Speed, at 544l. 6s. od.: the site was given by Henry VIII. to Stephen Kirton, and Margaret his wife. In the following year, the church, with the church-yard, and all appurtenances, were granted to the churchwardens and inhabitants of the town for ever. This grant was confirmed by James I., and has undoubtedly operated to the preservation of the church from the destruction in which the other buildings situated to the south were involved. The church is a very large and elegant building, and with great alterations have taken place in it since the time of Flambard, yet the nave, the south-western aisle, and the northern transept still display considerable portions of his work. The nave is formed by a double row of massive square pillars, ornamented with semi-columns: between these pillars are semicircular arches springing from grouped pilasters, which are lateral projections from the main pillars. The south-western aisle, called also the Lower Walk, exhibits some semicircular arches, with zigzag moulding, and other ornaments. At the end of this aisle is a neat chapel, which is said to have been erected by John Draper, the first prior of that name, who was installed in 1277. The north transept, though greatly altered, still displays evident marks of the Norman style; especially on the outside in the ornamental and other work ornaments. Here are two small chantries or oratories, adjoining each other, supposed to have been built by some earl and countess of Salisbury, as the pavement within and contiguous has been composed of square tiles ornamented with the family arms. The chancel, and all that part which is call’d of the transept, is of more modern date. Most of the windows are large, and decorated with mullions and tracery: from the low aisles at the sides the upper part is strengthened by flying buttresses. The altar-piece is a very curious specimen of ancient carving in wood, which Mr. Warner considers as coeval with bishop Flambard. It represents the genealogy of Christ by a tree springing from the hands of Jefse, who is represented in a recumbent position, supporting his head with his left hand: in niches, on each side of Jefse, are David playing on his harp, and Solomon in a musick posture. Above are the Virgin, infant Jefus, and Joseph, with several other figures illustrative of the circumstances of our Saviour’s birth. North of the altar is a beautiful, but now mutilated, chapel, erected in the reign of Henry VII. by the venerable Margaret, countess of Salisbury, for her burial-place: the sculpture of the ornaments is excellent, and the most florid style of that age pervades the whole interior. At the eastern extremity of the church is a spacious chapel, dedicated to the Virgin Mary, and supposed to have been built by the Well family, ancestors of the lords Dewar, about the close of the 14th century: it is now Thomas Welle, by whom was built April 1435, ordered his body to be interred in the new chapel, and bequeathed 100l. towards the completion of the works of the church. Immediately over this chapel is a large room, called St. Michael’s Loft, which is recorded, in the old register of this parish, to have been let apart and used as a free grammar schoolroom ever since the year 1662. A school is known to have existed in this town fo early as the time of the first Baldwin de Redvers, as appears from his confirmation of his father’s grant to the priory. The dimensions of the church, and its principal parts, are as follows: whole length, including St. Mary’s chapel and the tower, 311 feet; breadth 24; chanctel in length 70 feet, in breadth 27; breadth of the nave 27 feet; the great pillars in circumference 36 feet 6 inches, in height 30 feet; height of the tower 120 feet. In the reign of Edward I. Christ-Church received a precept, ordering the return of two members to the national council. This was repeated in the first and second
second years of Edward II., but no returns were made, through the "poverty of the burgesses." It was again summoned 13 Ediz. as a prescriptive borough; and the circumstances of the times inducing compliance, it has ever since been represented by two members. The right of election is exercised by the corporation, which consists of the mayor, recorder, aldermen, bailiffs, and common council; in all 24: but Browne Willis and others have flated the real right to be in the inhabitant householders paying Feast and lat. Chrift-church is 135 miles S.W. of London; has a market on Mondays, and two annual fairs. The inhabitants, according to the return to parliament in 1801, were 1410; the number of houses 295. Many of the former found employment in two large breweries that have been established here; others in the falamon fishery on the rivers Avon and Stour, or in fishing round the neighbouring shores, where various kinds of fine fish abound. The lower order of females, both in the town and its vicinity, are mostly engaged in knitting fockings; and children derive employment from a manufactory of watch-firing chains lately established here. The poor-house is conducted on a very excellent plan, by which considerable sums are faved to the parish. The former expenditure has also been greatly reduced by the establishment of several friendly societies; the advantages arising from which have been considerably increased under the influence of Mr. Rofe.

The Bay or Harbour of Chrift-church is spacious; but, from various local caufes, it is too shallow and dangerous to be frequented by vessels that draw more than five feet and a half of water. This imperfection is chiefly owing to a bar or ledge of mud that extends from the point called Hen-giftbury-head, on the Hampshire fide, to St. Christopher's Cliff, in the Isle of Wight. The fition of this bar is occasionally thifted, either by a fecceffion of heavy rains, which increase the force of the water discharged into the bay by the rivers Avon and Stour, or by fea furms attended by fouthwester winds. Another circumstance peculiar to this harbour, and the neighbouring port of Poole in Dorsetshire, is that of every tide producing two high waters. This phenomenon, so inexplicable from the general laws of tides, is occasioned by the fition of this coast with refept to the Isle of Wight, and from the contraction of the channel by the jutting out of the point of land on which Hurst Cake flands. The tide flows into this channel from the well; and though it fets in with uncommon violence at Hurst Cake, it does not meet the tide that piles round the ifland, till it has reached Spithead: the paffage being too narrow for all the water to pass through, the time of high water at Hengiftbury-head is of course much earlier than either at Portland or Chichefetter; at the fof and change of the moon the diference is three hours and a half. When the water begins to ebb, by flowing off from the well, the contraction in the channel at Hurst Cake operates in a contrary direction; and, by confining the water that has spread itself over the whole surface of the Southampton water, and of the channel within the ifland, gives the water in Chrift-church bay an opportunity of flowing off much quicker, by which means it becomes fo low, that the water that now pours through with great velocity at Hurst Cake is sufficient to produce a feccond tide in Chrift-church and Poole harbours of nearly three feet.

CHRISTENING. See Baptism.

CHRISTIAN, in a general fense, fomething that relates to Chrift.

The king of France bore the title or surname of the most Chriftian king. The French antiquaries trace the origin of the appellation up to Gregory the Great; who, writing a letter to Charles Maff, occasionally gave him that title, which his successors during the existence of the French monarchy retained.

Lambecius in the third tome of his Catalogue of the emperor's library, holds, that the quality of most Chriftian was not ascribed to the ancient French kings, Louis le Debonair, &c. as kings of France, but as emperors of Germany: but the French historians endeavour to refute this plea.

Chriftian, in a more reftriited and peculiar fense, denotes a disciple of Chrift. The followers of Chrift, or the profelesy to his religion, from among both the Jews and Gentiles, were distinguishing by various appellations. Those by which they generally appropriated to one another were believers, brethren, faithful, faints, holy, and disciples. By the Gentiles and their adversaries, they were called Nazarenes and Galileans. They were first called Christians at Antioch; about A.D. 43 or 44, according to the vulgar computation, (Acts xi. 26.) "The name of Chriftian," says Tertullian, (Apol.) "comes from the union received by Jesus Chrift; and that of Chriftianus, which you sometimes through mistake give us (for you are not particularly acquainted with our name) signifies that gentlefnes and beneficence of which we make profession;" thus deriving the name of Chriftian from the Greek Χριστιανός, good or useful. It was in consequence of the converion of Cornelius and his family, that the believing Jews and Gentiles were formed into one church; and, therefore, in order to prevent the continuance of that separation and diflance which subsifted between them, under the former apppellations of Jews and Heathens, this new name of Chriftians was given them; as some conceive according to the prophecy mentioned (Is. ii. 15). It has been maintained by learned commentators, (in loc.) among whom we may reckon Benfon and Dod-didge, that this name was given them by divine direction or appointment; accordingly, they allege that the word Χριστιας implies as much, and Dr. Doddridge has translated the paffage: "and the disciples were by divine appointment first named Chriftians at Antioch." (Compare Matt. xi. 22. Luke, ii. 26. Acts, x. 22. Heb. viii. 5. xi. 7. xii. 25.) Some have faid, that Euodius was then bishop of Antioch, and gave the disciples this name; but the silence of St. Luke with regard to this circumstance renders it improbable; nor is there any fufficient evidence that it was given by Barnabas or Saul, as bishop Pearson (on the Creed, p. 105.) feems to think. There is, however, a manifest propriety in the name, as it expresses their relation to Chrift; and reminds them of their obligation to adhere to his doctrine; and it is certain that they gloried in it, and avowed it before the face of their enemies. (Tertull. Apol. c. 5. Eufeb. Hi. Eclef. i. v. c. 7.) Witius (de Vit. Paul. cap. iii. § 5.) thinks it a circumstance of remarkable wisdom, that this celebrated name should arise from Antioch, a church confiding of a mixture of Jews and Gentiles, rather than from Jerusalem, dignified in so many other refpects; and that it was a kind of victory, gained over Satan, who from Antioch had, some ages before, raised so many cruel percutors of the church of God. Witius, however, does not difcern any particular emphafis in the word Χριστιας, and readily admits the interpretation of Grotius, that the Greek word, according to its usual meaning in the late Greek writers, and in the New Testament itself, signifies named, or called. And he inclines to the conjecture of archbishop Ulher, that this appellation was given to the believers by the Romans then at Antioch. Sucer, in his "Thesaurus," explains the original word, and understands this text exactly as Grotius did. Dr. Hume has a diftention concerning the origin of the name of Chriftians, in which he shews it to be very probable, that this name had not
its rite from the Jews. Nor did the disciples of Jesus take it
to themselves. But, probably, they were first so called by
Illethens, particularly the Romans, as archbishop Usher had
argued; the name not having a Greek but a Latin termina-
tion. St. Paul, therefore, did not give the name, as bishop
Pepys, after Chariton, conjectured; and indeed Dr.
Humean shows, that both St. Luke and St. Paul seem to
have declined the use of it; possibly left our Saviour's name
have been esteemed an ordinary leader of a sect, like the
philosophers at that time much celebrated among the
Greeks and Romans. However, it was not long before it
obtained, and was very acceptable to the followers of Je-
rus. It is used by St. Peter i. iv. 16. And some have
thought it to be the "worthy name," intended by St.
James, ch. ii. 7. And it is certain, that afterwards it was
much, and justly valued by those who bore it. In the epif-
ople of the churches of Vienna and Lyons, giving an account
of their late sufferings, it is styled an honourable, and glo-
rious, and reviving appellation. Benfon's Hill: Plant.
Chrift. Rel. vol. i. ch. i. § 6. Dodd. in loc. Lardner's

The conduct of the first Christians corresponded to the
name by which they were distinguished. They were humble,
upright, and diligent in availing themselves of the in-
structions of the apollos; they were reticent and persever-
ing in maintaining their profession of Christianity amidst va-
rious reproaches and sufferings, and they testified their sincerity
by numerous acts of self-denial, fortitude and patience,
and by submitting even to death, in its most awful forms,
rather than incur the guilt of renouncing their faith in the
gospel and its divine author. Their general character was
not only irreproachable, but exemplary; and they recom-
manded their religion by their uniform temper and practice,
as well as by verbal declarations of its excellence and invin-
cible adherence to their profuction. We have many early
testimonies to this purpose, delivered not only by persons of
unquestionable integrity among themselves, but also by their adveraries and persecutors. To their lives they were able
to appeal, and did frequently appeal, in vindication of their
character against the accusations of their enemies; and they
thus evinced the falsehood and inverteate malice from which
such accusations originated. We shall here select, out of a
variety of ancient documents to the same purpose, the letter
of Pliny the younger, who was proconsul of Bithynia, in the
third year of the reign of Trajan, about the 63rd year after
our Lord's ascension, A. D. 102. In this letter Pliny, who
was a person of good sense and moderation, explained to Tra-
jan the difficulties which occurred to him in the execution of the
severe laws that were enacted against the Christians. He
informs him concerning the method which he had observed in
punishing the Christians, gives him an account of their
faith, worship, and manners, according to the account which
he had received from those who had apostatized to avoid per-
secution, and requests the emperor's advice how he should act
in reference to them for the future. This letter is cited by Ter-
tullian and Athenaeus: and being still extant, does great
honour to the Christian religion and its votaries. In the pro-
cess of his examination of those who were brought before him under the charge of being Christians, he says,
that some of them denied that they were Christians, or even
had been of this number; and to other evidence of their not
being jutly subject to this charge, they added, as he informs
the emperor, that of reviling Christ; which none of those, as
they themselves acknowledged, who were really Christians,
could be compelled to do. Others of them affirmed, that
the whole of their fault or error was, that they were wont
on an appointed day to meet before it was light, and to sing
with one another a hymn to Christ as a God, and to bind
themselves with an oath, not to do any wicked thing, but to
commit no thefts, no robberies, no adulteries, to break on
promise, and to refuse giving back any pledge when asked.
These things finished, it was their custom to depart, then
to meet again in order to take food, which, however, was innoc-
cent and eaten in common. He adds, as a reason for not
proceeding against them with rigour, and fear, that it
was a matter worthy of deliberation, "chiefly because of the
number of those who are in danger. For many of all ages,
of every rank, and of both sexes also, are called to account,
and will be called. Neither through the cities only, but the
villages also, and the country, is the contagion of that supcr-
bition spread, which, it appears, may yet be stopped and cor-
correct: at least it is very certain, that the almost deolate temples
are begun to be frequented, and the feared rites long neglected to
be renewed. Moreover the victims everywhere are told, of
which hitherto fearely any buyer was found. Hence it is
caly to collect, what a multitude of men may be reclaimed,
if there be allowed place for repentance." A re-proof of
Antinoumius Fios (see his article) also bears honourable tes-
timony to the character of the Christians. In this re-proof
Antinoum intimated that the Christians gained advantage
over their opponents, and manifested their superiority by their
readiness to lay down their lives in support of their cause; and
that they incurred enemy and persecution on account of
their greater regard to religion; and he illud an edict,
ordering among other things, that "if any fliall illude
prove to create trouble to one that is a Christian, or to accuse
him of crimes merely because he is a Christian, let him who is
indicted be discharged though he is found to be a Christian,
and let the informer himself undergo the punishment." But
it is needless to multiply instances of this kind.

CHRISTIAN Church. See CHURCH.
CHRISTIAN Court. See COURT Christian.
CHRISTIAN Name, that given at baptism. See NAME.
CHRISTIAN persecution of. See PERSECUTION.
CHRISTIAN Religion, or CHRISTIANITY, that instituted
by Jesus Christ, comprehending doctrines of faith and rules
of practice, all of which are contained in the New Testa-
ment, and are designed to recover mankind from ignorance
and vice, from guilt and death, to true knowledge and virtue,
to the divine favour, and everlasting life. Its aptitude
to this end, its conformity to reason, and to the state of
man, the sublimity and excellence of its doctrines, the equally
venerable and lovely character of its author, the purity of
its precepts, its benign tendency and salutary effects, concur,
with the external evidence of PROPHECY and MIRACLES,
to establish its divine origin and truth.

Dr. Gerard, in the introduction to his "Discorations on
Subjects relating to the Genius and Evidence of Christi-
nity," observes, that the evidences of the Christian religion
may very properly be distinguished into two kinds: the di-
rect and the indirect. "The direct evidences are internal
and external. The external evidences of Christianity are
miracles and prophecy: these are the most direct proofs of its
divinity. The internal evidence, arising from its excellence,
has also great force. But when its excellence is urged as a di-
rect proof of its truth and divinity, it should be considered
in reference to the principal end of Christianity. The end
which Christianity professedly aims at is the spiritual im-
provement of mankind, the present virtue and comfort, and the
future perfection and happiness of all who yield themselves
up to its power. This end it keeps continually in view; it
represents all its doctrines and precepts as means of pro-
moting this end; and it is careful to let them in that attitude
in which they may most directly and powerfully contribute

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Christian religion arises from particulars in its nature, or from effects produced by it, or from facts in the Gospel-histoy which cannot be at all accounted for but on the supposition of a divine original, or which are, at least, most naturally explicable on that supposition. Such arguments produce conviction, not by simply exciting a perception of excellence, but by making us feel, that we must offer violence to the natural principles of our understanding, and be involved in absurdities, if we deny the divinity of Christianity. Whatever circumstance is unaccountable, without supposing the truth of Christianity, affords a real presumption for it. See Duchal’s ‘presumptive Arguments, &c. in 10 Sermons, 1753.’

Some of these presumptive arguments, with respect to the circumstances from which they arise, and the manner in which they affect the understanding, are allied chiefly to the internal evidences of Christianity; others to the external. The circumstances from which some presumptive arguments for our religion arise, are such in their nature as, while they are inexplicable without supposing its divinity, excite at the same time a perception of excellence. Thus, the character of Jesus is such, and so uniformly supported, that, if it had not been real, the evangelists cannot be supposed capable of deluding it. There are several circumstances in our Saviour’s last discourses with his disciples which prove that, if he had not really spoken them, the evangelists could never have invented or ascribed them to him. The characters of some of the apostles of Christ; the controversy among Christians, in the apostolic age; the practice of Christ and his apostles in uniformly referring their claim to the impartial inquiries of men, and renouncing every other method of recommending it, have been shown by Dr. Duchal to contain strong presumptions of the truth of Christianity. All these arguments have an affinity to the internal evidence of Christianity. There are others which bear affinity to its external evidences. They add credibility to them; they predispose the mind to admit them; or heighten its acquiescence in their sufficiency. They contain a mixture of something miraculous, which, by being such, implies the divinity of this religion, and which carries along with it satisfying evidence of its own reality. Thus, Bell, in his ‘Inquiry into the divine Mission of J. the Baptist and Jesus Christ,’ has shown, that the claims of both mutually support each other; and that the circumstances attending their births, many of which were miraculous, and their whole conduct towards one another in their public life, afford a full proof that Jesus was the Messiah, and John his forerunner. The case is the same with regard to the miraculous conversion and subsequent conduct of the apostle Paul, forbidding us to ascribe the origin and prevalence of Christianity either to enthusiasm or imposture; as has been displayed with great strength of reason by Lord Lyttelton and by Dr. Duchal. See Paul.

There are other arguments, which corroborate the truth of Christianity, by adding weight to its external evidence in a manner still more direct. They arise from circumstances not absolutely necessary for rendering these evidences complete; and therefore they may be considered as separate and independent evidences of the collateral kind. Thus, when we consider that many of the particulars predicted concerning the Messiah and accomplished in Jesus are perfectly extraordinary in their own nature, and seemingly incompatible with one another, this affords evidence of the truth of our religion, additional to what arises merely from the accomplishment of any prophecy. A similar confirmation of Christianity has been deduced by Dr. Duchal, from some circumstances in the character of the Man of Sin, foretold by Paul, so singular, that mere imagination could scarcely have suggested them; and if it had, they never could have
have taken place. These influences have an immediate relation to the proof of Christianity from prophecy, which see. Others are related to the proof from miracles, which see; such is the argument from the quick and extensive propagation of the Gospel, illustrating the evidence from miracles in the same way as the efficacy of the Gospel corroborates its internal evidence: and the argument from the confessions of ancient infidels, stated by Gerard, in one of his dissertations. The argument for Christianity from the continuance and present state of the Jewish nation, is almost equally related to the proof from miracles and to that from prophecy. See "Lardner's Discourses on the Circumstances of the Jewish People, an Argument for the Truth of Christianity." There are other arguments, which have an equal relation to the internal and external evidences for Christianity, and which add weight equally to both. Such are the two arguments illustrated by Dr. Gerard; the one deduced from the manner in which Christ and his apostles prosecuted the evidence of their mission, which was the most proper, and the other, from the result of the scrutiny and examination of infidels. There are other arguments, deducible from the permanence of the positive institutions of Christianity, which are a kind of monuments of its truth and divinity original; and others again, of the presumptive kind, furnished by the history of the Acts of the Apostles; which see. Dr. Leland has given an excellent summary of the evidences of Christianity, in his "View of the Deistical Writers, vol. i. p. 411, &c." See also Beattie's "Evidences, &c." and Paley's "View of the Evidences of Christianity, vol. i." Macknight's "Truth of the Gospel History," "An Answer to the Question, Why are you a Christian?" by John Clarke, minister of a church in Bolton, 6th ed. Lond. 1803. See APOSTLES, BIBLE, CANON, GOSPEL, RELIGION, REVELATION, TESTAMENT, &c.

The argument in proof of the truth of Christianity, to which we have above referred, deduced from its sudden and extensive propagation, and permanent duration, deferves, on various accounts, to be more amply stated, and to be vindicated from the objections that have been alleged against it. No just and satisfactory reason can be given for its speedy diffusion, general prevalence, and continued subsistence in the world; without admitting its divine original, and the supernatural efficacy that contributed to its reception and propagation. In its own nature and avowed design, it had to encounter with a host of enemies both among Jews and Heathens; whose passions and prejudices, secular interest and honour, and established habits and usages, would combine in discouraging its advocates and raising obstacles, which it would be difficult to surmount. More especially when we consider that independently of its claims to a divine origin, and of the supernatural power which accompanied it, the millionaires in the Christian cause laboured under a variety of personal and local disadvantages. They were delitute of those natural talents and acquired accomplishments, and of that authority and influence usually resulting from rank and opulence, which would of themselves have contributed to their favourable reception with the multitude. Nevertheless, Christianity "grew mightily and prevailed;" of the weapons that were wielded against it by prejudice and error, talents and learning, wealth and worldly power, none eventually proved. Many circumstances concurred, indeed, to favour its reception and spread soon after the time, when it was introduced. This was the precise period, which had been predicted many ages before it occurred. This was the time in which a general expectation of the Messiah or Saviour prevailed. At this time the Jewish system both of doctrine and practice was become extremely corrupt, and the inquiries of the studious heathens had been found insufficient to satisfy them on the most important and interesting subjects. There are also several other collateral circumstances, which mark the period in which our Saviour appeared as the most proper for the introduction, establishment, and propagation of the religion which he communicated to mankind. This was an age of general knowledge and inquiry, when genius and science were cultivated and promoted, both in Greece and Rome, and when the human mind was beginning to emancipate itself from that blind and obstinate attachment to old opinions and fictions, venerable merely on account of their antiquity, which is inseparable from ignorance and barbarity. This was an age in which men began to discover a very general disposition for moral inquiries; and in which some of the most distinguished sages and philosophers flourished. The Augustan age is proverbially celebrated for its refinement and culture; for the knowledge and investigation by which it was distinguished. This was a period of general peace through the whole Roman empire. It was likewise a period of general toleration and liberty; it was also a time, in which by the wide extent of the Roman empire, an intercourse was opened and maintained between the inhabitants of very distant nations; and this intercourse was farther promoted by the dispersion of Jews and Christians in consequence of the destruction of Jerusalem and the dissolution of the Jewish state. The Greek language at this time was almost universal; and, therefore, the inspired writers, whose gospels and epistles were published in this language, enjoyed peculiar advantage for extending the knowledge of the sacred doctrines, precepts, and institutions of Christianity. Our limits will not allow our enlarging on these particulars; and we must, therefore, content ourselves with merely fiegulating them.

Of the success and prevalence of Christianity, during the apostolic age, we have already given a brief account under the article APOSTLES. In process of time, it made a wonderful progress through Europe, Asia, and Africa; and its progress was much accelerated by means of the wide extent of the Roman empire, and by a variety of circumstances which took place, at and soon after the period of its first introduction. In the third century there were Christians in the camp, in the senate, and in the palace; in short, everywhere, as we are informed, except in the temples and the theatres; they filled the towns, the country, and the islands. Men and women of all ages and ranks, and even those of the first dignity, embraced the Christian faith; insomuch that the Pagans complained that the revenues of their temples were ruined. They were in such great numbers in the empire, that, as Tertullian expresses it, if they had retired into another country, they would have left the Romans only a frightful solitude. For the further illustration of this argument, we may observe that the Christian religion was introduced everywhere in opposition to the sword of the magistrate, the craft and interest of the priests, the pride of the philosophers, the passions and prejudices of the people, all closely combined in support of the national worship, and to crush the Christian faith, which aimed at the subversion of heathenism and idolatry, and the abrogation of the Jewish law. Moreover, this religion was not propagated in the dark, by persons who tacitly endeavoured to deceive the credulous; nor delivered out by little and little, so that one doctrine might prepare the way for the reception of another; but it was fully and without disguise laid before men all at once, that they might judge of the whole under one view of it. Consequently mankind were not deceived into the belief of it, but received it upon proper examination and conviction.
CHRISTIAN RELIGION.

tion. Besides, the gospel was first preached and first believed by multitudes in Judaea, where Jesus exercised his ministry, and where every individual had access to know whether the things that were told him were matters of fact; and in this country, the scene of the principal transactions on which its future glory was to depend, most of the faithful witnesses have been received, unless it had been true, and known to all as truth; again, the doctrine and history of Jesus were believed and lived in the most noted countries and cities of the world, in the very age when he is said to have lived. On the 50th day after our Lord's crucifixion, 5000 persons were converted in Jerusalem, by a single sermon of the apostles; and a few weeks after this, 3000 who believed were present at another sermon preached also in Jerusalem. (Acts ii. 44. 4 v. 7. viii. 1. ix. 20.) About 8 or 10 years after our Lord's death, the disciples were become so numerous at Jerusalem and in the adjacent country, that they were objects of jealousy and alarm to Herod himself. (Acts, xiii. 1.) In the 23d year after the crucifixion, the disciples in Judæa are said to have been many myriads. (Acts, xxi. 20.) See Apostles. The age, in which Christianity was introduced and received, was famous for men, whole faculties were improved by the most perfect state of social life, but who were good judges of the evidence offered in support of the facts recorded in the gospel-history. For it should be recollected, that the facts of the gospel was not restricted to Judæa; but it was preached in all the different provinces of the Roman empire. The first triumphs of Christianity were in the heart of Greece itself, the nursery of learning and the polite arts; for churches were planted at a very early period at Corinth, Ephesus, Berœa, Thessalonica, and Philippæ. Even Rome herself, the seat of wealth and empire, was not able to resist the force of truth, at a time when the facts related were recent, and when they might, if they had been false, have easily been disproved. From Greece and Rome, at a period of cultivation and refinement, of general peace, and extensive intercourse, when one great empire united different nations and distant people, the confession of these facts would very soon have prevailed from one country to another, to the utter confusion of the persons who endeavoured to propagate the belief of them. Farther, although most of the early converts were persons in the middle and lower classes of life, yet even these, in an age of such general knowledge and intercourse, were sufficiently secured against every kind of false pretensions; and as for the more ignorant, their attachment to their birth religious notions would be strong; and consequently, miracles, or unquestionable operations of divine power, would be necessary to convince persons of this rank and character, and to induce them to change their principles. Their conversion, therefore, affords an incontestible argument in proof of the facts by which it was accomplished. It should here be considered that the religion to which they were proselyted was exclusive. It denied, without reserve, the truth of every article of heathen mythology, the existence of every object of their worship. It accepted no compromise; it admitted no comprehension. If it prevailed at all, it must prevail by the overthrow of every statute, altar, and temple in the world. It pronounced all other gods to be false, and all other worship vain. These are considerations which must have strengthened the opposition to it, augmented the hostility which it must encounter, and enhanced the difficulty of gaining proselytes. More especially when we recollect, that among the first converts to Christianity in the earliest age, a number of persons remarkable for their station, office, genius, education, and fortune, and who were personally interested by their emoluments and honours in the continued subsistence either of Judaism or heathenism, appeared among the Christian proselytes. Its evidences approved themselves, not only to the multitude, but to men of the most refined taste and most distinguished abilities; and it dissolv'd the attachments of all-powerful interest and authority created and upheld. Along the prospect to Christianity we find NICODEMUS, and Joseph of ARIMATHÉA, and members of the senate of ISRAEL; JARUS, a ruler of the synagogue; ZACCHÉUS, the chief of the publicans at Jericho; APOLLOS, distinguished for eloquence; Paul, learned in the Jewish law; SÉRGIUS PAPUlius, governor of the island of Cyprus; CORNELIUS, a Roman captain; Dionysius, a judge and senator of the Athenian Areopagus; Erastus, treasurer of Corinth; Tyrannus, a teacher of grammar and rhetoric at Corinth; Publicius, governor of Malta; Philemon, a person of considerable rank at Colosse; Simon, a magician in Samaria; Zenas, a lawyer; and even the domelictes of the emperor himself. These are noticed in the sacred writings; and the heathen historians also mention some persons of great note who were converted at an early period. To all the preceding circumstances we may add a consideration of peculiar moment, which is, that the profession of Christianity led all, without exception, to renounce the world, and to expose themselves to the most ignominious and execrable sufferings. On the other hand, we should reflect on the character and condition of the persons, who endeavored to change mankind to their belief, and to abandon all their former convictions and habits. They were a few, selected from the meanest of the people, and they belonged to a nation that was despised on account of the ill-will which they bore to the rest of mankind. By such persons were thousands prevailed upon in a very short time to change their belief and to reform their lives. And, without adding any more in this way, the Christian religion, thus introduced by the power of God and of truth, has been supported in the world by the fame powers through a course of many ages, amidst the corruptions of its friends, the opposition of its enemies, the dangers of prosperous periods, and the perfections and violence of adverse circumstances: all which must have destroyed it, if it had not been founded in truth, and guarded by the protection of an Almighty providence.

Mr. Gibbon, the elegant and instructive historian, has endeavoured to account for the wonderful propagation of Christianity, independently of its truth and divine original, in a manner which tends, in our opinion, to make an impression on the mind of his reader not at all advantageous to our holy religion. To the inquiry by what means the Christian faith obtained so remarkable a victory over the established religions of the earth, he says, an obvious but satisfactory answer may be returned; that it was owing to the convincing evidence of the doctrine itself, and to the ruling providence of its great Author. But afterwards, in alluding to this astonishing event, five secondary causes, derived from the passions of the human heart and the general circumstances of mankind, he seems to have inculcated that Christianity, like other impostures, might have made its way in the world, though its origin had been as human as the means by which he supposes it was rapidly spread. Whether it was his intention to depreciate the primary means by which Christianity prevailed, and to intimate its dissatisfaction with the obvious answer which others have returned to the inquiry concerning its reception and spread, we shall not presume to determine; but we may b. allowed to say, without incurring the charge of want of candour, that his reasoning on this subject has a tendency to divert the attention of his readers from the principal cause of the triumph of Christianity to other causes less favourable to its truth: C. C. and
and divine original, and altogether inadequate to this great event. As the subject is in a high degree important and interesting, we shall here avail ourselves of the replies that have been made by the advocates of Christianitv, and particularly by the learned and ingenious Dr. Watfon, bishop of Landaff, to the remonstrance of the native Liberalian.

The feeble cause, which he alleges, is, "the inflexible, and, if we may use the expression (he says), the intolerant zeal of the Christians, derived, it is true, from the Jewish religion, but purified from the narrow and unfocial spirit, which, instead of inviting, had deterred the Jews from embracing the law of Moses." The zeal of the Christians is allowed to have been inflexible, as far as it concerned a steady adherence to their religious principles and profession, and intolerant, in not admitting to Christian worship those who professed the image of Cefar, who bowed down at the altars of Jovian, who mixed with the votaries of Venus, or wallowed in the filth of Diucaiihan festivities; but, instead of deducing it, as Mr. Gibbon does, from the Jewish religion, it ought to be ascribed to a full persuasion of the truth of Christianity. The zeal of the apostles or primitive Christians did not bear the slightest hintitude to the fierceness and bigotry of the Jews; it was derived from very different causes, and aimed at far nobler ends. It is not conceivable, that a zeal resulting from the Jewish religion should urge the Christians to propagate the gospel amongst Jews as well as Gentiles; and that such a zeal as Mr. Gibbon has described, whatever might be its principle, should ever have been devised by any human understanding as a probable means of promoting the progress of a reformation in religion; much less that it should have been thought of or adopted by a few ignorant and unconnected men.

The second cause to which Mr. Gibbon has attributed the rapid growth of Christianity is, "the doctrine of a future life, improved by every additional circumstance which could give weight and efficacy to that important truth." Such a doctrine is unquestionably congenial to the nature of man as a moral and accountable agent; it is repeatedly inculcated in the gospel, and most adequate to the purposes of the dispensation of this age, has increased its efficacy; but, considering the circumstances of the persons to whom this doctrine, in its whole extent, as comprehending punishments and rewards, and the immortality of the soul, in connection with the resurrection, was delivered, it is not likely that, abstracted from the supernatural testimony by which it was enforced, it could have met with any very extensive reception among them. It was not the kind of future life, which they expected. Future punishments, which constituted a prominent part of this doctrine, were reckoned by the philosophers among the aniles fabula; nor was the abfurdiy of this part of the Christian doctrine confined to the writings of the philosophers, and to the circles of the learned and polite; but Cicero makes no secret of it in his public pleadings before the people at large. Besides, its rewards were not attractive, nor were they such as the multitude wished. The pride of the philosopher was shocked by the doctrine of a resurrection, the mode of which he was unable to comprehend; and the imaginations of other men were feebly impressed by the representation of a future life, which did not portray the serene sky, the verdant garden, and the luxurious enjoyment of an Elysium. Upon the whole, the Christian doctrine of a future life was neither agreeable to the expectations, nor corresponding with the wishes, nor conformable to the reason of the Gentiles; and it, therefore, afforded no inducements for their receiving it, and, in consequence of their belief, regulating their loose morals according to the rigid standard of gospel purity, upon the mere authority of a few contemptible fishermen of Judaea. Mr. Gibbon himself observes in another place, that the "Pagan multitude, retaining their gratitude for temporal benefits alone, rejected the inculcable present of life and immortality, which was offered to mankind by Jesus of Nazareth." When this writer ascribes the conversion of the Gentiles to the influence of their fears, excited, as he pretends, but without sufficient reason, by the expectation of Christ's speedy appearance, of the millennium (which fict.) and of the general conflagration; it is natural to ask from what sources they derived those fears which converted them? not, we may say, from the labours of such men, as the apostles and first preachers of Christianity, who from their mean condition and rude speech were very ill adapted to inspire the hasty and the learned Romans with any other affections than those of pity or contempt.

"The miraculous powers ascribed to the primitive church," are the third of the secondary causes to which Mr. G. ascribes the rapid propagation of Christianity. It must be allowed that the miracles, not merely ascribed to the primitive church, but really performed by the apostles, ought to be considered not only as a secondary, but as one great primary cause of the conversion of the Gentiles. But the miraculous powers attributed by Mr. Gibbon to the primitive church, and which he ascribes with a degree of derision, implying his scepticism or incredulity concerning them, were by no means calculated, at least in any eminent degree, to spread the belief of Christianity amongst a great and enlightened people. When we consider that the pretended miracles of the heathens were so numerous as to have inestimably lost their force, and sunk in their deceit, those that were ascribed to the first propagators of Christianity must have created an immediate and abhorred prejudice against their cause; and nothing could have subdued that prejudice, but miracles, really and visibly performed. See Miracle.

The utility of Mr. Gibbon's fourth cause, viz. "the virtues of the first Christians," cannot be disputed; as they very much conducted to the spread of their religion: but those virtues are depreciated by his representation of them, as proceeding from their mean and timid reputation for having been the most abandoned sinners, or from an impetuous zeal in supporting the reputation of the sect or society to which they belonged. "After the example of their divine master," says Mr. G. in language that more than infames unmerited reproach, "the millionaries of the gospel disdained not the society of men, and especially of women, oppressed by the conscientious, and very often by the effects of their vices." The pernicious tendency of such a declaration, connected with the gross misrepresentation implied in it, reflects reproach on the character of the historian, and seems to indicate a design to degrade the importance of Christianity and to excape to it contempt. But whatever may be its effect on the heedless and dissipated, it supplies its own antidote in the elimation of the impartial, thoughtful, and judicious, who will not fail to distinguish between allusion and fact. Very contrary to the declaration of Mr. G. was the conduct enjoined on the first teachers of Christianity; for they were ordered to turn away from, to have no fellowship or intercourse with, such as were wont "to creep into houses, and lead captive sly women laden with sins, led away with divers lusts." And if a few women, who had either been seduced by their persuasion, or had fallen victims to the licentious manners of their age, should be found amongst those who were most ready to receive a religion that forbade all impurity; this circumstance cannot warrant an imputation of discredit, either upon the sect, or upon the
CHRISTIAN.

those who wrought their reformation. The attention mani-

fested by the primitive Christians with regard to their

conduct is inviably ascribed to improper motives;

whereas their solicitude to avoid reproach in this respect

might as candidly, perhaps, and as reasonably, be derived

from a sense of their duty, and an honest endeavour to
discharge it, as from the mere desire of increasing the
honour of their confraternity by the illustrious integrity of
its members. After all, the ascetic morality of the primi-
tive Christians, which Mr. G. describes as adverse to the

proprieties of life, and abhorrent from all the innocent
pleasures and amusements of life, is exhibited under such
difficult colouring, that instead of alluring persons to a closer
inspection of it, it must have made every man of pleasure or
of sense to turn away from it with horror or disgust; and so
far from contributing to the rapid growth of Christianity, it
must excite wonder, how the first Christians ever made a
single convert. The averseion of Christians from the busi-
ness of war and government is charged upon them by Mr. G. as
criminal disregard to the public welfare. By way of gen-
gerally reply it may be observed, that Christianity does not
concern itself with ordering the constitutions of civil societies,
but levels its whole influence at the hearts of individuals who
compose them; and, as Origin said to Celsus, if every indi-
idual in every nation was a good Christian, there would be
neither internal injustice, nor external war; there would be
none of those passions which embitter the intercourse of civil
life, and defolate the globe. It can therefore be no reproach
to the Christian religion, that it should instruct doctrines,
which, if universally practised, would introduce universal
tranquility, and the most exalted happiness amongst man-
kind. Nothing but a total misconception of the design
of the Christian dispensation, or a misinterpretation of the
peculiar injunctions, forbidding its votaries to make
riches or honours a primary pursuit, or the prompt
gratification of revenge a first principle of action, can
lead any one to infer, that a Christian is obliged to
offer his throat to an assassin, and his property to the first
plunderer; or that a society of Christians may not repel, in
the bell manner they are able, the unjust assaults of host-
ile invasion. No precepts of the gospel, whatever may be
affected or infiltrated to the contrary, debar a man from the
possession of domestic comforts, or deaden the activity of his
private friendships, or prohibit the exertion of his usual
ability in the service of the public.
The fifth and last secondary cause of the rapid and extensive
spread of Christianity, mentioned by Mr. G. is "the union
and the discipline of the Christian church." Union, it must
be allowed, is strength to every association; and it is much
to be wished, that it could be found even in the early period
of the Christian dispensation, and much to be lamented that
the too general defect of it has been the reproach of Chris-
tians from the apostolic age to our own. There was, in-
deed, a certain community of doctrine, an intercourse of ho-
spitality, and a confederacy of discipline established among
the individuals of every church; so that none could be ad-
mitted into any assembly of Christians without undergoing a
previous examination into his manner of life, and without
protesting in the most solemn manner that they would not
be guilty of murder, adultery, theft, or perjury. It may
be also granted, that those who broke this compact
were ejected by common consent from the confraternity
into which they had been admitted; and this confede-

racy extended itself to independent churches; so that
those who had, for their immorality, been excluded
from Christian community in any one church, were rarely, if
ever, admitted to this privilege by another:—but it is not
admitted, that this severity and this union of discipline
could ever have induced the Pagans to forsake the gods of
their country, and to expose themselves to the contemptuous
hatred of their neighbours, and to all the severities of per-
fecution, exercised with unrelenting barbarity, against the
Christians. After this brief abstract of the reasoning of Mr.
Gibbon, and the replies of the advocates of Christianity on
the subject of its propagation, we must refer to Gibbon's History
of the Decline and Fall of the Roman Empire, vol. ii. chap.
15. D. Watton's Apology for Christianity, pp. 118, 119. White's
Sermons, Serm. III. and other writers who have either di-
rectly or indirectly written on the same subject. See Com-
munity of Goods, Excommunication, Famine, Per-
secution, etc.

CHRISTIAN I., in Biography, king of Denmark, son of Theodoric count of Oldenburg, was elected to the throne in the year 1448, and in him we behold the founder of the royal house of Oldenburg, which still poises the throne of Denmark. He owed his elevation as well to his inelab-
dent from Eric VII. as to the moderation of his uncle Adolphus, duke of Slefwick, to whom the crown was of-
fered upon the death of Christophe of Bavaria without if-
sue. Adolphus declined the honour on account of his ad-
vanced age, and recommended, in his stead, Christian, then
twenty-two years of age. In the same year that he ascend-
ed the throne of Denmark, he was married to the crown
of Norway, in right of his descent from one of their ancient kings.
After some struggles he obtained also the crown of Sweden in 1558, upon the deposition of Charles Canuton. About the same time the duchy of Slefwick reverted to the crown
of Denmark, and Christian obtained possession of the coun-
ties of Holstein and Stormar. The Swedes, in a short
time, grew discontented with the government of Christian,
who neglected to visit them, and had applied the public money in the purchase of Holstein and Stormar. To put
an end to their machinations, Christian sent the archbishop
of Ufal, whom he suspected, and sent him prisoner to
Denmark. This action caused an open revolt, and led to the
deposition of the king. From this period Christian aban-
donned all projects of ambition, and attended to the con-
cerns of his own kingdom. He was distinguished for his liberality
to the clergy, and in 1472 made a pilgrimage to Rome,
where he was received with extraordinary honours. On his
return he founded the university of Copenhagen, and died
in 1481, after a reign of thirty-three years. He was a so-
vereign of great moderation and humanity, whose qualities,
being his shining than told, were more adapted to the ad-
ministration of his own government, than to the exploits
of war. By Mallet, the most celebrated of Danish histo-
rians, Christian I. is characterized as one of those princes
who do not attract the admiration of mankind, yet whom
Providence never bellows upon a nation but as a signal mark
of favour. Christian was succeeded by his son John, whom
he had already associated with himself in this throne.

CHRISTIAN II., king of Denmark, was born in 1481,
the same year in which his grand-father died. In his youth
he discovered a lively genius and a good understanding,
which, if they had been properly cultivated, might have re-
ndered him the ornament, instead of becoming, as he proved,
the disgrace of his country. The young prince was first en-
trusted to the care of a common burgurer of Copenhagen,
and was afterwards removed to the house of a school-maier,
who was canon of the cathedral. In this situation his chief
employment consisted in regularly accompanying his master
to church, where he distinguished himself beyond the other
scholars and choristers in chanting and singing psalms.
He was afterwards placed under the tuition of a German pre-
ceptor,
Christian.

ceptor, under whom he made a considerable proficiency in the Latin tongue. From this humble education, or from other circumstances not known to the world, Christian imbibed a taste for bad company; was accustomd to haunt common taverns, to mix with the lowest of the populace, and was, in short, guilty of almost every excess. The king, his father, who had, unintentionally, been the cause of his son's misconduct, was now indignant at the irregularities which became notorious to the whole country, but the bad habits which the prince had contracted were too strongly rooted to yield to any effort. He nevertheless signified his displeasure, and recalled his father's affections by his military prowess and successes in Norway, and by an unwaried application to the affairs of government.

He succeeded his father in 1513, and during the first years of his reign, his administration was in many respects worthy of praise, and the excellence of his laws induced Holberg to affirm, that if the character of Christian II. were to be determined by his laws, and not by his actions, he would merit the appellation of Good, rather than of Tyrant. Foreseeing the difficulties he should meet with in obtaining the crown of Sweden, he resolved to strengthen himself by an alliance with the house of Austria, and accordingly married Isabella, sister to the emperor Charles V. Notwithstanding this marriage, which was merely political, he kept a mistress named Colombula, in whose favours he suspected that Torbern Oxen, a young nobleman, had participatd. The monarch, amidst the futility of banquets, urged him to avow the fact. The young man professed a mind incapable of falsehood; he acknowledged, that he had loved Colombula, and had solicited, but never obtained her favours. He was instantiy arrested, imprisoned, and arraigned; but by the Senate Torbern was acquitted, because the law had assigned no punishment for simple concubinage. Diffatisfied with this decision, Christian assembled another tribunal, where he had him convicted and immediately executed. In 1517, Lutheranism began to excite attention; and in Denmark it was favoured by the king, who hoped it might lead to the confiscation of the church lands. He was, however, obliged to submit to the pope, and to fuse, through the house of Austria, for a reconciliation with the holy see. The domestic government of Christian became more oppressive, chiefly through the extortions contrived by Sigebrette, the mother of Colombula, who had the complete confidence of the king. This base woman, who felt no compassion for the poor, nor regard for the rich: who paid no respect to the laws, and who acknowledged no other rule than the passions of the monarch, commanded with despotic authority, dispofed of all places and preferments, imposed taxes at pleasure, and excuted them with such rigour, that the household furniture and chattels of those who did not pay them were seized and publicly sold. In 1519 Christian renewed the war against Sweden, defeated and killed the administrator of that country, and through the treachery of the archbishop of Upsal, he was in the succeeding year recognized king of Sweden. He fixed upon the following November for his coronation, and then returned to Denmark, where, with two of his prelates, he concerted one of the most atrocious and fanatical projects that flanked in history. Returning to Sweden, he convoked the assembly of the states, and was publicly crowned at Stockholm. After the ceremonial, the Swedish nobility were invited to a splendid entertainment, and received with the utmost affability. In the midst of the felicity, he caufed the soldiers to arrest the administrator's widow, the fiance, and the principal nobility; and after accusing them of various crimes for which there was no pretence, he instituted a mock prosecution by Danish commissioners. The process was, however, too low for his blood-thirsty disposition; he causd a summary condemnation to be pronounced, and they were led to instant execution. Four core or nucy noblemen and senators of the first rank, both of the lity and clergy, were in one day hanged on gibbets, as felons or traitors. Not contented with this exhibition of his savage cruelty, to conclude the scene, the soldiers were ordered to butcher the surrounding spectators, and the burgurers of the city. He even caufed the administrator's body to be dug from its grave, which, in its putrid state, he tore to pieces with his teeth and nails like a wild beast. His progress on his return to Denmark was marked with blood, and he left no memorials behind him but those of cruelty.

The massacre of Stockholm, in which fix hundred persons were murdered in cold blood, and amidst the rejoicings of a coronation, exhibited such a striking instance of the malignant and implausible character of the king, that upon the revolt of Gustavus Vasa, the spirit of resistance diffused itself rapidly from Sweden to Denmark, where he had exasperated his subjects by repeated cruelties and oppressions. In 1523 he was publicly deposed by the states of Denmark, and the crown transferred to his uncle Frederic, duke of Holstein. The deposition of this infamous tyrant was in consequence only of the just abhorrence in which he was held by all ranks of people. For several years he submitted without a struggle to the ignominy of banishment, but in 1532 he invaded the Danish dominions, and was taken prisoner. The place of his confinement was a dungeon in the castle of Sunderborg, in the isle of Alten. Having entered the gloomy cell, with a favourite dwarf, the sole companion of his misery, the door was instantly blocked up. In this state he remained till the year 1546, when he made a solemn renunciation for himself and heirs of all claims to the crown of Denmark and Norway, and promised never to go out of the tracts of Callemburg without the king's consent, and never to speak to a stranger but in the governor's presence. On these conditions he was allowed the privilege of hunting and fishing, within certain limits, and received a handfome appointment, and other advantages were stipulated for him in a treaty concluded between the king of Denmark and the emperor at Speirs. In this retreat did Christian reach his seventy-eighth year, enjoying a degree of comfort to which his many crimes gave no title whatever. He died in 1559, leaving two daughters, one electress Palatine, the other, duchess first of Milan, then of Lorraine. Of himself is left the character of the Nero of the North. It is said, that during his imprisonment, he was occasionally so much affected with reflections on his past conduct, that he would burst into tears, throw himself upon the ground, utter the most bitter lamentations, and continue for some time in a fitte approaching to infancy.

There were several other monarchs of Sweden of the name of Christian, concerning whom little need be said.

Christian III. succeeded Frederic in 1534; he embraced the Lutheran religion, introduced it among his subjects, and at length established it as the religion of the state. This prince united in his character firmness and moderation: he was a lover of letters and learned men, and founded a valuable library at Copenhagen. He died in 1558, and was succeeded by Frederic II., who was followed in 1588 by

Christian IV. This prince ascended the throne before he was twelve years of age. The regency paid every attention to his education, and masters were procured in all the various accomplishments of mind and body from different parts of Europe, to whose exertions the prince did the greatest credit. He was able to converge with all the ambas- 
sadors from foreign courts, and, at an early period, to dedicate to his own ministrers who were abroad. In 1661 he made war against Sweden, and was elected chief of the Protestant league against the emperor for the re-establishment of the prince palatine in 1652. The several wars in which he was engaged were detrimental to the finances of his country. He died in 1643, leaving a high character for vigour of mind and body. He was a slave to violent passions, which gained strength with increasing years. He was addicted to women, a circumstance that injured his reputation. It must, however, be admitted in his praise, that he was a firm and intrepid warrior, a prince of extensive genius, and possessing great generosily and magnanimity.

CHRISTIAN V. ascended the throne of Denmark in 1670. He founded his kingdom involved in various foreign and domestic disputes, which led him to employ the first years of his reign in putting the revenue into a state of order, reforming discipline among his troops, and strengthening his fortifications. In 1675 he joined the league against Sweden, and in the war between the Danes and their allies with the Swedes, Christian displayed great activity and enterprise. His fleet, in conjunction with that of the Dutch under Van Tromp, completely defeated that of the Swedes. For two years the king was generally successful in all his undertakings, but in 1677 the tide of victory seemed to turn against him, and in 1679 he was glad to conclude a peace. From this period he aimed to settle all disputes with foreign powers by means of negotiation. He attempted to gain possession of Hamburg, and obtained at first a considerable tribute from that city, but his conduct there led the neighbouring princes to guarantee its protection. Christian died in 1699, at the age of fifty-four, when his subjects were enjoying the fruits of his mature wisdom and reputation. As a prince he had established a high character, and claimed respect throughout Europe. As a man, he spoke with fluency moll foreign languages, was a promoter of the sciences, and had made great progress in those branches of the mathematics which relate to the military art. See DENMARK.

CHRISTIAN, ANDREW, born at Rippen, a small town in Denmark, in 1551. He received the rudiments of his education at Wittenburg, which he perfected at Basle, where he took his degree of doctor in medicine. Being called to Copenhagen, he taught medicine there for fifteen years, at the end of which time he was sent by his sovereign, Christian IV. to reside in the college of noblesse lately established at Sorø. In this situation he died in 1605. The work by which he is known, is entitled "Excurdium Medicum, de engynfeciis, curandique externis et internis Humani Corporis Morbis." Batine, 1583, 8vo. It contains, in epoem, the method, then most approved, of treating disesases; as such it was several times re-printed. Hallo. Bib. Eoy. Dist. Hilt.

CHRISTIANA, in Geography, a post-town of America, in the slate of Delaware and county of Newcast, seated on a navigable creek of the same name, which falls into Delaware river from the south-east, a little below Wilmington. The town, consisting of about 50 houses and a Presbyterian church, hands on a clivity, commanding a pleasant prospect of the country towards the Delawarre, and carries on a considerable trade with Philadelphia in flour. This is the greatest carrying-place between the navigable waters of the Delawarre and Cheapeak, which are here 13 miles apart. It was built by the Swedes in 1654, and derived its name from that of their queen. It is 9 miles S.W. of Wilmington, and 37 S.W. of Philadelphia.

CHRISTIANA, Great and Little, two islets in the Grecian Archipelago, situated 2 leagues S.W. of Santorini.

CHRISTIANA, or CHRISTINA, Santa, one of the Marquesas islands, called by the natives Ohikura, or Whaitai, lying under the same parallel with St. Pedro, or Ontoey, 5 or 4 leagues more to the west. Revolution bay, near the middle of the west coast of the island, lies in S. lat. 9° 33' 30", and W. long. 139° 8' 40'; and the west end of Dominica, or Ohehahuna, lies N. 14° W. Capt. Cook gave this bay the name of his ship. By the Spaniards it was called Port Real. It is not more than 3 miles across at its mouth by 2 of a mile in depth; and the two points which form it lie, with respect to each other, in a north by east and south by west direction. The south point is terminated by a steep rock, and a hill of gentle declivity terminates the north point, which is formed by bold and excavated rocks, and is covered with "cañarinas," the large trees, whose hard and heavy wood is used for making clubs and other weapons. The lands at the bottom of the bay pretend a chain of high hills, slightly broken at their summits, and steep in several places. Mr. G. Forster says, that the bottom of the harbour is filled up with a very high ridge, level at top, and resembling the Table-mountain at the Cape of Good Hope. With the exception of two small coves, which both receive a rivulet, and where an accessible beach occurs, the remainder of the circumference of the bay exhibits, throughout, nothing but bold rocks, close to which the lead indicates a coral bottom, with a depth of water of 20 fathoms and upwards. One of these coves is called the "North Cove," the other the "South Cove." Two valies, well covered with trees, terminate at the north cove, and a pretty rivulet, after having fertilised the lands, affords, at its mouth, a good watering-place for ships. The bottom of the bay is sandy, excellent for holding, over a depth of water, which falls, towards the shore, from 9 to 13 or 14 fathoms. Fresh water of the best quality is procured in the North Cove, and wood is also easily obtained. It appears from different accounts, that the springs and rivers of the island are subject to considerable augmentations and diminutions; and alternate inundations or droughts oblige the natives to remove their dwellings from one part of the island to another. The huts or cabins occupied by the inhabitants are built on a little platform of stones, raised somewhat above the level of the ground. The walls are formed with bamboo-canes, 7 or 8 feet high, placed close together; and the roof, the middle of which rests 9 or 10 feet above the foundation, is formed by other bamboo laid in a parallel direction, one above the other, and covered with leaves of a species of the fan-palm, or of the bread-fruit tree. The roofs are ridged, so as to carry off the water by a double slope; and in one of the fronts are a door and window. These cabins are, in general, 9 or 10 feet long, by 5 or 6 broad, and some are square. The floor is paved with large stones, joined together very neatly, and covered with mats. On the outside of these habitations are platforms, on which the natives sit down and amuse themselves; and these are paved, in order to guard against damp in the rainy season. The religious ceremonies of the inhabitants resemble those of the Society Islands. The French, during their stay here, discovered nothing that had the appearance of worship to a Supreme Being. Pleasure is the divinity of the country; they have no superstition, no ceremony, no priests or jugglers, says Mar- chand. In each district they have a mora or, where the dead are buried beneath a pavement of large stones. They have a multitude of deities; and they only offer hogs in their sacrifices, but never men. They have no regular government.
ment, established law, or punishments; but custom is the general rule. Their chief food is the hog, which they eat five or six times a day, without having any regular meals. Their pork, and also their fowls, they dress in oven's dug in the ground, and heated with flaves; sometimes in wooden veflils, where the water is made to boil by means of hot flaves, which they throw into it repeatedly. Not unfrquently they eat hix raw, and even pork. They know how to extract from the cocoa-nut an oil, which is probably employed in the dressing of their dishes; but which is principally used for anointing the whole body: the women confume great quantities of it in maintaining the glows and beauty of their hair. When they are deftitute of animal food, they use the roasted bread-fruit, fish, malib, pudding made of it and other vegetables, a kind of walnuts, and a paste made of a root resembling the yam. Their common drink is pure water, and also cocoa-nut milk. They also prepare a strong liquor, either of pepper-root, which they use as a token of peace, or of the root of ginger; but they are temperate in the use of it, and no infiance of intoxication occurs among them. To their friends they manifest their civility in a fingular manner, by offering to them bits which they have previously chewed, in order to put them to no other trouble than that of swallowing what is thus prepared. The women are not allowed to eat hog, and are probably under other prohibitions, as at Oathette, and seem much more ferile to the men, and more harfthy treated. It has been faid that the women are not allowed to mef with the men, as is the cafe in other ilands; but Capt. Chanal fays that he was several times at their meals, and that he fou the men, women, and children eat in common, and feed on the fame dishes. They are employed in making cloth and matting, but not in cookery, except for themselves. The men seldom work. Some old perons excepted, who make cords and nets. The reft bark indolently in the fun, telling their florises, and thus begging their time. The chief is faid to have three wives, and has feveral children; but polygamy seems to be a privilege restricted to the chief. From what is known, however, of the difpofition and manners of the natives of St. Christiana, we may hesitate in admitting that they are at all acquainted with conjugal union; at least it is certain that the men know no more of jealousy than the women do of fidelity. Every woman seems to be the wife of all the men; and every man the husband of all the women. Every man makes to strangers the offer of every woman without any distinction. The Spaniards lead us to believe that the women are common without any distinction of age or kindred; but furgeon Roblet affures us, that the intimate union of the sexes between relations is rigorously prohibited; but he cannot affign the degree of rela- tionshup to which the prohibition extends. These people appear to be very fond of their children. Before the age of puberty, the operation of fitting the prepuce, is performed; and all the men are tattooed (see Tatfoning), even to the lips and eye-bells. They have few daffes, and, as the mi- fionaries fay, are yet happily free from the fatal malady which has made fuch ravages in the Society Ilands. Capt. Cook, in his Second Voyage, describes them as surpassing all other nations in symmetry of fhape and regular features. His obfervations have been confirmed by those of Capt. Chanal and furgeon Roblet, recorded by Marchand. Not a single deformed or ill-proportioned partion was feen on the iland; all were strong, tall, well-figured, and remarkably active. The men are from 5 feet 10 inches high to 6 feet. Their eyes are not fo full, nor their teeth fo good as thoife of many other nations; but Capt. Chanal fays, that they have fine large black eyes and handfome teeth; their hair is of various co- lours, but none red; some have it long, but the general cuflom was to wear it fhort, except a bunch on each side of the crown, which is tied in a knot. In thefe refpects there is a great variety; and also in their treatment of the beard. Thofe who prefer it at full length, which is commonly the cafe, arrange it in different ways; generally parting it into two tufts, and either shaving or plucking out the portion which belongs to the chin. When it is fuffered to grow to its full length, it is parted into locks, of which they form braids, or to which they fatten the teeth of fifies, or of men, or small pieces of bone, fleifs, and beads of coloured glafs, which they receive from the Europeans. Some eradicate the whole of the beard. On their heads they place various ornaments, formed of feathers, cloth, or cocoa-nut leaves, to which they fuppend pearl oyfier-shells, tortoise-shell, and pieces of mother of pearl, or various fizes and differently ar ranged; all which pieces are offtentatious, and of unequal diameter, form together a large cockade, flipted circularly. This kind of diadem is fometimes fupported by a plume. They also use various kinds of ornaments for the neck, which are composed of small pieces of light wood, with small red feeds attached to them with gum or fize, or of red bulbs, or of polished bone, fleifs, white corn, or bone. Men and women have, in general, their ears pierced; but none habitually wear pendants. In the number of their most curious ornaments, they reckon all that they receive from strangers, and even all that they can fteal from them; and everything is hung to the neck, the ears, and the wait. They also adorn their heads, arms, waift, knees, and even infpefts, as well as clubs and other weapons, with trefles or locks of hair, which may be that of the enemies whom they have slain in battle, or rather, when we consider their mild and placable difpo- fition, that of their friends or relations. To their wait, and on their fhoes, they fuppend two, or, and fometimes three fculs; but they are not to highly appreciated as the hair. They have, among their ornaments, large fcurf of the fibres of grafs and whitened with hine, which they use for cooking themfelves, and parfols made of large palm leaves adorned with a variety of feathers. Their countenances are pleafing and open, and display much vivacity. Their com- plexion is tawny, and rendered almost black by the puncfures of the whole body. Capt. Chanal thinks there are to fea differences among individuals as warrant an inference, that there exist among them species effenfly different. But the physical differences in individuals, noticed by furgeon Roblet, to mend him to indicate a difference in the fpecies. It is also known, that in order to dignitate the fame object, they have feveral names which feem not to belong to the fame language. Probably the Mendorians, from their mild and hospitable difpofition, have been induced to receive strangers among them, fhown by figns and the chances of war on their coasts, and to incorporate them in the primitive nation, with which they are at this day confounded. They were entirely naked, except a fmall piece of cloth round their wait and loins. Their puncfures were defposed with the utmost regularity, fo that the marks on each leg, arm, and cheek, were in general fimilar. The women, who are extolled for their beauty, are rather of tall fature, though well-proportioned, and their general colour inclining to brown. Some few are punctured or tattooed. They wear a long narrow piece of cloth wrapped two or three times round their wait, and having the ends tucked up between their thighs; above this is a bread piece of cloth, nearly as large as a fheet, tied at the upper cornets; they lay the knot over one fhoulder, and the garments, hanging below, reaches half way down the leg. Their garments, however, are of little use to the females;
females; as they are a sort of amphibious animals, who spend a great part of the day in water; and appear there as much at their ease as if they were reclined on a lofty carpet, or sporting on a feather-bed. Among these females a very great degree of libertinism prevails; and they either fell or gratuitously give their favours to any indiscriminately who seek them. Surgeon Roblet describes the licentiousness of their amours, though in guarded language, in a manner that muff disgust every chaste reader, and that throws their extreme degeneracy and indecorum. Their canoes are made of wood, and are backed by a loft tree, which grows near the sea; they are from 16 to 20 feet long, and about 16 inches broad. The head and stern are formed out of two solid pieces of wood; the former is curved, and the latter ends in a point, which projects horizontally, and is decorated with a rude carved figure, having a faint resemblance to a human face. Some of the canoes have a latteen sail, but they are generally rowed with paddles.

Their naval architecture, however, is still in its infancy, if we compare it with that of the Otaheitians. Sometimes two of their ill-constructed and leaking canoes are joined together, but they most commonly content themselves with adapting them an outrigger, composed of two bamboos projecting laterally, and fastened at their outer extremities by a branch of a light wood, which forms the gunwale of the frame. These canoes carry from three to seven men, and from ten to fifteen when two are lashed together. If a canoe overfalls, an accident not uncommon, the men jump overboard, right her bale her out, and get into her again very quietly. Capt. Chunal says, that the construction of their huts and canoes evinces no incomprehensible share of industry and patience. In the fabrication of their weapons, they display great care and ingenuity. These confit of lances from nine to eleven feet long, a fort of fabre, pikes or javelins, and clubs, having at one extremity a large knob, and made of cajuna wood, ornamented with carving. In the rainy season they maintain intercourse with one another by means of flits, composed of two pieces, so adapted to each other, as to admit of being accommodated to shallow or deep water.

Their tools, rude as they are, their fishing implements, differing very little from ours, and the various utensils, articles of furniture, garments and dresses, all announce intelligence and industry in the persons by whom they were invented, and also in those by whom they are fabricated. Their hatchet, which is a black and sharp knife, shaped like an elongated wedge, or a mortice chisel, and fastened to a piece of crooked wood by small finnett made of cocoa-nut bals; their pieces of shefil, formed in sharp-edged instruments and saws, and their rough flint of some flint, serve to fashion and polish their different works of carpentry and of sculpture. Their fishing implements, confitling of the hoop-net and the sweep-net, are made, some of them with cocoa-nut bals, others with the cortical fibres of a species of nettle. The same materials are employed for making ropes, finnett, and mats. Their household utensils confit of calabashes of different capacities, which they contrive to steep fo hermetically, that they may be employed for the conveyance of liquors, and of various wooden vesils used for their food; and on these they amuse themselves in carving and engraving figures of men, fishes, and birds. The fabllance of their cloths is the bark of the paper mulberry tree; and some are 3fo made of the cortical fibres of the bread-fruit tree; and these not only wear tolerably well, but are sometimes dyed yellow. After all, the principal occupation of the natives of St. Christophana is to fingen, dance, and amuse themselves. The music of Otaheite and of this island are much the same, and the inhabitants of both make use of the same kind of drums. They amuse themselves in running on their flits, and also in swimming, to which exercise they devote whole days, without any other nourishment besides the fish and the milk of cocoanuts. Thins devoted to amusement and pleasure, the Mendoças are an amiable, hospitable, and generous people. Although from the levity and indolence that are natural to them, they are addicted to theft, yet they relurn on the first demand, and even with laughter, the articles which they have purloined. Nevertheless, robbery is not authorized, nor even tolerated at Santa Christophana; and whilst they feed from fish, they observe the most temporal fidelity among one another. It is not easy to estimate the population of this island; but Marchand, allowing 1000 inhabitants for every league of coast, estimates the whole number at 7000.

On making a general comparison between the island of St. Christophana and that of Otaheite, it is evident that the former does not exhibit the opulence, the luxury, the profusion of food, the studied variety and vast quantity of cloth, which are remarked in the principal island of the great equinoctial ocean. The Tahiteens have many superficies; they have made great advances towards civilization, and great progress, not only in the useful, but even in the agreeable arts. The Mendoças possess a respectable competence, and in every respect a desirable degree of comfort, and their disposition inclines them not to wish for more than they enjoy; divided between pleasure and delights, they appear sheltered from the political storms which mull freqenly disturb the government, partly monarchical, partly feudal, which is established among the Tahiteens. The latter have left in liberty what they have acquired in civilization; one part lives by the labours of the other, and this is the natural and ordmary routine of great societies; they lead a sensual life, and hereditary differences already begin to punish them for their excesses. The Mendoças have preferred their primitive liberty in its full perfection; and every one lives through himself and for himself: the robust health which they enjoy is, without doubt, far preferable to that voluptuousness to which they are yet strangers. An European, I conceive, (says Marchand) would for himself prefer Tahitee to Wahihetó; but a Mendoça would be much to blame, if he envied the lot of a Tahiteen: by deviating more from nature, he could have little to gain, and, perhaps, much to lose.

The only tame fowls are cocks and hens, and their quadrupeds only hogs; but the woods are inhabited by small birds, whose plumage is exceedingly beautiful, and their notes sweetly varied. The Oceanic birds, which frequent the bay, are man-of-war birds, tropical birds, boobies, and different species of terns and swallows.

Captain Cook, Mr. Reinhold Forfier, and Meffrs. Charal and Roblet, have given a vocabulary of the words commonly used in this island, from which it appears, that the Mendoças employ no difficult articulation, and that their language, notwithstanding the frequent aspirations, and the veneration with which they are accustomed to express themselves, possess sweetness and a fort of harmony.

The language of this island has a great affinity to that of the Society islands, or it is rather, as Marchand fuggles, the same tongue; and if this be true, it proves, that, although the two archipelagos are separated by an interval of sea of 260 leagues, and although it may be presumed, that their canoes do not maintain between them an habitual communication, the people who inhabit them must have had a common origin. A native of the Society islands, who was embarked in the Resolution, conversed fluently with the native
tives of La Madre de Dios; but captain Cook says, that
the Englishi, who must in their visits to Otheite have ac-
quired a knowledge of most of the words spoeke there,
could never succeed in making themselves understood at
Santa Christiana. As far as it has been examined, the lan-
guage of this island employs 5 vowels, a, e, i, o, u, but the
consonants, in 95 words that have been collected by captain
Chanal, are only 8 in number, and perform the office of 12
different sounds, viz. b or p, d, c hard, g hard, k and g, f, m, n,
t. v. The natives of Santa Christiana cannot articulate our
r, and they supply the defect by a fort of aspiration. Our
consonants s, f, s, make no part of the articulations of
the language of this island. -

In Marchand's Voyage, (vol. 1.) we have an account very
much in detail of this island; together with a statement of
the circumstances in which the Spaniards, Englishi, and
French, differ from one another. This island, it is said, pre-
fents itself under an agreeable aspect; being very lofty, as
well as the other islands of the group. A narrow chain of
high hills extends through its whole length, and from the
shore run other chains of equal elevation, which branch out
and join the principal chain; these hills are separated by
confined and deep vallies, into which run rivulants or cas-
cades, that water every part of the island; fruit trees of
various species here occasion coolness, and yield abundance
to its inhabitants. According to the statement of

captain Cook, the island is in length, from N. to S. 3
leagues, of 20 to a degree, and in circuit 7 leagues, whereas
Quirpos extends it to 9 Spanish leagues of 17½ to a degree;
but as neither of them examined more than a portion of the
whole coast of the island, its absolute extent and circumfe-
rence remain still undetermined. The shores of this island
prent hollow rocks, the black, spongy, hard, and brittle
stone of which indicates the effect and the produce of a
great volcanic eruption; so that in regard to its origin and
the nature of its minerals it is similar to the higher of the
Society islands, which appear to have been the seat of an-
cient volcanoes. The foil of the valleys is a very strong
mould, sometimes black, sometimes red, and very fit for ve-
gation, and it produces various species of lichens, grasse,
puirrains, and thurbs. These vallies are covered with trees;
such as the cocoa palm, it produces the bread-fruit tree, the
plantain tree, the caufama, the paper-mulbery tree (mora pap-
fera,) the fibres of the bark of which are employed by the
natives in the fabrication of their cloths, &c. &c. Besides
the fruits of the cocoa-nut, plantain, and bread-fruit tree,
the island furnishes a fort of sweet potato, a species of
apple, ginger, cucumbers like those of the Well-India
islands, water-cres, and purriffin, the yam, the chestnut, the
walnut, &c. Santa Christiana possesses the fuerigar-cane; but
the inhabitants are ignorant of its value. European animals,
tho left there by captain Cook, either could not accom-
modate themselves to this climate, or were neglected, and
perhaps exterminated, by the inhabitants, so that later voy-
gers could not discover any of them; neither could they
find any of the European stenils or commodities, such as
looking-glases, knives, hatchets, nails, glafs-heads, &c. left
there by captain Cook, in 1774. The only quadruped
found in Santa Christiana was the hog, small in fize, but of
delicate and well-tafted flesh: if we except the rat, which,
to the great detriment of the inhabitants, has exceedingly
multiplied in the island. Poultry are scarce; and apparently
reared merely for the fake of placking the cocks, while large

tail feathers, afforred for forming plumes, are employed in fhad-
ring their head-drefles. The sea furnishes excellent rock-filh;

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the bonito is very common. The bay is often frequented
by porpoifes and flark. The climate is fabulous, and the
natives appear healthy and robust; but the temperature is
subject to great variations from one fason to the other.
In 1774 the variation obferved by Mr. Wales was 4° 22' 15° E.
and in 1791, it was obferved by captain Marchand to be 3°
14' 18'/. From comparing the obfervations of Mr. Wales
and captain Marchand, it may be concluded, that in the
pace of 17 years, the variation of the compafs has not un-
dergone any material change in this latitude.

CHRISTIANIA, a city and fea-port of Norway, in the
government of Aggerhuan; fittated at the extrem-
ity of an extensive and fertile valley, forming a femicircular
bend along the ofore of a beautiful bay, which, being en-
closed by hills, uplands, and forests, has the appearance of
a large lake; and about 30 English miles from the open fea.
The navigation of the bay is somewhat difficult, but it is
fufficiently deep for the largest vessels, having fix or feven
fathoms of water clofe to the quay. It is the eclec-
tal capital of the kingdom; because it contains the fupreme
court of juifice. It lies in N. lat. 59° 56' 37", and E.
long. 10° 50', on the northern extremity of the bay of Bir-
ning, an inlet of the fea, forming the northern extremity of
the gulf of Christiania, whose rocky shores are overfearp
with thick forests. The town is divided into three parts,
viz. the city and the three suburbs of Waterland, Peter-
wigen, and Fierdingen, the forts of Aggerhuan, and the old
town of Opfloe, or Apfloe. The city contains 4,150 froun
the suburbs 682, Opfloe 420, including the epifcopal palace,
the (bifhop of Christiania being metropolitian of Norway,
and the fce yielding an annual revenue of 400l.) and the
number of inhabitants amounts to about 6,000. The city
formerly occupied the fite of Opfloe, and was rebuil'd in its
preffent fition by Christian IV. in 1624, after a plan de-
igned by himfelf: the streets are carried in ftraight lines,
and at right angles to each other, and are uniformly 40 feet
broad, and very neat and clean. It has a Latin school,
founded by Christian IV. in 1655, and a public library.
The caille of Aggerhuan is built on the well fide of the
bay, at a fmall distance from the city; and was erected in
1910 by the Swedes, and flrengthened in 1633 by
Christian IV. and by fuccedings kings of Denmark at sub-
frequent periods. Sce Aggerhuus.

Christiania has an excellent harbour, and carries on a con-
siderable trade. The principal exports are tar, foap, iron,
copper, planks, and deals; flum manufactured at Mr.
Cooper's works for about 3000l.; iron from the four works
of Borum, Edsvold, Narkedahl, and Ondahlen, 14,000l.;
copper from Foldholm, 10,000l.; planks and deals, 90,000l.,
principally to England. The planks and deals are faid to
be of inferior elification to thofe fent from America, Ruffia,
and the different parts of the Baltic; because the trees
grow on the rocks, and are therefore firmer, more compact,
and fels liable to rot than the others, which chiefly fhoit
from a fandy or loamy foil. The planks are either red or
white fir or pine. The red wood is produced from the
Scotch fir, and the white wood, which is in fuch high eli-
uation, from the fpruce fir. Each tree yields three pieces
of timber, eleven or twelve feet in length, and is usually fawn
into three planks; a tree generally requires 70 or 80 years
growth before it arrives at the greatest perfection. The
greatest part of the timber is fewn in the inland country,
and floated down the rivers and cataractes. Saw-mills are
ufed for cutting the planks; but they must be privileged,
and they are refrefted to cut only a certain quantity. The
proprietors are bound to declare on oath, that they have not
exceeded

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exceeded that quantity: and if they do, the privilege is taken away, and the saw-mill destroyed. At Christiania there are 136 privileged saw-mills, of which 100 belong to the family of Anker. The quantity of planks permitted to be cut amounts to 20,000,000 standard deals, 12 feet long, and 1 3/4 inches thick.

Christiania, a government of Norway, otherwise called Aggerhus; which fee.

Christianan, Sr. a Portuguese town on the coast of Brazil; off which is a small bay without the northernmost reef of the river Surugippa, which is six leagues from the river Francelico, where is good anchorage.

Christianof, a fortified sea-port town of South Gothland in Sweden. N. lat. about 55° 26'. E. long. 15° 41'. It is four leagues from the S. end of the island of Oeland to the point of Christianopolis, which is the breadth of the S. entrance of Calmar found.

Christianopolis, in Ancient Geography, an episcopal town of the Peloponnes, in Arcadia.

Christians of St. John, in Ecclesiastical History, an ancient seat of Christians, very numerous in Baffora, and the surrounding towns.

They formerly inhabited along the river Jordan, where St. John baptized: and it was thence they had their name. But after the Mahometans became masters of Palestine, they retired into Mcopotomia and Chaldea.

They hold an anniversary feast of five days; during which, they all go to their bishops, who baptize them with the baptism of St. John; their baptism is always performed in rivers, and that only on Sundays.

They have no notion of the third person of the Trinity; nor have they any canonical books, but several which are full of charms, &c. Their biographies descend by inheritance, as our ecclesiastics do; though they have the ceremony of an election. There is no satisfactory account of the origin or principles of this fact. See Balaams.

Christians of St. Thomas, or St. Thomas, a seat of ancient Christians found in the East Indies, where the Europeans touched at the port of Calcut; who pretend to be descended from the house of St. Thomas converted in the East Indies; whence the name.

The natives call them, by way of contempt, Nazarenes; their more honorable appellation is Mappuleyam. See Thomands.

Some learned men in Europe say, it was not St. Thomas the apostle that converted that country, but another St. Thomas; others say, it was a Neftorian merchant, called Thomas. It is certain they are Neftorians, and have been so a long time; inasmuch that Christians of St. Thomas now pass for the name of a fact. They have a patriarch, who resides at Mozoul. The pope has made several attempts to reduce them under his obedience, but to no purpose. The number of these Christians must have been very considerable in the beginning of the 16th century, when the Portuguese became first acquainted with them, since they possewed about 1,100 churches, in the countries now subject to the Travancore and Cochin rajahs; and, at the present time, after the manifold persecutions, oppressions, and successive revolutions, that have almost depopulated the whole coast, they are computed to amount to no less than 150,000 persons. They are indiscriminately called St. Thomé Christians, Neftorians, Syrians, and sometimes the Malabar Christians of the mountains, by the Portuguese writers of that time, and by the subsequent missionaries from Rome. The most common name given to them by the Hindoos of the country is that of "Nazarane Mapila," and more frequently "Surians," or "Sriane Mapila." The appellation of "St. Thomé Christians," which the Portuguese were fond of bestowing upon them, probably originated from the chief who settled the first colony of Syrians on the coast, and who, according to their tradition, was their first bishop and founder of their religion in these countries, whose name was "Mar Thomé." His arrival may, perhaps, be ascertained to have occurred during the violent persecution of the sect of Neftorius, under Theodosius II., or some time after. The Portuguese, however, pretend that St. Thomas the apostle arrived in India, and, having converted a great number of idolaters on the coast of Malabar, and afterwards on the other side of India, as far as Mallaipoor, now St. Thomé, suffered martyrdom there. The Malabar Christians, as they say, remained a long time without ecclesiastical chiefs, and without intercourse with the rest of the Christian world, till they procured bishops from Mozoul in Syria, who introduced into this country the heresy of Neftorius. This, though very improbable, and unsupported by any historical proof, has been repeatedly asserted, even by Protestant writers. Common tradition, which has been admitted by the Portuguese writers of the 16th century, probably on the foundation of written records in the Syriac language, which then existed, and were afterwards all destroyed by the famous archbishop De Menezes at the synod of Oddiamper, mentions Mar Thomé as the first who introduced the Christian religion into Malabar. The Neftorians consider him as their first bishop and founder, from whom they derive their name of St. Thomé Christians. His arrival may be placed towards the middle of the 5th century; as notice is taken by Cofms Indelegleus of Christians in the pepper country or Malé, who received their bishops from Peria, where the Neftorian patriarch of that period resided, whose first seat was at Seleucia in Peria, afterwards removed to Babylon, and at last to Mozoul.

In the Malabar histories the first mention of a Syrian colony of Christians is made in the reign of Coconangom Perumal, who probably lived in the 6th century; and, though we have an account of two Syrian or Chaldaean bishops, named Mar Sapor and Mar Porpho, who arrived at Cochin, about 100 years after its foundation, where they were extremely well received by the rajah, and permitted to build a church, which subsisted when Cabral first visited Cochin. The grants and privileges, which they received from the rajah, were engraved upon copper-plates, which many centuries after were thrown to archbishop de Menezes, probably the same that are now in possession of the Jews at Cochin. Other circumstances, such as the name of Syrians retained by the St. Thomé Christians, their peculiar features and complexion, the style of their buildings, especially of their churches, and above all, the general use of the Syriac or rather Chaldaean language preferred in all their religious functions, concur in confirming the opinion, that the St. Thomé Christians were originally a colony of Neftorians. They formerly possessed, according to the Portuguese account, upwards of 100 villages, situated mostly in the mountainous part of the southern division of Malabar. They were distinguished from the other inhabitants in Asia, by the number of their religious sects; and as to their religious observances, they generally followed the doctrine of Neftorius. Upon the arrival of the Portuguese, attempts were made to proftyle them to the church of Rome; and, when persuasion failed, recourse was had to open force. At length Menezes, archbishop of Goa, made a personal visit to the Malabar Christians, and having appointed a synod at Oddiamper, in the vicinity of Cochin, in 1599, he assembled the Syrian priests of "Caffanis" and 4 elders from each village, and after some fiew of disputation and explanation of the controverted tenets of the church of Rome, he dic-
and overpowered them by his authority, effected in appearance an union of the Nestorianists of Malabar with the Romish church; and they were for some time governed by Roz and his successors, under the title of Vicar-general of Cannyonore, and their ecclesiastical dignity maintained for two years, were, in general, sincere, nor permanent; for soon after some Nestorians, or Nestorian priests, found their way to the mountains of Travancore, where they revived the old doctrines and rites, and ever since kept up their communication with the Jacobites, Maronites, and Nestorians of Syria. At present there are 32 churches of this description remaining, which are called Schismatic Christians by the Portuguese and Roman clergy. They have a bishop or a "Mar Thomé," who resides at Narnatt, about 10 miles inland from Poree, and was consecrated by some Jacobite bishop sent from Antiochia, for that purpose, in 1752. He adheres more to the doctrine of Nestorians than of Nestorians. About 63 of the old St. Thomé churches remain united to the Roman catholic religion, and are governed by the archbishop of Cannyonore, or, as he is himself, the archbishop of the Malabar Christians of the mountains. Since the death of the last archbishop, the government of Goa, which had formerly the nomination, has thought proper to appoint only a vicar-general, who resides at present at Packerpalipore. The Chaldean language is still used in their churches, and they are furnished with the necessary books by the "Congregatio de propagatione fidei."

The St. Thomé or Syrian Christians, of both descriptions, never claimed the particular protection of either the Portuguese or Dutch, as the new Christians do, but considered themselves as subjects of the different rajás-in-whole districts they lived, and for a considerable time remained unmolested. But when the rajás of Travancore and Cochin had succeded in subduing the petty rajás and chiefs, that were situated within the limits of Travancore, they established an oppressive despotism. The new or Portuguese Christians confounded that race of new converts, gained by the Portuguese mostly from the lowest castes along the sea-shore, where they built many churches; which, by way of distinction from the Syrian churches, are generally called the Latin churches. They formerly enjoyed the protection of the Portuguese and Dutch governments, without considering themselves as subjects of the rajás in whose territories they reside; and acknowledged only their jurisdiction in civil and criminal matters, and paid no taxes to their native princes. This exemption they maintained till the year 1785, when the governor of Cochin entered, for the preservation of their privileges, into a written agreement with the rajá of Cochin, which stipulated that they should pay a yearly sum to the rajá, and in delay or failure of payment, the Dutch, and the rajás, were to enforce it; the rajá, however, did not adhere to his stipulations; but, compelled, by oppressive treatment, a great part of them to abandon his dominions. The number of these Christians who consider themselves as under the protection of the fort of Cochin, is estimated at about 30,000. In ecclesiastical matters they were formerly subject to the Portuguese bishop of Cochin; but being expelled by the Dutch, when they got possession of the fort, he fixed his residence at Colan, retaining his former appellation of bishop of Cochin, and also his ecclesiastical jurisdiction over such churches as were not under the immediate control of the Dutch. His successors continue to reside over the same dioceese, which extends as far as the Cavery river, on the other coast, including the island of Ceylon; comprehending more than 100 churches, the new or Latin Christians. When the Dutch had expelled the Portuguese bishops from Cochin, they applied to the see of Rome for a new bishop subject to their control; and the pope sent out a Carmelite prior, with episcopal powers, under the name of vicar-general, to whom the St. Thomé General granted a diploma to that purpose, and this ecclesiastical dignitary has an annual stipend of about 450 rupees, paid him by the "Congregatio de propagatione fidei," and he resides at Varapoly, in a convent of his own order, supported by the "Propaganda." His diploma and power gradually declined; and at present only 14 churches are subject to his episcopal jurisdiction. The St. Thomé Christians formerly possessed a great number of churches or temples, separately built, in the inland parts of the Travancore and Cochin dominions; some of these have fallen upwards of a lack of rupees, and few lefts than half that sum. Now they are reduced to a wretched condition, being scarcely able to erect a shed for their religious meetings over the splendid ruins of their famous churches. As their population has decreased, their population has also diminished. Formerly the converts to Christianity were allowed to retain their patrimonial estates; and under the ancient mild Hindoo government, and even in modern times, till Hyder Ally made his second irruption, impose on landed property were unknown in Malabar. Another source of the opulence of the St. Thomé Christians was trade; for they were, in fact, the only, or at least the principal merchants in the country, till the Arabs settled on the coast. See Asiaf Researchers, vol. viii.

CHRISTIANSTAD, in Geography, one of the governments into which Southern Norway, or Norway Proper, is divided. It occupies the south western part of the kingdom; and contains 113,524 inhabitants. It is a bishopric yielding an annual revenue of 650l.

CHRISTIANSTAD, a sea-port town of Norway in the government or dioceese of Christiansand, opposite to the island of Flekker or Flekeren. N. lat. 58° 10'. E. long. 10° 14'.

CHRISTIANSTUG, a fortress of Africa on the gold coast, belonging to Denmark. It was taken by the negroes in 1693. who pillaged it, and kept it for some time.

CHRISTIANSTUG, the chief town of Montgomery county, in the slate of Virginia, North America. It contains few houses; has a court-house and gaol, situated near a branch of Little river, a water of the Kenawhaw. N. lat. 37° 5'.

CHRISTIANSHAFFEN, a part of the city of Copenhagen, built on the fife of Amak. See AMACK.

CHRISTIANSOE, a fortress of Denmark, built on a rock, on the east coast of the island of Bornholm.

CHRISTIANSTADT, a strong fortified town of Sweden, in the province of Skone, or Scania, built in 1614, by Christian IV, king of Denmark, when this province belonged to the Danes, and finally ceded to the Sweden by the peace of Roschof in 1658. The town is small, but neatly built, and is esteemed the strongest fortress in Sweden. The houses are all of brick, and mostly flucado white. It stands on a marshy plain close to the river Helga, which flows into the Baltic at Alus, at the distance of 20 miles, and is navigable only for small craft of 7 tons burden. English vessels annually refort to this port for alum, pitch and tar. The inhabitants have manufactories of silk, linen, and flax, and carry on a small degree of commerce: 57 miles W. of Carlifornia. N. lat. 55° 58'. E. long. 14° 6'.

CHRISTIANSTADT, a town of Silezia, on the west side of the Bober, 32 miles W. of Glogau, and 54 N.E. of Dresden.

CHRISTIANSTED, the principal town in the island of Santa Cruz, seated on the north side of the island, with a fine
fine harbour. It is the residence of the Danish governor, and is defended by a stone fortres.

CHRISTIANSUND, a small island of the Northern Ocean on the Western coast of the province of Drontheim in Norway. N. lat. 63° 10', E. long. 7° 58'.

CHRISTIGNETH, a river of North Wales, which runs into the Dee, in the county of Denbigh.

CHRISTINA, in Biography, queen of Sweden, the only child of the great Gustavus Adolphus, who succeeded to the throne of her father in 1632, when she was only five years of age. During her minority Sweden enjoyed internal repose, but during her in a long state of warfare with the German empire, in consequence of the invasion of Gustavus, as supporter of the protestant league. The war was conducted by able men whom the king left behind him. The abilities of Oxentier, who pursued the plans laid down by Gustavus, preferred for Christina that preponderance which the cabinet of Sweden possessed in the affairs of Germany. The young queen, at an early age, discovered a taste for the society and occupations of her sex. Her education was conducted upon a very liberal plan. She possessed a strong understanding, and a great turn for abstruse studies. At an early age she was capable of reading the Greek historians. Thucydides, Polybios and Tacitus were her favourite authors, and as she advanced in life, the love of letters became her ruling passion, which influenced the fortune and conduct of her whole life. At the age of eighteen she assumed the reins of government, and proved herself fully able to conduct the affairs of a powerful kingdom. The general peace of Weftphalia had in 1648 restored tranquility to Sweden on terms sufficiently honourable and advantageous to a nation which had attained to a military reputation in no wise inferior to that of any European state. Several princes of Europe aspired to the hand of Christina, but she rejected their proposals, pleading as the motive of her conduct, political interests, contrariness of religion, and diversity of manners. Her people, anxious for her marriage, recommended to her Charles Gustavus, count palatine, her cousin; she rejected their solicitations, having an insuperable aversion to the marriage state, of which she made no secret, declaring, in reply to one of the remonstrances made to her on the occasion, "that there were certain duties required in the nuptial ceremony with which she could not persuade herself to comply."

These words were variously interpreted, but the probably regarded the conjugal connection, as a complete humiliation, as it regards the female sex. To prevent a renewal of applications on this subject, she solemnly appointed Gustavus her successor, but without the smallest participation in the rights of the crown during her own life. In the year 1650 she was crowned with great splendour. From this time she entertained a philosophical contempt for pomp and parade, and a kind of disgust for the affairs of state. She seemed to be only interested in that part of the foreign power which gave her the opportunity of acting as the patron of the learned throughout Europe, and the encourager of the fine arts. She invited to her court men of the first reputation in various studies; among these were Grotius, Leibnitz, Bocchus, Huet, Voltaire, and others who were highly celebrated. Her choice with regard to these seems to have been directed more by general fame, than by her own judgment, or taste for their several excellencies, and in general estimation she has derived no great credit either as a learned lady, or as a discriminating patroness of literature. She was much under the influence of a Bourdlet, a physician who gained her ascendancy by outrageous flattery: and her attention to the high duties of her station disfigured her subjects. She was a collector of books, manu-
C H R

though. She returned to Rome, and cultivated a correspondence with the learned men there and in other parts of Europe, which was her chief solace under the neglect of persons in power. At the peace of Nineggen, she sent a plenipotentiary to take care of her interests, who with difficulty procured remittances of her arrears. In 1170 she took a decided interest in the doctrines of Molinos, the founder of the sect of Quietists, who was persecuted by the French government: and on the revocation of the edict of Nantes, in 1685, she wrote to the French ambassador in Sweden, animadvertting with much freedom and good true on the project of making converstions by permutation, and the want of royal policy in banishing useful artisans on account of differences in religion. Bayle published this letter, with his own remarks, which offended Chritiana, but the dispute was amicably settled. In a letter written in 1687 to Madame-Catherine Scudéry, she expresses herself with great tranquility on the prospect of approaching death, an event, however, which did not take place till 1689. The last scene she passed with philosophical composure; she died at the age of sixty-three, leaving behind her many letters; a "Collection of Miscellaneous Thoughts and Maxims;" and "Reflections on the Life and Actions of Alexander the Great." In Chritiana we behold qualities worthy of commendation and even high applause; but it cannot be concealed that the perplexed faults merit a strong and decided reprobation. In her we see a princeces discrediting her great endowments by a vain parade and affectation of singularity, and apologizing to a religion which she sometimes affected to ridicule and despise. While upon the throne, she was desirous of a private isolation, and after she had attained her wishes by the voluntary sacrifice of her authority, incessantly repining, and anxious to recover, upon the most humiliating conditions, that crown which she had so capriciously renounced. Coxé's Travels. Universal History.

CHRISTINA, SANTA. See CHRISTIANA, ST.

CHRISTINESTADT, in Geography, a sea-port town of Sweden, in the province of Eal Bothnia, built in 1640.

CHRISTIOPOLIS, in Ancient Geography, an episcopal town of Cappadocia.

CHRISTISEE, in Geography, a town of Poland, in the palatinate of Bracław; 44 miles S.S.W. of Bracław.

CHRISTMAS, the feast of the nativity of Jesus Chrift. It appears from St. Chryfoftom, that in the primitive times, Christmas and Epiphany were celebrated at one and the same feast; that father observes, that it was but of a little while that Chritinias had been celebrated at Antioch on the 25th of December, as a distinct feast; and that the use there of came from the West. The Armenians made but one feast of them, as low as the 12th century. It is commonly maintained, that pope Telephorus was the first who ordered the feast of the Nativity to be held on the 25th of December. John, archbishop of Nice, in an epistle upon this subject, relates that at the inftance of St. Cyril of Jerusalem, pope Julius procured a strict inquiry to be made into the day of our Saviour's nativity, which being found to be on the 25th of December, they began thenceforth to celebrate the feast on that day. However, the precise day, or even the month, in which our Saviour was born, is extremely uncertain. Some, as Clemens Alexandrinus informs us, affixed it to the 23rd of the month Pachon, corresponding to the 10th of May. But there are some circumstances which should rather lead us to conclude, that he was born in autumn; as this was, in every respect, the most proper feast of the year for a general aflertainment, which took place at the birth of Chrift, and which required personal att

tendance; and as there were shepherds watching their flocks by night at the time when Chrift was born; and therefore it is probable, that the aza of the Nativity was either in September or October, A. U. 748 or 749. See EPOCAH.

CHRISTMAS harbour, in Geography, a safe and commodious harbour, with good anchorage and plenty of fresh water, situated on the N.E. coast of Kerguelen's land, otherwise called Defolation island. S. lat. 45° 41'. E. long. 69° 4'. Variation, in 1777, 27° 45'.

CHRISTMAS island, an island of the Pacific ocean, so called by capt. Cook, on account of his first landing there on Chriftmas day. It is situated between the Sandwich islands on the N., and the Marquesas on the S., at about an equal distance from the one and the other. It is about 15 or 20 leagues in circumference, covered with wood, and bounded by a reef of coral rocks; having on the W. side a bank of fine sand, which extends a mile into the sea, and affords good anchorage. In digging no fresh water could be found; and this almost desolate and uninhabited island furnishes nothing but turtle, fish, and a few birds. Capt. Cook caured the seeds of the coco-nuts, yams, and melons to be planted in this island. N. lat. 1° 59'. E. long. 203° 30'.

CHRISTMAS CHAI, in Botany. See HELEBORUS NIGER.

CHRISTMAS found, a bay on the S. coast of Terra del Fuego, at the extremity of S. America, in S. lat. 55° 22'. W. long. 70° 3'. The entrance into this bay is 3 leagues wide, and bears from St. Idefonfos' islands, at the distance of 10 leagues, N. 35° W. The shore is generally a rocky bottom, so that ships should not anchor very near it. The E. point of this found is named Point Nativity; and the E. side of York Minster forms the W. point of this found; the variation here is 25° 30', E., and it has high water on full and change days at half past two o'clock. The adjacent land appeared to capt. Cook, when he visited this coast, desolate beyond any thing which he had yet experienced. It seemed to be entirely composed of rocky mountains, without the least appearance of vegetation. These mountains terminate in pointed precipices, which overhang cliffs which rise to a vast height, so that fearlessly any thing in nature can precipitate a more barren and savage aspect than the whole country. Barren and dreary, however, as the coast was, it was not totally diliterate of accommodations about Christmas found. Fresh water and wood for fuel were found about every harbour; and the country every where abounds with fowl, particularly geese. A considerable number of plants was also found upon it, almost every species of which was new to the botanists.

CHRISTO, MONTES, an island in the Mediterranea, S.E. from Corfica, in N. lat. 45° 17'. E. long. 10° 55'.—Allo, an island, due W. from Port Plata, on the N. side of the island of Hispaniola.—Allo, a remarkable mountain on the coast of Peru in S. America, a little to the southward of Point de Cames.

CHRISTO, Ponta, a point of land on the Atlantic shore, forming the S. limit of the gulf of Nicnreadia; nearly S. from Scutari, and almost due E. across the Hellepont, from Condamine.

CHRISTOFHER, in Geography, a town of Poland; in the palatinate of Sandomirz; 16 miles S.S.W. of Sandomirz.

CHRISTOGENON, from XPB, Christ, and τοιον, I am born; in the Greek Church, a sort of 30 days, immediately preceding the suppos'd time of Chrift's nativity.

CHRISTOLYTI, from XPB, Christ, and τις, I dif

difer, a sort mentioned by Damascenus; so called, because they maintained that Chrift descended into hell, body and soul;
foul; and that he left both there; ascending to heaven with his divinity alone.

CHRISTOMACHI, Ἀποτριγετος, from the Greek Ἀποτριγητος, Christis, and μεγαν ρημα, I fight or oppose, a designation given to all sorts of heroes who deny the divinity of our Saviour, or hold heterodox opinions concerning his incarnation.

CHRISTOPHER, HERB, in Botany. See Actaea foetata.

Christopher's, St. commonly called St. Kitt's, in Geography, is one of the leeward Charibbee or Charaibean islands in the West Indies, which was called by its ancient possessors, the Charibees, Lienmioga, or the fertile island. It was discovered, in November 1493, by Columbus, who, pleased with its appearance, gave it his own Christian name. It was neither planted nor possessed by the Spaniards; nevertheless it is said to have been the most early British territory in the West Indies, and the common parent both of the English and French settlements in the Charaibean islands. It was suggested by an experienced friend to Mr. Thomas Warner, that St. Christopher, though despised and deserted by the Spaniards, afforded the prospect of a favourable settlement for a colony; and in 1623, he formed the resolution of going thither with a few of his friends. Accordingly, he and 14 other companions took their passage in a ship bound for Virginia, and from thence they sailed to this island in January 1625, and by the following September they had raised a good crop of tobacco, which they proposed to make the staple commodity. Thus it appears, that the first actual establishment in this island was prior to that in Barbadoes, which did not take place before the latter end of 1624. The plantations of the English settlers were destroyed by a hurricane before the close of the year 1623; and Mr. Warner was obliged to return to England, where he obtained and possessed the valuable patronage and support of James Hay, earl of Carlisle, and thus by a favorable supply in 1624, he preserved the existence of the settlement. In the following year Mr. Warner returned to the island, accompanied by a large body of recruits, and at the same time arrived M.'s D'ÉfNambe, captain of a French privateer, who, after a severe engagement with a Spanish galleon, sought refuge in these islands. Having brought with him to St. Christopher's about 30 hardy veterans, they were hospitably received by the English, who thought themselves thereby secured against an apprehended attack on the part of the Charaibees. The fact seems to have been, that Warner's first colony lived on friendly terms with these savages, who liberally supplied it with provisions; but when their lands were seized by the planters, the latter, conscious of merit in retaliation, apprehended an attack, though none was really intended. The French and English feeling, or perhaps feigning, the alarm of a projected revolt, determined to seize the conspirators. With this view they fell on the Charaibees by night, and having in cold blood murdered from 100 to 120 of the stoutest, drove all the rest from the island, except such of the women who were young and handsome, of whom, says Pere Du Tertre, they made concubines and slaves. The Charaibees who had escaped the massacre, united with their countrymen in the neighbouring islands, made a vigorous attack in order to revenge themselves; and, after a severe conflict, the Europeans, indebted to the superiority of their weapons more than to that of their vaunt, obtained a complete conquest, purchasing their triumph with the loss of 100 men, who were left dead on the field of battle.

After this exploit the Charaibees quitted this and some of the small islands in the neighbourhood, and retired towards the south. Warner and D'ÉfNambe returned to Europe in order to solicit further succour. The former was knighted, and was sent back as governor in 1626, with 450 new recruits, amply supplied with necessaries; and D'ÉfNambe, patronized by Richelieu, the minister of France, projected the establishment of an exclusive company for trading to this and some of the neighbouring islands. The French, however, in general, either misjudged the island or disapproved the project; and though D'ÉfNambe failed from France in 1627 with 532 recruits, they were so feantily supplied with provisions and necessaries, that the greater part perished miserably at sea for want of food. The survivors were kindly received by the English; and for preventing future content, the commanders of each nation agreed to divide the whole island pretty equally between their respective followers. In May 1627 they signed a treaty of partition, which comprehended a league defensive and offensive; but this was of little avail against the Spanish invasion in 1629. For some time the French and English lived amicably; but at length national rivalry and hereditary animosity rendered the island a scene of internal contention and bloodshed.

Who were the first agrifcultors it is not now easy to ascertain; it is probable, however, that each nation would lay the blame on the other. In the reign of Charles II., during the first Dutch war, the French threatened the United States, and his subjects in St. Christopher's, avowing the doctrine of neutrality, attacked the English planters, and drove them out of their possessions; which were afterwards restored to them by the treaty of Breda. In 1689 the French planters, taking part with the interest of the abdicated monarch, again attacked and expelled their English neighbours; and laying waste their plantations, committed outrages that are unjustifiable among civilized nations, even in a time of open and avowed hostility. So cruel and treacherous was their conduct, that it was avenged by William and Mary as one of the causes which induced them to declare war against the French nation. The French, after having continued about eight months before matters of the island, were compelled by the English, under the command of general Codrington, to surrender, and in 1690 of them were transported to Martinico and Hispaniola.

In 1705 many of the English planters were again laid waste by a French armament, which committed such ravages that the British parliament found it necessary to distribute the sum of 100,000l. among the sufferers, in order to encourage them to continue their plantations. At the peace of Utrecht, this island was ceded to Great Britain, and the French possessions were publicly sold for the benefit of the English government; part of this sum, viz. 80,000l., was appropriated in 1733, as a marriage portion to the princesse Anne, who was betrothed to the prince of Orange. Some few of the French planters, who consented to take the oaths, were naturalized, and permitted to retain their estates. In 1782 it was compelled by a superior force to surrender to the French, after a very vigorous and noble defence; but by the general peace of 1783 it was restored to Great Britain.

St. Christopher lies in N. lat. 17° 15', and W. long. 65° 17'; it is about 14 leagues in circuit, and contains 457,66 acres of land, of which about 17,000 acres are appropriated to the growth of sugar, and 4000 to palmage. Sugar is the only commodity of any account that is raised, except provisions and a little cotton; and consequently it is probable, that nearly one-half of the island is unfit for cultivation. The interior part consists of many rugged precipices and barren mountains. Of these the highest is Mount-Mersey, (evidently a decayed volcano), which rises 3711 feet in a perpendicular height from the sea. The fertility of the mountains is, however, amply compensated by the fertility of the plains. The soil, which is peculiar to this island, is in general
ral a dark grey loam, very light and porous; and conceived to be the production of subterranean fires, the black ferruginous pumice of naturalists finely incorporated with a pure foam, or virgin mould. The under stratum is gravel, from 8 to 12 inches deep. Clay is only found at a considerable height in the mountains. Sugar-canes planted in particular spots of this island yield 8,000 lbs of Muscovado sugar from a single acre. The general average produce for a series of years is 16,000 bushels of 16 cwt, which, as one-half only of the whole caneyard, or 8,500 acres, is annually cut, (the remainder being in young canes) gives nearly 2 bushels of 16 cwt per acre for the whole of the land in ripe cane; and even this is a return fuel, it is conceived, as is not equalled by any other sugar country in any part of the globe. The planters of St. Christopher's, it is said, are at a profit by the experience for manure; they never cut ration-canes, i.e. those from old roots; and although springs and rivulets are sufficiently plentiful in the country for the cultivation or the inhabitants, their plantations suffer much in dry weather, as the sub-stratum does not long retain moisture. This island is divided into 9 parishes, and contains 4 towns and hamlets; viz. Duffe-terre, the present capital, containing about 600 houses; Sandy-Point, Old Road, and Deep Bay. Of these, the two first are parts of entry and inhabited by law. The fortifications consist of Charles-Hill and Brimstone-Hill, both near Sandy-Point; three batteries at Duffe-terre, one at Figtree bay, another at Palmetto point, and some smaller ones of inferior importance. The proportion which St. Christopher's contributes, with the other islands, towards an honourable provision for the governor-general, is 1000l. currency per annum; which is allotted on him by the assembly immediately on his arrival. He has also some perquisites, which, in time of war, are considerable. Each island within this government has a separate council, and each of them an assembly, or house of representatives. In St. Christopher's the council should consist of 10 members, but more than 7 are seldom present. The house of assembly is composed of 25 representatives, of whom 15 make a quorum. The requisite qualification to be a holder of 40 acres of land, or a house worth 50l. a year. Of the electors, the qualification is a 6-cheld of 10l. per annum. The governor of this, and the other islands in the same government, is chancellor by his office, and in St. Christopher's sits alone. In this island the jurisdiction of both the King's Bench and Common Pleas centres in one superior court, in which justice is administered by a chief justice and 4 puisne judges. The chief is appointed by the crown, the other by the governor in the king's name; and they hold their commissions during pleasure. The office of chief judge is worth about 600l. The emoluments of the affidavit judges are trifling. The present number of white inhabitants is computed at 4000, and taxes are levied on 26,000 negroes; and there are about 800 blacks and mulattoes of free condition. All the white men from the age of 16 to 60 are obliged to enlist in the militia, and they serve without pay. They form two regiments of foot, although the whole number of effective men in each regiment seldom exceeds 300. There is also a company of free blacks. The natural strength of this island is fuel, that a garrison of 2000 effective troops, properly supplied with ammunition and proviions, would, in all human probability, have rendered it impregnable to the formidable invasion of 1752. St. Christopher's is separated from the island of Nevis by a narrow strait about ½ of a league broad; W. from Antigua, as some say, 15 leagues, and according to others 21; and St. Eustatius is about 3 leagues W. by N. from the W. point of this island. Edward's Hist. of the West Indies, vol. 1.
The Chromati submitted to the emperors of Constantinople; whereas the Bulgarians remained independent.

CHIOBERG, in Geography, a town of Poland, in the palatinate of Sandomierz; 52 miles W. of Sandomierz.

CHIROKIEL, in Ornithology, the common quail, Tetrax coturnix, called Chrokiel, or Grande Caille de Pologne, by Buffon.

CHROMA, in the Botanical Writings of the Ancients, a word used to express a famous root brought from Syria into Greece, and used by the women of that country to paint their cheeks red. It was also called rhizium and focus, and by the Latins radica.

CHROMA, in Geography, a river of Siberia, which runs into the frozen sea. N. lat. 73°. E. long. 139° 14'.

CHROMA, in the Italian Music. The Italians take this term from the Greeks, but use it to signify a note or character of time, by us called a quaver, and when the word sem is added thereto, it means our semiquaver. Eight of the former are contained in a bar, and sixteen of the latter in common time.

CHROMA, in Rhetoric, a colour or fair pretence. The word is Greek, and literally denotes colour.

CHROMA is also a graceful way of lingering, or playing with quavers and ar il ces.

CHROMA also sometimes signifies the same as the chromatic diesis or semitone minor.

CHROMA is also used to signify the genus chromaticum. In this sense we find it used by Arilaxenus, and in Ptolemy's Harmonics.

CHROMATIC, in the Ancient Music, the second of the three genera, or kinds, in which the consonant intervals were subdivided into their concordant parts.

The other two kinds were, the enharmonic and the diatonic. The chromatic confounded of semitones, and minor thirds: it had its name, because the Greeks marked it with the character of colour, which they called χρώμα; or as P. Parran sug gists, because the chromatic kind is a medium between the other two, as colour is between black and white; or else because the chromatic kind varies and embellishes the diatonic kind, by its semitones; which have the same effect in music, with variety of colours in painting. M. Rou leau says, that this species of music was written in coloured notes. Arilaxenus divides the chromatic genus into three species; the molle, hemiolium, and tonieum: Ptolemy, into molle or antiquum, and interium.

These species were also called chromi, or colours of the genera; the molle expresses a progression by small intervals, the interium by greater.

The chromatic and enharmonic kinds only contain the smallest of the diatonic degrees; so that they have the same proportion to the diatonic, as fractions have to integers.

Boethius, and after him Zarlin, attribute the invention of the chromatic genus to Timotheus, a Mileshian, in the time of Alexander the Great. The Spartans banished it in their city, on account of its softness. The characters of this genus, according to Aristides Quintilianus, were sweetness and pathos.

Mr. Malcolm observes, that we are at a loss what use the ancients could make of these divisions and subdivisions, into genera and species. All acknowledge the diatonic to be the true melody; the others seem only humourous irregularities, calculated to pleae the fancy by its novelty and oddness; and were besides to very difficult, that few, if any, are said to have ever practised them accurately.

The moderns have been much perplexed to understand the different species of the chromatic music in use among the ancient Greeks. Most of our musicians have no other notion of the chromatic than of a melody proceeding by semitones, major and minor. This is what Brofka says of it. But this is not sufficient to convey a true notion of the chromatic.

Dr. Pepusch has given us a clearer light in this affair: his doctrine is as follows.

The ancients distinguished three sorts of chromatic, which were denoted by the names, molle, fasquinor, and tonieum.

The chromaticum molle, was a division of the diaterron, or fourth, into three intervals, which were two subseuent semitones minor, and the interval, which is the complement of these two to the fourth; and this interval will be found equal to a third minor added to an enharmonic diesis. This species is not to be met with among the moderns.

The chromaticum fasquinor, or hemiolium, was a division of the fourth into a semitone major, a semitone minor, and a third minor. This is mentioned by Ptolemy as the chromatic of Ddimus. It occurs in modern compositions.

The chromaticum tonieum, or tonicium, was a division of the fourth into a semitone major preceded by another semitone major, and the complement of these two to the fourth, which is the interval, commonly called a superfluous tone. This often occurs in modern music. Dict. de Musique, p. 19 Philos. Trans. No. 481. p. 272. Wallis, Appendix. Ptolem. Harm. p. 164.

Of the modern chromatic, the scale of which is so different from the ancient, we can easily explain the principles upon which it is built, by giving it a fundamental base. The regular chromatic scale in modern music, confining entirely of a series of major and minor semitones, such as the temperament of our keyed and wind instruments allows, ascending and descending, may receive the following fundamental base.

As it can very seldom happen that a complete octave of half notes can be wanted with a base to them, in order to avoid double sharps and flats, we have divided the chromatic octave into two tetrachords.

\[
\begin{array}{cccccccc}
G & A & B & C & D & E & F & G \\
\hline
b7 & b7 & b7 & b7 & b7 & b7 & b7 & b7 \\
\end{array}
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These are the general ideas throughout Europe of the ancient and modern chromatic. But the abbe Teyon, who has meditated on these matters more perhaps than any other modern theorist, has furnished an article to the musical Encyclopedists, which, though very ingenious, will, we fear, Vol. VII.
interval which constitutes the chromatic genus; as the tone is that of the diatonic; and the quarter-tone that of the enharmonic; the half-quarter tone that of the diatonic. It is evident, but it remains to be discovered, what ancient Greek, and modern authors, understand by a semi-tone. Aristo- toxianus did not understand himself, in speaking of half toncs, or a third or fourth part of a tone; it is in vain for him to say that he was accused wantonly of dividing a tone rigorously into halves, (Metebonius, p. 45. Aris.ox.) of confuting in his division of tones, only the judgment of the ear, (ib. pp. 14 and 15) rejecting musical ratios of intervals (ib. p. 12) which are their natural signs, and the proof of their degree of consonance and dissonance, i.e. of their harmonic or enharmonic character, it is wholly impossible for him to prove that a nominal semi-tone is, or is not, the precise half of a tone given.

2dly. The Pythagoreans of the last ages of Greece, those who dared to assume that title, after the total extermination of the Ionic sect, were not much more reasonable than the Aristoxianians, their opponents. Neglecting to confute the founds themselves in their theory, they were carried away by certain metaphysical prejudices, to calculate so complicatedly, as to lead to the simplicity of the ratio of sounds. Did they think that the ratio of the interval from the 7th to the 8th of a key (as in C. B C) which is 15 to 16, was with them 243 to 256: that of the major 5th (which is 4 to 5) to be 64 to 81? which rendered it so dissonant, that they agreed with the Aristo- toxianians, that it ought not to be ranked among concords. Aristo- toxianus pp. 20 and 471. Nicomachus, p. 20 and 211. Dacchius, p. 31. Aristox. Qint. p. 16. N. B. These three last were Pythagoreans, that is to say, pretended to profess the numerical theory of the Pythago- reans. Aristox. Qint. Indeed, (p. 144) tells us, that the ancients, meaning the Pythagoreans, had determined the ratio of the semi-tones to be 16 to 17, and 17 to 18: but we do not find that this division had been adopted in the Chromatic genus, with the semi-tones were from 243 to 256.

3dly. The moderns make the Chromatic scale proceed by semi-tones major and minor alternately; the frist in the ratio of 256 to 16, the other of 243 to 256. Now an interval from 15 to 16, is not a semi-tone, but a true diatonic interval, a real sound of the natural scale. Modern chromatic theorists, therefore, limit it to a single chromatic interval, which therefore cannot constitute a genus; for the chromatic genus ought to proceed by semi-tones. Now it is impossible in practice, to give to the two equal intervals without changing the key. Chromatic melody therefore would not have place in any of our keys. We must then either suppose that the moderns have no chromatic genus, or that they use many kinds of semi-tones, which are only equalized by temperament.

It is not, however, held by writers on the subject, that moderns have so easily differ from the ancient; but that the ancient composers are too often reason for the difference, we find it, not with a very lively hope that we shall succeed in the Greek Music. It would be of little use to enquire on the ratio of the tone of the first primary, What seems necessary to observe, is, that in the scale of the three genera have to be equal, the lowest not the highest. Thus (as the table, in modern notes, is B C D E), B C D E are primary; the genus common to the three genera; the B C D E are called Chords Staves. Whence I conclude that the Greeks never extended the different intervals above the fourth, but confined them to the intervals of their formule.

2dly. That in each formula of the chromatic genus, the first semi-tone is always equal to the second; (see the table of Aristo- toxianus's system at the head of his treatise). Hence I conclude, that the Greeks had not the least notion of what we call a key; because they had not the curiosity, I don't know, but the desire to use every tetrachord in some folio key. Now it is impossible to produce two consecutive similar intervals in one single key. But Pythamy, in re-establishing the ratios of the Greek system in their ancient simplicity, demonstrated that these semi-tones were rendered equal only by temperament. (What says the abbe Rouffer to this?) What ought to confirm us more and more in this idea, that the Greeks were not the inventors of their system, is their ignorance of its harmonic character, its modulation, and its relations. Though the tetrachord was the most ancient system of the Greeks, we must not conclude that it was the only one in each genus; they had likewise pentachords and diapasons, of which the intrinsic form has not been always the same: (could the diapason or octaves we have a latitude?) But in the last analysis, each of these systems is resolved, ultimately, in the tetrachord, which is properly speaking, the gamut of the Greeks.

"Chromatic, in Modern Music. The chromatic may be practised in modern music by utilizing different gamuts, by singing different passages, transitions, and chromatic graces or embellishments.

18. Of Gamuts. The natural, physical, and progressive form of a gamut is progressive, since every scale is included in a progression of the harmonics of a generator, that is, of a key note. Thus the diatonic gamut is the result of the regular production of sounds, comprehended between the extremes of the 4th octave from C the generator. The chromatic gamut immediately follows the diatonic in the acute, and is comprised between the 15th and 32d harmonics of C. Thus this gamut forms the 5th octave of the key note C, C#, D, D#, E, E#, F.

But much is wanting to render our chromatic gamut progressive, in which the semi-tones decrease uniformly from grave to acute. For including only semi-tones major and minor, its melody is less natural than a melody formed of progressive sounds; and the accompanying is forced, being reduced to three or four chords at most. For, when the chromatic melody proceeds by semi-tones major, in ascending each note is successively 7th and 8th of a key, or 31 and 4th, and reciprocally in descending. When the melody proceeds by semi-tones minor, we are driven to different combinations of the chord of the extreme flat 7th. When a succession of sounds alternately major and minor is used, we have a feint of minor tones. But it is easy to procure a chromatic accompaniment superior to all this, which have been in use hitherto, in supposing our gamut really progressive, and altered only by temperament. Now temperament ought not to change the harmony. Upon this supposition, when we sing C, C#, D, D#, E, we are supposed to sound the natural gamut, C, C#, D, D#, E, and we accompany it with this fundamental燧 of C, E, C, E, E, which is making the intermediate: half tone between C and D, passing notes; and in a rapid succession of half tones, raising or falling, allowing a half to the first and last note is sufficient. And this is the best apology that can be made for rapid semi-tone successions.

Chromatic Paffages, which we have hitherto accompanied by the several resolutions of the extreme flat 7th, and extreme sharp 6th, may be regarded as parts of the natural gamut. With a little use we may refer them to the true chord to which they appertain, in remembering that the major
major semi-tone has no place in the chromatic scale, and that
its true and only place, even in the modern gamut, is be-
tween the sharp 7th and 5th of the key note; and, conse-
quentially, in ascending, it may be accompanied by all the
chords which include the sharp 7th; as in the key of C: G
BDE, CEGB, DFB, DFGAB, FAB, DGe, etc.

4 But a general rule is, that every time the semi-tones
success each other chromatically, that is, without being se-
parated by wider intervals, we ought never to suppose them
equal; but always gradually, and progressively unequal. If
this rule is violated, you will have passages, but never chro-
matic melody, and a harmony which, far from determining
the key of the treble, will have no other effect, than to
puzzle and mislead the hearer.

Chromatic transitions consist in changing the key at each
note of the melody; which is supposing all the half notes
equal. But this supposition is more favourable to the igno-
rance of the composer than to the effect of the harmony and
melody. The composer regards each sound as the 4th and 5th
of a key successively, as superfluously 5th and 6th, or indeed as
3d and 7th below the key note, so that one form only of re-
solution serves him for the most considerable traits in har-
mony; an harmonic mechanism more likely to degrade the
melody than to enforce the effect. In general, it is the ig-
norance of the key of a chromatic melody, and of its true har-
mony, which drives composers to transitions (modulations).
To this there are some exceptions, but they are rare.

Chromatic graces, or embellishments, are passages not al-
lowed for in the time, by which piano-forte players, when
the right hand is low on the keys, mount up to the point
where the melody re-commences. It is, however, a feat
which destroys all idea of the key of the piece, if such runs
are not very short and rapid, and the performer has not the
faith and address to make the principal chords of the key
heard; which would require a profound knowledge of har-
mony, and a very active finger. But good harmonists leave
to mediocrity these childish ornaments, which are truly offen-
sive to delicate ears.

For our own parts, the running up and down the keys in
semi-tones is now become so common, affected, mechanical,
and unpleasant a trick, that we never wish to hear it performed
more frequently than once a year.

The nice discriminations of major and minor semi-tones in
the abbé Fétton’s ingenious article Chromatic, whence we
have made such long extracts, are speculations for discussion,
and materials for disputition, rather than practice. In com-
posing for our keyed instruments, and in playing on them,
both the composer and performer are at the mercy of the tuner,
and of his habitual temperament. The composer writes, and
the performer plays, as if the instrument were perfect. Our
forefathers, knowing where the wool lay in the organ and harp-
ichord, touched that key and its relatives as seldom as possible.
A composition in Eb or E, with a sharp 3d, is hardly to be
found in music of 100 years old; and we have old organs where
Eb and Ab seem, by the dult with which they are covered,
as if they had never felt the finger since the instrument was ere-
cted. But now the bold modulations of Emanuel Bach, Haydn,
and Mozart, have provoked another temperament; the tuners have, by degrees, been obliged, much against their
will, to try at equal harmony, and composers and performers
may now ramble about, without the fear of offending nice ears
by one key more than another. There is not time for calcu-
lation during the performance of a written piece, much less
of a voluntary. If a keyed-instrument is out of tune, the
auditor knows that it is the fault neither of the composer
nor player, and accommodates his auricular organ to the evil;
but if a vocal performer sings out of tune, or the intentions
of a violin player are false, it is never forgotten or forgiven.
Imperfection of intervals in singing, however, depends on the
chord of the finger, and on the strength of hand in the violin
player, more than on the ear of either; the mischief being
done before the ear of either is offended. The abbé Fétton
justly calls chromatic passages in which the key is dis-
guised as not to be known, chromatic graces; very different
things from chromatic modulations. See in Plates of Mus
examples of modern chromatic to a fundamental base; of
contrapunto d’opin in genoa chromaticis; and of Roussian’s
chromatic figurations.

Chromatic in Painting, is sometimes used to signify the
colouring. See Colour.

Chromatic, in Philosophy, denote that branch of the
science of optics, which it sets and explains the properties
of the colours of light and of natural bodies. See the detail
under Colour and Reflection.

Chrome. Chrome is a metallic substance of a grey-
white colour, extremely brittle, acidizable with great
difficulty by nitric acid, and then capable of combining with
caustic potash into a lemon yellow fust. This fust being
added to a solution of nitrat of lead occasions a deep orange-
red precipitate of chromated lead.

Chrome has hitherto been found only in the acid slates
combined with lead and with iron.

The colour of this mineral is aurora red. Passes into hya-
cinth red. It occurs sometimes disseminated, but most com-
monly crystallized, either in rectangular prisms, or in six or
eight sided prisms. The crystals are of moderate fixe, ad-
hering laterally to each other, and generally very imperfect
and ill defined; they have a brilliant external lustre. The
fracture is fine-grained uneven, passing into conchoidal and
irregularly lamellar. It breaks into blunt edged inter-
minate fragments. It is translucent, passing into semi-trans-
parent, is brittle, easily fragilae, and, when scraped, gives
a yellowish orange-coloured powder. Sp. gr. 6.05.

Chromat of lead, when exposed to the blow pipe, cracks
a little, and melts into a blackish flag. With borax it is in
part, reduced to the metallic state, and communicates a
green colour to the flux. It has been analyzed by Vauquelin
with the following result:

| 69.66 | Oxyd of lead |
| 36.40 | Chronic acid |
| 120.06 | |

This mineral has hitherto been found only in the gold
mine of Berezof, to the north of Ekaterenburg, on the
eastern side of the Uralian mountains: it is thinly dispersed
in a vein passing through granite and micaceous schists, ac-
compounded by quartz, ekaena, and felsparous pyrites; none of
the crystallized varieties have been found for some
years.

Sp. 2. Chromat of iron. The colour of this mineral is
greyish, or blackish brown; it occurs in masses; it passes
a slight degree of metallic lustre; its fracture is compact
uneven, sometimes imperfectly lamellar; when pulverized,
it is of an ash-coloured gray. It is hard enough to scratch
glass; is difficultly fusible, opaque, and gives an argilla-
ceous colour when breathed upon. Sp. gr. 4.09.

It is infusible before the blow-pipe without addition, but,
with borax, melts into a beautiful green-coloured glass. It
contains, according to an analysis by Vauquelin,
5 9 2
47 Chronic
Chromat of iron is said to have been found in Siberia; it has also been discovered in France near Goffin, in the department of Var, forming nodules and veins in serpentine.

The method of analysing the chromat of lead is very simple: Vanquelin has pointed out two ways, both of which we shall mention.

Take one part of finely pulverized chromat of lead, three parts of perfectly saturated carbonte of potash, and forty parts of water, and boil the mixture for the space of an hour. As soon as the substances begin to act on each other a brisk effervescence will take place, the orange-colour of the lead will change to brick red, and finally, when the effervescence has ceased, there will remain at the bottom of the vessel a powder of a dirty yellow colour, conflating of carbonat and chromat of lead, covered by a liquor of a bright golden yellow, which is chromat of potash. The liquor being poured off, and the powder well washed, some very dilute nitric acid is to be poured on the powder till it ceases to effervesc; the colourless solution, thus obtained, is nitrat of lead, while the undecomposed residue of chromated lead will remain unaltered, and is afterwards to be decomposed by a second digestion with thrice its weight of carbonated potash. The nitric solutions of lead being mixed together are to be decomposed by sulphat of soda, and the lead contained in the ore is to be eliminated from the nitrat of lead thus procured. The alkaline solutions of chromated potash are to be mixed with weak nitric acid, as long as any carbonic acid from the undecomposed carbonte of potash is given out, and the liquor, by frequent evaporation and cooling, deposits crystals of chromat of potash mixed with nitre.

The other method of decomposing this substance is, to digest together, at a moderate temperature, equal parts of chromat of lead very finely pulverized, thron and pure mutric acid, and water; taking care to stir the mixture from time to time. The chromat of lead will change to a white colour, and will be decomposed, being converted for the most part to mutric of lead. When the acid has ceased to act, the liquor must be poured off, and fresh mutric acid, (diluted as before with water,) to the amount of about one-fourth of the former quantity, is to be digested with the residue, till no more orange-coloured grains appear among the white mutric. This liquor being added to the former, together with the washings, the whole, after being heated, is to be placed for a few days in a cool place, that the small quantity of mutric lead that it holds may be deposited; when this is removed, some oxide of silver (precipitated from its solution in nitric acid by pure potash), is to be added very gradually till the last portions acquire a red purple colour; thus the whole of the mutric acid will be got rid of, and the liquor will contain only chromic acid, which, by slow evaporation, is deposited in small prismatic ruby-red crystals.

The decomposition of chromat of iron is not effected by any means so easily as that of chromated lead. The action of either mutric or oxymutric acids upon it is very slow and imperfect; nor is a boiling solution of either pure or carbonated potash attended with better success. The most effectual way of proceeding is, to fuse in a platinum crucible the finely powdered ore, with an equal weight of candid potash; then to separate by water all that is soluble in this fluid, and treat the residue with hot mutric acid. By the alternate use of these menstrua fix or leave times each, the whole of the ore will be taken up and dissolved. The mutric solution being evaporated to dryness, and then left to cool, will become gelatinous, thus announcing the presence of flixex, which may be separated by drying the jelly, and then dissolving the residue in boiling water, in consequence of which the flixex will remain undissolved; the clear liquor being then treated with ammonia, the iron will be obtained in the state of oxys. The mutric solution being thus exhausted, the alkaline solution is to be carefully neutralized by nitric acid, by which means the alumine will be precipitated, and nothing will remain in the liquor but chromat of potash and nitre, from which the chromic acid may be obtained pure, by adding nitrat of lead till no further precipitation takes place, and then treating the chromat of lead thus formed with mutric acid, as mentioned above.

Chromic acid is of an orange-red colour, and a pungent metallic taste; it is very soluble in water, and by gentle evaporation crystallizes in lengthened prisms. Like other acids it combines with the fusible bases, whence refults a genus of compound salts called chromats, the chief of which we shall proceed to describe.

Chromat of barytes is formed by mixing together the aqueous solutions of barytes and chromic acid: it appears as a pale lemon-yellow precipitate, is sparingly soluble in water, and has no perceptible taste. When heated, it gives out oxygen gas, and assumes a green colour.

Chromat of lime is prepared, like the preceding, by adding the liquid acid to lime water; an orange yellow precipitate falls down; differing from the chromat of barytes only in being less soluble, and in a somewhat different order of affinities.

The carbonated alkalies are decomposed with effervescence by chromic acid, forming very soluble and crystallizable salts of a lemon yellow colour. Chromat of ammonia is destroyed by a red heat, the alkaline base being decomposed, and dioxygenating the acid, so that only a green oxys of chromic remains behind. The alkaline chromats are decomposable with abfraction of their acid by barytes, lime, and bortonton, and with abfraction of their base by the mineral acinds; when added to any of the soluble metallic salts a double decomposition takes place, and the chromated metal is precipitated in the form of a coloured powder; mercury gives a vermilion red precipitate, silver a carmine red, lead an orange yellow, tin a green, &c.

Chromic acid appears to be very easily reducible to the state of oxys, in which state it is generally of a green colour. Thus, when heated on charcoal before the blowpipe, it first boils, and when the moisture is evaporated, a green pulverulent insubile oxys remains. By fusion with borax and glas of phosphorus, it affords vitreous globules of a bright emerald green. With tan it forms an infusible yellowish brown flocculent sediment; and with hydro sulphur of potash a brownish green one.

Muriatic and chromic acids, when heated together in a retort, occasion a considerable effervescence; part of the mutric acid is converted into oxymutric, which flies off; and the chromic acid is changed into the green oxys. Ether or alcohol, when heated for a few minutes with this acid, produce on it a similar effect; as does also muriat of tin, and the same metal in the reguline state, also iron, zinc, and most other metallic substances. Even light will decompose chromic acid, for a paper wetted with it, and exposed for a few days to the sun, assumes a permanent green colour.

In order to reduce chromic acid to a regulus, it is sufficient to heat it strongly in a crucible lined with charcoal; the result
fult will be a brittle, brilliant, greyish white, metallic button, amounting to about 67 per cent. of the acid employed. At a high temperature it assumes the form of feathery crystals. A fragment of this metal, when exposed to the blowpipe, first tarnishes, and then acquires a thin coating of green oxide. When finely pulverized, and treated with boiling concentrated nitric acid, it is oxidized, though with extreme difficulty, and gives the acid a light bluish green colour; by repeated abstractions it is at length completely acidified, and then exhibits exactly the same characters as the native acid.

Chrome, on account of its scarcity, and the short time that it has been known, has not yet been applied to any use; it is probably, however, capable of furnishing some fine pigments to the painter and enameller; in particular it will tinged glass with a true emerald green; the colouring matter of this beautiful gem having been recently proved to be this very metallic oxide.

CHROMIS, in Ichthyology, the name of a little fish caught frequently in the Mediterranean, the chief colour of which is dusky brown. Lineatus describes it after Artedi as Sparus, with the second ray of the ventral fins fuscous. See Sparus chronis.

CHRONIC dysepsia, in Medicine, from χρονος, time, is a disease which, from its nature, may be of long duration. The term chronic is used in contradistinction to acute, which implies a state of violent and febrile action in the constitution, which must necessarily soon terminate, either in recovery or death. See Disease.

Chronic weakness, a term employed by some physicians in a vague and somewhat general sense, to denote a variety of modifications of disease, which have often been called nervous, and which are accompanied with a general debility of the constitution, and a failure in the performance of certain functions, especially that of digestion. It includes those varieties which Dr. Cullen included in his genus of dysepsia, and Sauvages in that of asthenia, as well as hypochondriasis, obstruepsia, and other diseases, where the dyspnoea is symptomatic of some derangement of the stomach and bowels, or of the other viscera. The causes and the means of cure are such as belong to the varieties of dysepsia and asthenia. This term is rejected from the more correct medical vocabulary of the present day. See Chronic Weakness.

See Dysepsia and Asthenia.

CHRONICLE, CHRONICON, denotes a history digested in order of time; though the term is seldom used but in speaking of our old English histories, as Holinshed's Chronicles, Stow's Chronicles, &c. See Annals.

CHRONICLE, Parian. See Arundelian Marbles, and Parian Chronicles.

Chronicles, in the Canon of Scripture, are two faced books called by the Greeks Paralipomena, Paraleipomena, because they contain many fundamental relations omitted in the other historical books. The Hebrews, says Dupin, (Complete Hill of the Canon, &c. p 86.), made but one book of them, under the title of "Dibre-Ha'ananim," the sayings or actions of days or years, i.e. journals or annals; either because the order of time is more exactly observed in them, or else because they were taken out of the records, journals, or annals of history. They are an abridgment of faced history from its beginning, to the return of the Jews from the Babylonian captivity, taken out of the books which we have, and out of other annals which the author had by him in his time. The design of the author was to represent to the Jews the series of their history, which might have been obliterated from their memory during the captivity, and thus to put them in mind of their original. Accordingly, the first book traces the genealogies of the Israelites from Adam, relates the death of Saul, and gives a brief account of David's reign. The second traces the progress of the kingdom of Judah, its various revolutions, its period under Zedekiah, and the reformation of the Jews by Cyrus.

It has been generally supposed, that these books were compiled by Ezra, and that they were written after the termination of the Babylonish captivity, and the first year of the reign of Cyrus, who is mentioned in the last chapter of the second book. Some passages seem to have been transcribed verbatim from the histories and records that were made at the time when the temple stood, and when the Jews were in possession of Judæa; and others were probably interpolated or added after the time of Ezra. Dr. Kennicott has satisfactorily shown (Diffutations, vol. i. and ii.) that several apparent contradictions between the accounts in Chronicles and in the books of Kings, with regard to numbers, have arisen from the corruption of the Hebrew text; which may be easily accounted for when we consider that numeral letters, used in expressing numbers, might easily be changed into one another by transcribers. See Characters, Hebrew. Several words are also omitted, e.g. 34 in Chron. xi. 13, preferred in the parallel place in 2 Sam. xxiii.; and others are interpolated, e.g. two whole verses at the end of Chronicles; which interpolation is discovered by means of the beginning of the book of Ezra, which has the same words, fully proving that part, and a very abrupt part, of the decree of Cyrus had been subjoined to Chronicles, through the inadvertence of some transcriber. Thus, the two verses at the end of the book, which are far from being chronologically connected with the preceding, mention, and merely mention, the decree of Cyrus. They begin that memorable decree, but leave it unfinished; breaking off in the very midst of a sentence, in a manner perhaps unparalleled. These two last verses have, probably, been added improperly. Some transcriber, having finished the book of Chronicles at verse 21, proceeded, without leaving the usual distance between different books, to write the book of Ezra, but, finding his mistake, he broke off abruptly; and began Ezra at the culminating distance, without publishing his error, by erasing or blotting out those lines, which he had carelessly subjoined to Chronicles. Hence we may perceive, that the book of Chronicles once followed that of Chronicles.

CHRONOGRAPH, a kind of composition, whose numeral letters, joined together, make up some date, or epocha. See Anagram.

The word is compounded of χρονος, time, and γραφειν, to write. CHRONOLOGICAL, belonging to chronology. Chronological characters, are characters by which times are distinguished. See Characters. Of these some are natural, or astronomical; others are artificial, or historical. Natural chronological characters are those which men have established, as the solar cycle, the lunar cycle, &c. Artificial chronological characters are those which are supported by the testimonies of historians, when they fix the date of certain events to certain periods. We say also chronological tables, abridgments, machines, &c. See Chronometer, and Chronological Tables at the close of the last article.

CHRONOLOGY, compounded of χρονος, time, and σωζειν, to preserve, is the art of measuring time (See Time), distinguishing its several constituent parts, such as centuries or ages, years, months, weeks, days, hours, &c. (which see respectively) by appropriate marks and characters, and of adjusting
admitting these parts, in an orderly manner, to past transactions, by means of arsas, epochs, cycles, &c. (which see respectively) to the illustration of history. See History.

Stoicums divide chronology into five distinct branches; viz. metaphysical, physical, political, historical, and ecclesiastical; according to the various relations, or habits, in which time is considered; viz. as it is in itself; as connected and fully related to the affections, states, and alterations of natural things; as necessary to civil use; as matched with events that pass in the world; and particularly as it relates to the celebration of Easter, which see. The importance and utility of chronology, as it comprehends the distribution of time into its subordinate parts, and the arrangement of historical events by means of these several divisions, in the order according to which they occurred, so that their respective dates may be accurately fixed, must be universally acknowledged. Chronology has been, therefore, not unjustly designated "one of the eyes of history," and it also serves many interesting purposes in theology, and in various other departments of literature and science. As its use is extensive, the difficulty of acquiring it is not inconsiderable. It derives its chief assistance from astronomy and geography, and also from arithmetic, geometry, and trigonometry, both plain and spherical; and the wife of a Fludous and labourous apposition to various sorts of information. Supplied by the observation of eclipses, by the testimonies of Biblical authors, and by ancient medals, coins, monuments, and inscriptions. Its history, however, is comparatively of modern date, as we shall shew in the sequel of this article.

Edward, China. No nation has boasted more of its antiquity than the Chinese; but though they have shown us records of that country as far back as the Deluge, they have few, if any, authentic records of their history for a long period as five hundred years before the Christian era. This, however, may probably be owing to the general destruction of ancient remains by the tyrant Tin-chih-liang, in the year 215, or, as some say, 216, before the Christian era. We learn from a chronological table of the Chinese history, for which we are obliged to an illustrious Tatter, who was vice-roy of Canton in the year 1744, and a Latin translation of which was published at Rome in 1750, that the most remote epoch of the Chinese chronology does not surpass the first year of a prince called Gru-li-wang, who began his reign four hundred and twenty-four years before the vulgar era. This opinion is confirmed by the testimony of two of the most approved historians of China, who admit nothing into their histories previous to this period. The Chinese in their computation make use of a circle of sixty years, called liang, from the decomposition given to the first year of it, which forms as the basis of their whole chronology. Every year of this cycle is marked with two letters, which distinguish it from the others; and all the years of the emperors, for above two thousand years, have names in history common to them with the corresponding years of the cycle. Phil. Trans, abr. vol. xvi. part iv. p. 15, &c. According to M. Perrot, in his Essay, the Chinese date the epochs of Yao, one of their first emperors, about the year 2145, or as others state it, 2157, or according to Du Halde 2357 years before Christ; and reckon their first astronomical observations, and the composition of their famous calendar, to have preceded Yao a hundred and fifty years: and thence it is inferred, that the astronomical observations of the Chinese are Chaldeans' refence. Accordingly Mr. Wilton (Short View of the Chronology of the Old Testament) maintains that the Chinese chronology, when rightly understood, is exactly applicable to that which he has deduced from the Hebrew treatise of the Old Testament. Later authors date the rite and progress of the sciences in China from the grand dynasty of Tcheou, about twelve hundred years before the Christian era, and show, that all historical relations of events prior to the reign of Yao are fabulous. Mem. de l'Institut des Sciences, &c. Chinoises; a work compiled by the millenaries of Pekin, vol. i. Paris, 1756. See China.

Chronology, History, and Newtonian principles. Many ages must have elapsed before the mode of computing time, or of dating events, was brought into established use. The most ancient philosophers and thinkers must have been in error, and were unacquainted with chronology. In the age of Homer, a formal calendar seems to have been unknown, and at that early period time was measured by the Greeks, the revolution of the sun and moon, and the five fixed returns of labor 1787; but we need not push our inquiries further into that part, as months, weeks, and hours, from the purport of the subject to history or its regular events; nor do we discover any authorities to clocks, dials, or watches.

Several centuries intervened between the Olympian era, and the first historians; and several more elapsed before the period in which the first chronicles appeared. We find that even after the computation of time commenced, its first names were very inexact. See the sequel of this article.

Sir Isaac Newton has shown that all nations, before they began to keep exact accounts of time, have been prone to improve their antiquity. Thus Herodotus informs us (lib. i. c. 42) that the priests of Egypt reckoned from the reign of Menes to that of Sichon, who put Sidonian to flight, 1011 generations of men, as many priests of Velas, and as many kings of Egypt; and 13 generations were compiled to amount to 100 years; the whole interval from Menes to Sichon was estimated at 1340 years. The Chaldeans also boasted of their antiquity; for Calilhodene, the disciple of Aristarchus, sent astronomical observations from Babel to Greece, which were said to have comprised an interval of 100 years before the time of Alexander the Great; and they further boasted, that they had observed the stars 1500 years. There were also others, who made the kingdoms of Asia, Media, and Darius, much older than the truth. Some of the Greeks, says Sir Isaac, called the times before the reign of Ogyges unknown, because they had no history of them; those between his flood and the beginning of the Olympiads, fabulous, because their history was very much blended with fabulous tales; and those after the beginning of the Olympiads, historical, because their history was free from such fables. The fabulous ages, however, wanted a good chronology; and so also did the historical, for the first 60 or 70 Olympiads. Hence it appears, that the chronology of ancient kingdoms was involved in the greatest uncertainty; and this illustrious philosopher has shown, that the Europeans in particular had no chronology before the Persian empire, which began 528 years before Christ, when Cyrus conquered Darius the Medes, and that the chronology which they now have of more ancient times has been since framed by reasoning and conjecture. In the beginning of that monarchy, Aqueinians made Theronus as old as Ogyges and his flood; and that flood 1220 years older than the first Olympiad, or 680 years more ancient than the truth; and in order to warrant this computation, his followers have increased the reigns of kings both in number and duration. The antiquities of the Greeks are full of fables, but we are left to their writings were composed only in verse. The ancient philosophers, as Orphus, Hesiod, Parmenides, Xenophanes, Empedocles, and Thales, anciently delivered their opinions in verse, but this mode was afterwards discontinued. Pausanias farther informs us (Observ. tom. ii. p. 46.) that
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that Aristarchus, Timoccharis, Aristillus, and Hipparchus, described astronomy in prose, without rendering it the more contemptible, after Eudoxus, Iltedes, and Thales had written concerning it in verse. We learn from Pliny (Nat. Hist. i. vii. c. 56.) that Pherecydes Syrus taught to compose dictionaries in prose in the 59th olympiad, or the reign of Cyrus; and Cadmus Mileus to write history. In another place (ib. v. c. 29.) he says, that Cadmus Mileus, who flourished at a period somewhat earlier than the Persian monarchy, was the first who wrote in prose. Jophbus (Cont. Apion.) informs us, that Cadmus Mileus and Aecilius, the oldest historians among the Greeks, flourished a little before the expedition of the Persians against the Greeks; and Suidas says of Aecilius, not only that he was a most ancient historian, but that he wrote genealogies out of tables of brahs, found in a corner of his father's house. Pherecydes, already mentioned, wrote of the antiquities and ancient genealogies of the Athenians, in ten books, and was one of the first and best of the European writers of this kind, whence he obtained the name of "Genealogus;" and Dionysius Halicarnassenus (lib. i. c. 13.) effects him to be second to none of the genealogers. Euphenides, the historian or genealoger, who was a different person from the Cretan philosopher of the same name, wrote of the ancient genealogies; and Hellanicus, who was 12 years older than Herodotus, digested his history by the ages, or sequentia of the priesthoods of Juno Argeia. Others digested theirs by the archives of Athens, or kings of the Lacedemonians.

Ephorus, the disciple of Herocrates, digested his records by generations. Accordingly Polybius is of opinion, (lib. v. § 33.) that this historian of Cumæ was the first who attempted to reduce chronology into a regular science, under the form of an universal history; and we know that he flourished in the time of Philip of Macedon, about 320 years before Christ. He began with the return of the Heraclids into Peloponnesus, and ended his chronological history with the siege of Perinthus, in the 26th year of Philip, the father of Alexander the Great, that is, eleven years before the fall of the Persian empire. We may observe, however, that the Arundelian marbles (which see), composed 66 years after the death of Alexander the Great, take no notice of olympiads, and reckon backwards from the then present time by years; and that in the histories of Herodotus and Thucydides, the dates of events are not ascertained by any fixed epochs; nor were the olympiads applied to this purpose at so early a period. Times of Sisili, who flourished in the reign of Ptolemy Philadelphus, about the middle of the third century before Christ, or in the 25th olympiad, was the first who attempted to establish an era, by comparing the dates of the olympiads, the Euporean kings, the archons of Athens, and the praefetes of June, and adapting them to one another, according to the best of his judgment. Where he left off Polybius began, and continued the history. Before this time nothing satisfactory on the subject of chronology seems to have appeared; and the true reason is obvious, because before the epochs of Alexander, the Greeks had very scanty materials for such a work, as their knowledge was confined to a very narrow tract of country, and to the annals of a very short period of time. Their travellers could not easily impart the hitorical memoirs of the countries through which they passed, as they wanted the necessary advantages for this purpose; such were a thorough knowledge of the language of the country, a free access to all their principal records, and a perseverance in such laborious researches for several years. But general wars, notwithstanding the number of diabolical calamities that attended them, afforded opportunities for obliterating the situation, nature, and improvements, of other countries; and thus the progress and circulation both of learning and of other useful arts were the more easily propagated into different countries. Strabo informs us (Geog. lib. ii.) that the Greeks derived great advantages, even in their knowledge of geography, from the ancients of Alexander; for by his means they became more perfectly acquainted with the larger tracts of Asia, and all the northern parts of Europe to the river Ister; and he might have added the whole extent of Egypt; so that, at the same time, they obtained the full possession of Babylon and Egypt, the two great fountains of ancient learning. The Romans, says Strabo, in like manner diffused the fame light over the western parts of Europe, up to the river Elbe, which divided Germany into two parts; and they went beyond the Ister even to the Tyras; and as for the countries round the lake Mageticus, and the sea coast to Colchis, they were uncovered till the days of Mithridates named Eupator, king of Pontus; and the Parthian empire made Hyrcania, Bactria, and the Scythians that lived beyond them, to be better known. We may therefore take it for granted that no general history could be properly compared, till the geography of those countries was sufficiently known, in order to describe the strength of each particular kingdom, the number of its inhabitants, the progress of its arms, or the provinces that might be lost or acquired in its quarrels with other kingdoms. But whenever the access to all these countries was laid open by the conquests of Alexander; when so many new kingdoms were established under the Macedonian government, into which the citizens of all the Greek states were freely admitted; when it extended the Greek tongue, as an universal language, over Asia and Egypt; it gave the most favourable opportunity to several eminent men to write histories of different nations. Berosus compiled the history of Chaldaï, from the records of Babylon; and Manetho that of Egypt, from the records of Memphis and of Thebes; and the Arundelian marbles gave a complete series of the annals of Greece from their earliest times; all of which were composed in that age, by contemporary writers. And when we add to this, that the great library of Alexandria was first formed under Ptolemy Philadelphus, into which the writings of all nations were collected; we may well conclude from this induction of particulars, that it was at this period, and not before, that chronology became a science. Moreover, if we consider the situation of the world at this time, we shall be confirmed in the same opinion. For, till there was a collection of proper materials brought together, such as the manuscripts of all nations must contain, it was impossible to separate the truth of history from the rubbish of fable; because facts are only to be canvassed from a multitude of circumstances, which combine together to give light to each other, while the contemporary history of one country corresponds to the contemporary state of another. As a library was necessary to furnish the materials for this purpose, we accordingly find that the first "great father of chronology" was Eratosthenes, appointed by Ptolemy Euergetes, the librarian of Alexandria, who flourished about 100 years after the death of Alexander the Great, who had access to that invaluable treasure of learning. The possession of such a multitude of historical memoirs both prompted and enabled him to determine the dates of many remote facts. And we are informed by Dionysius of Halicarnassus (lib. i. § 46.) that in the execution of this work, he had laid down to himself certain "chronological canons," which that great writer declares he found to be accurate and uncorrected; having examined them, in a treatise...
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written upon that subject, which, to the regret of the learned world, has been irrecoverably lost. The chronographic canons, or general principles of the chronology of Eratosthenes, are found in the Stromata of Clemens Alexandrinus (p. 145); and they are as follows:

<table>
<thead>
<tr>
<th>Years</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>80</td>
<td>From the taking of Troy to the return of Heracles</td>
</tr>
<tr>
<td>60</td>
<td>From the return of the Heraclids to the settlement of Ionia</td>
</tr>
<tr>
<td>159</td>
<td>From the settlement of Ionia to the guardianship of Lycurgus</td>
</tr>
<tr>
<td></td>
<td>From the guardianship of Lycurgus to the year next preceding the 1st Olympiad</td>
</tr>
<tr>
<td>128</td>
<td>From that year to the invasion of Xerxes</td>
</tr>
<tr>
<td>27</td>
<td>From the invasion of Xerxes to the beginning of the Peloponnesian war</td>
</tr>
<tr>
<td>48</td>
<td>From the beginning to the end of that war</td>
</tr>
<tr>
<td>34</td>
<td>From the end of the Peloponnesian war to the battle of Leuctra</td>
</tr>
<tr>
<td>35</td>
<td>From the battle of Leuctra to the death of Philip</td>
</tr>
<tr>
<td></td>
<td>From the death of Philip to the death of Alexander</td>
</tr>
</tbody>
</table>
| 8      | Thefe numbers are fortunately confirmed by a passage of Dionysius Halicarnassæus (p. 69); from which we learn, that the 432d year from the taking or Troy was, according to the canons of Eratosthenes, the 1st of the 7th Olympiad; which agrees with the Clementine numbers. Eratosthenes was succeeded by Apollodorus, the disciple of Pantaclus, the Æolic philosopher, who flourished in the time of Polykles Phyicon. The following circumstances may lead us to presume, that in his syllabus of chronology, he followed Eratosthenes. They both agreed concerning the interval, that elapsed between the taking of Troy and the return of the Heraclids, both making it 80 years. They also agreed concerning the age of Homer, and likewise concerning the age of Lycurgus; and they purposed the same method in determining it. Apollodorus adopted Eratosthenes' list of the kings of Thebais. Eratosthenes and Apollodorus have been followed by all succeeding chronologers. Nevertheless, after all the improvements made in chronological computation by the writers above-mentioned, chronology was still, in a very considerable degree, uncertain; and that it was reputed doubtful by the Greeks of those times is evident from several passages in the beginning of Plutarch's life of Lycurgus, and also in his life of Solon, to which we refer the reader.

As Cambyses destroyed all the records of Egypt, imperfect and dubious as they were, we have no account of its inhabitants, which can be depended upon before their intercourse with the Greeks, from whom we derive all that is known of them, and that was not before the time of Pyrametichus, whose reign began in the year 600 B.C. Of this we are informed by Herodotus, who, speaking of those Grecians who had aid in setting Pyrametichus on the throne of Egypt, says, that the Romans and Carians continued for a long time to inhabit those parts which lay near the sea, below the city of Bachdia, on the Pelusiac branch of the Nile, till in succeeding times Anearch, king of Egypt, caused them to abandon their habitations, and settle at Memphis, to defend him against the Egyptians. But from the time of their establishment, he says, they had no communication with the Greeks, that one may judge, we know all this to be true, in Egypt from the reign of Piametichus to our age.

The chronology of the Latins was still more uncertain than that of the Greeks. &c. Plutarch (in Romulo et Numa), and Servius (in Æneid. vi. v. 678.) represent the originals of Rome as attended with great uncertainties; nor can we wonder at this, when we consider that the old records of the Latins, or at least a considerable part of them, were burned by the Gauls in the year 390 B.C., or 120 years after the regignis, in 506 B.C., and 63 years before the death of Alexander the Great; in 374 B.C. Quintus Fabius Pictor, the oldest historian of the Latins, lived 100 years later than Alexander, and took almost every thing from Diocles Preparathus, a Greek. At the time when the Greeks and Latins were forming their technical chronology, there were among them great disputes about the antiquity of Rome. (See Epoche and Rome.)

The chronologers of Gallia, Spain, Germany, Scythia, Sweden, Britain, and Ireland, are of a still later date; for Scythia, beyond the Danube, had no letters, till Ulphilas, its bishop, introduced them, about 600 years after the death of Alexander the Great; and Germany had none till it received them from the western empire of the Latins, above 700 years after the death of that king. The Huns had none in the days of Procopius, who flourished 850 years after the death of that king; and Sweden and Norway received them at a still later period. And it must be allowed, that things, which were done above four or two hundred years before the rise of letters, are of little credit.

After a general account of the defects and obscurity of the ancient chronology, Mr Flane observes, that, though many of the ancients computed by generations and succession, yet the Egyptians, Greeks, and Latins, reckoned the reigns of kings equal to generations of men, and three of them to a hundred, and sometimes to a hundred and twenty years; and this was the foundation of their technical chronology. He then proceeds to vince, from the ordinary course of nature, and a detail of historical facts, the difference between reigns and generations; and that, through the latter, from father to son, may at an average be reckoned about thirty-three years, or three of them equal to a hundred years, yet when they are taken by the oldest sons, three of them cannot be computed at more than about seventy-five or eighty years; and the reigns of kings are still shorter, so that eighteen or twenty years may be allowed a full medium. He then fixes on four remarkable periods, viz. the return of the Heraclids into Peloponnesus, the taking of Troy, the Argonautic expedition, and the return of Scythia into Egypt, after his wars in Thrace; and sets the epocha of each by the true value of a generation. We shall confine ourselves at present to his estimate of that of the Argonautic expedition. Having fixed the return of the Heraclids to about the hundred and fifty-ninth year after the death of Solomon, and the destruction of Troy, to about the seventy-sixth year after the fame period (see Hydraida and Troy); he observes, that Hercules the Argonaut was the father of Hyllus, the father of Cleodes, the father of Arilochmus, the father of Arildemos, who conducted the Heraclids into Peloponnesus; so that their return was four generations, reckoning by the chief of the family, later than the Argonautic expedition, which therefore happened about forty-three years after the death of Solomon. This is farther confirmed by another argument. Epaphus and Hercules were Argonauts. Hippocrates was the eighteenth inclusive from the former by the father's side, and the nineteenth from the latter by the mother's side; allowing twenty-eight or thirty years to a generation, the seventeen intervals by the father, and the eighteen intervals by the mother, will, at a medium, give five hundred and seven years; and these, reckoning back from the commencement of the Peloponnesian war, or four hundred and thirty-first year before Christ, when Hippocrates began to flourish, will place the Argonautic expedition...
tion in the fortieth-third year after Solomon’s death, or nine hundred and thirty years before Christ.

If we date the commencement of the Peloponnesian war in the 20 year of the 57th olympiad, and count back 507 years, we shall come to the 162d before the old annals, which is about the 37th year after the death of Solomon.

Sir Isae Newton ascertains the Argonautic expedition, and several other principal events in the Grecian history, by such a variety of independent arguments, drawn from the same and different mediums, all so agreeable to the present course of nature, that it seems impossible for a person who pays a sufficient regard to it not to be determined by them. It is surprising, indeed, that the manifest inconveniences of the commonly received chronology with the course of nature, should not have prevented the establishment of it; and it is absolutely unaccountable, but upon the disposition which all men have discovered, to admit any hypothesis which tends to give dignity to their nations and families, by adding to the antiquity of them. But must it not be a more accountable attachment to established hypotheses, which can induce any person of the present age, after these inconveniences have so clearly pointed out, still to adhere to a chronology, which, in those turbulent unsettled times, supposes kings to have reigned one with another in some succesions 35, in some 38, in some 43, in some 44, in some 46 years a piece; and which generally allows about 60 years to a generation, and in one instance 82? 2d. With respect to the chronology of the kings of Rome, Mr. Hookes has shown, by several independent arguments, deduced from the connexion of events in the history of their reigns, that to suppoze them to have reigned one with another 19 or 20 years, makes a more confusion of facts, than to imagine them to have reigned 35 years a-piece, which is the common hypothesis.

The chief inconveniences attending the old chronology in the Roman history are, that it supposes an interval of 63 years of peace in that restless nation before the accession of Tullus Holillius. It makes the reign of Servius Tullius fo long in proportion to the few centuries, which (according to the most authentic records) were taken in his reign, as would argue a most unaccountable neglect of his own favourite institution. It obliges us to suppose Tarquinus Superbus not to have been the son of Tarquinius Priscus, Dido not to have been contemporaneous with Æneas, or Numa with Pythagoras, as well as Solon with Crefulus in the Grecian history; all which have the unanimous voice of all tradition in their favour, and which Dionyfus Halicarnassenlis, Livy, and Plutarch, express their extreme unwillingness to give up, but that they were compelled to it by a regard to a chronology which in their times was unquestioned. Indeed, the congres of Solon and Crefulus Plutarch expresses his determination not to give up, notwithstanding his general attachment to a theory which would not admit of it, and the fallacy of which he did not expect. To this purpose he says, ‘The congres of Solon with Crefulus some think they et. confute by chronology. But a history so illusious, verified by so many wittnesses, and which is more, so agreeable to the manners of Solon, and worthy of the greatness of his mind and of his wisdom, I cannot persuade myself to reject because of some chronological canons, as they call them; which 100 authors correcting have not been able to confute anything certain, and have not been able to agree among themselves about repugnances.’

If the number of kings that reigned at Alba be joined to those who reigned at Rome, and they be allowed to have reigned 19 or 20 years a-piece, they will place the coming of Æneas into Italy, and the siege of Troy, exactly at the time in which arguments drawn from generation and succesions in Greece, as well as astronomical calculations (as we shall shew in the sequel), place that event, which is a reciprocal confirmation of the full correction both of the Greek and Latin chronology. For from Latins to Numitor are 16 kings, who reigned at Alba; Romulus was of the house of Numitor, and after him Dionysius and other histotians reckon 6 kings more at Rome to the beginning of the confuls. Now these 22 reigns, at about 15 years to a reign one with another (for many of these kings were slain), took up 336 years, which, counted back from the confulship of J. Brutus and Valerinius Poplecola, the two first confuls, place the Trojan war 78 years after the death of Solomon. See Troy.

This computation likewise agrees, as Sir Isae has shewn, with what Apianus, in his History of the Punic Wars, relates, out of the archives of Carthage, which came into the hands of the Romans, viz. that Carthage had 700 years. This is a round number, but Solinus adds the odd years when he says, ‘Carthago pot est annos 737 quum fuerat ext ucta exi- diritur,’ which places Dido, the founder of Carthage, about 70 years after the death of Solomon. See Carthage. It likewise agrees with the Arundelian marbles, which say that Teucer came to Cyprus 7 years after the destruction of Troy, and built Salamis, in the days of Dido. It is indeed an argument very much in favour of Newton’s computations, that they agree very nearly with all the most ancient monuments, the most correct tradition of antiquity, and the oldest historians; particularly Herodotus and Thucydides, who wrote before chronology was corrupted by the vanity of their nation, or the absurd systems of later histrionia. Moreover, it conducts very much to the credibility of the Old Testament history, that the courses of generations and succesions in the one correspond to those in the other. Besides, in several other respects it brings them to a greater harmony than can be arrived on any other principles; and, in particular, it places the expedition of Scophris (probably the same person with Sisæs) at the precise time in which it is spoken of in the Scriptures. See Sesostris.

The other kind of reasoning, by which Sir Isae endeavours to establish the epocha of the Argonautic expedition, is purely astronomical. The sphere was formed by Chiron and Mafæus at the time, and for the use of the Argonautic expedition, as several of the afterfims, mentioned by Aratus, and referring to this event, plainly shew; and at this time (as several ancient writers testify) the cardinal points of the equinoxes and solstices were placed in the middle of the confullations of Arius, Cancer, Chelaz, and Capricorn. Our author establishes this point by a confideration of the ancient Greek calendar, which consisted of 12 lunar months, and each month of 30 days, and which required an intercalary month. Of course this lunilar year, with the intercalary month, began sometimies a week or a fortnight before or after the equinox or solstice; and hence the first astronomers were led to the above-mentioned disposition of the equinoxes and solstices; and that this was really the case, is confirmed by the testimonies of Endorus, Aratus, and Hipparchus. On these principles, Sir Isaac proceeds to argue in this manner. In the end of the year 1580, the star called the Prima Arietis was in 72 25° 51’ with north latitude 7° 8' 58’; and the star called the Ultima caelest Arieta was in 8° 10° 3’.
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Consequently the equinoctial colure at this time cut the ecliptic in $8^\circ 6^\prime 44^\prime$; or by the calculations of bishop Horlsey in $8^\circ 6^\prime 50^\prime 26^\prime$, and by this reckoning the equinox was then gone back (according to Newton) $35^\circ 44^\prime$, and according to his editor Horlsey $36^\circ 50^\prime 20^\prime$, since the Argonautic expedition. But it recedes $50^\prime$ in a year, or $1^\circ$ in seventy-two years, and consequently $36^\circ 44^\prime$ in 2642 years; which counted backward from the beginning of 1620, will place this expedition about twenty-five years after the death of Solomon.

According to Horlsey's calculations the equinoctial points recede $50^\prime$ $50^\prime$ in 2642 years. From the end of the year 1659, i.e. of the Julian period 6422, count back 2642, and you come to the year of the Julian period 3760, the 23d from Solomon's death, according to Petravins. But, as there is no necessity for allowing that the middle of the conflagrations, according to the general account of the ancients, should be precisely the middle between the prima Aries, and ultima Canis. Sir Isaac Newton proceeds to examine what were those fires, through which Eudoxus made the colors to pass in the primitive sphere, and in this way to fix the position of the cardinal points. From the mean of five places he finds, that the great circle, which in the primitive sphere, described by Eudoxus, or at the time of the Argonautic expedition, was the equinoctial colure, did, in the end of 1680, cut the ecliptic in $8^\circ 6^\prime 29^\prime 15^\prime$; or according to the calculations of bishop Horlsey, in $8^\circ 6^\prime 30^\prime 05^\prime$, and according to Raper's copy of Newton's chronology, $8^\circ 6^\prime 50^\prime 17^\prime$, written by his own hand in the margin. He likewise, in the same manner, determines the mean place of the full dilution colure to be $8^\circ 6^\prime 28^\prime 46^\prime$, or, as Horlsey states its, $8^\circ 6^\prime 28^\prime 48^\prime$, and as it is at right angles with the other, concludes that it is rightly drawn. Hence he infers, that the cardinal points, in the interval between that expedition, and the year 1689, have receded from these colures $1$ fig $6^\circ$ and $20^\prime$, which, allowing seventy-two years to a degree, amounts to $2627$ years; and these counted backwards, as above, will place the Argonautic expedition forty-three years after the death of Solomon, or about 37 years after this event, as placed by Petravins.

The principles on which the preceding calculation is founded are these: Let $\gamma\rho\psi\chi$ (Plate III. Astronomy, fig. 22.) be an arc of the ecliptic, $\gamma\psi$ being the equinoctial point at the end of the year 1680. Let the point $P$ be the place of the first star in Aries (? of Bayer) and $C$ the place of the star in the tail (r of Bayer). Imagine a great circle of the sphere drawn through $P$, and $\psi$; and erect the arc $PC$ in $H$. Then is $H$ the middle point between $P$ and $C$, through which the equinoctial colure of the primitive sphere passed. Therefore through $H$ draw a great circle $HA$, which may make an angle of $66^\circ 30^\prime$ with the ecliptic, the acute angle looking eastward. Then $HA$ will be the equinoctial colure of the primitive sphere, and $A$ the equinoctial point of that sphere.

To find the distance of $A$ from $\gamma\psi$, the equinoctial point of the sphere of 1620; find the pole of the ecliptic and through $P$, $N$, and $H$, draw circles of latitude, $\Pi\Pi$, $\Pi\psi$, $\Pi\Pi$, $\Pi\Pi$, meeting the ecliptic in the points $p$, $c$, and $b$; and from $P$ and $H$ draw arcs of great circles, $PB$ and $HID$, perpendicular to $PC$. Therefore the arc $\gamma\psi\chi$, are given; being the given longitudes of the stars $P$ and $C$ at the end of the year 1680. Therefore $P$ and the difference of these three, is given, and the angle $\Pi c$, which is measured by that given arc $Pc$. But the arc $\Pi\Pi$ is given, being the complement of the given latitude $Pc$. Consequently in the right-angled spherical triangle, $P\Pi\Pi$, the hypotenuse $PP$ is given, and the angle $P\Pi D$. Therefore both the legs, $PB$, $H$, will be given by trigonometry. But $P\Pi D$ being given; since $\Pi\Pi c$ is also given, being the complement of the given latitude $PC$; their difference, $BC$, is given. Therefore in the right-angled spherical triangle, $PBC$, the two legs, $PB$, $BC$, are given. Consequently the hypotenuse $PC$, and the angle $P\Pi B$ will be given by trigonometry. But $PC$ being given, its half, $HC$, will be given. Therefore, in the right-angled spherical triangle, $HDC$, the hypotenuse $CH$ being given with the angle $HCD$; the legs $HD$, $DC$, will be given by trigonometry. But $DC$ being given, since $\Pi\Pi C$ is also given, their difference, $\Pi\Pi D$, is given. And in the right-angled spherical triangle, $\Pi\Pi D$, the two sides $\Pi\Pi D$, $DH$, being given, the angle $D\Pi H$ and the hypotenuse $\Pi\Pi H$ will be given by trigonometry. \vspace{1em}

But $\Pi\Pi H$ being given, its complement, $Hh$, which is the latitude of the point, $H$, is given. And in the right-angled spherical triangle $HhA$, the side $Hh$ being given with the angle $HhA$; the side $hA$, will be given by trigonometry. But the arc $c\psi$ is given, being the measure of the given angle $D\Pi H$. Therefore the arc $cA$, the sum of $c\psi$ and $hA$, is given. But $\gamma\psi\chi$ is given; consequently $\gamma\psi A$ is given. Q. E. I.

Computation.

Given $\gamma\psi = 28^\circ 51^\prime 00^\prime$; consequently $c\psi = 20^\circ 12^\prime 42^\prime$

$\gamma\psi = 49^\circ 03^\prime 42^\prime$ consequently $\Pi\psi = 82^\circ 51^\prime 02^\prime$

$\gamma\psi = 78^\circ 58^\prime$ consequently $\Pi\psi = 87^\circ 25^\prime 59^\prime$

Hence, in the right-angled triangle $\Pi BP$, $\Pi\psi = 82^\circ 51^\prime 02^\prime$

$PB = 20^\circ 12^\prime 42^\prime$

Therefore the legs $PB = 20^\circ 2^\prime 52^\prime$

$\Pi B = 82^\circ 23^\prime 12^\prime$

But $\Pi C = 87^\circ 25^\prime 55^\prime$

Therefore $BC = 5^\circ 02^\prime 43^\prime$

Hence, in the right-angled triangle $PBC$, $PB = 20^\circ 02^\prime 43^\prime$

$BC = 5^\circ 02^\prime 43^\prime$

Therefore $PCB = 76^\circ 27^\prime 00^\prime$

And $PC = 20^\circ 38^\prime 51^\prime$

Therefore $HC = 7^\circ 10^\prime 25^\prime$

Hence,
Hence, in the right-angled triangle $\triangle HDC$,  
\[ HC = 10° 19' 27" \]
\[ \text{And } HCD = 76° 27' 00" \]
\[ \text{Therefore } HD = 10° 1 59' \]
\[ \text{And } CD = 2° 26' 37" \]
\[ \text{But } \Pi C = 87° 25' 55" \]
\[ \text{Therefore } \Pi D = 84° 59' 18" \]

Hence, in the right-angled triangle $\triangle DH\Pi$,  
\[ \Pi D = 84° 59' 18" \]
\[ \text{And } \Pi H = 10° 1 59' \]
\[ \text{Therefore } \Pi H = 4° 1 15' = b \]

Hence, in the right-angled triangle $\triangle H\Pi A$,  
\[ Hb = 4° 56' 5" \]
\[ \text{And } H\Pi b = 66° 30' 00" \]
\[ \text{Therefore } b \Pi A = 2° 9' 7" \]
\[ \text{But } ch = 10° 4' 15" \]
\[ \text{Therefore } c \Pi e = 13° 13' 22" \]
\[ \text{But } \Pi e = 49° 3' 42" \]
\[ \text{Therefore } \Pi A = 36° 50' 20" \]

It should be observed, says bishop Horsey, that in finding the place of the equinoctial colure of the primitive sphere on the sphere of 1690; the obliquity of the ecliptic, on the primitive sphere, has been supposed to be just 23° 26', and the complement of the obliquity 66° 54'. And computing from these elements, we have found reason to conclude, that the primitive sphere of the Greeks was 2627 years older than the sphere of 1690. But at that distance of time, before the commencement of the year 1690, Dr. Horsey finds, by Mayer's tables, that the obliquity of the ecliptic was 23° 48' 54". He therefore assumes 23° 48' 54" for the obliquity on the primitive sphere, and, repeating his calculations, he found the following five places of the primitive equinox on the sphere of 1690:

The primitive equinoctial colure being drawn
Through $\alpha$ of Aries  $8^\circ 2^\prime 34^\prime$
The middle point between $\alpha$ and $\beta$ of Ceti  $6^\circ 56' 25''$
Through $\beta$ of Cetus  $7^\circ 23' 16''$
Through $\gamma$ of Perseus  $6^\circ 03' 00''$
Through $\delta$ of Perseus  $4^\circ 39' 30''$

The mean place of these five is $8^\circ 25' 23''$, and if this be the place of the primitive equinoctial point on the sphere of 1690, the place of the summer solstice should be $6^\circ 29' 23''$. But by the description of the solstitial colure it should be $6^\circ 28' 46''$. It may be reasonable, therefore, to take $8^\circ 25' 23''$ and $6^\circ 29' 23''$ for the places of the primitive equinox and solstice on the sphere of 1690; by which reckoning these points will be left advanced by $2'$ than for Isaac Newton has supposed. But these two minutes will not make a difference of 3 years in the age of the primitive sphere.

Our illustrious author hath, by other methods of a similar nature, established the epoch of the Argonautic expedition, as well as others, and reduced the age of the world about 500 years. What gives great weight to this argument, from the precision of the equinoxes, is, that if we reckon from whatever time the position of the equinoctial points had been mentioned by astronomers whose age is known, this motion, counted backwards, fixes that great event in the same year. It likewise demonstrates, that the observations of the ancients, though coarse enough, as Sir Isaac Newton acknowledges, are sufficiently exact for the purpose. This being a remarkable circumstance, the particulars of it are as follows. According to Pliny, and the calculations of Petavius, Thales, who wrote a book of the tropics and equinoxes, fixed the equinoxes and solstices in the 11th degree of their respective signs, so that they had preceded 4° 26' 52" from their original place at the time of the Argonautic expedition. This answers to 320 years, and calculated backwards from the 414th olympiad, when Thales was a young man, it to apply to astronomical studies, will place that event 44 years after the death of Solomon.

Petavius, in the calculation above referred to, deriving information from Pliny (I. xix. c. 25), who says, that Thales determined the "octaeus matutinus" of the Pleiades to be upon the 25th day after the autumnal equinox, thence computes the longitude of the Pleiades in $23° 26' 52''$, and consequently that the Lucida Pleiadum had, since the Argonautic expedition, moved from the equinox $4° 26' 52''$, as above stated. From the passage of Pliny, to which we have now referred, an objection has been deduced against the chronological computation of Newton. Pliny's authority, it is said, avails as much to prove, that Hevold places the morning-fitting of the Pleiades on the very day of the equinox, as that Thales placed it 25 days later. And if it be true, that Lucida Pleiadum did really set at sun-rise on the day of the autumnal equinox, in the age of Hevold, this will much more refute Isaac's date of the Argonautic expedition than the assumption, that the morning-fitting of the same star was 25 days later in the age of Thales, confirms it. For it is agreed, that Hevold was some time later than the Argonautic expedition; for we have his own testimony, that he lived after the war of Troy. The Argonautic expedition happened, according to Sir Isaac Newton, in that age when the longitude of Lucida Pleiadum was in the 26th degree of the sign of Aries. But when this star set at sun-rise, on the day of the autumnal equinox, its longitude must have been rather behind the vernal equinox, as an almanac, who will take the trouble to make the necessary calculations, may easily perceive. So that between the age of Hevold, as thus defined by the morning-fitting of the Lucida Pleiadum, and that time which Sir Isaac Newton affirms to the Argonautic expedition, the stars must have advanced more than 20 degrees in longitude; and a change of 20 degrees, at the rate of 1° in 72 years, requires 1440 years. Consequently, it may be said, his date of the Argonautic expedition cannot be less than 1500 years too late.

To this specious objection Newton might have replied, that Pliny reports the leaft of the morning-fitting of this star, in the age of Hevold, from a book of astronomy, of which
which he faves only, that it was extant under the name of 
Hefiod: and that this book could not be Hefiod's. For 
Hefiod speaks of Arcturus as rising at fun-fet 60 days after 
the winter solstice. And it is im-possible that any star of 
the Pleiades could set at fun-fet, on the day of the aumnrnal 
equinor, in the fame age when Arcturus rofe at fun-fet 60 
days after the winter solstice; or that these two circumstances 
of the sphere should be removed from each other by a les 
interval of time than the space of 1450 years. This book of 
almanac, extant in Pliny's time, under the name of Hefiod, 
must have been a fuppofitions work, and probably the im-
position of fome petty retailers of fience in the decline of 
the Grecian learning. The extravagant antipathy, which 
it gives to the Greek almanac, entirely destroys its 
credit.

According to Columella, Meton, and Euclenon, who 
published the lunar cycle of 19 years (see Cycle), and for 
this purpose observed the fummer solstice in the 316th 
year of Nabonafar, the year before the Peloponnewian war began, 
in which year the drive of the degree of Carcin, which is at leaft 7° more backwards than at fun, this 
terval answers to 502 years, which counted backwards from 
the year of obfervation, makes the Argonautic expedition 
fall upon the 44th year after the death of Solomon. Laftly, 
Hipparchus, who firft discovered that the equinoxes had a 
regular motion backwards, made his obfervations about 
the 602d year of Nabonafar, and fixed the vernal equinox 
in the fourth degree of Aries. Consequently, the equino-
cial points had receded eleven degrees since the Argonautic 
expedition, which is equivalent to 792 years, and which 
counted backwards, places the expedition in the 43d year 
after the death of Solomon. These coincidences are 
remarkable, and could not have placed the fame event so near 
the fame year, unlefs all the obfervations had been sufficiently 
exact. And when we cofider the coincidences of a great 
many more independent evidences, derived from the course 
of generation, and the order of fucceffion, with those which 
are deduced from aftronomical principles, nothing feems to 
be better eftablifhed than that the Argonautic expedition, 
and the whole Greek chronology of events, 
really happened about 43 years after the death of Solomon, 
and not in the days of Gideon, above 300 years before, as 
the common opinion has flated it.

The rising and setting of the flars with refpect to the 
rising and setting of the fun depend alfo upon the preceffion 
of the equinoxes. Any writer, therefore, who mentions the 
rising or setting of any flar, at any particular time of the 
year, with refpect to the fun, furnishes us with data fufficient 
to determine the time in which he wrote. Thus Hefiod 
tells us, that 60 days after the winter solstice the flar Arctu-
rus rofe juft at fun-fet; from which circumfance it is easily 
calculated that Hefiod flourifhed about 100 years after the 
death of Solomon, or in the generation, or age, next 
after the Trojan war, as Hefiod himfelf declares; and this 
affords another independent argument for the date affigned 
by Newton to that war, and the whole Greek chronology 
connected with it. Bishop Horfley, in his edition of New-
ton's works, obferves that he cannot deferve for Isaac 
Newton's conclusion from his premises. When Arcturus 
rufe at fun-fet 60 days after the winter solstice, he finds the 
longitude of that flar to have been 19° 28' 28", which 
exceeds its longitude on the primitive sphere by no more than 
1° 48'. Taking the longitude and latitude of Arcturus, 
each as it was in the primitive sphere, viz. the longitude 
19° 26' 52", the latitude 30° 52' 19"; he finds, that when 
the fun rufe at fun-fet, the fun's true place muft have been 
3° 10' 56' ; and according to the situation of the sphelion 
of the earth's orbit, which obferved in that age of the world, 
when the equinoxes were in 8° 6' 27", and 11° 6' 27", the fun was in this place 60 days after the 
winter solstice. So that the conclusion from this paffage of He-
fiot should rather be that he flourifhed in that very age when the 
Greeks firfl formed their sphere, that is, according to New-
ton's fystem, in the age of the Argonautic expedition. 
The bishop fuppofes the truth to be, that before the retrograde 
motion of the equinoctial points was discovered, all writers 
speak of the risings and fettinjs of the flars, as they were 
flated by the almanowers who firfl formed the sphere. This 
was probably the cafe with regard to Hefiod in particular, 
if he lived to near the age of the Argonautic expedition, 
and the beginning of the Greek phere, as fir Isaac fupp-
fores. No conclufion is therefore to be drawn, concerning 
the particular age of any writer, much older than Hip-
parchus, from what he may lay of the phenomena 
of the sphere; unlefs it be certain, that he was a prac-
tical almanower, and lived at fuch a distance of time 
that the diftance of time between Hefiod, and the firft 
maker of his sphere, might produce fensible changes in the 
seasons of the risings and fettinjs of the flars. Such writers might, 
indeed, without any knowledge of the motion of the equi-
noxes, decribe the phenomena according to their own ob-
ervations, and impute the difference, between what they saw 
and what their miflers had delivered, to the coortlenfs 
of the firft obfervations. Bishop Horfley, when he speaks of 
the appearances of the primitive sphere, means the appear-
ances in the latitude of 40° N., at that time when the ver-
al equinox was in 8° 6' 27" on the sphere of 1690.

Sir Isaac Newton having, by the confronting aids of 
Scripture and reafon, rectified the chronology of the Greeks, 
made ufe of this rectified chronology to adjust the com-
temporary affairs of the Egyptians, Affrians, Babylonians, 
Medes, and Persians. His elaborate fystem, however, has 
not elufed confufe. M. Freret and M. Soucek have attac-
hed it on much the fame ground; the former hath com-
ounded reigns and generations, which are carefully dif-
nfinguifhed in this fystem. The aftronomical obfervations of both 
have been confirmed by fir Isaac Newton himfelf, and by 
Dr. Halley. Phil. Tranf. Abr. vol. viii. part iv. p. 42 

Mr. Gibert, in a letter published at Amfterdam in 1754, 
has attempted to reduce the Babylonian, Egyptian, and 
Chaldean annals to our chronology. He begins with shew-
 ing, by the authorities of Macrobius, Eudoxus, Varro, Dio-
dorus Siculus, Pliny, Pinctarch, St. Augulfin, &c. that by a 
year the ancientf were of any planet in the heavens; fo that it confifted fometimes only of one day. 
Thus, according to him, the folar day was the aftronomical 
year of the Chaldeans; and the boifed period of 473,000 
years affigned to their obfervations is reduced to 1267 years, 
9 months; the number of years which elaped, according to 
Eufebius, from the firft discoveries of Atis in aftronomy, in 
the 384th year of Abraham, to the march of Alexander 
into Asia in the year 1588. of the fame era; and the feven-
teen thousand years added by Berofus, to the obfervations 
of the Chaldeans, reduced in the fame manner, will give forty-
seven years, and fix or seven months, being the exact interval 
between Alexander's march, and the firft year of the 151st 
olympiad, or the time to which Berofus carried his history. 
Epigenus attributes 720,000 years to the obfervations 
preferred at Babylon; but these, according to Mr. Gibert's 
fystem, amount only to 1071 years, three months, which 
differ from Calilhenes's period of 1903 years allotted to the 
fofe obfervations, only by 68 years, the period elaped from 
the taking of Babylon by Alexander, which terminated the 
letter
latter account, and to the time of Ptolemy Philadelphus, to which Epigenius extended his account.

Chronology facet. The systems of sacred chronology have been very various. Nor is this to be wondered at, since our three biblical copies of principal note give a very different account of the first ages of the world. The Hebrew text reckons about 4000 years from Adam to Christ, and to the flood 1656 years; the Samaritan makes this interval longer, and reckons from Adam to the flood only 1307 years; and the version of the Septuagint removes the creation of the world to 6000 years before Christ. The interval between the creation and flood, according to Eusebius and the Septuagint, is 2242 years; according to Josephus and the Septuagint, 2156 years; and according to Julius Africanus, Eusebius, Petavius, and the Septuagint, it is reckoned at 2262 years. Many attempts have been made to reconcile these differences; but none are quite satisfactory. See Epocha, Samaritan, &c.

Walton, and I. Volfius, give the preference to the account of the Septuagint. Walton's Prolegomena. Volfius Chronologia Sacra. Others have defended the Hebrew text. The reader may find an abstrait of the different opinions of learned men on this subject, in Strachinian's Brev. Chron. translated by Sauldt, p. 106, &c. and p. 176.

The more eminent writers on chronology, among the ancients are, Julius Africanus, in the third century; Dionysius Exiguus, Eusebius, and Cyril.

Among the moderns, Bede, Fudacius, Mercator, Lilius, Clavius, Scaliger, Vitus, Petavius, Caffini, Munster, Calvius, Hardouin, Capellus, Uther, Newton, Marsham, Helvius, I. Volfius, Pagii, Strachius, Perron, Blair, Playfair, &c.

It will be proper to add to the above account of the history and principles of chronology a few words on the construction and utility of Chronological Tables. By means of such tables history is reduced into a short compass, and the reader is aided in the study of it. Thus an entire course of history is easily comprehended, and at the same time a proper distinction may be observed between its several parts. If such tables confine of nothing more than an enumeration of the capital events in history, thrown together promiscuously, without any distinction of kingdoms, regard being only had to the order of time in which the events happened, they have their use. We thus see, at almost one view, the principal things which history records, and from the dates annexed to each article, we form an idea of the interval of time between one and another of them; such tables are often compiled for single histories; of this kind is the "short Chronicle" prefixed to "Newton's Chronology." But in a more complex and extended history, it will be useful to keep the separate parts distinct, and, for this purpose, to arrange them in different columns. By such means we obtain a distinct idea of the course of any single history, and at the same time a clear comparative view of the contingent state of any other history which was parallel with it. The neglect of this method has introduced confusion into the chronological tables published with the "Universal History," and the advantage resulting from it may be perceived in those of Marshall, Tallents, &c. Besides a distinct view of the succession of events in different histories, it is an advantage to have, in separate columns, an account of the "great men," in arts or in arms, which each age has produced. This has been exhibited by the italic mentioned authors and others. For this purpose two columns are quite sufficient; one for statesmen and warriors, and the other for men of learning and science. Another improvement in chronological tables has been to annex a variety of dates, in distinct columns, to every event, to save the reader the trouble of reducing the different methods of computation to one another.

But many chronologists have multiplied these different epochs far beyond any real use, to the great inconvenience of their page, and leaving little room for more valuable matter. Helvius furnishes an example of this kind. Four years are abundantly sufficient, viz. the year before and after Christ, and the Julian period to run through the whole extent of the work; the Olympiads for the course of the Grecian history; and the year of the city for the Roman. These are used by Blair. The list, and capital improvement in chronological tables, which has been effected in some measure by Tailents and Marshall, more perfectly in Helvius, but most completely by Blair, is to dispose the events in such a manner, that the distance at which they are placed, without attending to the date in the margin, shall give a just idea of the real interval of time between them. This is done by having a single line, or any fit interval appropriated to any certain period of time, or number of years. In the chronological tables engraved by Sturt, we see a great deal of matter, by a singular method, and the help of arbitrary and symbolical characters, crowded into a short compass; so that we see the state of the several kingdoms of Europe for any century since the Christian era in a single page. This author has also annexed an alphabetical index to his work, in which, by the help of symbols, he has exprest the character of every prince mentioned in his tables, and the principal events of his life. This small work is valuable for its equifences, but is not so much recommended by its difficulties. Genealogical tables are of very considerable use in substitution to those of a chronological kind; for an account of which, see Genealogy. Pieldley's Lectures on History, &c. 1788.

### CHRONOLOGICAL TABLE

**Remarkable Events, Discoveries, and Inventions, from the Creation to the Year 1807.**

| B.C. | 4004. — Creation of the world, at the autumnal equinox, on Tuesday, October 23, according to archbishop of the Julian period. | 4004. — Creation of Adam and Eve, on Friday, Oct. 28. |
| B.C. | 4003. — The Birth of Cain, the first who was born of a woman. | 4003. — The Birth of Seth. |
| 3875. — Abel murdered by Cain. | 3875. — The Birth of Seth. |
| 3874. — The Birth of Seth. | 3874. — The Birth of Seth. |
| 3870. — Enoch translated to heaven for his piety, at the age of 365. | 3870. — Enoch translated to heaven for his piety, at the age of 365. |
| 3317. — Birth of Methusalehm, who died at the age of 960. | 3317. — Birth of Methusalehm, who died at the age of 960. |
Chronology.

B.C.

1948.—Birth of Noah, who died at the age of 930.
1946.—Birth of Shem, who died at the age of 600.
2149.—Noah entered the ark on Sunday, Nov. 30th, and on Sunday, Dec. 7, it began to rain.
2348.—The Deluge.—On Wednesday, May 6, the ark reeled on mount Ararat.—On Friday, Dec. 18, Noah left the ark, built an altar, and offered sacrifice to God for his deliverance.
2347.—The tower of Babel is built about this time by Noah's posterity in the valley of Shinar, upon which God miraculously confounded their languages, and thus dispersed them into different nations.
2334.—Celestial observations begun at Babylon, a register of which was sent by Callithenes to Aristotle for 1923 years to the capture of that city by Alexander in the year 331 B.C.
2221.—The Chaldean monarchy founded by Nimrod.
2207.—The Chaldee monarchy founded, according to some historians.
2188.—The kingdom of Egypt commences under Mefraim, the son of Ham, which lasted for 1653 years, to the conquest of Canbytes, in the year 525 B.C.
2089.—The kingdom of Sicily established.
2259.—The kingdom of Affrnia begins.
1996.—Abraham born, who died 1924, A.H. 175.
1921.—The covenant made by God with Abraham, when the 436 years of sojourning commenced.
1897.—The covenant renewed with Abraham, his name changed to Abraham.—Circumcision instituted.

The cities of Sodom, &c. destroyed.

1896.—The death of Isaac.
1871.—Trial of Abraham's faith by the command to offer his son Isaac.
1856.—The kingdom of Arges begins.—Isaac marries Rebekah.
1837.—The 17th dynasty of the fife shepherd kings in Egypt begins, and continues 103 years.
1823.—Memnon, the Egyptian, invents the letters.
1795.—The reign of Ogyges begins 1020 years before the first olympiad.
1764.—The deluge of Ogyges, which laid waste Attica for more than 200 years, till the coming of Cecrops.
1759.—Jacob, blessed by his father, goes to Haran, and marries the two daughters of his uncle Laban.
1728.—Joseph sold into Egypt.
1715.—Joseph interprets Pharaoh's dreams, and is promoted.—The 7 years of plenty begin.
1708.—The 7 years of famine begin.
1706.—Joseph discovers himself to his brethren.
1702.—All the lands in Egypt, sold to Joseph, who let them out with a perpetual tax of a fifth part of their produce.
1689.—Jacob predicts the advent of the Messiah, and dies at 147.
1655.—Joseph foretells the egrets of the Israelites from Egypt, and dies at 110, having been prefect of Egypt for 80 years. His death terminates the book of Genesis, containing a period of 2509 years.
1615.—The Ethiopians, coming from the Indus, settle in the neighborhood of Egypt.
1582.—The chronology of the Arundelian marbles begins, at which time Cecrops is supposed to have come into Attica.
1574.—Aaron born, and in the following year Pharaoh pub-

ifies an edict for drowning all the children of the Israelites.

1571.—Moses born.
1556.—Cecrops brings a colony of Saites from Egypt into Attica, and founds the kingdom of Athens, 780 years before the tilt olympiad.
1546.—About this period Scamander comes from Crete into Phrygia, and begins the kingdom of Troy.
1531.—Moses visits the Israelites; flies into Midian, and continues there 40 years.
1503.—The deluge of Phocailion in Thessaly.
1497.—The council of Amphionis established.
1493.—Cadmus carried the Phoenician letters into Greece and built the citadel of Thebes.
1491.—God appears to Moses in a burning bush, and sends him into Egypt, where he performed many miracles, and inflicted on Pharaoh 10 successive plagues, till he allowed the Israelites to depart, in number amounting to 600,000 besides children, on Tuesday the 3d of May, which completed the 430 years of sojourning. On Monday, May the 11th, Moses opened a passage for the Israelites through the Red Sea into the desert of Etham, when Pharaoh's host attempting to follow them, were drowned; about the 22d of June they arrive in the desert of Sinai, near mount Horeb, where they remain near a year, during which Moses receives from God and delivers to the people the 10 commandments, with other laws, and sets up the tabernacle, containing the ark of the covenant.
1490.—Sparta built by Lacedemon.
1485.—The first ship that appeared in Greece, brought from Egypt by Danaus named Arimais.
1480.—Troy supposed to have been built by Dardanus.
1473.—The first Olympic games celebrated at Elis by the Idæi Daësty.
1452.—The 5 books of Moses written in the land of Moab, where Moses died in the following year. B.C. 110.
1451.—The Israelites, under Joshua, pass Jordan and enter Canaan, on Friday, April 30.
1445.—Joshua divides the land of Canaan, and reaps from his conquests the sabbatical year, which begins from the autumnal equinox.
1426.—Joshua dies at Timnath-Scecloth. B.C. 110.
1415.—The Israelites, foat into ida-chevy, continued in slavery under Cushan, king of Melopotamia, for 8 years.
1405.—Minos gives laws to the Cretans, and acquires a great maritime power. Iron is found by the Idæi Daësty from the accidental burning of the woods of mount Ida in Crete.
1425.—Othnuel, the first judge of Israel, defeats Cushan, and gives rest to Israel, in the 40th year after that given them by Joshua.
1390.—Benjamin almost totally destroyed by the other 11 tribes, Phineas being high-priest.
1383.—Ceres came to Athens, and taught them to sow corn.
1356.—The Eleusinian mysteries first introduced at Athens.
1344.—The kingdom of Mycene begins about this time, when the kingdom of Argos was divided; Mycene forming the most considerable part.
1343.—The Israelites, relating into idolatry, expelled by Eglon, king of Moab, for 18 years.
1326.—The Ethopianames first instituted.
CHRONOLOGY.

B.C.

1085.—The Israelites obtain a king, and Saul anointed king.
1095.—The Israelites obtain a king, and Saul anointed king.
1094.—Saul rejected, and David anointed king.
1085.—The kingdom of Assyria ends; others say in 1070.
1070.—The kingdom of Athens ends in Codrus, and governed by archons.
1058.—The Peloponnesians, the 2d people who acquire the maritime power of the Mediterranean.
1055.—Saul consults the witch of Endor, and kills himself on Mount Gilboa.
1048.—Jerusalem taken by David from the Jebusites, and made the seat of his kingdom.
1044.—The migration of the Ionian colonies from Greece, 60 years after the return of the Heracleides, and their settlement.
1034.—David reproved by Nathan, and repents.
1013.—Abdolam rebels, and is killed by Joab.
1012.—Solomon begins to build the temple, 480 years after the exodus from Egypt; others say in 1016.
1004.—The temple dedicated on Friday, October 30th, 1003 years before Christ; others say in 1005.
1000.—The Thracians acquire the maritime power of the Mediterranean, about this time, and hold it for 45 years.
996.—Solomon's fleet prepared in the Red Sea, and sent to Ophir.
972.—Solomon's palace finished, which with the temple employed him 20 years.
986.—Samos, in the island of the same name, and Utica, built about this time.
975.—The division of the kingdom of Judah and Israel; others say in 979.
971 or 974.—Sefak, king of Egypt, takes Jerusalem, and plunders the temple and palace.
926.—Lycurgus, the Spartan lawgiver, is born, 150 years before the 8th olympiad.
916.—The Rhodians are the 4th who acquire the maritime power of the Mediterranean, and hold it for 23 years.
907.—Homer wrote his poems and flourished.
920.—The kingdom of Assyria ends.
896.—Elijah the prophet is taken up into Heaven.
893.—The Phrygians are the 7th people who acquire the maritime power of the Mediterranean.
884.—Lycurgus, after travelling 13 years, establishes his laws in Lacedaemon.—Iphitus, Lycurgus, and Cleothus, restore the Olympic games at Elis, 108 years before the vulgar era of the 8th olympiad.
872.—The art of sculpture in marble laid to be found out.
869.—Phidion, king of Argos, invented scales and measures, and coined silver at Argina.—The city of Carthage is built by queen Dido about this time; others say it was enlarged by this queen in 864.
868.—The Cyprians are the 6th who acquire the maritime power of the Mediterranean.
839.—The army of Hazel, king of Syria, desolates a great part of the kingdom of Judah.
826.—The Phenicians are the 7th who acquire the maritime power of the Mediterranean.
820.—Nineveh is taken by Arbaces, and Belus, which annihilates the kingdom of Assyria.—Sardanapalus burns himself to death.—The kingdom is subdivided.
814.—The kingdom of Macedon begins, and continues 646 years, till the battle of Pydna.
CHRONOLOGY.

B.C.

514.—Cyrus, in Campania, built.

777.—The kingdom of Lydia begins.

793.—Amos the prophet flourished, and began his prophecies.

878.—The Egyptians are the 8th who acquire the maritime power of the Mediterranean.

879.—The Corinthians invented ships called Triremes.

799.—The race of kings ended at Corinth, and was succeeded by annual magistrates, called Provantes.

875.—Corinthus conquered in the 28th olympiad from their institution by Iphitus, though vulgarly called the first olympiad, which, according to Scaliger, was celebrated on the 23d of July.

870.—Phul invades the kingdom of Israel, and is bribed to depart with 1000 talents.

870.—The Ephori established at Lacedaemon by Theopompus.

877.—Itah begins to prophesy, and continues his prophecies for above 60 years; was slain suddenly by order of Manasses in 676.

874.—The decennial archons begin at Athens.—Micaiah the prophet.—The Milesians are the 9th who acquire the maritime power of the Mediterranean.

873.—Rome is built, according to Varro, April the 20th, or the 12th of the calends of May.

870.—The rape of the Sabines.

871.—The Romans and Sabines unite.—The era of Nabonassar begins.

873.—The first war between the Messenians and Lacedaemonians begins, and continues 19 years.

874.—The Carians about this time have the command of the Mediterranean.

872.—Syracuse built by a colony of Corinthians under Archias; others say in 758.

871.—Habbakuk the prophet.

874.—The 1st Messenian war ended by the capture of Ithome, which rendered them vassals to the Lacedaemonians.

872.—The Chinefe empire divided into principalities.

871.—Samaria, after 3 years siege, taken.—The kingdom of Israel finished by Salmafer, king of Assyria, who carried the ten tribes into captivity.—The 1st eclipse of the moon on record, according to Ptolemy, March 10th, 3 hours 20' before midnight.

872.—The 2nd and 3rd eclipse of the moon on record; the 2d on March 4th, 50' before midnight; and the 3d on September 18th, 4 hours 20' before midnight, according to the meridian of Alexandria.

871.—Inefficuial siege of Tyre for about 5 years by Salmafer, king of Assyria.

873.—Gela in Sicily founded.—Sancherib's army destroyed in one night by an angel, to the amount of 185,600 men.

790.—The Salii, an order of priests, instituted by Numa.

797.—Eebatana built by Dejoces.

797.—Tarentum built by the Lacedaemonian balleards, called Parthenians, on being expelled Sparta.

873.—Corona built by the Corinthians.

870.—Holofernes besieged Bethulia, and killed by Judith.

876.—Archilochus the poet flourished, and invented the Iambic verse.

875.—The second Messenian war begins, and continues 14 years.

874.—Athens begins to be governed by annual archons. —Tyrtæus the poet flourished.

873.—The Lacedaemonians defeated by Arilomnes.

B.C.

688.—Affaradinus, or Esarhaddon, king of Assyria, takes possession of Babylon—the chariot race instituted at the Olympic games.

678.—Dejoces extends the Median empire to the river Halys.

677.—Manasseh king of Judah is taken prisoner, and carried in chains to Babylon.

676.—The Lacedaemonians about this time acquire the command of the Mediterranean, and retain it about sixty-nine years.

675.—The festivals of Caria instituted at Sparta, annual in August, and continued nine days—Terpander the poet the first victor.

673.—Terpander added about this time 3 frings to the lyre.—Thatchus of Gortynius, in Crete, the musician.

671.—The second Messenian war finished after a siege of eleven years, and the Messenians expelled the Peloponnesus.

670.—Achaman of Sardis, the lyric poet.

667.—The combat between the three Horatii and the three Curiatii.

665.—The city of Alba destroyed—the Messenians settled in Italy—war between the Romans and the Fidenates.

679.—Cypræus usurps the government of Corinth, and retained it for 30 years.

678.—Byzantium built by a colony of Argives, or, according to some of Athenians and others—otherst say, it was built in 670, 17 years later than Chaledon.

651.—A five years' war between the Romans and Sabines begins.—Cyrine in Africa founded.

648.—The Thoth of the year of Nabonassar was on February 18th, having shifted 25 days in 100 years.

641.—Amon, king of Judah, treacherously put to death by his domestic servants.

636.—The Tartars defeated the Chinese with great slaughter.

631.—War between the Romans, and the Fidenates and Sabines, which continues, at intervals, for fifty years.

630.—Cyrine built by Battus, who begins that kingdom.

629.—The government of Corinth usurped by Periander.

627.—Jeremiah the prophet.

626.—Zephaniah the prophet.

625.—The Pentateuch found by Hilkiah.

624.—The Scythians invade Media, Lydia, &c. and keep possession of several provinces for 28 years.—Draco the lawgiver, archon at Athens.

623.—Draco establishes his laws at Athens.

621.—A war between the Lydians and Milefeans, which continues eleven years. The fourth eclipse on record, which was of the moon, on Saturday April 22d, three hours after midnight, according to the meridian of Alexandria.

619.—Necho about this time began the canal between the Nile and the Red Sea; but did not finish it.

608.—Josiah, king of Judah, slain at Megiddo by Pharaoh Necho, king of Egypt.

607.—Alcæus the poet flourished.

606.—Nineveh taken and destroyed by the joint armies of Cyaxares and Nabopolassar.

605.—The first captivity of the Jews, dated by others in 606.

664.—By Necho's order some Phœnicians about this time failed
failed from the Red Sea round Africa, and returned by the Mediterranean.

500. — Sappho the Lyric poetess.

597. — Jehoiachin, king of Judah, carried captive to Babylon by Nebuchadnezzar.

596. — The Scythians expelled upper Acha by Cyaxares, after 28 years prodigiously. — Epimenides of Crete, the first builder of temples in Greece.


593. — Ezekiel the prophet.

592. — Anarchars the Scythian.

591. — The Pythian games first celebrated at Delphi.

590. — The Lydian war begins, and continues 6 years.

587. — The city of Jerusalem taken by Nebuchadnezzar after a siege of 18 months, June the 19th.

586. — The temple of Jerusalem burned on the seventh day of the fifth month.

585. — A battle upon the river Halys between Cyaxares and Halysates, interrupted by an eclipse of the moon, May the 28th, which was predicted by Thales — this brought the Lydian war to a conclusion. — 

582. — The Ithmian games restored.

580. — Money first coined in Rome.

579. — The Megaridian war. — Stefarchus the poet flourished.

572. — Tyre taken by Nebuchadnezzar after a siege of 13 years.

571. — Apries, king of Egypt, dethroned by Nebuchadnezzar.

569. — Daniel interpreted Nebuchadnezzar's dreams, according to Josephus.


566. — The first census at Rome — 84,700 citizens.

562. — The first comedy at Athens, acted upon a scaffold by Sufarion and Dolon, the inventors of comedy.

560. — Pheidias first usurped the tyranny of Athens, which he recovered after expulsion in 557, and from which he was again expelled in 556.

549. — Daniel the prophet delivered his predictions. — Cyrus ascended the throne of Persia.

556. — Anaximenes of Miletus flourished.

530. — Cyrus king both of Media and Persia. — The kingdom of Lydia ended, after a subversion of 249 years.

549. — Thucydides the poet flourished. — The Pheidias turned the temple of Apollo at Delphi.

548. — Creusus having crossed the Halys by an artificial bridge contrived by Thales, is defeated by Cyrus.

539. — The Phocceans, leaving their native country, settle in Gaul, and build Marseilles. — Pythagoras flourished.

538. — Cyrus takes Babylon, and terminates the kingdom of Babylon.

537. — Simonides of Cea, the poet, flourished.

536. — Cyrus issues an edict for the return of the Jews, and rebuilding the temple, the foundations of which were laid in the second month of the second year after their return. — Thespis the inventor of tragedy lived.

535. — The first tragedy acted about this time at Athens, by Thespis in a waggion. — According to the Arundelian marbles in the preceding year.
CHRONOLOGY.

B.C. 455.—Cassius punished for usurping the sovereignty.—The Volcae and Equi subdued.
484.—Aristides banished from Athens.—Xerxes recovers Egypt, and commits the government to his brother Achemenes.
483.—Quilicius first created at Rome.—An eruption of mount Etna.
481.—Xerxes begins his expedition against Greece.
480.—The affair of Thermopylae finished, Aug.—The Persians defeated at Salamis in a sea-fight, Oct. 20th.—Pindar the lyric poet flourished, ob. 425, at. 86.
479.—The Persians, under Mardonius, defeated at Platæa, Sept. 22d—on which day occurred the battle of Mycale.—War between the Romans and Heretians.—Charon of Lampsacus, the historian, lived.
477.—The 360 Romans, of the name of Fabius, killed by the Veientes near Cremona, July 17.
476.—Valerius triumphed over the Veientes and Sabines, 100,000 citizens in Rome.—A great eruption of mount Etna.
471.—Themistocles, accused of conspiring against the liberty of Greece, retires to Xerxes in Asia.
470.—Cimon defeats the Persian fleet at Cyprus, and the army near the river Eurymedon in Pamphylia.—An eruption of mount Etna.—Anaxagoras of Clazomenae, the philosopher, ob. 428, at. 72.
469.—The first fœliciæ content between the tragic poets, when Sophocles, at 28 years of age, was declared victor over Æchylus.—An earthquake at Sparta.
—Capua founded by the Tufcans.
466.—The Syracusans recover their liberty, and maintain it for 61 years.
463.—Egypt revolts from the Persians, under Inaros, but obtains the affiance of the Athenians.—A great pestilence in Rome.—Sophocles, the tragic poet, ob. 464, at. 91.
462.—The Persians defeated by the Athenians, in a naval engagement, in Egypt.
461.—Earthquakes and numerous prodigies in Rome.
460.—The 3d Meffian war with the Lacedæmonians begins, and continues 10 years.—The tribunes contend with the confuls about making laws.
459.—The Athenians begin to exerise tyranny over the other Grecian states.
458.—Ezra sent from Babylon to Jerusalem with the captive Jews, and vefiels of gold and silver, &c. by Artaxerxes, in the 7th year of his reign, being 70 weeks of years, or 409 years, before the crucifixion of our Saviour.—Cincinnatus appointed dictator.—War between the Corinthians and Megara.
456.—The Athenians, deftroyed by the Egyptians, retire out of Egypt by capitulation with the Persians.—Nehemiah the prophet.—The ludi faciliæ celebrated for the fiirth time at Rome.—The tribunes affert their right of convoking the senate.
454.—The Romans fend deputies to Athens for a copy of Solon’s laws.—An eruption of Etna.
453.—Arilarchus the tragic poet.
451.—The decemvirs created at Rome, and the laws of the 12 tables compiled and ratified.
450.—Cimon triumphed over the Persians by sea and land.
—Zaleucus the lawgiver of Locri.
449.—The decemvirs banished.—The Persians make an ignominious peace with the Greeks.

B.C. 448.—The 1st sacred war about the temple of Delphi.—Hellenias the historian, ob. 411, at. 85.
447.—The Athenians defeated by the Boeotians at Corinth.
446.—A 50 years’ truce between the Athenians and Lacedæmonians.—Charondas the lawgiver of Thurium.—Thucydidès, the Athenian general, banished by oligarchiæ.
445.—Herodotus reads his history in the council at Athens, and receives public marks of honour, at the age of 39 years.—Military tribunes with confular power created at Rome.—Nehemiah returned to rebuild the walls of Jerufalem.
444.—The Athenians lend a colony to Thurium in Italy, of which number were Herodotus, Thucydidès, and Lytus.—Empedocles, of Agrigentum, the philosopher, flourished.
443.—Cicero first created at Rome.—Herodicos called the gymnastic physician.
442.—Proloud and universal peace.—Eupipides first gained the prize of tragedy at Athens, at the age of 43 years, ob. 427, at. 78.
441.—Artemes of Clazomenae invented the battering-ram, the testudo, and other military instruments.—Pencles subdued Samos.—A great famine at Rome.
440.—Comedies prohibited at Athens, which continued for 3 years.—Phidias the sculptor flourished, ob. 432.
439.—War between Corinth and Corydra.—Acron the physician called the empire.
437.—Cratius, the comic poet, ob. 431.
436.—Malachi, the laft of the prophets, delivered his predictions.
435.—Phidias taken by the Romans.—The Corinthians defeated by the Coryczans.—Expuls the comic poet lived, ob. post 415.
434.—Aristophanes, the comic poet, ob. post 389.
433.—The temple of Apollo consecrated.—A comet appeared in China.
432.—The Metonic cycle begins. See CYCLE. Meton ob. post 415.
431.—The Peloponnesian war begins May 7, and continues near 27 years.—Eutæmon the astronomer.
430.—The history of the Old Testament finishes about this time.—A plague at Athens for 5 years, which was of great extent.
429.—Socrates the philosopher flourished, ob. 430, at. 70.
428.—Democritus of Abdera, the philosopher, ob. 361, at. 109.
427.—Gorgias of Leontium, the orator, ob. 400, at. 108.
426.—The plague broke out at Athens a second time.—Thucydidès, the historian, flourished ob. about 391, at. 80.—An eruption of Etna.
425.—Hippocrates of Cos, the physician, ob. 376, at. 99.
424.—Aristophanes’ first comedy of the Clouds first acted against Socrates.
423.—A truce between the Lacedæmonians and Athenians, which lasted from about the 3d of October to the 12th of April following.
421.—A peace of 50 years, concluded April 10th, between the Lacedæmonians and Athenians, kept for 6 years and 10 months.
420.—Alcibiades, the Athenian general, ob. 404, at. 40.
419.—Protagoras of Abdera, the sophist.
418.—A signal victory gained by the Lacedæmonians over the Argives and Mantuans.

416.
CHRONOLOGY.

B.C.

416.—The Agrarian law moved at Rome.

413.—Parrhais, of Ephesus, the painter.—Alcibiades accused at Athens.

414.—Egypt revolts from the Persians.—The 2d part of the Peloponnesian war called the Decelian begins; the scene of it Sicily.

413.—A lunar eclipse, August 27, by which Nicias was so terrified, that he left the Athenian army in Sicily.

412.—The Athenians, on account of their misconduct in Sicily, are deserted by their allies.—Lyfias the orator, ob. 379, xt. 81—400 persons elected to the government of Athens.

410.—The Lacedaemonians defeated at Cyzicum by the Athenians.—Three quarters elected for the first time at Rome.—The history of Thucydides ended, and that of Xenophon begun.—The Carthaginians attacked Sicily.

408.—The Romans defeated the Volsci.—The Athenians become masters of the Hellespont.—The Medes, after a revolt from the Persians, obliged to submit.

407.—The Carthaginians renew their attack on Sicily.

406.—Agathon the comic poet.

405.—The Athenian fleet of 180 ships totally defeated at Aegopontamos by Lyfander.—Syracuse usurped by Dionyfius.—Cebe the philosopher.

404.—Athens taken by Lyfander, which finishes the Peloponnesian war.—Athens governed by 30 tyrants.—Euclid of Megara, the philosopher.

402.—Telles of the dithyrambic poet.

401.—Cyrus killed in an expedition against his brother, Artaxerxes.—The retreat of 10,000 Greeks from Babylon under Xenophon.—The 30 tyrants expelled Athens by Thratybulus, and the democratic government established.

400.—Socrates put to death by the Athenians.—Xenophon, the philosopher, called the Attic muse, ob. 359, xt. about 50.

399.—The seal called Leiblenum instituted at Rome.

398.—Military catapulta invented about this time by Dionyfius.—Cefias, the physician and historian, ob. after 384.—Many prodigies at Rome.

397.—War against the Carthaginians by Dionyfius of Syracuse, continues five years.—Zeuxis of Hrcalea, the painter.

396.—Antithenes, called the Cynic philosopher.

395.—An alliance of the Athenians, Thbeans, Corinthians, and Argives, against the Lacedaemonians.

394.—A sea-fight at Cnidus, between the Persians and Lacedaemonians.—Contests at Rome about the Agrarian law.—The Corinthian war begins.—The history of Thesppeius ended.—Archytas of Tarentum, the Pythagorean philosopher and mathematician, ob. about 360.

393.—Argives become masters of Corinth.

390.—The battle of Allia, in which the Romans were defeated by the Gauls, who marched to Rome, which was taken and burned.

389.—Plato’s first voyage into Sicily, ob. 345, xt. 81.

388.—Rhegium taken by Dionyfius.—Philoctenus, the dithyrambic poet.

387.—The peace of Antaleidas between the Lacedaemonians and Persians.—152,583 effective men in Rome.

—Damon and Pythias, the Pythagorean philosophers and friends.

385.—The war of Cyprus finished, after a duration of two years, and given up by the Persians.

B.C.

380.—Hesius of Chalcis, the Athenian orator, ob. about 360.

378.—Heraclides the rhetorician, ob. 388, xt. 97.

377.—The Lacedaemonians defeated in the sea-fight at Naxus, Sept. 20th.—Arctic of Cyrene, the female philosopher.

376.—Artaxerxes concludes a peace with the Greeks.—The Lycian law proposed in Rome.

374.—The unsuccessful expedition of the Persians under Artaxerxes in Egypt.—Philolaus, the Pythagorean philosopher.

373.—A great earthquake in Peloponnesus —A comet appeared in Greece, &c.

372.—Diogenes, the Cynic philosopher, ob. 354, xt. 90.

371.—The battle of Leucipa, July 8th, in which the Lacedaemonians were defeated by the Thebans under Epaminondas.

370.—The Macedonians return to Peloponnesus, after a baptism of about 300 years.

368.—Endeans about this time brought the celestial sphere from Egypt, and carried it into Greece, ob. about 352, xt. 53.

367.—The populace at Rome obtain the privilege of having one of the consuls a Plebeian.—The Gauls, who invaded the Roman territories, were defeated by Camillus.—The Lycian law passed.

365.—The Romans renew the custom of fixing the chronological nail in the temple of Jupiter, on the 13th of September.—Ivyx places it in the next year.

363.—The battle of Mantinea, in which Epaminondas was killed.—Arilippus jun. the Cynic philosopher.

362.—Revolt of several Persian governors in Lesser Asia against Artaxerxes.

360.—Philip’s first battle, gained at Methon, over the Athenians.—Plato’s second voyage into Sicily.

359.—Philip’s second battle gained over the Illyrians.—The obliquity of the ecliptic 23° 49’ 10’.

357.—The second pitched war begins.—Dionyfius jun. expelled Syracuse by Diom.—Arilippus observed the moon’s transit over Mars, April 4th.

354.—Dion put to death.—Thopomous of Chios, the orator and historian.

353.—The Phocaeans defeated in Thespia by Philip.

352.—Ephorus of Cyme, the historian.

351.—The Sidonians besieged by the Persian army; burn their city; and put themselves to death.—The monument of Manes erected.

350.—Egypt conquered by Ochus.

348.—Philip of Macedon, having taken all the cities of the Phocaeans, concludes the faced war.—Speusippus, the academic philosopher, ob. 339.—A comet appeared in Greece.

347.—Dionyfius recovers Syracuse.

345.—Arilippus the philosopher flourished, ob. 322, xt. 61.

343.—War between the Romans and Samnites begins, and lasts 17 years.—Timoleon recovers the liberty of Syracuse; banishes Diontius, and settles a democracy.—Pythagoreus of Rhodes, the painter, ob. about 320.—The Syracusan zea commenced.

—Philip makes Thrace tributary.—A pestilence at Rome.

341.—A comet appeared, near the equator, in Greece.

340.—The Carthaginians defeated by Timoleon near Agrigentum, July 13th.

339.—Xenocrates, the academic philosopher, ob. 314, xt. 82.
### CHRONOLOGY.

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CHRONOLOGY.

B.C.

241.—A variation of the N. star, in the side of the front of Scorpio. — Lycon, the Peripatetic philosopher, ob. 226, at. 74.

259.—Silver first coined at Rome. — Crates, the Academic philosopher, ob. about 250.

268.—Athens taken by Antigonus Gonatas, who retains the government 12 years. — Berossus, the Chaldean historian.

267.—Hermachus of Mytilene, the Epicurean. — Ptolemy made a canal from the Nile to the Red Sea.

265.—A census at Rome. — 292,226 citizens.

264.—The first Punic war. — The chronicle of Carthage, or the Arundelian marbles, compiled. — Cleanthes, the Stoic philosopher, ob. about 240, at. 80.

263.—Homer, jun. the tragic poet.

262.—The battle of Sardis. — Timotheus of Sicily, the historian, ob. at. 96. — The transit of Mercury over the bull’s horn, April 26. Mercury being in 23° Taurus, and the sun in 20° 30’ Vir.

251.—The Romans first concerned themselves in naval affairs. — Menetho, the Egyptian historian.

250.—The Carthaginians defeated at sea by the Romans. — Callimachus of Cyrene, the poet, ob. about 244.

250.—Zabolus the critic, called Homer-Mal............... (continues).

258.—Darius of Samos, the historian.

257.—Naunites of Cyzicus, the orator and historian.

256.—Regulus defeated and taken prisoner. — Athens restored to its liberty by Antigonus. — Ctesibius, the historian, ob. at. 104.

255.—Sosibius of Lacedaemon the critic.

254.—Hieronymus of Rhodes, the Peripatetic philosopher.

253.—A census at Rome. — 297,807 effective men. — The Carthaginians masters of the sea.

251.—Aratus with his fellow citizens join the Achaean league.

250.—The Parthians revolt from the Macedonians.

249.—The sea-fight of Drepanum, in which the Romans are totally defeated by the Carthaginians.

248.—Antigonus Caryllus, the historian.

247.—Iphitus the son of Sirach. — A census at Rome. — 251,212 citizens.

246.—Ah the records, &c. in China destroyed. — Ptolemy kills Labeis, queen of Antiochus, and overruns great part of Syria. — Canon of Samos, the astronomer, ob. after 223.

245.—Eratosthenes of Cyrene, librarian of Alexandria. — ob. 194, at. 82.

243.—The citadel of Corinth taken by Aratus. — Sphairus, the Stoic philosopher and historian.

242.—The Carthaginians defeated. — The first Punic war terminated. — Apollonius of Perga, called the great geometrician.

241.—Aegus king of Sparta, attempting to settle an Agrarian law, is put to death. — Laocydes, the philosopher, of the second Academy, ob. after 215. — September the 3d, Jupiter observed in 20° 33’ Vir, and in conjunction with the S. star of Aries.

240.—The first play acted at Rome, being that of Livius Andronicus, the first Roman dramatic poet.

239.—Chryseippus of Cilicia, the Stoic philosopher, ob. 207, at. 73.

238.—The Carthaginians finish the Libyan war. — Polybius, the Epicurean philosopher.

B.C.

237.—Hannibal leads a Carthaginian army into Spain, with his son Hannibal. — Euphorion of Chalces, the poet, ob. about 220, at. 56.

236.—The Tartars expelled from China. — Archimedes of Syracuse, the mathematician, ob. 212.

235.—The temple of Jove burnt the first time after Numa and universal peace. — M. V. M. Calpurnius, the Roman painter, ob. after 226.

234.—The Sardinian war begins. — C. Nævius, the comic poet, ob. 203.

232.—The Agrarian law revised. — The Gauls revolt.

231.—The first divorce at Rome. — Sardinia and Corsica subdued by the Romans.

230.—Apollonius the Rhodian, the poet and third librarian of Alexandria. — Eratosthenes observed the obliquity of the ecliptic to be 23° 51’ 20’.

229.—The Romans declare war against the Illyrians.

228.—The Roman ambassadors first appear at Athens, C., c. — Philochorus of Athens, the historian.

226.—Arístoc Cæs, the Peripatetic philosopher, ob. about 183.

225.—Cleomenes kills the Ephors, and restores the Agrarian laws of Sparta. — The Gauls enter Italy and are defeated. — Fabius Pictor, the first Roman historian.

224.—The Romans for the first time crossed the Po. — The Colossus of Rhodes thrown down by an earthquake.

221.—Physiarchus, the historian.

220.—A census at Rome. — 270,213 citizens. — The civil war in Greece begins, and continues three years.

219.—Plautus of Umbria, the comic poet, ob. 184.

219.—Seguntum taken and destroyed by Hannibal. — Archagathus, the 1st physician at Rome. — The art of surgery introduced into Rome.

218.—The second Punic war begins with Hannibal’s passing the Alps, and continues 17 years.

217.—The Romans defeated at Thapsylene.

216.—The Romans totally defeated in the battle of Cannæ.

215.—Evander, the philosopher of the second Academy.

214.—Syracuse, after a siege of three years, taken by Marcellus.

210.—Hermippus of Smyrna, the Peripatetic philosopher, and grammarians.

207.—Asdrubal defeated and killed by Claudius Nero. — Zeno of Tarsus, the Stoic philosopher.

205.—Ennius of Calabria, the poet, brought to Rome by Cato the quaker, and first gave harmony to the Roman poetry. — Sotion of Alexandria, the grammarian.

204.—Scipio besieged Utica.

203.—Scipio in one day took the two camps of Asdrubal and Syphax. — Hannibal recalled.

202.—Scipio defeated Hannibal at Zama, Oct. 19.

201.—Peace obtained on very ignominious terms, by the Carthaginians, and the close of the second Punic war.

200.—The first Macedonian war begins, and continues near 14 years. — Arilophanes of Byzantium, the grammarian, ob. at. 83.

198.—Sidon taken by Antiochus; after the battle of Panium. — Aielepides Myrhanus, the grammarian.

197.—The Romans send two pretors into Spain. — Defeat of Philip Cynocephalus. — Licinius Tegula, the comic poet.
B.C.
196. —Caecus Lælius, the Roman orator.—The Roman senators first met in the orchestra at the funereal games.
195. —Aristionymus, the fourth librarian of Alexandria, ob. 27 B.C.
194. —Sparta and Thrace Spain subdued by the Romans.
193. —Hyginus of Pergamus, philosopher of the second Academy.

192. —The war of Antiochus the Great with the Romans begins, and continues 11 years.—A census at Rome — 243,704 effective men.
191. —Earthquakes at Rome, 38 days.
190. —The Romans under Scipio defeat Antiochus in the battle of Magnesia.
189. —The Romans make peace with Antiochus.—Amphictyonic levy first brought to Rome by the spoils of Antiochus.

188. —Philipus menobles the Lacedæmonians to renounce the laws of Lycurgus.
187. —Antiochus defeated and killed in Media, after plundering the temple of Jupiter Belus in Elymais.—Scipio Africanus banished from Rome.
186. —Dogenes of Babylon, the Stoic philosopher.
185. —Philipus menobles and defeated and killed by Dinocrates, tyrant of the Mæsians.—Critolus Philættes, the Peripatetic philosopher, ob. about 143.—The Transalpine Gauls march into Italy.
182. —The stars appeared in China in the day time.
181. —Pelliclura at Rome.
180. —Demetrius, accused by his brother Peræus, is put to death by his father Philip.—Statius Cecilius, the comic poet, ob. after 166.
179. —A census at Rome — 273,244 effective men.—Some books of Numa found at Rome in a Roman coffin, supped on by Livy to be forged—and burned.
177. —Agarbalcides of Cnidian, the historian.
176. —Heracleides, called Lembus, the historian.
175. —A great earthquake in China.—Pelliclura at Rome.
173. —Euménes finishes the 12th book of his annals.—Attalus of Rhodes, the astronomer and grammarian.
172. —A comet appeared in China, in the call.—Antiochus's first expedition in Egypt.
171. —The 2d Macedonian war begins.—Antiochus defeats Ptolemy's generals.
170. —Paper invented in China.—Antiochus takes Jerusalem, and plunders the temple.—An invasion of the Tartars into China.—Metrodorus, the philosopher and painter of Athens, afterwards carried to Rome by Æmilius.
169. —A census at Rome — 212,805 citizens.
168. —Peræus defeated in the battle of Pydna.—An eclipse of the moon preceding the preceding night, foretold by Gallus.—C. Sulpius Gallus, the tribune, and 18 Roman almoner.
167. —The 1st library erected at Rome, consisting of books brought from Macedon.
166. —Terence of Carthage, the comic poet, ob. 159, at 35. His first play, Andria, acted at Rome.—Apollo- nius killed by Judas Maccæus.
165. —Judas purified the temple of Jerusalem.—An eruption of Ætna.—Crates Mallo of Pergamus, called the critic.
164. —A census at Rome — 327,032 citizens.—Polybius of Megalopolis, the historian, ob. 124, at 82.
163. —The government of Judea under the Maccabees begins, and continues 126 years.—M. Pacuvius, the tragic poet, ob. about 131, at 90.

B.C.
162. —Hipparchus begins his astronomical observations at Rhodes, and continues them for 34 years.—Demetrius takes possession of Syria.
161. —The philosophers and rhetoricians banished from Rome.
160. —Terence's last play, Adelphi, acted at the funeral of P. Æmilius.—Carusades of Tyre, the philosopher, and author of the 3d or new Academy, ob. 128, at 90.
159. —Time measured at Rome by water, invented by Scipio Naïca.
158. —An invasion of the Tartars into China.—Hipparchus observed the autumnal equinox on Sunday, September 27, about mid-day.
157. —A comet appeared in China, in the 5th month.
156. —Several temples of Pergamus plundered by Præfla, king of Bithynia.—Andromachus of Alexandria, the great grammarian, ob. 124.
155. —Andrillus, perforating the ion of Peræus, assumes the tyranny of Macedon.
150. —Demetrius, king of Syria, killed by A. Balas.—Arístobulus of Alexandria, the Jew and Peripatetic philosopher, ob. after 124.
149. —The 3d Punic war commenced, and continued 3 years.—Præfla put to death.
148. —Jonathan Maccæus defeats Apollonius in the battle of Azotes, and takes that city and Acalon.—A comet appeared in the N. part of China, in the 4th month.—Saturus, the Peripatetic philosopher and historian.
147. —A census at Rome — 322,000 citizens.—The Romans make war against the Achæans.
146. —Carthage destroyed by P. Scipio, and Corinthus by L. Mammius, who brought to Rome from thence the finest fine paintings; of which the two principal were Bacchus by Ariðides, and Hercules in torture.—Hipparchus observed the vernal equinox March 24, at mid-day.—Blair refers this observation to 155.—A remarkable comet appeared in Greece.
145. —The Romans defeated Greece.
144. —Tryphænus murdered Jonathan and his brethren.—Antipater of Tarsus, called Calamobos, the Stoic philosopher.
143. —Hipparchus observes the autumnal equinox on Wednesday, September 26th, about sun-set; from the new moon of Sept. 28th he began his new cycle of the moon. See Cycle.—A great earthquake in China.
142. —Simon, the high priest, takes the cube of Jerusalem; repaired it, and removed Judea from Syrian subjection.
141. —The Numantine war begins, and continues 8 years.—An eclipse of the moon observed at Alexandria, on Tuesday, Jan. 17, 2 hours before midnight.—Mænas Petronius, the grammarian.
140. —Diodorus, the Peripatetic philosopher.
139. —Lucius Accius, the tragic poet.
138. —Panæus of Rhodes, the Stoic philosopher.
137. —Ptolemy Phyæon began a new restoration of learning at Alexandria by inducing ingenious foreigners to settle there.—Nicander of Colophon, the physician and poet.
136. —Scipio Africanus, &c. made an embassy into Egypt, Syria, and Greece.—Ctesibius of Alexandria, the mathematician and inventor of hydraulic instruments.
CHRONOLOGY.

B.C.
135.—The history of the Apocrypha ends.—A comet appeared in the N.E. part of China in autumn.—The Servile war begins in Sicily.
133.—Namatai in Spain destroyed by Scipio.—The kingdom of Pergamus annexed to the Roman empire.—Tiberius Gracchus put to death for attempting an Agrarian law.
130.—Antiochus, king of Syria, defeated and killed.—A comet in Asia.—The revival of learning in China.
129.—The temple on Gerizim destroyed by Hystenus.
128.—Hipparchus observes the vernal equinox to be on Thursday, March 23d, about sun-set, and afterwards the star Cor Leonis was 29° 59', from the summer solstitial colure.—Climates of Carthage, philosopher of the third Academy, ob. about 160.
127.—Hipparchus, on May 2d, about sun-rise, observed the sun in 7° 35' S, the moon in 21° 40' N, and their mean distance to be 312° 32'—he observed Spica Virginis 6° W. of the autumnal equinoctial point.
124.—Apollonius of Nyia, the Stoic philosopher.
123.—Carthage is rebuilt by order of the Roman senate.—Herodicus called Crates, the grammarian.
121.—A great eruption of Etna.—Caius Gracchus killed for attempting an Agrarian law.—L. Caius Antipater, the Roman historian.
120.—A comet appeared in the E. part of China.—Callicrates of Rhodes, the chronologer and historian.
119.—Menocrates of Nyia, the grammarian.—Two comets appeared in China—one in the N.E. in spring, and another in the N.W. in summer.
118.—A colony settled at Narbonne by the Romans—who defeated the Gauls near the Alps.—Dalmatia conquered by Metellus.
116.—Cleopatra affirms the government of Egypt.—Lucilius, the first Roman satyrilist, ob. 103, B.C. 46.
115.—Apollodorus of Athens, the chronologer and grammarian.
113.—Marcus Antonius, f.e. the Roman orator, ob. 87, B.C. 56.
111.—The Jugurthine war begins, and continues five years.
110.—A comet appeared in China, in the autumn.—The sumptuary law, called lex licinia, made at Rome.—Lucius Crassus, the Roman orator, ob. 91, B.C. 49.
109.—Hystenus took Samaria.—The Teutones and Cimbri attack the Roman empire.
108.—Athenion, the Peripatetic philosopher, ob. about 95.—The Romans defeated by the Cimbri.
107.—Cicero is born.
106.—Ptolemy dethroned by Cleopatra.—Jugurtha delivered up to Marius.
105.—The Cimbri and Teutones defeated the Romans, 80,000 of whom were killed on the banks of the Rhone.
104.—Arnobius, the first high-priest who wore a crown.—Artemidorus of Ephesus, the geographer.
103.—The Roman people obtained the power of electing the praetors.
102.—The Teutones defeated by Marius—200,000 killed, and 70,000 taken prisoners.
101.—The Cimbri defeated by Marius and Catullus—120,000 killed, and 60,000 taken prisoners.
100.—The Agrarian law revived by Saturninus.—Julius Cæsar is born.—Philo, the philosopher of the 3d Academy.

B.C.
99.—Lusitania conquered by the Romans under Dolabela.
97.—Ptolemy Appion dies and bequeaths his kingdom to the Romans.—Macedon occupied by the Romans.
96.—The king of Parthia sends embassadors to China.
95.—Charmides, the philosopher of the 3d Academy.
94.—Hortenius begins to plead at 19 years of age.
93.—Apollonius of Teus, the proprietor of a famous library at Athens, ob. about 86.
91.—The Social or Marboc war begins, lasts three years, and is finished by Sylla.—L. Silenna, the Roman historian.
90.—Aesclapiades of Prusias, the physician, and author of a new book, in phiscs, ob. after 63.
89.—The Mithridatic war commenced and continued 26 years—in 94 Playfair.
88.—The civil war between Marius and Sylla begins and continues 6 years.—Alexander, called Polyhistor, the grammarian and historian.
87.—Photius Gallus, the first Latin rhetorician.—A comet appeared in the N.W. of China in the spring.
86.—Sylla takes Athens—defeats Archelaus—sends Apollonius's library to Rome, in which was the original MS. of Aristotle's works.
85.—Dionysius, the third Stoic philosopher, ob. after 83.—A census at Rome—643,000 citizens.
84.—Q. Valerius Antias, the Roman historian.—A comet appeared in the N.W. of China in the spring.—Peace between Mithridates and Sylla.
83.—Zeno of Sidon, the Epicurean philosopher.—Sylla destroys the Capitol.
82.—Sylla plundered the temple of Delphos—defeats Marius—committed the greatest enormities at Rome—was created dictator.—Quintus Hortenius, the Roman orator, ob. 50, B.C. 63.
81.—Cicero begins to plead at the 26th year of his age.—A. Licinius Archias, the poet.
80.—Antipater of Sidon, the poet.
79.—Sylla resigns the dictatorship.—Alexandra governs Judæa.—Pothinus of Apamea, the Stoic philosopher and almoner, ob. after 51, B.C. 84.
77.—Aegimius of Rhodes, the astronomer and mathematician.
76.—Apollonius of Rhodes, the rhetorician.
75.—Nicomedes, king of Bithynia, dies and bequeaths his kingdom to the Romans.—Theodorus of Tripoli, the mathematician.
73.—The Servile war begins.
71.—The Servile war ends.—Tyrannus, the grammatical and Peripatetic philosopher, ob. after 56.
70.—The censorship revived at Rome.—M. Terentius Varro, called the most learned of the Romans, ob. 29, B.C. 38.
69.—The Roman Capitol rebuilt.—A census at Rome.—450,000 citizens.—Lucullus defeats Mithridates and Tigranes.—A comet appeared in the west of China in the spring.
68.—Aristodemus of Crete, the grammarian.
67.—The war of the Pirates.
66.—Crete reduced to a Roman province.
65.—The reign of the Sclavonide ends.—And Syria reduced to a Roman province.—T. Lucertius Carus, the poet, ob. 54, B.C. 44.
64.—Dionysius, the Thracian, the grammarian.
63.—Catiline's conspiracy.—Detected by Cicero.—Defeated by Antony.—Mithridates killed himself.—Jerusalem taken by Pompey.
2
B.C.

62.—Antiochus, the philosopher of the third Academy.

61.—L. Taruntius Porcius, the mathematician, ob. after 44.

60.—The first triumvirate between Pompey, Caesar, and Crassus.—Q. V. Catullus, the lyric poet, ob. about 43. B.C.

59.—Andronicus of Rhodes, the Peripatetic philosopher, and rector of Aristotle's works.

58.—Cicero banished Rome by the intercession of Clodius.

57.—Cicero recalled from exile.—C. Critius Salatinus, the historian, expelled the senate in 59, ob. 55. B.C.

55.—Cesar passes the Rhine, and defeats the Germans.—Makes his first expedition into Britain.—Ptolemy king of Egypt retired to his kingdom.—Pompey built a stone theatre for public sports.

54.—Cesar's second invasion of Britain.—Timagenes of Alexandria, the historian and rhetorician.

53.—Crassus killed.—His army defeated by the Parthians.

—Catilina, the Peripatetic philosopher.

52.—Clodius murdered by Milo.

51.—Gaul becomes a Roman province.

50.—The civil war begins, Oct. 22d.—A census at Rome.—320,000 citizens.

49.—Cesar proclaimed dictator.—A comet appeared in China.—Cornelius Nepos, ob. about 25.

48.—The battle of Pharailia.—Antipater, procurator of Judea.—P. T. Varro, called Atacinus, the poet.

47.—Alexandria retaken by Julius Cesar.—The library destroyed.

46.—The war of Africa.—Cato kills himself at Utica.—This year, called the year of confusion, being corrected by Sostratus, of Alexandria, the mathematician, and confuting of 15 months, and 445 days.

45.—Cesar killed in the senate-house, at Rome.—A comet appeared in China, and at Rome after Cesar's death.—Diodorus Siculus, the historian.

43.—The second triumvirate between Octavius, Antony, and Lepidus.—Cicero put to death, Oct. 7th.

42.—The battles of Philippi.—Cassius and Brutus defeated.

41.—A great famine at Rome.—An earthquake in China. Trogus Pompeius, the historian.

40.—Jerusalem occupied by Antigonus, afflicted by the Parthians.—Hyrcanus expelled.—Herod receives the kingdom of Judea from the Romans.—Dydimus, the Iochiilt.

39.—The Romans recover Syria and Palestine.

38.—The senate made 67 prætors.—The Spaniard set on (67).

37.—Pompey gained the empire of the east.—Sosius took Jerusalem and Herod.—Antigonus put to death.—The Armnican family terminates 126 years after Judas Maccæus.

36.—Sexus Pompeius defeated in Sicily.—Lepidus degraded from the triumvirate, and banished.—Virgilius Maro, ob. 19. B.C.

34.—Antony feizes the kingdom of Armenia.—Marcus Manilus, the astronomical poet.

33.—Dioecetes, physician to Antony and Cleopatra.

32.—A comet appeared in China.

31.—The battle of Actium, Sept. 2d.—Antony and Cleopatra defeated.—The Roman empire property begin.—An earthquake in Judea.—The feet of the Sibyls and Pharies commence.—Arius Pollio, the orator and historian, ob. A.D. 4. B.C.

B.C.

30.—Alexandria taken by Octavius.—Antony and Cleopatra put themselves to death.—Egypt reduced to a Roman province.—Strabo, the geographer, ob. A.D. 25.

29.—Octavius diffused by Mæceenas from divesting himself of the empire.—Horatius Flaccus, ob. 8. B.C.:—Cesar triumphed three days in Rome.—The temple of Janus shut.—A cenus at Rome.—4,101,017 citizens.

28.—Emilius Macer, of Verona, the poet, ob. 16.

27.—The title of Augustus co. ferre upon Octavius, by a decree of the senate, Jan. 19th.—The power of emperor for ten years; next the censorship; then the triumvirs; and, at last, an absolute exemption from the laws.—The Pantheon at Rome built.—A great famine in Palestine.—S. Aurelius Propertius, the elegiac poet.

25.—The Egyptians adopt the Julian year, and fix their thoth to begin always on Aug. 29th.—Titus Livius, ob. A.D. 17. B.C.

24.—The senate, by a solemn oath, Jan. 18, confirm to Augustus the tribunicial and exemption from the laws.

23.—Antonius Mula, the physician, whose great remedy was the cold bath.

22.—A great persecution in Italy.

21.—Augustus goes to Greece and Asia; recalls Agrippa; gives him Julia in marriage, and the government during his absence.—Made Syria a colony.—Tibullus, the elegiac poet, ob. about 19 B.C.

20.—Tiberius recovers the Roman ensigns from the Parthians.—Porus, king of India, fulcits an alliance with Augustus.—Ovidius Naio banished to Torni, A.D. 9. ob. 17. B.C.

19.—Rome at the meridian of its glory.—Herod rebuilt the temple of Jerusalem.—Agrippa constructed the magnificent aqueducts at Rome.

18.—Augustus reduces the senate to 300; afterwards limits them to 600.—Cæciby is discouraged.—Pythens and Bathylus, two famous Roman actors.

17.—The Secular games revived.—Varius and Tucca, critics and editors of the Æneid.

16.—Agrippa goes to Syria, and thence to Judea.

15.—Druclus destroys the Rhetians.—M. Vitruvius Pollio, the architect.

14.—A great conflagration at Rome.

13.—Augustus assumes the office of Pontifex Maximus; burns about 2,000 pontifical books; referring the mode of the Sibylline oracles.

12.—Tiberius conquers the Pannonians.—Many prodigies in China, and a comet.—Nicholas Damascenus, the Peripatetic philosopher and historian.

11.—Druclus conquers several German nations.

10.—Herod built the city of Cæarea.

9.—Druclus's expedition into Germany, where he dies, July 20th.—C. Julius Hyginus, the grammatican and poet.

8.—Augustus corrects the calendar.—The month Sextilis named Augustus by a decree of the senate.—A cenus at Rome.—4,253,000 citizens.—Virgilius Flaccus, the grammarian, and tutor to the two grandsons of Augustus, and supposed author of the Capitoline marbles.

6.—Tiberius retires to Rhodes.

5.—Q. Varus appointed governor of Syria.—A comet appeared in China.—Our Saviour Jesus Christ was born,
The First Century of the Vulgar Christian Era.

A.D.

1. Cæsar made peace with the Parthians.
2. Tiberius returns to Rome.—L. Cæsar dies.
3. Cæsar dies.—Cinna's conspiracy detected.
4. Leap year corrected, having been formerly every third year.—Phaedrus.
5. A great famine at Rome.
6. Germanicus sent against the Parthians.
7. Jesus Christ, at the age of 12 years, disputes with the Jewish doctors in the temple, in April, when the passover was ended.—Afinius Gallus, ob. 33.—Germanicus, ob. 19, at. 34.
8. Dalmatia subdued by the Romans.
9. Arminius, a German general, defeats the Romans.
10. A comet appeared in China.
11. A census at Rome.—45,017,000 citizens.—Augustus dies at Nola Aug. 19th, at. 76.
12. Velleius Paterculus, ob. 34.
14. Cappadocia reduced to the form of a province.—An earthquake in Asia destroyed 12 cities.—Cornelius Celcius.
15. Herod built Tiberias.
17. Theatre of Pompey consumed by fire.—A comet appeared in China.
18. Valerius Maximus.
19. Tiberius goes to the island Caprea.—John the Baptist begins his ministry.
20. A conflagration at Rome.—Philip made governor of Judea; kills himself 59.—Jesus baptized by John.
22. Our Saviour Jesus Christ crucified on Friday, April 3d, at 3 o'clock P. M. resurrection on Sunday, April 5th.—Aecfenion, Thursday, May 14th.—Apion of Alexandria, the grammarian, called “the trumpet of the world.”
24. Tiberius dies.
25. A conjunction of Saturn, Jupiter, and Mars.—St. Matthew, according to Blair, writes his gospel.—Philo Judeus.
26. The name of Christians given at Antioch' (Blair).—Petronius appointed governor of Syria.
27. Caligula's put to death.—St. Peter, ob. 67.
29. Peter imprisoned.—James put to death.—St. Mark, according to Blair, wrote his gospel.
30. Vespasian's successful war in Britain.—Pomponius Mela, the geographer.
31. A new island appeared in the Ægean sea.—The fecular games celebrated at Rome.—Caracalas the British king.
The Second Century of the Vulgar Christian Era.

102. - Ptolemy, pro-consul in Bithynia, sends Trajan his account of the Christians.

103. - Dacia reduced to the form of a Roman province.

104. - A great earthquake in Asia and Greece.

105. - Trajan's expedition against the Parthians, &c.

106. - A comet appeared in China.

107. - The 3d perfection of the Christians under Trajan.

108. - The 1st perfection of the Christians under Trajan.

109. - A few years before.

110. - Trajan erects his column at Rome.

111. - Nicomedea and other cities swallowed up by an earthquake.

112. - Trajan builds a wall between Carlisle and Newcastle.

113. - Phegon Thrallian.

114. - Trajan goes into Asia and Egypt for 7 years.

115. - Heraclea and Nicopolis destroyed by an earthquake.

116. - The Jews make an incursion into Egypt.

117. - Trajan's expedition into Britain.

118. - The 3d perfection against the Christians, under Trajan.

119. - Nicomedea and other cities swallowed up by an earthquake.

120. - Trajan builds a wall between Carlisle and Newcastle.

121. - A comet appeared in China.

122. - A plague on the known world.

123. - The war with the Marcomanni begins.

124. - Commodus makes peace with the Germans.

125. - A comet appeared in China.

126. - Julius Severus, governor of Britain.

The Second Century of the Vulgar Christian Era.

127. - The Second Canon of Nicaea.

128. - The 1st perfect trial of the Christians, under Trajan.

129. - Trajan builds a wall between Carlisle and Newcastle.

130. - Phegon Thrallian.

131. - Trajan goes into Asia and Egypt for 7 years.

132. - Airlidies.

133. - Caesarea and Nicopolis destroyed by an earthquake.

134. - A comet appeared in China.

135. - The war with the Parthians begins.

136. - A comet appeared in China.

137. - The Second Canon of Nicaea.

138. - Trajan's expedition into Britain.

139. - The 3d perfection of the Christians under Trajan.

140. - A comet appeared in China.

141. - A comet appeared in China.

142. - The war with the Parthians begins.

143. - A comet appeared in China.

144. - The 4th perfection against the Christians.

145. - War with the Parthians, continues 3 years.

146. - The perfection of the Christians, under Marc. Aurel.

147. - The war with the Parthians, continues 3 years.

148. - Another war with the Marcomanni, which lasts three years.

149. - A comet appeared in China.

150. - A comet appeared in China.

151. - A comet appeared in China.

152. - Marcus Aurelius dies, &c.

153. - Marcus Aurelius, &c.

154. - Urbicus's wall was built between Edinburgh and Dumbarton Frith.

155. - The 2d canon of Nicaea.

156. - A comet appeared in China.

157. - The 4th perfection of the Christians.

158. - The 2d canon of Nicaea.

159. - A persecution of the Christians.

160. - Another war with the Parthians, commences.

161. - Another war with the Marcomanni, which lasts three years.

162. - A comet appeared in China.

163. - A comet appeared in China.

164. - A comet appeared in China.

165. - A comet appeared in China.

166. - A comet appeared in China.

167. - A comet appeared in China.

168. - A comet appeared in China.

169. - A comet appeared in China.

170. - A comet appeared in China.

171. - A comet appeared in China.

172. - A comet appeared in China.

173. - A comet appeared in China.


175. - A comet appeared in China.

176. - A comet appeared in China.

177. - A comet appeared in China.

178. - A comet appeared in China.

179. - A comet appeared in China.

180. - A comet appeared in China.

181. - A comet appeared in China.

182. - A comet appeared in China.

183. - A comet appeared in China.

184. - A comet appeared in China.

185. - A comet appeared in China.

186. - A comet appeared in China.


188. - A comet appeared in China.

189. - A comet appeared in China.

190. - The 2d canon of Nicaea.

191. - A comet appeared in China.
The Third Century of the Vulgar Christian Era.

201. Symmachus published a version of the Bible.
203. Severus goes into the East, and defeats the Parthians.
204. The religious games celebrated at Rome.
205. An earthquake in Wales.
207. Severus goes into Britain.
208. Severus builds his wall across Britain, from the Frith of Forth.
209. Philostratus, ob. about 244.
210. Severus dies at York, ob. 216.
211. A comet appeared in China.
212. The Christian faith introduced into Scotland.
213. Oppian, ob. 213.
214. War between the Romans and Parthians.
215. Caracalla is killed by Maximus, ob. 215.
216. Maximus is put to death by the soldiers.
217. The Romans agree to pay an annual tribute to the Goths.
218. The Romans defeat the Persians, with great slaughter.
219. The 6th persecution against the Christians.
220. Two comets appeared in China.
221. The two Gordians killed in Africa.
222. The Arkites terminate in Persia.
223. The Franks first mentioned in history.
224. Gildian makes a successful expedition against the Persians.
225. Gildian is put to death.
226. The secular games celebrated at Rome.
227. The two Philips are killed: one at Verona, the other at Rome.

A.D.
250.-The 7th persecution of the Christians, under Decius.
251.-The Romans are defeated by the Goths at Melfa.-
The Novatian heresy propagated.-St. Cyprian, ob. 253.
252.-The Romans become tributary to the Goths.-The
Seychilans and Persians invade Asia.-A dreadful
persecution over the Roman empire.
253.-Petrinus, ob. 257, ob. 266.-A great eruption of
etna.
254.-The 8th persecution against the Christians, under Valerian.
255.-The Roman empire is harassed by 30 tyrants.
256.-Valerian is taken prisoner by Sapor, king of Persia,
and flayed alive.-The temple of Diana confounded by fire.-The Seychilans ravaged the Roman empire.
257.-A great plague raged in the Roman empire.
258.-Earthquakes in Europe, Asia, and Africa; and 3
days of darkness.—Paulus Samosateneus, Bishop of Antioch, deposed in 270.
259.-Odenatus, king of P. Lima, governs the eastern empire.
260.-The Seychilans and Goths defeated by the Romans.
261.-Gallicius is killed at Milan, ob. 50.
262.-Claudius gains a great victory over the Goths.
300,000 of them killed.—Zenobia takes possession of Egypt.
263.-The 9th persecution against the Christians, under Aurelian.
264.-Zenobia, queen of Palmyra, defeated by Aurelian, and Palmyra taken.
265.-The temple of the Sun is built at Rome.-Dacia
given up by Aurelian to the Barbarians.
266.-Aurelian is killed near Byzantium.
267.-Winston is first made in Britain.—Tacitus dies at Tarfus.
268.-Gallicius is killed at Milan, ob. 71.
269.-Probus's expedition into Gaul.—The Franks settled
in Gaul.—A comet appeared in China.
270.-Probus defeats the Persians.
271.-Probus is put to death at Sirmium.
272.-The era of Diocletian begins Aug. 19th, according
to the fixed Egyptian year, though he did not enter upon his reign till Sept. 17th.—The Romans send ambassadors to China.
273.-Arianism.
274.-The empire attacked by northern nations, and several
provinces are usurped by tyrants.
275.-Caraulus proclaimed emperor in Britain.
276.-Gregory and Hermogenes, lawyers.
277.-The Gregorian and Hermogenian codexes published.
278.-The two emperors and the two Caesars meet to defend the four quarters of the empire.—Alins Spartianus, the historian.
279.-Caraulus is killed by Aelius.—The Franks expelled from Batavia.
280.-Britain recovered to the emperors after a ten years
uprising.—Alexandria besieged and taken by Diocletian.

The Fourth Century of the Vulgar Christian Era.
281.-War between the Persians and Romans.—Julian
Capitoline.
CHRONOLOGY.

A.D.
303.—The 10th persecution against the Christians, under Diocletian. —Pliny the Younger.
304.—Diocletian and Maximianus resign the empire, and live retired.
305.—A comet appeared in China. —Trebellius Pollio.
306.—Constantius carries on war against the Britons; dies July 25th.
307.—A considerable part of Rome destroyed by fire. —St. Eulius Lambadius.
308.—Four emperors reigned at the same time.
309.—The Christians persecuted in the East.
310.—Constantine divides Britain into four governments.
311.—Laodicius.
312.—Maxentius killed in battle. —The Indigitions begin. —Pelilence over the East.
313.—The 10th persecution terminated by an edict of Con- stantine and Licinius.
314.—A civil war between Constantine and Licinius.
315.—The punishment of the crofs abolished.
316.—Constantine begins to favour the Christians.
317.—Sunday appointed to be observed.
318.—Constantine becomes master of the empire; gives full liberty to Christians.
319.—Licinius defeated and banished.
320.—The 1st general Council of Nice, from June 15th to Aug. 25th, convicts of 318 bishops. —Arius, ob. 336.
321.—Crispus, falsely accused, is put to death. —The Christians persecuted by the Parthians. —Eusebius Pamphilus, ob. 342.
322.—The seat of empire transferred from Rome to Con- stantinople.
323.—Constantinople feemingly dedicated. —A dreadful per- secution in Persia, which lasted 40 years.
324.—The heathen temples demolished by order of the emperor. —St. Athanasius, ob. 371.
325.—A great famine and pestilence in Syria.
326.—300,000 Sarmatians revolt from their masters, and are dispersed through the empire.
327.—A comet appeared in China.
328.—Constantine the Great dies May 22d, a.t. 66.
330.—The gospel propagated in Ethiopia by Frumentius. —St. Hilary, ob. 367, a.t. 80.
331.—Jamblichus, ob. about 363.
332.—Necæa destroyed by an earthquake.
333.—Constans killed in Spain.
334.—The heathen first called Pagans.
335.—Elias Donatus, the grammarian.
336.—Gallus put to death by Constantius.
337.—Eutropius, the historian and sophist.
338.—Julian defeated fix German kings at Strasburg.
339.—An earthquake ruins 150 cities in Greece and Asia.
340.—Libanius, the sophist.
341.—Amniarius Marcellinus, ob. about 380.
342.—Themistius, the sophist, ob. about 386.
343.—Julian in vain endeavours to rebuild the temple of Jerusalem; and dies in an expedition into Persia. —Aurelius Victor.
344.—The Roman emperors enacted laws against magicians. —Britain harassed by the Picts, Scots, and Saxons. —The Roman empire divided into two parts, called the Eastern and Western empire.

A.D.
350.—Valens marched against the Persians. —St. Basil, ob. 379, a.t. 51.
351.—Eutropius.
352.—The Bible translated into the Gothic tongue. —A comet appeared in China.
353.—St. Ambrose made bishop of Milan, ob. 397.
354.—The Goths, expelled by the Huns, settle in Thrace.
355.—Valens defeated by the Goths. —The prerogatives of the Roman fee much enlarged.
356.—The Lombards first leave Scandinavia, and defeat the Vandals. —Aetius, ob. about 394.
357.—The second general council of Constantiopolis. —Mac- donnias, the heretic.
358.—The emperor Gratian defeated and killed. —The Huns ravaged Mesopotamia. —Pappus of Alexandria, the mathematician.
359.—Theon, jun. of Alexandria, the mathematician.
360.—The quinquennales celebrated by Arcadius. —St. Jerome, ob. 420, a.t. 78.
361.—The tyrant Maximiuns defeated and killed by Theo- dofius.
362.—The first kings of the Lombards elected in Pannonia.
363.—A fiery column seen in the air for 50 days.
364.—Prudentius.
365.—Theodosius defeats Eugenius and Arbogastes. —St. Augustine, ob. 430, a.t. 76. —A great earthquake felt in many parts of Europe.
366.—Theodosius the Great dies, a.t. 60.
367.—St. Chrysostom, ob. 427, a.t. 53.
368.—Claudian.
369.—Heliodorus.
370.—A comet appeared in China.

The Fifth Century of the Vulgar Christian Era.
371.—Avaris, king of the Goths, over-runs Europe. —Sulpicius Severus, the Ecclesiastical historian, ob. 420.
372.—The Avaris, having defeated the Huns, become masters of Great Tartary. —Anianus of Alexandria, the monk and chronologer.
373.—Avaris defeated by Stilicho. —Macrobius, ob. about 415.
374.—An irruption of the Goths. —Panodorus of Alexander- dria, the monk and chronologer.
375.—The Pelagian heresy published. —John Stobbeus —Stilicho defeats 200,000 Goths in the mountains of Fufule.
376.—The Vandals, Alani and Suevi, spread into France by a consecration of Honorius. —Pelagius, ob. about 430.
377.—The Christian religion propagated in Persia. —Hi- matia, the mathematician, and daughter of Theon, ob. 415.
378.—Rome taken and plundered by Alaric. —Servius, the commentator on Virgil.
379.—Synerius, bishop of Cyrene, and Platonick philosopher.
380.—The Vandals begin their kingdom in Spain. —Arme- nia divided between the Persians and Romans. —St. Cyril, bishop of Alexandria, ob. 444.
381.—The kingdom of the Burgundians begins in Alaece.
382.—The Vingoths found the kingdom of Toulouse.
383.—The Christians persecuted in Persia.
384.—A great lone fell from the sky in Constantiopolis. —Orosius, the historian.
385.—The Alans exterminated by the Goths.
**Chronology.**

A.D. 419.—An earthquake destroys many cities in Palestine.—Socrates, the Ecclesiastical historian, denounces the Scholastic.

420. —The kingdom of the French begins on the Lower Rhine.—China is divided into two empires.

421. —The Salic law promulgated. —The Christians severely persecuted in Persia.

422. —The Huns ravage Thrace.

423. —The western empire usurped by John, called the Notary.

424. —The relaxation of learning attempted by Theodosius, who establishes public schools at Constantinople.

425. —The Romans leave Britain, never to return.

426. —Panonnia is recovered by the Romans.—Zoeus, the historian.

428. —Pelegrinum propagated in Ireland.—The French defeated Aetius the Roman general.

431. —The third general council of Ephesus.—Nektarius, the heretic bishop of Constantinople.

433. —The Roman provinces in Africa submit to the Vandals.

436. —A great part of Constantinople conquered by fire.—Attilla, king of the Huns, begins his reign.

437. —Nestorianism prevails in the East.—The Theodosian code published.

437. —The Goths defeated by Aetius.—Cyril's cycle of 95 years begins.—The first persecution of the Christians by the Vandals.—Theodoret, bishop of Cyrus, ob. about 460.

439. —Geuenric becomes master of Carthage; and commences the kingdom of the Vandals in Africa.—Sozomon, the Ecclesiastical historian, ob. 470.

441. —The Huns, Perians, Saracens, &c. invade the Roman territories.

443. —The Manichæan books burned at Rome.—Olympiodorus, the Ecclesiastical historian.

446. —Fire, famine, pestilence, and sedition, at Constantinople.—The Britons make their fruitless complaint to Aetius and the Romans, against the incursions of the Scots and Picts.

447. —Attilla, with his Huns, ravages Europe.

449. —The Saxons first come into Britain, at the invitation of Vortigern, and land in the Isle of Thanet.—Heptarchy established in England.—A great famine in Italy.

450. —Theodosius II. dies, ex. 460.

451. —The fourth general council of Chalcedon.—Attilla defeated by Aetius.—The Christians persecuted in Britain.—Eutyches.

452. —The city of Venice takes its rise about this time.

453. —The Britons in vain attempt to expel the Saxons.—The Vandals become masters of Sicily.

455. —Rome taken by Geuenric.—The kingdom of Kent begins.

456. —The Suevi defeated by Theodoric.—Prosper, ob. 462.

457. —Vortimer defeated by Hengist in the battle of Crayford, Kent.

458. —A great earthquake at Antioch.—The Chinese fail to the north of California.

461. —A fire in Constantinople.—Peace between the emperors Leo and the Goths.

462. —Victorinus, of Aquitain, invents the pa.chal cycle of 532 years.

463. —The Vandals expelled from Sicily.

465. —The Goths expelled by the Romans.—Rogation-day instituted.

467. —The Vandals defeated by the Romans.

468. —The Visigoths drive the Romans out of Spain.

469. —Sidonius Apollinarius, ob. 482, ex. 51.

472. —A great eruption of Mount Vesuvius.—Gennadius, ob. 492.

474. —Lew I. and Lew II. die.

475. —Hengist treacherously massacres 500 British nobles. —The Saxons defeated by the Romans.—Gelarius, of Cyzicus.

476. —The kingdom of Italy begins.—The western empire ended.—A dreadful fire in Constantinople.

479. —Peter, sir-named the Fuller, ob. 496.

480. —Great part of Constantinople destroyed by an earthquake, which lasts 40 days.

482. —Zeno publishes the decree of union between parties in the church.

484. —Huneric, king of the Vandals, persecutes the Christians.

485. —Clovis devotes the Romans at Soiffons.

487. —The Britons, under Ambrofius and prince Arthur, defeat the Saxons.

490. —Theodoric defeats Odoacer.

491. —Ella founds the 2d Saxon kingdom of Saffex, including one county and Surrey.

493. —The kingdom of Italy passes from the Hculi to the Otro-goths, by the capture of Ravenna.—Malchus, the bishop.

494. —The Roman pontiff affuits his supremacy.

495. —Timotheus Gazaeus.

496. —Clovis baptized, and Christianity received in France. —The Sclavonians settle on Poland and Bohemia.

497. —The Haeric war closes.

499. —The Bulgarians ravage Thrace.—Fulgentius, ob. 529.

500. —The Saracens ravage Syria and Phœnicia.

The Sixth Century of the Vulgar Christian Era.

501. —Anastasius makes peace with the Saracens.—Acadius, councilor to Gondebaud.—Gondebaud publishes his laws of the Burgundians, called "La loy Gom-bette."

503. —Anastasius's army cut to pieces by Cabades, king of Peria.—The pope refilled the legal magistrate.

504. —The Christians persecuted by the Vandals.—The pandects published.—Magi prevalent at Rome.

506. —The Perian war ends.

507. —Arian, chancellor of Abaric, reforms the Theodosian code, and publishes it.

508. —Abaric defeated and killed by Clovis, near Poitiers.

507. —A great fire at Constantinople.—The Saracens invade Arabia and Palestine.—Alcinus Atilus, ob. 523.

512. —Paris becomes the capital of the French dominions.

511. —A great insurrection at Constantinople.—Prince Arthur defeats the Saxons in the battle of Badonhill or Bath.

512. —An eruption of Vefuvius.

513. —The Perian and Saracen kings embrace the Chriftian religion.—Boetius, the philosopher, ob. 524.

514. —Conftantinople besieged by Vitalanus, whose fleet is burned by a blast speculum of Frisius.—Caffiodorus, secretary to Theodoric, ob. 562, ex. about 100.

516. —The Getz ravage Macedonia, Thessaly, &c. —The computation of time by the Christian era introduced by Dionysius the monk, called the Little, ob. 520.
A.D. 547.—-Five years of drought and pestilence in Palestine.
549. — Prince Arthur defeated at Charlton by Cerdic, which begins the 3d Saxon kingdom of Wessex.
552. — The Britons defeat the Anglo-Saxons at Bath.
554. — An earthquake at Corinth. — Helechius of Miletus.
557. — Thrasamond, king of the Vandals, defeated and killed by the Moors.
558. — An earthquake in Sicily.
559. — Antioch conquered by fire. — Priscian, the grammarian.
560. — An earthquake at Antioch. — Dionysius the Lector composed his cycle.
561. — Erechtheus founds the 4th Saxon kingdom of Essex.
562. — Belarius marches with an army against the Persians.
563. — The code of Justinian is published, April 16th. — The order of Benedictine monks is instituted. — Tribonianus, the famous lawyer.
564. — A conspiracy and sedition at Constantinople. — A great pestilence in Ethiopia. — The kingdom of Burgundy conquered by Childebert and Chlothar.
565. — The diet of Justinian is published, Dec. 30th.
566. — The kingdom of the Vandals founded by Belarius, who took Carthage. — Procopius, the historian, and secretary to Belarius.
567. — Belarius gains Sicily.
568. — Belarius takes Naples — The inhabitants of Constantinople taught by two Indian monks to fabricate silk.
569. — Rome surrendered to Belarius. — French coin begins to be current through the Roman empire. — Count Marcellinus, the chronologer.
570. — Italy distressed with war, famine, and pestilence. — The Goths take and raze the city of Milan. — The camps of the Romans and Goths taken by Theodebert, king of Metz.
571. — Vitiges taken prisoner by Belarius in Ravenna. — The Moors defeat the Romans in Africa. — An earth quake at Constance. — Totila, defeated by the king of Persia.
572. — The confuption of Baalbus is the last at Rome. — Prince Arthur murdered in Cornwall. — Antioch rebuilt. — The Romans defeated by the Goths on the Po.
574. — The Romans defeated by the Persians — Paul, surnamed the Silentiary.
575. — Rome taken by Totila, and barbarously pillagd. — Simplicians, the Peripatetic philosopher.
576. — Ida founds the 5th Saxon kingdom of Northumberland.
577. — Totila forries Rome.
578. — An earthquake in Palæstine, Syria, &c. — The date of Poland formed by Leck.
579. — The manufacture of silk introduced into Europe from India.
580. — The empire of the Avars in Great Tartary ends. — An earthquake in Greece, and a great commotion in the sea. — A great earthquake at Constantinople. — The 5th general council, or second of Constantinople.
582. — Narses defeats and kills Tevis, king of the Goths, and thus finishes the Ostrogoth monarchy in Italy.
583. — A sedition of the Jews in Palestine. — Civil wars in France. — Gildas, called the Wise, the British historian, ob. 572.
584. — A great earthquake at Rome, Constantinople, &c.
585. — Pestilence in Italy, France, and Germany. — The kingdom of France divided into four parts. — Columbus propagates Christianity among the Peits. — Justinian dies, &c. — Agathias, the historian.
586. — The kingdom of the Visigoths founded in Spain.
587. — The Lombards, invited from Pannonia by Narses, found a kingdom in Italy.
588. — The Turks first mentioned in history. — Exarchs are sent to Ravenna by the eastern emperors against the Lombards.
589. — The Persians declare war against Justin. — Gregory of Tours, called the father of the French history, ob. 595.
590. — The Avars ravage part of Germany.
591. — The Persians invade and plunder Syria.
592. — Civil wars in France. — The first monastery founded in Bavaria. — Cealp finds the 6th Saxon kingdom of Earl Anglia.
593. — Chosroes the Great defeated by the emperor Justin's army.
594. — Justin II. dies.
595. — Chosroes again defeated, and dies of grief. — The city of Antioch destroyed by an earthquake.
596. — Latin censtina about this time to be spoken in Italy.
597. — Cruda founds the kingdom of Mercia, being the seventh Saxon kingdom in Britain.
598. — The Suevi in Spain conquered by the Visigoths, which finishes the kingdom.
599. — The origin of siefs in France.
600. — An earthquake at Antioch.
601. — The city of Paris confounded by fire.
602. — The Tiber overflowed Rome. — The several provinces of China united. — Philippicus defeated the Persians.
603. — Pestilence in Italy and France. — The Romans defeated by the Avari.
604. — Cæulnun defeated and dethroned in the battle of Wansborough in Wilt's by Coelhre.
605. — The Avari expelled from Thrace. — The Goths about this time established themselves in the country called by their name.
606. — Evagrius, the Ecclesiastical historian.
607. — The Slavonians penetrate into Ilrria, Bohemia, and Poland. — The Lombards besiege Rome, and ravage Italy.
608. — John, of Constantinople, assumes the title of universal bishop.
609. — Augustin, the monk, comes into England, attended by 40 monks.
610. — A truce between the Romans and Lombards.
611. — A dreadful pestilence in Africa. — A comet appears in France.
612. — The Slavonians and Avari ravage Italy. — The
The Seventh Century of the Vulgar Christian Era.

A.D.

602.—Mauricius, emperor of the East, put to death by Phocas.—The Lombards defeat the Romans.

603.—War between the Persians and Greeks.—Secundus, historian of the Lombards, ob. 617.

604.—Chosroes defeats the Roman army.—St. Paul's church in London founded by Ethelbert, king of Kent.

605.—The use of bells introduced into churches about this time.—The power of the popes now begins by the concessions of Phocas.

606.—The court of chancery instituted in England.

607.—The Pantheon of Rome converted into a church.

608.—The Jews in Antioch revolt, and massacre the Christians.—Ibidorus Halapalinius, ob. 634.

610.—Heraclius takes Constantinople, and puts Phocas to death.

611.—The church and abbey of Westminster founded by Sibert, king of the East Saxons.

612.—The Saracens ravage Syria.—Mahomet begins to publish his Koran.—Theophylactus Simocatta, the historian.

613.—Clotaire reigns over all France.—The maitres du palais introduced into France.

614.—The Persians take Jerusalem, kill 90,002, and carry off the cros de Chrlit.

615.—The Persians over-run Africa, and take Alexandria.

616.—The Persians take and plunder Cathage.—The Jews banished out of Spain and France.

617.—Edwin kills Ethelfrid in the battle of Retford.—Chosroes forfets peace to Heraclius, unless he renounces Christianity, and worships the sun.—John of Alexandria, called Philoponus, the grammarian, and commentator on Aristotle.

618.—The Avari take and plunder Constantinople.

619.—Heraclius defeats the Persians in a great battle.—Mahomet fled from Mecca to Medina, and the Hegira begins on Friday, July 14th.—Mahomet, ob. 632, 2d. 67.

628.—An academy founded at Canterbury.—Chosroes put to death by his son.

632.—The aera of J. Egregium commences, June 16th.

633.—Edwin, king of Northumberland, killed in battle by Penda, king of Mercia.

634.—The Saracens take Damascus.—Geo Pudes, the poet and historian, ob. after 641.

635.—The Saracens invade Egypt and Palestine.

636.—The Christian religion introduced into China.

637.—The Saracens take Jerusalem.

638.—The Saracens take Alexandria, and burn the library.

639.—Heraclius dies.

644.—Omar, caliph of the Saracens, killed in the temple of Jerusalem, which he had converted into a mosque.—The university of Cambridge founded by Sigerbert, king of East Anglia.—The laws of the Lombards formed into a fyltem, and published Nov. 22.

645.—Penda, king of Mercia, defeats Cenawalch, and keeps possession of Wessex for three years.

647.—The Saracens make themselves masters of Africa.

648.—The Saracens take Cyprus.

652.—Peria becomes a part of the empire of the caliphs.

653.—The Saracens take Rhodes, and destroy the Colosseum.—Ravage Armenia.—Defeat the Greeks at sea.—The Danes invade England.

659.—The Saracens obtain peace of Conflanti, on condition of paying him 100,000 crowns yearly.

A.D.

660.—Organs first used in churches.

663.—The kingdom of Lombardy taken possession of by Grimoald, duke of Beneventum.—Glasis invented by a bishop, and brought into England by a Benedictine monk.

668.—Conflanti murdered in a bath.—And the eastern empire usurped by Metius, the Armenian.

670.—The Saracens invade Italy, and $eige Conflanti, &c.

679.—The Saracens defeated by the Greeks, and their fleet dispersed.—Callimachus, the mathematician.

685.—The Saracens attempt to land in Spain, but defeated by Wamba.

676.—The Saracens make a peace with Conflanti, on paying an annual tribute.—A comet appeared at Rome.

692.—The sixth general council of Conflantiople called "in Trullo."

695.—Penfurrence in Saxony, and next year in Syria.

688.—Ogfrid, king of Northumberland, invades Ireland, but is defeated.—A comet appeared at Rome in January.—An eruption of Vesuvius.

693.—Conflantiople V. dics.—The Britons totally subdued by the Saxons.

696.—Suffex subdued by Ceadwalla, and united to the kingdom of Wessex.

698.—Kent pulled by the West Saxons remains feeble during the remainder of the heptarchy.

699.—Pepin engrosses the power of the French monarchy.

695.—A conspiracy of the Jews in Spain.—Julianus II. banished with the loss of his realm.

699.—Money first coined by the Russians.

697.—The gospel propagated in the eastern parts of France.—Leonius deposed, and his son cut off.

698.—The Saracens take Cathage, and expel the Romans from Africa.—The Picts in Britain embrace the Christian religion.—Christiannity introduced into Ireland about this time.—The first prince of Poland elected, and Cracow built.

The Eighth Century of the Vulgar Christian Era.

701.—8th battles fought by the Saracens.

703.—Julianus fized on Thrace and marched to Conflantiople.

704.—The Lombards reduced by intelline wars; the first province given to the pope.

706.—Julianus defeats the Bulgarians.

707.—The Saracens invade the Roman territories.

709.—Inc. published the laws of the Saxons about this time.

711.—Julianus is put to death by Philippus.

713.—The Saracens conquer Spain.—The Bulgarians ravage Thracia.

714.—Charls Martel governs all France.

717.—The Saracens unsuccessfuly besiege Conflantiople.

718.—Charles Martel defeat king Chilperic.

719.—Boniface, an Anglo-Saxon, propagates the Christian religion in Germany.

726.—Two emirs for demolishing images in churches.

727.—Ina, king of Wessex, begins the tax of Peter's pence, for the support of a college.

729.—Two comets appear this year, one before sun-rise, the other after sun-set.

730.
A.D. 
732. — Pope Gregory excommunicated the emperor.
732. — The Saracens defeated by Ch. Martel, near Tours.
735. — Ch. Martel becomes master of Aquitaine. — The pope's nuncio infuriated about this time.
736. — Leo destroys all the images in his empire, and persecutes the monks.
737. — Johnnes Damascus, ob. 370.
740. — The Lombards seize the church of Spileto, and the pope recovers it. — An earthquake at Constantinople, &c.
743. — Fredegard, the French historian.
744. — The monastery of Fulda in Germany founded.
746. — A dreadful pestilence over Europe and Asia for three years.
748. — The computation of years from the birth of Christ begins to be used in histories from this time.
749. — The race of Abbas become caliphs of the Saracens.
751. — The Merovingian race ends in France.
752. — The 2d race of the French kings begins.
754. — The Exarchs of Ravenna are conquered by the Lombards. — The defenders of images are persecuted. — The 1st consecration of the kings of France. — The exarchate ends by the capture of Ravenna.
755. — The king of the Lombards declared war against the pope.
757. — Pepin afflicts the pope with a numerous army. — The kingdom of Cordova, in Spain, founded.
759. — The temporal dominion of the pope commences.
761. — Constantinople perverted the worshippers of images. — A comet appeared at Rome, its course from E. to W.
762. — Bagdad built by Almanzor, and made the capital for the caliphs of the house of Abbas. — Burials permitted in towns, which used to be in the highways.
763. — A great frost begins Oct. 1st, and continues about 150 days.
766. — The Turks ravage Armenia and Asia.
770. — Constantinople dislocates the meteors in the East, obliterating the monks and runs to marry.
772. — Charlemagne makes war against the Saxons.
774. — The kingdom of the Lombards terminates by Charlemagne's capture of Pavia, after a duration of 266 years.
775. — Alcuinus, ob. 804.
776. — Charlemagne reduced the Saxons.
778. — Charlemagne restored learning in France.
780. — The worship of images re-established.
781. — Paulus Winfridus, named Daconus, the historian, ob. 801.
784. — Charlemagne defeats Wittikind and the Saxons, so that they submit.
787. — The Danes, for the first time, arrive in England. — The seventh general council, or second of Nice, begins.
788. — Pleadings in courts of judicature are instituted.
790. — An earthquake at Constantinople.
791. — Charlemagne defeats the Avari in Pannonia. — The Moors defeated by the Spaniards with great slaughter.
A.D. 
794. — An Academy founded in Paris. — Ethelbert, king of East Anglia, treacherously murdered by Offa, king of Mercia, who thus takes pothetin of East Anglia. — Georgines, named Synceillus and the monk, the chronologer.
794. — Charlemagne extirpated the Huns. — Offa, by way of atonement for his villany to Ethelbert, begins the tax, called Peter-tribute, in Mercia.
795. — The pope sent legates to Charlemagne to request him to confirm his election.
797. — 17 days of unusual darkness. — Alphonso defeats the Moors. — Charlemagne dethroned and put to death by his mother Irene.
799. — Constance took Majorca and Minorca.
800. — The temporal power of the popes abridged. — Charlemagne proclaimed at Rome emperor of the West; and thus the emperors of the West, or of Germany, begin Dec. 25.

The NINTH CENTURY of the Vulgar Christian Era.
801. — A great earthquake in France, Germany, and Italy.
802. — The empress Irene deposed and banished. — Johnnes Damascus, named Melue, the Arabian, a Christian, and physician to the caliph Raichid, ob. about 816.
807. — Jan. 31. 3d after midnight, Jupiter was eclipsed by the moon, both being in 2d 27' of Libra. — March 17, a large spot was seen on the sun for eight days.
808. — The first defeat of the Normans into France.
810. — A civil war among the Saracens.
811. — Nicephorus killed by the king of the Bulgarians. — Eginhard, the historian, ob. 842.
814. — Leo ordered the images in churches to be demolished.
815. — An insurrection against the pope in Rome.
816. — Learning encouraged among the Saracens by Almanzor, who found the sun's greatest declination to be 23° 34'.
817. — Ecclesiastics exempted from military service. — Lewis divides his kingdom among his children.
819. — Almanzor ordered his astronomers to measure a degree of latitude on the plains of Sinjar near Babylon, who found it to be 56° 3 Arabian miles.
820. — Leo V. killed in the temple at Constantinople by Michael.
822. — Constantinople besieged by the Saracens under Thomas the Slave; but the siege is raised by the Bulgarians.
823. — The Saracens of Spain take possession of Crete, and call it Candia.
825. — Balearica observed the obliquity of the ecliptic to be 23° 35'.
826. — Harold, king of Denmark, embraces the Christian religion, and is dethroned by his subjects.
827. — The Almagest of Ptolemy translated into Arabic by order of Almanzor. — The Saracens took possession of Sicily, Calabria, &c.
828. — The several kingdoms of England united under Egbert. — Rabban Musa, ob. 876. — The kingdoms of Navarre and Arragon founded.
829. — Missionaries sent from France to Sweden. — St. Mark's at Venice is built.
830. — Theophius published an edict against images.
832. — Painters banished from the sultan empire by Theophilus, on account of his hatred of images.
A.D. 835—The feast of All Saints instituted.
837—A comet appeared in China.—Also, in Europe, which moved in 25 days through Π, Ω, Ω, and disappeared in Ω.
838.—The Picts defeated, and their nation extinguished by Kenneth, king of Scotland.
840.—Lewis le Debonnaire dies, ε. 64.
841.—The battle of Fontenay, where Lotharius is defeated. —Almamurad, the Arabian astronomer.
845.—Theophrus dies. —The worship of images restored. —Germany separated from the empire of the Franks.
847.—A new partition of the French dominion in an assembly of the peers at Thionville among the three brothers.—Godofcalchus, the heretic, ob. 870.
848.—The king of Spain defeated the king of Corduba. —The king of Germany defeated the Vandals.
853.—The Normans penetrate into Germany.—Hincmarus, archbishop of Rheims, ob. 882.
856.—The Saracens besiege Rome.
857.—A great earthquake in Italy.
858.—The Venetian fleet totally defeated by the Saracens in the bay of Crotona.
859.—The Saracen fleet defeated by the pope’s allies.
860.—About this time the gospel was preached by Anscharius, bishop of Hamburgh, &c. in Denmark and Sweden.
862.—The Normans invade England.—The Moors defeat the Spaniards. —The Saracens ravage Sardinia and Corsica.
862.—The English defeat the Danes at Okley. —The Moors persecute the Christians in Spain.
863.—The Normans get possession of some cities in France.
865.—The emperor Lotharius, lick of the world, retires to a monastery and dies.
866.—The Normans plunder the coasts of Holland.—An earthquake over a great part of the known world.
867.—Odo, the librarian, ob. 874.
868.—The Scots defeated by the Britons.
869.—A severe winter and frost; carriages used on the Adriatic.—Photius, patriarch of Constantinople, deposed in 868.
870.—The chthon of the Greeks begins.
871.—Rufo, the first prince of Russia, begins to reign.
872.—Missionaries sent to convert the Selavonians.—John Scottus, called Erigena, ob. 883.
873.—Civil war among the Saracens in the east.—They ravage Italy.
874.—Anastasius, the librarian, ob. about 886.
876.—The Danes under Jarl, being brought into England, conquer Northumberland.—The Christian religion propagated in Bulgaria.
878.—The government of Egypt becomes independent of the Saracen caliph of Bagdad under Ahmed.
879.—The Danes successfully ravage England.
880.—Ethelred fought nine pitched battles with the Danes in one year.
882.—Clocks first brought to Constantinople from Venice. —The Danes defeat Alfred near Wilton. —The Greeks successfully against the Saracens. —Charlemagne makes war against the Saxons.
883.—The duchy of Solfardes begins to reign in Khurasan.—France is laid waste by locusts and pestilence.
884.—The Danes invade Scotland.
885.—A bearded comet appeared in France.
886.—Alfred concealed himself in the isle of Athelney; Vol. VII.
887.—But soon after defeats the Danes, and causes them to leave England.
890.—The Normans invade Germany.—The kingdom of Arles begins.—Alfaragius, the Arabian astronomer, called Logilab.
892.—The Normans ravage France.—Sept. 16th, A. M. 11th. 45′ Albategni obsevers the obliquity of the ecliptic to be 23° 35′.—The French monarchy divided between Lewis and Carloman.
894.—Lewis defeats the Normans in a great battle.
895.—Albategni, the mathematician, named Mahomet of Aractus, observes the autumnal equinox at Aractus, on Sept. 19th, 1st. 15′ after midday, ob. about 888.
898.—Albategni observed the sun’s apogee in Π 25° 27′.—The first star of Aries distant from the equinocial point 15° 2′.
900.—Regnem, the historian, ob. 909.
903.—The Normans besiege Paris.
906.—The university of Oxford founded by Alfred about this time.—The Scythian become masters of Croatia.—Charles made a dishonorable peace with the Normans.
908.—The dominions of Charles le Gros, who possessed all those of Charlemagne, are divided into five kingdoms.
909.—The English defeat the Danes about the Danube.
910.—The Normans ravage France and the Low Countries.—Alfred divides England into counties, and composes his body of laws about this time.
912.—The monastery of Cluny is founded.
916.—Arnolph takes Rome.
917.—War between the Greeks and Bulgarians.—A great famine in Germany.—John Affer, the historian, ob. 989.
919.—The Hungarian invade Lombardy.

The Tenth Century of the Vulgar Christian Era.

901.—Civil wars in France and Germany.
902.—The Saracens defeated by Himerius at sea. —A comet appeared with its tail to the east.
903.—The Normans invade France.
904.—The Hungarians invade Italy.—A frost of 120 days begins at the close of the year.
905.—Harouin, caliph of Egypt, conquered and killed by Mahomet, the Saracen general.—A very remarkable comet appeared in China.
906.—War begins in England against the Danes, and continues 12 years.
911.—Thebit observes the obliquity of the ecliptic to be 23° 33′ 30″.—Leo VI., who wrote several treatises in the age of ignorance, dies.
912.—The Normans establish themselves in France under Rollu.—The Carolingian race of emperors ends in Lewis III.—The empire of Germany becomes elective.
913.—The Danes feize on the crown of England.
914.—The Hungarians defeated by Conrad.—The Saracens defeated by Confantine’s generals.
915.—The Hungarians ravage Saxony.—The university of Cambridge founded.
<table>
<thead>
<tr>
<th>A.D.</th>
<th>Event</th>
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<tbody>
<tr>
<td>916</td>
<td>Odochnon II. defeats the Saracens in Spain, kills 70,000, a few days after an eclipse of the sun on April 5.</td>
</tr>
<tr>
<td>917</td>
<td>The Bulgarians besiege Constantinople.</td>
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<tr>
<td>919</td>
<td>Phocas raises a sedition in Constantinople, is killed by Romanus, who is advanced to the empire.</td>
</tr>
<tr>
<td>922</td>
<td>The Moors defeat the Christians in Spain.</td>
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<tr>
<td>925</td>
<td>The Hungarians invade Germany. — Rodolph defeats Berenger in the battle of Piacentina.</td>
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<tr>
<td>924</td>
<td>The Hungarian ravage Italy.</td>
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<td>926</td>
<td>Sigisuid elections first marquis of Brandenburg.</td>
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<tr>
<td>926</td>
<td>Ales united to Burgundy.</td>
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<td>928</td>
<td>The marquisate of Mafnie established.</td>
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<td>929</td>
<td>Eudes de Cluny, ob. 942.</td>
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<td>930</td>
<td>Henry submits the Danes to the payment of tribute.</td>
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<tr>
<td>931</td>
<td>Arnolph of Bavaria defeated by Hugh, king of Italy.</td>
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<tr>
<td>932</td>
<td>The Christians defeated in Germany.</td>
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<tr>
<td>934</td>
<td>— Arophi, the Arabian astronomer.</td>
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<tr>
<td>935</td>
<td>The Saracen empire divided, by usurpation, into 7 kings and days.</td>
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<tr>
<td>937</td>
<td>Lutprand, the historian, ob. 978.</td>
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<tr>
<td>939</td>
<td>Romanus, king of Spain, defeats the Saracens at Sicily.</td>
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<tr>
<td>941</td>
<td>Arithmetic brought into Europe.</td>
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<tr>
<td>942</td>
<td>— The eastern emperors take possession of the kingdom of Naples.</td>
</tr>
<tr>
<td>945</td>
<td>The Turks ravage Thrace, and the Danes invade France. — Berenger agrees with Hugh for the recapture of Italy.</td>
</tr>
<tr>
<td>947</td>
<td>— Alfarabius, the Arabian astronomer.</td>
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<tr>
<td>952</td>
<td>Otho made Bohemia tributary.</td>
</tr>
<tr>
<td>954</td>
<td>Otho drives Berenger out of Italy.</td>
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<tr>
<td>954</td>
<td>Otho overcomes the Hungarians in Bavaria.</td>
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<tr>
<td>957</td>
<td>Otho defeats the Slavonians in Saxony.</td>
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<tr>
<td>958</td>
<td>— War between the Normans and Saracens in Italy.</td>
</tr>
<tr>
<td>959</td>
<td>— Berenger plunders Italy. — The power of the monks very great in England. — Rheza, the Arabian physician, ob. 1010, at. about 99.</td>
</tr>
<tr>
<td>962</td>
<td>Otho's expedition against the Vandals.</td>
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<td>961</td>
<td>Phocas recovers Canda from the Saracens.</td>
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<tr>
<td>964</td>
<td>— Italy conquered by Otho, and united to the German empire.</td>
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<tr>
<td>965</td>
<td>— Gerber, the Arabian astronomer.</td>
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<td>967</td>
<td>— The Ruffians invade Bulgaria.</td>
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<td>967</td>
<td>— Antioch recovered by Nicophorus from the Saracens.</td>
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<tr>
<td>969</td>
<td>— A famine in G. ramania. The Normans ravage Spain. — An eclipse of the sun observed at Constantinople, Dec. 22, about 16 o'clock, A. M.</td>
</tr>
<tr>
<td>979</td>
<td>— Otho, jun., defeats Nicophorus, and drives the Saracens out of Italy. — The race of Abbas extinguished by the Fatimides, who build Grand Cairo.</td>
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<tr>
<td>971</td>
<td>— The Ruffians, Bulgarians, &amp;c., defeated by Saracens in Bulgaria, to the number of 300,000 persons.</td>
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<td>975</td>
<td>— A comet appeared in Angoulême.</td>
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<td>977</td>
<td>— Bardas usurps the Eastern Empire for 10 years.</td>
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<tr>
<td>975</td>
<td>— Otho defeats and invades the Bohemians.</td>
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<tr>
<td>977</td>
<td>— Abbas, the monk, astronomer, ob. 1003.</td>
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<tr>
<td>978</td>
<td>— War between Otho and Lothaire.</td>
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<tr>
<td>980</td>
<td>— The two emperors of Constantinople recover Apulia and Calabria.</td>
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<tr>
<td>981</td>
<td>— Albinius, the Arabian geographer. — The Vandals and Bohemians ravage Saxony, &amp;c. — A civil war in Spain.</td>
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<tr>
<td>982</td>
<td>— Violent commotions and diffusions in Venice.</td>
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<tr>
<td>993</td>
<td>— The Danes invade England and Scotland under Sweyn.</td>
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<tr>
<td>993</td>
<td>— An earthquake in Greece. — Aimoin, the historian, ob. 1008.</td>
</tr>
<tr>
<td>997</td>
<td>— The Carolingian race ends, and the 3d race of kings in France begins.</td>
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<tr>
<td>998</td>
<td>— Peil nomine in Germany.</td>
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<tr>
<td>1000</td>
<td>— England invaded by the Normans.</td>
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<tr>
<td>1001</td>
<td>— The figures in arithmetic brought into Europe, by the Saracens from Arabia. — Gerbert, afterwards pope Silverth II., ob. about 1003.</td>
</tr>
<tr>
<td>1004</td>
<td>— A great eruption of Vesuvius. — The king of Denmark and Norway invade England with a great army.</td>
</tr>
<tr>
<td>1013</td>
<td>— Almanzor defeats the Christians.</td>
</tr>
<tr>
<td>1014</td>
<td>— The empire of Germany declared elective by Otho III.</td>
</tr>
<tr>
<td>1018</td>
<td>— The Christians defeat Almanzor.</td>
</tr>
<tr>
<td>1021</td>
<td>— Abu Wafi, and Abu Hamed observed the obliquity of the ecliptic to be 23° 37'.</td>
</tr>
<tr>
<td>1020</td>
<td>— Balbuzin defeats the Bulgarians, and drives them out of Transylvania.</td>
</tr>
</tbody>
</table>

**CHRONOLOGY.**

**The Eleventh Century of the Vulgar Christian Era.**

<table>
<thead>
<tr>
<th>A.D.</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>1001</td>
<td>An insurrection in Rome against Otho.</td>
</tr>
<tr>
<td>1002</td>
<td>The emperor Henry assumes the title of king of the Romans. — A general massacre of the Danes in England, on Sunday, Nov. 13.— Avicenna of Bokhara, the Arabian physician, ob. 1053, at. 83.</td>
</tr>
<tr>
<td>1004</td>
<td>Sueno invades England.</td>
</tr>
<tr>
<td>1005</td>
<td>All the old churches are rebuilt about this time in a new style of architecture.</td>
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<tr>
<td>1006</td>
<td>A pestilence over Europe for 3 years.</td>
</tr>
<tr>
<td>1007</td>
<td>A great eruption of Vesuvius. — Melch, of Mariand, called Jacobite, physician to Hakem, caliph of Egypt.</td>
</tr>
<tr>
<td>1009</td>
<td>The Saracens besiege Jerusalem; a civil war among them in Spain, which continues till 1011, when they become tributary to the Saracens of Africa.</td>
</tr>
<tr>
<td>1011</td>
<td>An earthquake at Constantinople.</td>
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<tr>
<td>1012</td>
<td>Erhein grants an annual tribute to the Danes.</td>
</tr>
<tr>
<td>1013</td>
<td>The Danes under Sweyn get possession of England.</td>
</tr>
<tr>
<td>1014</td>
<td>A violent storm Sept. 19th, which inundated Flanders.</td>
</tr>
<tr>
<td>1015</td>
<td>The king of Poland agrees to pay a yearly tribute to the emperor of Germany.</td>
</tr>
<tr>
<td>1016</td>
<td>Edmund Ironside fought 6 battles in England, with Canute II. king of Denmark, most of which he lost by the treachery of Edric.</td>
</tr>
<tr>
<td>1018</td>
<td>— The Normans fall enter Italy in a body.</td>
</tr>
<tr>
<td>1019</td>
<td>Bulgaria reduced to the form of a Roman province.</td>
</tr>
<tr>
<td>1020</td>
<td>A dreadful plague in Saxony.</td>
</tr>
<tr>
<td>1021</td>
<td>Guy d'Arezzo, in Italy, or Aretin, the monk.</td>
</tr>
<tr>
<td>1022</td>
<td>A new species of music under 6 notes introduced by Arezzo.</td>
</tr>
<tr>
<td>1023</td>
<td>— The caliph of Egypt ravages Palestine, and plunders the temple of Jerusalem.</td>
</tr>
<tr>
<td>1028</td>
<td>Canute conquers Norway. — Constantin, emperor of the East, aged 70, and is succeeded by Romanus.</td>
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<tr>
<td>1030</td>
<td>Canute of Normandy, the caliph. — Romanus deposed by the Saracens.</td>
</tr>
<tr>
<td>1031</td>
<td>— Romanus drives the Saracens out of Syria, and begins to build the temple at Jerusalem. — The Normans conquer Apulia.</td>
</tr>
</tbody>
</table>
CHRONOLOGY.

A.D.

1032.—The kingdom of Arles or Burgundy bequeathed to the emperor Conrad by Rodolph.
1033.—A great eclipse of the sun observed June 20th, about mid-day, in France.—Glaber, the historian, ob. after 1045.—The Peace of God published.
1035.—Capua taken from the pope by the king of Sicily.—The kingdom of Cathale and Aarragon begin.—The Vandals ravage Saxyon.
1036.—The kingdom of Norway begins.
1039.—An earthquake and famine at Constantinople.—The dynasty of Komnenea ends in Spain, after a duration of 38 years.
1042.—Constantine aforesaid by an earthquake.—The Saracens of Africa invade Italy.—The Greeks ravage Bohemia.
1041.—Germanus, called Contraetus, the monk and mathematician.
1042.—A comet appeared Oct. 6; moving from E. to W. 1043.—The Russians come from Scythia, and land in Thrace.—The Turks become masters of Persia.
1046.—Three missing popes deposed by a council convened at Sutium by the emperor Henry III.
1047.—Francesco, the mathematician.
1050.—The Greek church separated from the Latin.
1052.—Peter Damian, ob. 1052.
1053.—Pope Leo IX. taken prisoner in Naples by the Normans.—Michael Cerularius, ob. 1058.
1055.—The Turks take Bagdad, and overturn the empire of the Caliphs.
1057.—Gregory IX., the historian.
1058.—Guelfard drives the Saracens out of Sicily.
1059.—Berenger, ob. 1088, 22 Sept.
1060.—A severe famine in Germany.
1061.—Sirmises appointed to be taken in Scotland, by a parliament at Forfar.
1062.—Seventy thousand persons and more undertook a voyage to Palestine, and were killed or made prisoners.—Michael Pffellus of Constantinople, the Peripatetic philosopher and historian.
1063.—The massacre of Goflar.
1065.—Jerusalem taken by the Turks from the Saracens.
1066.—A comet appeared in May, moving in the same course with the sun.—The conquest of England by William duke of Normandy in the battle of Halings on Sat. Oct. 14.
1069.—The Dunes land in England, Sept. 11.
1070.—The feudal law introduced into England.—Arzaehel of Toledo observed the declination of the sun to be 29° 34'—he left 402 observations on the apogee of the sun.
1071.—The Turks defeated Romanus, and took him prisoner.
1072.—Roger took possession of Sicily.—Sirmises were first used in England about this time.
1073.—Marinus Scotus, ob. 1086.
1074.—The king of Bohemia obliged to pay a tribute to the Holy See.
1075.—The king of Germany defeats the Saxons in Thuringia.—The famous wars of the Saxons against Henry begin about this time.
1076.—The emperor Henry IV. and the pope quarrel about the nomination of the German bishops.—An earthquake in England.—Asa Minor, having been subdued by Solyman two years ago, was, from this time, called Turkey.—Arzaehel found the sun's apogee in 11° 17' 50'.

A.D.

1077.—The emperor goes barefooted to the pope at Can- nufo, about the end of January.
1079.—Arzaehel, the Spanish mathematician.—Avicenna observed the solar equinox, March 14, P.M. 2° 56'.—The Persian year reformed.
1080.—Domeday book begins to be compiled from a survey of all the estates in England, and was finished in 1086.
1081.—Henry lays siege to Rome.—William of Spices, the mathematician.
1083.—Henry takes possession of Rome on Friday, June the 2d.
1085.—Toledo taken from the Saracens, and made the capital of Calle.
1086.—The order of Carthusians founded by Bruno.
1087.—An expedition of the Christians against the Saracens in Africa.—William the Conqueror, of France.—Suidas, author of the Greek lexicon.
1089.—Robellius of Compiegne, the scholastic head of the fleet of Normanists.
1092.—The dynasty of Assifilia begun in Irak, and flourished 117 years.
1091.—The Saracens in Spain call in Joseph, king of Morocco, who thus gains possession of all their dominions in that kingdom.
1092.—Peter, firmated the Hermit.
1093.—Margaret conquers Sweden, and annexes it to Denmark.
1095.—Ullian, bishop of Worcester, is deprived of his bishopric for not understanding the French language.—Sieghart, the historian, ob. 1113.
1096.—The 1st crusade into the Holy Land.—A comet appeared.—The emperor took Naples and Sicily.
1097.—Godfrey of Boulogne takes Nicaea.—The Christians defeat the Saracens.
1098.—The crusaders take Antioch.—The order of St. Benedict instituted.
1099.—The crusaders take Jerusalem.—Godfrey elected king of Jerusalem, and the order of Knights of St. John instituted.
1100.—An earthquake in Sicily.

The Twelfth Century of the Vulgar Christian Era.

1102.—Baldwin defeats the Saracens near Joppa.—William, duke of Aquitain, undertakes a voyage to Pales- tine, with a numerous army.
1103.—William's army massacred at Constantinople.
1104.—Baldwin defeats the Saracens, and takes Ptolemais.
1105.—Henry, king of England, invades Normandy.
1108.—Hungary rescued from servitude to Germany.
1109.—Joseph, king of Morocco, defeats the Spaniards in the famous battle of the seven counts near Badjaso.—The crusaders take Tripoli.
1110.—Learning revived at the university of Cambridge.—Writing on paper made of cotton became common.
1113.—War between France and England begins.
1114.—Peter Abelard, ob. 1143, 23 Oct.
1117.—An earthquake in Lombardy.—Ann Camenza, the historian.
1118.—The order of Knights Templars instituted.
1119.—Baldwin defeats the Turks at Antioch.—Bohemia erected into a kingdom.
1120.—Prince William, with a number of English lords, drowned in their return to England from Forcar, Nov. 26.
A.D. 1161. Eufialthus, the commentator on Homer.

1162. The affairs of the Crusaders on the decline in Palest.
tine. — The emperor Frederic destroys Milan, leav-
ing only the churches.

1163. Nouradn defeats Raymond II. — John of Salisbury,
ob. 1187.

1164. The first king of Sardinia created by Frederic. — A
contest between Henry of England and Bicket. — The
Council of Clarendon against him. — The Teut-
onic order begins.

1165. Two comtes appear in Scotland. — Simon of Dur-
ham.

1166. Maimonides of Corduba, the most learned of the
Jews, ob. 1208.

1167. Frederic takes possession of Rome. — War between
England and France. — The caliph of Persia invades
Egypt. — Henry of Huntingdon.

1169. — The Venetians take the island of Chio. — The
dynasty of Fatimites ends in Egypt. — The
foreigners of Egypt henceforth styled Infidials.

1171. Henry II. of England takes possession of Ireland. —
Peter, called Comiceor, ob. 1178.

1172. — The city of Catania destroyed by an earthquake.

1173. — William acknowledges the kingdom of Scotland a
fief of the crown of England.

1176. Frederic totally defeated by the Milanes. — The
dispelling of justice by circuits first appointed in
England. — Genghis-khan begins to reign.

1177. — Baldwin defeats Saladin before Jerusalem.

1178. — The pope sends a legate to Prester-John.

1179. — Saladin defeats the crusaders. — The French king
visits Becket's tomb in England. — The university
of Padua founded.

1181. — The laws of England digested by Glanville.

1182. — Saladin takes Damascus.

1183. — Seven thousand Albigenses massacred by the inha-
bilants of Bery. — Peter of Blus, the historian,
ob. 1200.

1184. — Andronicus orders all the Latins in Constantinople
to be murdered.

1185. — The Bulgarians throw off the Roman yoke. — Sept.
16th a conjunction of all the planets at fun-rise;
fun in 3° 46' Jupiter in 2° 4' 32'; Venus in 3°
46', Saturn in 8° 6', Mercury in 4° 13', Mars in
9° 8', tail of the Dragon 18° 23' 50'.

1187. — The kingdom of Jerusalem finihed, that city being
taken by Saladin, Oct. 2d.

1188. — The third crusade. — The tax, called Saladin's tith,
impofed. — The Dutch and Zealands defeat the
Saracens. — The duchy of Mheuburg held as a
fief of the crown of Denmark.

1189. — The kings of England and France go to the Holy
Land. — Richard renounces his superiority over
Scotland for a sum of money.

1190. — Frederic fabduces Clitia, and defeats the Saracens.
— The Teutonic order of knights laid by Payfair to
be instituted at Ploemais.

1191. — The crusaders take Ploemais.

1192. — King Richard made prisoner by the emperor Henry
VI. — Guy, of Lusignan, elected king of Cyprus.
— Richard defeats Saladin in the battle of Alca-
bon. — Roger de Hoveden, the historian.

1193.
CHRONOLOGY.

A.D. 1195.—The Saracens from Africa invade Spain, defeat Alphonso, king of Castile, and kill 50,000 Spaniards.

1196.—The emperor Henry VI. takes possession of Naples and Sicily. —The 4th crusade.

1197.—Henry leads an army into Palestine.—William of Newburgh, the historian.

1198.—The 5th crusade. —The order of the Holy Trinity instituted.

1199.—Peace between Philip king of France and Richard king of England.—Campanus, of Lombardy, the astronomer.

1200.—The university of Salamanca, in Spain, founded. —William, king of Scotland, performs his homage to the king of England, at Lincoln, Nov. 21.

The Thirteenth Century of the Vulgar Christian Era.

1201.—The city of Riga, in Livonia, founded. —War declared between France and England.

1202.—The principality of Antioch united to that of Tripoli.—Gervase of Canterbury, the historian.

1203.—The 6th (4th, Blair) crusade sets out from Venice.

1204.—Constantinople taken by the Venetians and French. —Normandy conquered and re-united to France.—The Inquisition established.—The empire of Trebizond established.

1205.—Baldwin defeated near Adrianople by the Bulgarians.

1206.—The first towns erected into corporations in Normandy, were those of Rouen and Falaise, this year.

1208.—The order of Fratres minores established.—King John, of England, excommunicated by the pope.

1209.—The works of Airthole, just imported from Constantinople, are condemned by the council of Paris in 1210.—The silk manufacture imported from Greece into Venice.—Ralph de Diceto, the historian.

1210.—The persecution against the Albigensians, begun in the preceding year, is now very violent.—The emperor Otho excommunicated by the pope.

1211.—The king of England subdues Wales.—Saxo-Grammaticus, the historian.

1212.—The Chilianas defeat the Moors at Thouloisc, and kill 200,000 of them.

1213.—The king of England, reconciled to the pope, becomes his vassal.—Walter of Coventry.

1214.—War between England and Scotland.—Philip defeats Otho near Bourniva.—The Turks defeat the Perfans.

1215.—The order of Dominicans instituted.—A comet in March.—The order of Knights-Hospitallers founded.—A comte between the king and barons of England.—Magna Charta signed June 15.—The doctrine of transubstantiation introduced.

1216.—Alexander and the kingdom of Scotland excommunicated by the pope’s nunio.—Accurius, the famous lawyer, and author of the Gleefes, ob. 1219.

1217.—Peace between England and Scotland.—The French defeated in the battle of Lincoln.

1218.—The Chilians take Damietta from the Saracens.

1220.—Altronomy and geography brought into Europe by the Moors about this time.

1221.—The university of Padua enlarged.—St. Anthony of Padua, ob. 1231.

1222.—A great earthquake in Germany.—The Chilians forced to evacuate Damietta.

A.D. 1223.—All the slaves in France franchised by Louis VIII.

1224.—An extraordinary comet appeared in Denmark.

1225.—John de Sermo-bosco, a mathematician, of Halifax, in Yorkshire, ob. at Paris 1244.

1226.—The king of France, and many prelates and lords, form a league against the Albigensians.

1227.—An expedition of all the European powers to Palestine.—The power of the English barons abridged.—The Tartars, under Genghis-khan, over-run the whole Sasanian empire.

1228.—The university of Thouloisc founded.

1229.—A treaty between the Saracens and Christians.—A conspiracy against the crown of Sweden.—Alexander Halensis, ob. 1245.

1230.—Denmark defeated by peltlance.—The kingdoms of Leon and Castile united.—The Teutonic knights subdue Prussia.—The university of Naples founded.—Several murdered in the university of Paris on occasion of the disputes about Arilote.

1231.—The Almeggel of Tolentino translated from the Arabic into Latin.

1232.—William, bishop of Paris, ob. 1248.

1233.—The Inquisition entrusted to the Dominicans.—The order of the Knights of the Blessed Virgin instituted.

1234.—Peter de Vigne, chancellor to Frederic II., ob. 1249.

1235.—The first irruption of the Tartars into Russia, Poland, &c.

1238.—The university of Vienna founded.—The Tartars subject the Kufians to the payment of tribute.

1239.—A writing of this date, on paper made of rags, is still extant.

1240.—The king of Denmark published a code of ancient Cimbrian laws.—The Tartars invade Poland and Hungary.

1241.—The Kufians defeat the Swedes and Livonians near Narva.—The Hanseatic league formed.—The mines discovered in Germany.—Matthew Paris, the historian, ob. 1250.

1242.—A plague in France, Italy, and Greece.—Grotell, bishop of Lincoln, ob. 1254.

1244.—The Khailimans defeat the Chilians, and take Jerusalem.—The order of the Celebines instituted.

1245.—The general council of Lyons for renewing the crusades.—A clear red star, like Mars, appeared in '97.

1248.—The 5th crusade under Lewis IX.

1249.—Damietta taken by Lewis.

1250.—Lewis defeated in Egypt and taken prisoner.—Painting revived in Florence by Cimabue.—The Sorbonne in Paris founded.

1251.—Wales subdued, and Magna-Charta confirmed.

1252.—Alphonso of Spain found the sun’s apogee in 728° 40'.—Alberict Magnus, ob. 1280, et. 75.

1253.—The Alphonine tables composed.

1254.—War between Denmark and Sweden.—St. Thomas Aquinas, ob. 1274.

1256.—The order of the Augustines established.

1257.—St. Bonaventura, ob. 1274, et. 53.

1258.—The empire of the Saracens finished by the Tartars taking Bagdad.—Representatives of the commons of England present for the first time in parliament. (Playfair.)—John de Loinville.

1259.—The Tartars invade Poland.—Naffir Eddin, of Tifa, the Perisan astronomer and geographer.

1260.—Alphonso of Spain orders all public records to be written.
CHRONOLOGY.

A.D.
1261.—The Greek emperors recover Constantinople from the French, and the empire of the Franks there ends.—Roger Bacon, ob. 1284, ut. 75.

1263.—The Norwegians invade the Western islands of Scotland.—Civil wars in England, between the barons and the king.

1264.—The battle of Lewe, in which Henry is taken prisoner.—The commons first summoned to parliament. (Blair.)—The annual festival of the Holy Sacrament instituted by pope Urban. —The disputes of towns and barongs first summoned to parliament. (Playfair.)—A comet with a tail of great extent appeared; course direct; perihelion, July 6th.

1265.—The battle of Erution, in England, Aug. 4.

1266.—The battle of Benevento, Feb. 26.—Peace between Scotland and Norway.

1267.—The college of Paris established about this time. —Cambra, the first of the modern painters at Florence, ob. 1303.

1268.—The mufcmen gain Antioch.—The battle of Calamone, in Italy, fatal to Comanini, Aug. 24th.—The Tartars invade China, and expel many of the natives.

1269.—Louis's expedition to Palestine.—Czechs Nafirodi offered the obliquity of the ecliptic to be 23° 35'.

1270.—The king of Hungary reduced Bulgaria.—The Scots guard in France emboldened.

1271.—The academy of Florence founded. —All the orders of mendicants reduced to the four following, viz. Dominicans, Franciscans, Carmelites, and Hermits of St. Augustin.

1272.—The empire of the present Austrian family begins.—Cheouching, in China, observed the obliquity of the ecliptic to be 23° 33' 39''.

1274.—The first commercial treaty between England and Flanders.

1275.—Durandus, ob. 1295.

1277.—The sultan of Egypt defeats the Tartars near Damascus.—Papal bulls first avowed at Rome by pope Nicholas III.

1279.—King Edward relinquished his right to Normandy.—The mortmain act passed in England.—Henry of Ghent, ob. 1293, ut. 76.

1280.—The sultan of Egypt defeats the Tartars near Emestia.

1281.—A revolution in Bulgaria.

1282.—Twelve thousand (8000 Blair,) French massacred at the Sicilian vipers, March 20.—A great petulance in Denmark.—Peter, king of Arragon, feized on Sicily.—The academy of de la Cruca founded.

1283.—Wales conquered by king Edward, and united to England.—A new separation between the Latin and Greek churches.—The flates of Segovia adopted the vulgar Christian era.—Raymond Lulli, ob. 1315, ut. 80.

1285.—The Tartars ravage Hungary, and defeat the Hungarians.—Alphono of Arragon deprives his uncle of Majorca, and in the following year, becomes master of Minorca.—Jacobus de Voragine, ob. 1298.
A.D. 1318.—A severe famine in Great Britain.

1319.—The university of Dublin founded.—William Occam, ob. 1347.

1320.—An earthquake in England.—Gold coined in Christendom.

1321.—A civil war in England.—Abulfeda, the Saracen prince of Hamah in Syria, a great Arabian geographer, finished his Arabian geography, ob. 1335.

1322.—The battle of Muldorff between Frederick III. and Louis V.—the former being taken prisoner.

1323.—A truce between England and Scotland for 13 years.—A great eruption of Etna.

1325.—The first treaty of commerce between England and Venice.

1327.—Edward II. deposed by parliament.

1329.—The battle of Mount Calid gained by King Philip over the Flemings.

1330.—Gunpowder invented by a monk of Cologne.

1331.—The Turks take and plunder the city of Nice.—The knights of the Teutonic order settle in Prussia.—The art of weaving cloth brought from Flanders into England.

1332.—The King of Polandizes upon Silezia.—The pope acceded of heresy.—Nicephorus Gregoras, the astronomer and historian, ob. 1350.

1333.—The Moors gain possession of Gibraltar.—The Scots defeated at Halidon hill, near Berwick, July 19.

1337.—War between England and France.—The first comet, whose course is described with an astronomical exactness, appeared in the beginning of this year.—its perihelion June 2, 6° 25'; its ascending node 22° 21'—inclin. 32° 11'—retrograde.

1338.—The empire of Germany declared to be independent on the pope.—King Edward begins his war against France.

1339.—The academy of Pisa established.—Denmark defeated by war, famine, and pestilence.

1340.—The French defeated in sea-fight by Edward III. near Helvoetstuyys—followed by a truce which lasted 4 years—copper money first used in Scotland and Ireland.

1341.—Cantacuzenus leaves the Eastern empire for 17 years.—Darlam the Calabrian.—A comet appeared in June, first seen near Spica Virginis, disappeared near 0°.

1342.—The siege of Algiers, in which powder was used.—Edward's expedition to the continent.—The knights and burghesists first fort together in the same house of the English parliament.

1343.—Leonardus Platus of Thebafalonia, reflores of Greek learning in Italy.

1344.—The Madeirelands said to be discovered by Macham, an Englishman.—Gold first coined in England.—The Tartars invade Poland, and are defeated.

1347.—The battle of Crefly, between the French and English, August 26.—A treaty of commerce between the Venetians and the sultans of Egypt.—The Scots defeated by the English, and David taken prisoner.

1347.—Pestilence ravages Europe, said to carry off 1/10th of the inhabitants.—The admiralty court instituted.—Edward takes Calais Aug. 4th.—A code of laws published in Poland, and the university of Cracow founded.

A.D. 1348.—The university of Prague founded.


1350.—The Jubilee fixed to every 25th year.

1352.—The Turks first enter Europe.

1353.—Locults desolate Africa and Asia.—A comet appeared—its course from N. to S.

1354.—Francis Petrarch, ob. 1374, at 76.

1355.—A conspiracy at Venice.—Iovanni Bocaccio, ob. 1376, at 62.

1356.—The French defeated at Poictiers, and King John taken prisoner September 19.—An earthquake in Germany.—The golden bull published December 29.

1357.—A great sedition in France.

1358.—The vulgar Christian era adopted in various parts of Spain.—Tamerlane begins to reign in Peria.—The treaty of Calais signed, Oct. 24.

1361.—Matthew of Weilmünster, named Florilegus, ob. about 1380.

1362.—The law pleadings in England changed from French to English, as a favour to Edward III. to his people, in his 50th year.—Military order of Janizaries established among the Turks.

1364.—The battle of Cockerel, May 6, and of Avraii, September 29.

1365.—The universities of Vienna and of Geneva founded.

1366.—Adrianople made the seat of the Turkish empire.

1367.—The battle of Niiria in Casilis, April 4.

1368.—The battle of Montial, March 14.

1369.—Wickliff begins to teach in England, ob. 1385.

1370.—Chivalry flourished about this time.—The office of grand viceroy established.

1371.—The French defeated the English fleet near Rochelle, June 33.—The family of Stewart begins to reign in Scotland.

1373.—The Genoese become masters of Cyprus.—John Gower, the first English poet, ob. 1392.

1375.—A three years truce between England and France.

1376.—John Froifart, ob. 1400.

1377.—The French invade England.—The feast of the popes transferred from Avignon to Rome.—The fleet breaks in upon Flanders.—Wickliff's doctrine condemned in England.

1378.—The schism of double popes, which continues 38 years.—Greenland discovered by a Venetian.

1379.—Civil commotions in Flanders.

1384.—Bills of exchange first used in England.—A plague in Germany.—Watt Tyler's insurrection in England, July.

1382.—The battle of Rosebeck in Flanders, Nov. 17.—The Turks take Hierapolis.

1383.—Cannon first used in the English service by the governor of Calais.

1384.—The first act of navigation in England.—No goods to be imported or exported by Englishmen on foreign bottoms.—Hostilities between England and Scotland.

1385.—The king of Portugal defeats the king of Castile at Aljubarrota, Aug. 14.—The ancient race of Swedish kings ended.—Nicholas Flamel, ob. 1459.

1386.—Andronicus Palologus takes Constantinople, from retaken
A.D. 1387. — The first lord high admiral of England appointed.

1388. — Bombs invented at Venice.

1390. — John Huss banished out of Germany.

1393. — The Turks ravage Walachia, and defeat the Hungarians at Nicopolis. — The doctrine of Huss propagated in Bohemia.


1395. — Bajazet defeats the Christians at Nicopolis, Sept. 25, and afterwards subdues the Bulgarians.

1396. — Geoffroy Chaucer, the English poet, ob. 1422.

1397. — The union of Denmark, Sweden, and Norway, at Calmar. — Owen Glendour, ob. about 1408.

1398. — A rebellion in Ireland. — Huss first created in Scotland. — Tamerlane penetrates into Hindostan, and took Delhi in January following. — Latefes fruit in Denmark.

1399. — Tamerlane becomes master of Novogorod.

1400. — War between England and Scotland. — Tamerlane invades Alba Minor, with a great army.

**The Fifteenth Century of the Vulgar Christian Era.**

1401. — The emperor Rupert invades Italy, and is repulsed. — Tamerlane becomes master of Bagdad, Aug. 15th.

1402. — Tamerlane defeats Bajazet in the battle of Angora, July 28th, and takes him prisoner.

1403. — The battle of Shrewsbury, July 22d, in which Hotspur is killed.

1505. — Great guns first used in England at the siege of Berwick. — Famine and pestilence in Denmark. — The Canary islands discovered by Bethencourt, a Norman.

1406. — Leonard Aretin, ob. 1443, 8t. 74. — Brunus of Arezzo, secretary of Florence.

1407. — The kingdom of France laid under an interdict. — Huss propagates his opinions. — Balthazar Coffs becomes master of Rome.


1410. — Painting in oil colour invented at Bruges by John Van-eck. — A civil war in France.

1411. — The university of St. Andrews in Scotland founded. — War between king Ladislaus and the pope.

1412. — Algebra brought from Arabia into Europe, about the beginning of this century.

1414. — The council of Constance begins, Nov. 16th, in which two popes voluntarily submitted to deposition.


1416. — The English defeat the French fleet at the mouth of the Seine.


1418. — The massacre of the Armagnac faction in Paris. — Poggio, the Florentine, ob. 1459, 8t. 80.

1420. — The treaty of Troyes signed, May 21. — The island of Madeira discovered by the Portuguese. — Two kings, two queens, two regents, two parliaments, and two universities of Paris, in France. — The battle of Beaufé, April 3, in which the duke of Clarence is killed.

1421. — The revenue of England amounts to 55,754L.

1422. — The vulgar Christian era introduced into Portugal.

1423. — The English defeat the French and Scots in the battle of Crevant.

1424. — The English defeat the French in the battle of Vertuill. — Ang. Flavius Blondus, ob. 1463, 8t. 75.

1426. — An earthquake at Naples.

1427. — The academy of Louvain founded. — Theodore Gaza, ob. 1478, 8t. 90.

1428. — The siege of Orleans begins, Oct. 15th, and repulsed by Joan of Arc.

1429. — The battle of Herrings, Feb. 12th. — Francis Philibert, ob. 1451, 8t. 53.


1437. — G. Gemiius Pethio, ob. 1499, 8t. 100.

1441. — A civil war in Sweden. — Colino di Medici recalled from banishment, which began the rite of that family in Florence.

1445. — The treaty of Arras between Charles II. and the duke of Burgundy.

1456. — Paris retaken by the French, April 13th. — Laurentius Valla, ob. 1465, 8t. 50.

1457. — An expedition of the Portuguese into Africa. — The Turks invade Hungary. — Ulugh Beigh, emperor of Samarcan, author of the Persian astronomical tables, observed the obliquity of the ecliptic to be 23° 30' 11", ob. 1449, 8t. 57.

1459. — The re-union of the Greek and Latin churches. — The Pragmatic sanction settled in France.

1460. — The art of printing invented at Mentz, and gradually improving for 22 years. — John Gutenberg, ob. after 1460.

1461. — John Faulitus, ob. about 1466.

1462. — The Turks invade Hungary. — Peter Schefter, ob. after 1479.

1464. — Famine in Sweden. — Truce between France and England at Tours, June 18. — Weffulus, ob. 1489, 8t. 70.

1466. — The sea broke in upon Dort, April 15th, and drowned 100,000 persons. — Frederick declares war against the Swifs.

1467. — The Visconti family ends in Milan: succeeded by the Sforzas. — The Turks, for several years, defeated by Scanderbeg in 22 battles.

1448. — The house of Oldenburg begins to reign in Denmark. — The Scots defeat the English at Sark.
A.D. 1449.—War between England and France. — Ulugh Beigh put to death by his son. — Geo. Purbachius, ob. 1462, 1st. 87.

1450.—The battle of Fourmigny, April 18.
1451.—The English compelled to evacuate Rouen, and several other parts of France. — War between Sweden and Denmark. — Henricus Sylvius Pius II., ob. 1464.

1452.—Cardinal Bessarion, ob. 1472, 1st. 77.
1453.—Constantinople taken by the Turks, May 29th, which terminated the Greek empire. — The English government in France ends with the battle of Casselton, July 7th.

1454.—A conspiracy in Rome against the pope. — The Prussians and Poles carry on war for twelve years, against the Teutonic knights. — Thomas a Kempis, ob. 1471.
1455.—The battle of St. Albans, May 31st.
1456.—A great earthquake at Naples. — The Turks are repulsed at the siege of Belgrade. — Two comets appear.
1457.—Glas's first manufactory in England. — Joannae Argyropulu, ob. 1480, 1st. 70.
1458.—The Turks take Corinth. — A sedition in England.

1459.—The arts of engraving and etching invented. — Alphonso's first expedition into Africa.
1460.—The battle of Northampton, July 19th. — The battle of Wakefield, Dec. 31. Alum mines discovered in Italy. — Purbachius and Regiomontanus, (ob. 1476, 1st. 40.) observed the obliquity of the ecliptic to be 23° 29'. — An academy founded at Bafil, and at Friburg.
1461.—King Edward defeats king Henry at Towton, in Yorkshire, March 29th.
1462.—An expedition of the Turks into Walachia. — Regular polis established in France. — The first book printed, viz. the Volgate Bible in 2 vols. — Baptista Platina, ob. 1451, 1st. 60.
1463.—Religious rages in Saxony and Thuringia. — War between the Turks and Venetians. — Alphonso's second expedition into Africa.
1464.—The league against Louis XI. of France, called "La Guerre du bien public." — Rod. Agricola, ob. 1485, 1st. 43.
1466.—Sheep from England first permitted to be sent to Spain.
1467.—Warwick's conspiracy against Edward. — Jo. Joannis Pontanus, ob. 1505, 1st. 70.
1469.—The battle of Bannbury, July 26th. — The order of St. Michael instituted in France.
1470.—The battle of Stamford, March 14. — King Edward attained, and king Henry VI. restored.
1471.—The battle of Barnet, April 14. — Edward restored. — The battle of Towcester, May 4th. — Marcellus Francesco, ob. 1499, 1st. 56.
1472.—War between the Turks and Parthians. — A comet appeared—its perihelion, Feb. 29th 10° 23' A. M. — Its ascending node 27° 11' 40' 20' in ecliptic. — 5° 26'—retrograde—it passed through 40° in 24h. — John Lasco, ob. 1513, 1st. 99.

Vol. VII.

A.D. 1473.—The study of the Greek language introduced into France by Gregorius Tiphonius.
1474.—The Cape de Verdi islands discovered by the Portuguese. — Annus of Viterbo, ob. 1492. — Abraham Zaguth observed Spica Virginis in 15° 10'.
1475.—The treaty of Amiens, Aug. 29. — Poland and Hungary infested with locusts.
1476.—Ferdinand of Caltile defeats the king of Portugal. — Waltherus observed the obliquity of the ecliptic to be 23° 29'. — George Merula, ob. 1491.
1478.—Laurence de Medici expelled Florence, and an anathema against him by Sixtus IV., which greatly disturbed learning. — Peace between France and Caltile, Nov. 9. — Waltherus observed the vernal equinox in March 11, 8h. 5'.
1479.—The university of Upsal founded. — The kingdoms of Calthle and Arragon united.
1480.—The Turkish besiege Rhodes.
1481.—A great famine in France. — Savonarola, ob. 1498, 1st. 46.
1481.—The coast of Guinea discovered by the Portuguese. — A court of inquisition erected at Seville. — Jo. Picus of Miranda, ob. 1491, 1st. 37.
1483.—A conspiracy in England against Richard. — Porthorces and flags established.
1484.—Famine and pestilence reged in Denmark.
1485.—The battle of Bosworth, Aug. 22. — The union of the houses of York and Lancaster. — Demetrius Chalcowyles, ob. 1513.
1486.—War between the sultan of Egypt and the Turks. — The Rutilian subdue the kingdom of Caffan. — Brazil discovered. — Angelo Politian, ob. 1494, 1st. 46.
1487.—The court of Star-Chamber instituted in England. — Hermaus Barbarus, ob. 1493, 1st. 39.
1488.—The battle of Aubin, June 23, in which the French king defeats the duke of Brittany. — The Cape of Good Hope discovered.
1490.—Poetry begins to flourish in Germany.
1491.—The study of the Greek tongue introduced into England, by Grocyn. — Baptista Mantuanus, ob. 1516, 1st. 68.
1492.—Britain re-united to the French crown. — America discovered by Columbus. — Life of St. Domingo discovered. — Peace between England and France. — Ferdinand expelled the Moors from Granada, after a possession of above 800 years.
1493.—Montferrat discovered. — Jo. Reuchlin, called Capnio, introduced the Hebrew and Greek languages into Germany, ob. 1521, 1st. 67.
1494.—Poyning's act passed in Ireland.
1495.—The king of France feized on the kingdom of Naples. — Algerbra taught by a friar at Venice. — The diet of Worms for the peace of the empire. — The vedeval difcase introduced into Europe. — A treaty of commerce between Henry of England and Philip, duke of Burgundy.
1496.—The Jews and Moors banished out of Portugal. — John Colet, ob. 1519, 1st. 52.
1497.—North America, discovered by Amerigo Vespuftian. — Vasquez di Gama's expedition to the East Indies.
1498.—The Walachians ravage Poland, and carry off above 5 K 100,000
A.D. 100,000 prisoners, whom they sold to the Turks. Alexandre ab Alexandro, ob. 1521, at. 50.

1499. — War between the Turks and the Venetians. — Lewis XII. takes possession of Milan.-Dr. Thomas Laware, ob. 1532.

1500. — Brazil discovered by the Portuguese. — Florida discovered by John Cabot, an Englishman. — Maximilian divides the empire into six circles. — Painting in chiaro oscuro discovered. — A great plague in England.

The Sixteenth Century of the Vulgar Christian Era.


1502. — St. Helena discovered. — Compagnie of Manus, ob. 1525, at. 65. — Gondolfo, called the great captain, ob. 1515, at. 72.

1503. — The battle of Criminc, April 28, which finished the French power in Naples. — Leonarda da Vinci, ob. 1520, at. 75. — Cardinals Ximenes, ob. 1517, at. 80. — Walterson observed the summer solstice at Nuremberg, June 22, 12° 7/6. — The sun's apogee at 60° 6'.


1507. — Louis reduced the Genoese to subjection. — The isle of Madagascar discovered by the Portuguese. — Lewis Ariudo of Ferrara, ob. 1553.


1510. — Wernerius observed the obliquity of the ecliptic to be 23° 28' 36". — The pope grants to Ferdinand the investiture of Naples, July 23.

1511. — The isle of Cuba conquered by the Spaniards. — A league between the emperor, the pope, and the Venetians against the French, Oct. 4. — Raphael, ob. 1520, at. 37.

1512. — The battle of Ravenna, April 11. — The river de la Plata discovered. — Erasmus, ob. 1536, at. 70.


1514. — Cannon bullets of stone, still in use. — War between the Ottoman empire and Persia. — Polydore Virgil, ob. 1535, at. 80.

1515. — Copernicus observed the vernal equinox, March 11, 4° 30' morn. at Trumberg. — He observed Spica Virginis in 17° 5' 2", and the sun's apogee in 6° 49'. — The 14th Polyglot Bible printed at Aiculla. — A battle between the French and Swifs at Marignan, Sept. 13 and 14. — Ferdinand annexed the kingdom of Navarre to that of Castile. — Cornelius Agrippa, ob. 1534, at. 48.

1516. — Barbarossa uses the kindom of Algiers. — War between the Turks and Persians. — The battle of the Turke at Pashiland. — The treaty of Noyou, Aug. 16. — Francis Guiccard, ob. 1549, at. 26.

1517. — The Reformation begun in Germany by Luther. — Ludovicius Vives of Valenta, ob. 1576. — New Spain and the Straits of Magellan discovered. — Zuinglius, ob. 1531.

1518. — Francis I. and Charles V. competitors for the Imperial throne. — Cardinal Bembo of Venice, ob. 1537, at. 68.


1520. — A league between the emperor and Henry VIII. against Francis I. — The diet of Worms, April 17. — The Turks take Belgrade, Aug. — A conspiracy of the king of Sweden against the nobility. — The title of "Defender of the Faith" conferred on Henry VIII. — Copernicus of Thorn in Prufia, ob. 1543, at. 60.

1521. — The Turks take the island of Rhodes, Dec. 25. — The first voyage round the world, by a ship of Magellan's squadron. — Michael Angelo Bon, ob. 1574, at. 59.

1523. — A league formed against Francis I. by the pope, the emperor, the Venetian, &c. — Sweden and Denmark dimented. — Paracelius, ob. 1541, at. 48.

1524. — Clement Marec, ob. 1544, at. 60. — Queen Katharine of England, ob. 1558, at. 50.

1525. — The battle of Pavia, Feb. 24, in which Francis I. was made prisoner. — Julio Romano, ob. 1546, at. 54. — Sir Thomas More, lord chancellor, ob. 1535.

1526. — The treaty of Madrid, Jan. 14. — The inquisition established in Portugal. — The pope, Venetians, and French, form a league against the emperor. — Lutheraism established in Denmark. — Paul Jo- vius, ob. 1552, at. 70.

1527. — War between the pope and the viceroy of Naples. — The pope's territories invaded by the army of Charles V., and Rome taken and plundered, May 6th. — Bermuda islands discovered. — Francis Rabe- lais, ob. 1553, at. 70.

1528. — Popery abolished in Sweden. — Francis challenges the emperor to single combat. — A new form of government established in Genoa by Andrew Doris, ob. 1562, at. 93. — Olaus Magnus, ob. 1541.

1533. — The diet of Spires, March 15, against the reformers, from which the name of "Protestants" begins. — The peace of Cambrai, Aug. 5, between Charles and Francis. — The Turks besiege Vienna, and are repulsed. — J. Gen. Tridino, ob. 1550.

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1531.—Post-office in England.—A great earthquake at Liepensburg.—A comet appeared—its perihelion, Aug. 25, 9° 18' A. M.—ascending node 8° 24'—incl. 17° 50'—retrograde.—Hieron' Vida, ob. 1532.

1532.—The court of sessions instituted in Scotland.—Peace between the emperor and German princes, July 23.—A comet appeared—its perihelion, Oct. 23, 10° 12' A. M.—ascending node 26° 27'—incl. 33° 39'—direct.—Treaty of Nuremberg, Aug. 2.—Lily Giraldi, ob. 1533, ret. 74.

1537.—Papal authority abolished in England.—An insurrection of the Anabaptists in Westphalia.—A comet appeared—its perihelion June 17, 7° 30' A. M.—ascending node 9° 44'—incl. 35° 45'—retrograde.—Ignatius Loyola, ob. 1539, ret. 65.

1538.—Barbarossa takes the kingdom of Tunis.—The pope's sentence confirming the marriage of Henry VIII. —The reformation takes place in England, March 30th.—Julius Caesar Scaliger, ob. 1538, ret. 75.—Anne Boleyn, queen of England, ob. 1536.

1539.—The reformation introduced in Ireland.—Charles V. of France's expedition into Africa ends, Aug. 14th.—The society of the Jesuits formed.—Archbishop Cranmer, ob. 1536, ret. 67.—Barbarossa, the Turkish general, ob. 1537.

1536.—James king of Scotland's expedition into France.—A league between Solymans and Francis against Charles V.—John Leland, ob. 1532.—Jane Seymour, queen of England, ob. 1537.

1537.—Frascatinus, ob. 1533, ret. 71.

1535.—A truce for 10 years, concluded at Nice, between Charles and Francis, which lasts 4 years, June 18.—Peter Arétin, ob. 1536, ret. 67.

1538.—A rebellion at Ghent, which occasions Charles V. to pass through France.—The Bible printed in English.—The ancient constitution of the court of Spain defeated by Charles V.—617 monasteries and religious houses suppressed in England and Wales.—John Sleidan, ob. 1516.—Ann of Cleves, queen of England, divorced 1540.

1540.—The variation of the compass discovered by Sebastian Cabot.—The order of knights of St. John abolished.—Cepheus observed the obliquity of the ecliptic to be 23° 28' 8" at Sept. 27,—The society of Jesuits established.—Robert Stephen, ob. 1559, ret. 56.—Catharine Howard, queen of England, ob. 1542.

1541.—Solymann took Hungary to the form of a province.—Charles V. besieged Algiers, Oct. 21.—Melanthon, ob. 1560, ret. 64.

1542.—A treaty between Solymann and Francis I. against Charles V. Japan discovered.—Hieron Wolius, ob. 1580, ret. 64.—The English invade Scotland, and defeat the Scots at Solway Moss, Nov. 13.—Tytian Vecelli, ob. 1576, ret. 99.

1543.—A treaty between Henry and Charles V. against Francis I. —The academy of Verona founded.—California discovered.—Pins brought from France, and first used in England.—John Calvin, ob. 1594, ret. 75.—Catharine Parr, queen of England.

1544.—The battle of Cerifole, April 11, in which the French defeated the Imperialists.—The crown of Sweden declared to be hereditary.—A treaty of peace between the emperor and Francis I. at Crewey, Sept. 18.—The reformed religion authorised in Sweden.—Iron first cast in England.—Adrian Turnebus, ob. 1565, ret. 1515.

1545.—Civil commotions in Scotland.—The English defeated by the Scots at Ancrum-Muir.—The council of Trent begins and continues 18 years.—Needles first made in England.—Conrad Gerner, ob. 1594, ret. 49.

1546.—A league between the emperor and the pope against the Protestants.—Socinianism sprang up in Italy.—Camerarius, ob. 1574, ret. 57.

1547.—The elector of Saxony defeated by the emperor at Mulberg, Apr. 24.—A conspiracy against the government of George.—The Scots defeated by the English at Pinkley, Sept. 19.—The interest of money paid at 10 per cent. in England.—Hieronymus Cardan, ob. 1575, ret. 75.

1548.—War between the Turks and Persians.—The reformation advances in Poland.—Jo. Genesius de Sculpveda, the Peripatetic, and reformer of learning in Spain, ob. 1572, ret. 81.

1550.—The eldest sons of peers first permitted to sit in the House of Commons.—The back of Venice established about this time.—Iron bullets first used in England.

1551.—A league between Henry II. and Maurice, duke of Saxony, against the emperor.—Annibal Caro, ob. 1566.

1552.—The treaty of Passau between Charles and the Protestants, July 31st.—Books of astronomy and geometry destroyed in England, under a charge of magic.—The book of Common Prayer confirmed by act of parliament.—The corsair Dragout defeated by Doria before Naples.—Paul Mantius, ob. 1574, ret. 62.

1553.—Papistry reformed in England by queen Mary.—Servetus executed in Geneva.—Edward VI. dies July 6, ret. 16.—Cardinal Pole, ob. 1554.

1554.—The French invade the Low Countries.—The Ruffians invade the kingdom of Atracian.—Mary of England marries Philip of Spain.—Caldellvetro, ob. 1571, ret. 66.

1553.—The peace of religion established in Germany, Sept. 25.—A league between the pope and the king of France against the Spaniards, Dec. 15.—Fred Commandin, ob. 1575, ret. 66.

1556.—A comet appeared—its perihelion, April 22, 8° 3' A. M.—ascending node 11° 42'—incl. 34° 6' 20'—direct.—The Turks ravage Corfica.—Charles marries his crown to Philip, Jan. 6.

1557.—Charles retired to a monastery, Feb. 24.—Glasa first manufactured in England.—Philip defeats the French at St. Quentin, Aug. 10.—Ouaphusus Panvius, ob. 1539, ret. 39.

1558.—Calais taken by the French, Jan. 8.—Queen Mary dies, Nov. 17.—The reformed religion authorised in England.—Remondi, ob. 1795, ret. 61.

1559.—The peace of Chatena-Cambresis.—The tranquillity of Europe restored.—The queen regent of Scotland opposes the reformation, and persecutes the reformers.—George Buchanan, ob. 1582, ret. 76.

1560.—The conspiracy at Ambosie begins the civil wars in France.—Philip removes his court from Toledo to Madrid.—A treaty between Elizabeth and the

Protestant
A.D. 1561. — The difcord between Elizabeth and Mary commences. Queen Mary arrives in Scotland, after an absence of 13 years. — Livonia ceded to Poland. — Camoes, ob. 1579, xt. 50.

1562. — The battle of Dreux, Dec. 19, in which the duke of Guise defeated the prince of Condé. — Peter Ramsey, ob. 1573.


1565. — The revolt of the Low Countries. — The Turks attack Malta. — Tintoret, ob. 1594, xt. 82.


1567. — Queen Mary enfeals Bathwell, May 15. — The duke of Alva begins his operations in Flanders. — The battle of St. Denis, between the prince of Condé and Montmorency, Nov. 12. — Civil commotions in Sweden. — James, ob. 1599, xt. 63.

1568. — Queen Mary defeated in the battle of Glasgow, May 13 — returns into England and is imprisoned. — The Moors in Spain revolt. — The exercize of the reformed religion allowed in the Low Countries. — Canonicus, ob. 1581, xt. 56.


1571. — The isle of Cyprus taken by the Turks. — The battle of Lepanto, Oct. 7, in which the Turks are defeated. — Henry Stephens, ob. 1598, xt. 70.


1573. — War in France against the Protestants. — The prince of Hefte observed the vernal equinox March 10, 8h 26 P.M. at Caiifel. — Paul Venerole, ob. 1583, xt. 56.

1574. — The siege of Leyden by the Spaniards. — Sebastian of Portugal makes an expedition into Africa against the Moors. — Montague, ob. 1592, xt. 50.

1575. — The university of Leyden founded. — The Turks invade and ravage Raflia. — Francis Hotomanus, ob. 1593, xt. 65.

1576. — The league begins in France upon the edict of pacification, and the Protestant observers the exercize of their religion in France. — A civil war continues. — Paludio.


A.D. 1578. — The first treaty of alliance between England and the States General, Jan. 7. — A long and bloody war between Peru and the Ottoman Porte. — The Moors defeat the Portuguese at Alcafar, August 4. — Cardinal Baronius, ob. 1607, xt. 69.

1579. — Jan. 23rd, the union of Utrecht, which begins the republic of Holland. — Riccoboni, ob. 1620, xt. 58.

1580. — Philip of Spain feizes the kingdom of Portugal. — A comet appeared — its perihelion, Nov. 29th, 3° of A.M. — ascending node 15° 57° 20° — inclination 64° 40° — direct. — Peter Pitthus, ob. 1596.

1581. — An edit of the United Provinces against Philip, July 26th. — Copper money introduced into France. — Inf. Selliger, ob. 1609, xt. 69.

1582. — The Julian calendar reform'd by pope Gregory. — New stile introduced into Catholic countries, Oct. 5th, reckoned Oct. 15th. — Christopher Clavius, ob. 1612, xt. 75.

1583. — The first proposal of settling a colony in America. — Torquato Tasso, ob. 1595, xt. 51.

1584. — Raleigh discovered Virginia. — Cape Breton discovered. — The prince of Orange murdered at Delfi, June 30. — Tycho observed the vernal equinox, March 10, 15° 50° P. M. at Uraniburg. — Edmund Spencer, ob. 1598.


1586. — Babington's conspiracy against queen Elizabeth. — Cavendish's first voyage to circumnavigate the globe. — Tycho Brahe, ob. 1601, xt. 55.

1587. — Queen Mary beheaded, Feb. 8. — The battle of Coutras, Oct. 20th, in which the king of Navarre defeated the duke de Joyenfe. — Drake burned 100 sail of ships in the bay of Cadiz.


1589. — A conspiracy against James, king of Scotland, by Huntly, Crawford, &c. popish lords. — Peace between the Turks and Persians. — Drake's expedition to Spain and Portugal. — Henry III. murdered by Clement, July 22nd. — Julius Lepius, ob. 1606, xt. 58.

1590. — A comet appeared — its perihelion, Jan. 29th, 5h 45° P. M. — ascending node 1° 15° 30° 40° — inclination 29° 40° 40° — retrograde. — Telescopes invented by Janfen, a spectacle-maker in Germany. — An earthquake at Vienna, Sept. 5. — The art of weaving stockings invented by Lee of Cambridge. — The battle of Ivry, which ruined the league, March 4. — Stephen Palquier, ob. 1615, xt. 81.

1591. — The university of Dublin erected. — Tea first brought into Europe. — Mariana, ob. 1624, xt. 87.

1592. — Presbyterian church government established by act of
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of parliament in Scotland.—Falkland isles discovered.
1593.—Bothwell's conspiracy against king James. — A comet appeared—its perihelion, July 9th, 1° 38' A. M.—ascending node \( \frac{\pi}{10} 14^\circ 14^\prime 15^\prime \prime \)—inclin. \( 87^\circ 58^\prime \)—retrograde. — A great plague in London. — Cardinal Perron, ob. 1618, at. 63.
1594.—The Jefuits expelled France. — The bank of England incorpored. — Byrugs observed the obliquity of the ecliptic 23° 29' 23''. — Isaac Caphbon, ob. 1614, at. 55.
1595.—Drake's expedition against the immons of Darien.—Tycho Brahe observed the obliquity of the ecliptic, 23° 29' 25''. — Mondana and Quiros make discoveries in the Pacific ocean. — The Russians make the first discoveries in Siberia. — Caribbee isles discovered. — Shakespeare, ob. 1616, at. 51.
1596.—Calais taken by the Spaniards from the French. — A great earthquake at Japan. — The English defeat the Spanish fleet, and take Cadiz. — A treaty with England, France, and Holland, at the Hague, against Spain, Oct. 31. — A comet appeared—its perihelion, July 23d, 7° 57' A. M.—ascending node \( \frac{\pi}{10} 12^\circ 12^\prime 30^\prime \prime \)—inclin. \( 55^\circ 12^\prime \)—retrograde. — The Stella Mira in the neck of the Whale was observed by David Fabricius, Aug. 13th. — Anibal Caracci, ob. 1605, at. 40.
1597.—Watches brought to England from Germany. — The Turks invade Hungary. — Cervantes, ob. 1620, at. 60.
1598.—Tyrone's insurrection in Ireland. — The edit of Nantes in April. — The peace of Vervins, April 20th. — President de Thou, ob. 1617, at. 64.
1599.—Tycho observed Saturn in opposition to the sun, March 24th, 10° 20' A. M. — Sir Henry Saville, ob. 1622, at. 72.

The Seventeenth Century of the Vulgar Christian Era.
1601.—The siege of Olland begins, June 25th. — Spain invades Ireland, Sept. 21st. — Lord chancellor Bacon, ob. 1620, at. 60.
1602.—Byron's conspiracy detected and punished. — Decimal arithmetic invented at Bruges. — Father Paul Sarpi, ob. 1623, at. 71.
1603.—Manufactures of crystal established in France. — A league between France and England. — Queen Elizabeth dies, March 24th, at. 70. — The crowns of England and Scotland united. — Gratius, ob. 1627, at. 67.
1604.—Olland taken after a siege of three years, Sept. 20. — A new translation of the Bible ordered. — Peace concluded between England and Spain. — A dispute between the pope and the Venetians concerning the privileges of the clergy. — The French established a colony in Canada. — A bright new star discovered near the right foot of Serpentarius, in September, by Kepler; which disappeared in the space of a year. — Malherbe, ob. 1628, at. 76.
1605.—The gun-powder plot, Nov. 5th. — Marinii, ob. 1625, at. 56.

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1606.—A truce of twenty years between the empire and the Ottoman Porte. — Papirius Maffo, ob. 1611.
1607.—A comet appeared—its perihelion, Oct. 16th, 3° 56' P. M.—ascending node \( 8^\circ 20^\prime 41^\prime \)—inclin. \( 12^\circ 2^\prime \)—retrograde. — Hudford's bay discovered. — Boccaccini.
1608.—Colonies sent from England to Virginia. — The cold and frost extreme in the winter. — Galileo, ob. 1612, at. 73.
1609.—A truce between the Spaniards and Dutch. — The independence of the United Provinces acknowledged, March 30, O. S. — Helvius, ob. 1617, at. 36.
1610.—The Persians defeat the Turks near Palayon. — War between Russia and Poland. — Thermometers invented by Robbe, a Dutchman. — 80,000 Moors banished out of Spain. — Calil'fio first observed three of Jupiter's satellites, Jan. 7. — Longomontanus observed Saturn in opposition to the sun, Aug. 12th, 12° 0' P. M. — Andrew du Chéne, ob. 1640.
1611.—War between Denmark and Sweden. — The order of Barons intituled in England, May 22. — An earthquake at Constantinople. — 200,000 perfons died there of the plague. — Peace concluded between the Turks and the Persians. — Lopez de Vega, ob. 1652, at. 72.
1612.—A lucid spot in Andromeda's girdle first observed by Simon Marinus. — The Russians defeat the Poles at Muscovy. — The English unsuccessfully attempt to discover a northern passage to China. — The French make a settlement in the island of Margna, Ben Jonson, ob. 1658.
1613.—Peace concluded between Denmark and Sweden. — John Kepler, ob. 1620.
1614.—Logarithms invented by Baron Napier of Scotland, ob. 1617, at. 67. — A British colony established in Virginia.
1615.—Peace between the Turks and the Imperialists. — The Jews ordered to leave France. — John Barclay, ob. 1621, at. 38.
1616.—A civil war in France. — The settlement of Virginia by Sir Walter Raleigh. — King James II revives Flushing, the Brille, &c. to the Dutch. — Cape Horn frill falled round. — Sir Robert Cotton, ob. 1631, at. 61.
1617.—Peace concluded between Sweden and Russia. — Peace between the Venetians and the house of Austria. — Dominiquino, ob. 1641, at. 60.
1618.—Peace concluded between Poland and Russia. — A comet appeared—its perihelion, October 30th, 11° 37' A. M.—ascending node \( 16^\circ 1^\prime \)—inclin. \( 37^\circ 34^\prime \)—direct. — An horrible conflagration at Venice detected. — The battle of Ardèville between the Turks and Persians. — The Swiss of Dott begins November 1, and continues till April 26, 1619. — Fabri de Peires, ob. 1637, at. 57.
1619.—The circulation of the blood discovered by Harvey, ob. 1657, at. 80. — A war of thirty years commences in Germany, Aug. 26.
1620.—The English make a settlement at Madras. — Copper money first used in England. — The island of Barbadoes discovered by Sir William Courten. — The Bohemians defeated by the Imperialists at Prague, October 30, O. S. by which the Elector Palatine lost his electorate. — Navarre united to France.
A.D.

France.—Casting with a die first used in England.—Guigo Rheims, ob. 1642, at. 67.

1621.—War between Spain and Holland renewed after a truce of 12 years.—A civil war in France with the Huguenots, lasts 9 years.—War between Poland and the Ottoman Porte.—The Dutch establish the settlement of Batavia.—The two parties of Whigs and Tories formed in England.—Gaspar Barthius, ob. 1648, at. 71.

1622.—The Imperialists reduce the Palatinate.—Heidelberg taken by the Emperor, and the famous library sent to Rome, Sept. 16.—Peter Paul Rubens, ob. 1640, at. 67.

1623.—The Knights of Nova Scotia instituted.—The English factory maltreated by the Dutch at Ambonya.—Sir Henry Spelman, ob. 1641.

1624.—The Dutch defeat the Spanish fleet near Lima.—The Turks besiege Bagdad, and dare repulse.—Cardinal Bentivoglio, ob. 1641, at. 65.

1625.—A plague in England.—King James dies at Theobald's, March 21, at. 59.—Difcord between Charles I. and the House of Commons.—The first English settlement in the West Indies.—The Spaniards took Breda in the Low Countries.—Peace between Ferdinand of Hungary and the Sultan.—John Muffrin, ob. 1639, at. 60.

1626.—Peace between the Huguenots and the king of France, Feb. 5, N.S.—War renewed the following year.—A league of the Protestant princes against the emperor.—Gerard John Voftus, ob. 1650, at. 73.

1627.—War between England and France.—Ericus Petrus, ob. 1646, at. 72.

1628.—The Turks invade Perfa.—The duke of Buckingham murdered, Aug. 23.—Rochelle taken by Lewis XIII., Oct. 18, O.S.—Quevedo, ob. 1647.

1629.—Charles I. dissolves the English parliament, March 19; 9 members imprisoned, March 4, for their speeches.—Peace between Germany and Denmark.—The edict of pacification at Niames, July 4, O.S.—A truce between Sweden and Poland, for 6 years, Sept. 5, O.S.—Gustavus Adolphus enters Germany.—Peace between France and England.—Bahaum ilks discovered.—Inigo Jones, ob. 1651.

1630.—Gazettes first published in Venice.—The treaty of Stockholm, between England and Sweden, May 31.—War between Spain and Germany.—The Turks invade Poland.—Grotius, ob. 1645, at. 62.

1631.—A treaty between France and Sweden, Jan. 17, O.S.—Galilei first observed the transit of Mercury over the sun's disc, Nov. 17, at 57' at M.—The battle of Leipsie, Aug. 28, O.S. in which the Swedes defeated the Imperialists.—Archbishop Uher, ob. 1659, at. 75.

1632.—War between the Danes and Swedes, and between the Swedes and the Imperialists, who are defeated by the former at Lutzen, Nov. 6, O.S. where Gustavus Adolphus is killed.—A great eruption of Vesuvius.—Antigua settled by the English.—Gab. Naudé, ob. 1653.

1633.—Galileo condemned by the inquisition at Rome.—Louisiana discovered by the French.—Anthony Vandyck, ob. 1641, at. 42.

1634.—War between Prussia and Poland.—The Swedes defeated at the battle of Nottingen, Nov. 26, O.S. by the king of Hungary.—John Sedlén, ob. 1653, at. 70.

1635.—The French academy established at Paris.—A long and bloody war begins between France and Spain.—A treaty between France and Holland, Feb. 8.—Regular posts established in Great Britain.—Raffeld, ob. 1653, at. 66.

1636.—A treaty between Lewis XIII., and the queen of Sweden, March 10. O.S.—A truce of 26 years between Poland and Sweden.—The Swedes defeat the Imperialists at Willock, Oct. 4. O.S.—Coffini observed the transit of Mercury over the sun's disc at Thiury, Nov. 11, at 43' at M.—Defarte, ob. 1650, at. 64.

1637.—The Scots withdraw their allegiance from Charles I.—The polemologe invented by Huygens.—A bloody war commences between the Poles and the Cossacks in the Ukraine.—A league between Spain and Denmark against Sweden.—An insurrection of the Protestant in Hungary; the prince of Orange takes Breda, Sep. 26, O.S.—Hampden condemned and sentenced to pay a tax, imposed by Charles I.—Tammith Strada, ob. 1649.

1638.—The Turks take Bagdad, Jan. 6.—Two battles of Rheinfeld, Feb. 18 and 21, O.S.—The solemn league and covenant in Scotland, against episcopacy.—Peto, ob. 1652, at. 69.

1639.—The Imperialists defeat the French at Thiouville, May 27, O.S.—Horrox observes a transit of Venus over the sun's disc, at Liverpool, Nov. 24, O.S. at 5' P.M.—Votter, ob. 1648.

1640.—The Scots invade England, Aug. 10, O.S.—A conference between the English and Scots commissioners at Rippon, Oct. 2.—The duke of Braganza recovers the independence of Portugal.—The long parliament in England met, Nov. 5.—Falk, ob. 1654.

1641.—The earl of Strafford beheaded, May 12.—The malfeasance of the Protestant in Ireland, Oct. 23.—Chillington, ob. 1650, at. 43.

1642.—Peace between the Imperialists and the Turks.—The Swedes defeat the Imperialists at Leipsie, Oct. 3, O.S.—King Charles demands the five members, and the civil war begins. His army defeated at Edgehill, Oct. 2.—The Imperialists defeat the French at Tusingen, Nov. 15, O.S.—Tafman makes discoveries in the Pacific ocean.—Salmasius, ob. 1652.

1643.—Bristol surrenders to prince Rupert, July 26.—The siege of Gloucester raised Sept. 5.—The first battle of Newbury, Sept. 30, in which the army of Charles I. is defeated.—The Tartars invade China, and in the following year effect a revolution.—The royal academy of painting founded by Lewis XIV.—Barometers invented by Torricelli.—The prince of Condé defeats the Spaniards at Rocovar, May 9, O.S.—Walker's plot in England detected, May 31.—Nicholas Poullin, ob. 1656, at. 65.

1644.—A revolution in China.—The Swedes defeat the Imperialists in Bohemia, Feb. 25, O.S.—Cromwell defeats the army of Charles I. at Marloomon, July 2.—Earl of Essex's army surrendered in Cornwall, Sept. 2.—The second battle of Newbury, Oct. 27.—Gravelines taken by the duke of Orleans, July 18, N.S.—Riccioli observed Saturn in opposition to the sun, at Bologna, Oct. 10, at 57' at M.—Mothe le Vayer, ob. 1671.

1645.—War between the Turks and the Venetians.—Charles I. totally defeated at Nafebey, June 14.—Peace between Denmark and Sweden, Aug. 3, O.S.—The first code of Russian laws published.—Thurnen takes Treves.
CHRONOLOGY.

A.D.

Treves.—Duke de Rochefoucault, ob. 1680, at 68.

1646. — The Turks defeat the Venetians near Retimo, Oct. 9, O.S. — Paul Scarron, ob. 1660.


1648. — The peace of Munster between Spain and Holland, Jan. 20, O.S. — The Seven United Provinces declared a free and independent state. — The Imperialists defeated at Augsburg by Turcyn, April 7, O.S. — The prince of Condé defends the archduke at Lens, Aug. 10, O.S. — The peace of Munster between France and the empire, Oct. 25. — The peace of Osnabrungh between Sweden and the empire. — Fabricius observed a new star in the tail of the Whale. — Thomas Hobbes, ob. 1679, at 91.


1652. — The battle of Dunbar, Sept. 3, in which Cromwell defeats the Scots. — Mazarin, ob. 1683, at 73.


1655. — The English, under admirall Penn, take possession of Jamaica, May 7. — Blake attacks Tunis, and destroys the Spanish galleons in the bay of Santa Cruz. — The Venetians defeat the Turkish fleet at the Dardanelles, June 11, O.S. — Huygens first discovers a satellite of Saturn, March 25. — Peace between England and France, Oct. 25. — War between Sweden and Poland. — Roman Bartholin, ob. 1689, at 64.

1656. — A treaty between the king of Sweden and the elector of Brandenburg, Jan. 11, O.S. — War declared by England against Spain, Feb. 16. — The Swedes defeat the Poles in three battles at Warfax, July 18, 19, and 20, O.S. — Edmund Waller, ob. 1687, at 82. — Henry vicount de Turenne, and marshal, ob. 1675, at 64.

1657. — War between Sweden and Denmark. — A treaty between the king of Poland and the elector of Brandenburg, Sept. 9, O.S. — Peter Cornelle, ob. 1684, at 78.

1658. — Hevelius observed Saturn in opposition to the sun, at Dantzick, April 4, 5° 13'. M. — Turenne, after having defeated the Spaniards, takes Dunkirk, June 17, and the city is delivered to the English. — J. Baptista Paquelin Moliere, ob. 1672. — Admiral de Ruyter, ob. 1676, at 69.


1661. — A treaty between the Dutch and Portugal. — A treaty of commerce between Great Britain and Sweden, at Whitchall, Oct. 21. — Bombay yielded to the English by Portugal. — Hevelius observed the obliquity of the ecliptic to be 23° 20' 7". — A comet appeared —its perihelion Jan. 17, M 11° 19' — Ascending node 22° 30' — Inclination 32° 35' 59' — Direct. — Franking letters began ; embargoed in 1704 and 1775 — the trade was prohibited.

1662. — Dunkirk restored to the French. — The Royal Society established, July 15. — Samuel Butler, ob. 1680, at 68.

1663. — The Royal Academy of Inscriptions and Belles-lettres, established at Paris. — The Portuguese defeated the Spaniards near Evora. — The Turks took Newbafel, in Hungary, Sept. 17, O.S. — Prelins declared to be independent on Poland. — Charles le Brun, ob. 1690, at 71.


1666. — An engagement between the English and Dutch fleets near Dunkirk, June 1, 2. — The English defeat the Dutch fleet near the Thames, July 25 and 26. — A fire broke out in London, Sept. 2, which extended to 6,000 streets, consumed 13,220 houses. &c. &c. — A settlement in Antigua by the English. — War declared between England and Denmark. — The Academy of Sciences established in France. — Giles Mcnagge, ob. 1692, at 79.

1667. — A treaty of commerce between Great Britain and Spain.
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Spain, May 23.—The peace of Breda, July 31, between Great Britain and France, and also with Holland.—War renewed between France and Spain.—Charles de St. Evremond, ob. 1703, xii. 92.

1663.—A commercial treaty between Great Britain and Holland, at the Hague, Feb. 17. —The triple alliance of Great Britain, Sweden, and the States General, against France, Jan. 23. —Peace between Spain and Portugal, after 23 years of war, Feb. 3, O.S.—The peace of Aux-la-Chapelle, between France and Spain, April 23, O.S.—Benedict de Spinola, ob. 1678, xii. 44.

1666.—The Isle of Candi taken by the Turks, Sept. 6, O.S.—The commercial treaty of Florence, between Great Britain and Savoy, Sept. 19. —Huygens, ob. 1695, xii. 66.

1673.—The commercial treaty of Copenhagen, between Great Britain and Denmark, July 11. —The peace of Madrid, between Great Britain and Spain, July 18. —Peace between the duke of Savoy and the republic of Venice.—Mengoli observed the obliquity of the ecliptic to be 23° 28' 24". —Hevelius discovered a new star, July 15, which soon disappeared, and was again visible in 1672. —Hevelius observed Saturn in opposition to the sun, at Dantzick, Sept. 8, 8° 56' P.M. —Sir Christopher Wren, ob. 1723, xii. 91.

1674.—Caffini discovered four of Saturn's satellites in the course of a few years.—Isaac Barrow, ob. 1677, xii. 47.

1674.—A comet appeared,—its perihelion Feb. 20, 8° 37' P.M.—ascending node 22° 30' 50"—inclination 83° 22' 10"—direct. —Richer observed the obliquity of the ecliptic to be 23° 28' 51". —The vernal equinox was observed at Paris, March 19, 7° 41'. —War declared by France against Holland, April 6. —England declared war against Holland, March 17. —War between the Turks and Poles.—A treaty between the Empire and Holland against France, July 15, O.S.—A bloody engagement between the English and Dutch fleets, in Solebay, May 28.—Louis XIV. overruns great part of Holland, after having taken Utrecht, June 10. —The prince of Orange is made Stadtholder, and J. de Witt put to death, Aug. 12. —Sir W. Temple, ob. 1725, xii. 72.

1675.—The English and French defeat the Dutch fleet, May 28, June 14, and Aug. 11. —The king of France declares war against Spain, Oct. 9, O.S.—The Poles defeat the Turks, near Chozzin, Oct. 31.—René Rapin, ob. 1687, xii. 66.


1677.—A conference for a peace at Nimeguen.—War between Sweden and Denmark.—Turenne passed the Rhine, and opposed by Montecul.—The Pfullians defeat the Swedes at Fehrbellin, June 8, O.S.—The battle of Altenheim, July 22, O.S.—A treaty between

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Great Britain and Holland, at the Hague, Dec. 30.—Robert Boyle, ob. 1681, xii. 65.

1678.—Carolina planted by English merchants.—The king of France declares war against Denmark, Aug. 28. —The French defeat the fleet of the allies at Palermo, May 23, O.S.—The Royal Observatory at Greenwich built.—Samuel Puffendorf, ob. 1694, xii. 62.

1679.—The commercial treaty of St. Germain, between Great Britain and France, Feb. 24th.—The French defeat the prince of Orange near Caflèf, April 1, O.S.—The Protestants revolt in Hungary.—A comet appeared,—its perihelion, April 26, 2° 37' P.M.—ascending node 22° 3' 16"—inclination 70° 3' 13"—retrograde.—M. de Navailles defeated the Swaerts several times,—The micrometer was invented by Kirch.—The Swedes defeat the Danes at Landskron, Dec. 4, O.S.—Carlo Maratti, ob. 1713, xii. 88.

1680.—A strange dark bow at noon-day, Jan. 12.—The d-fensive alliance of Weimfinnen, between Great Britain and Holland, March 5. —The peace of Nimeguen, between France and Holland, July 31, O.S.—Peace between France and Spain, Sept. 17. —The Tartars attack the Ruffians.—A comet appeared,—its perihelion, Aug. 17, 2° 3' A.M.—descending node 3° 40'—inclination 3° 4' 20"—direct.—The populi plot discovered by Oaks, Sept. 6.—Daniel George Morthoff, ob. 1691, xii. 53.

1681.—The long parliament of England dissolved, Jan. 25. —The peace of Nimeguen, between France and Germany, signed Jan. 26, O.S.—The bill of exclusion first read in parliament, May 15. —Peace between Sweden and Denmark, after a war of four years, Aug. 23, O.S.—The meat-tub plot in England, Oct. 23. —An engagement between the English and Moors, which lasted eleven days, at Tangier, Nov. 7.—John de la Bruyere, ob. 1695, xii. 57.

1682.—The first establishment of the French in the East Indies.—The anatomy of plants made known by Grew.—Charles XII. declared absolute by the states of Sweden.—A comet appeared,—its perihelion, Dec. 8, 0° 6' P.M.—ascending node 22° 2'—inclination 62° 56'—direct.—Lord Strafford beheaded for high treason.—John de la Fontaine, ob. 1695, xii. 74.

1683.—Treaties between the king of England and parliament.—Penny post in London began.—Established by government in 1711.—Pollage advanced to 2d. in 1801.—Sir George Mackenzie, ob. 1691, xii. 53.—James, duke of Monmouth, ob. 1683, xii. 54.

1684.—The Royal Academy of Nimeguen established.—A comet appeared,—its perihelion Sept. 4, 7° 29' P.M.—ascending node 21° 16' 30"—inclination 17° 36'—retrograde.—The autumnal equinox observed at Paris, Sept. 22, 6° 34'. —Bouhons, ob. 1702, xii. 74.—Marshall Schomberg, ob. 1692.

1685.—The Rye house Plot discovered, June 14. —A comet appeared,—its perihelion, July 3, 2° 50' P.M.—ascending node 22° 22° 23'—inclination 83° 11"—retrograde.—Vienne besieged by the Turks.—Lord Ruffell beheaded, July 218.—John Dryden, ob. 1701, xii. 70.

1686.—A truce between France and Spain.—A league between Venice and Poland against the Turks.—The duke of Lorraine defeated 15,000 Turks at Wetzen, June 17, O.S.—Fremlot observed Saturn in opposition to the sun, at Greenwich, Feb. 19, 5° 10' A.M.—A comet appeared,—its perihelion, May 29, 10° 16° F.M.—ascending node 2° 28' 15"—inclination 65° 48' 46"—direct.
CHRONOLOGY.

A.D.


1695. — War between the allies and the Ottoman Porte. — The allies take Namur, July 25. — Casal taken by the duke of Savoy, May; — The vote for a new coinage, Dec. 16. — Nicholas Malebranche, ob. 1715.


1700. — The Dutch, and the Protestants in Germany introduce the new style, omitting the last eleven days of February. — The Spanish monarchy transferred to the house of Bourbon. — The second treaty of partition, signed at Landen, March 3, and at the Hague, March 25. — A severe bill against the Papists in England. — A conjunction of Venus with the sun, observed at Paris, Sept. 2, 11° 20' P. M. — A treaty between Denmark, Sweden, and Holstein, Aug. — The Swedes defeat the Russians, at Narva, Nov. 20. — Mad. Dacier, ob. 1720, xt. 69.

The Eighteenth Century of the Vulgar Chriftian Era.


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1703. — Portugal cedes to the league against France and Spain, May 5. — Bianchini observed the obliquity of the ecliptic to be 23° 28' 25". — The foundation of Petersburg laid. — A dreadful tempest in England, Nov. 27. — Godfrey William Leibnitz, ob. 1716, at 70.


1709. — The Russians defeat the Swedes at Pultowa, June 27. — The allies take Tournay, July 30. — The allies defeat the French at Malplaquet, Aug. 31. — The allies take Mons, Oct. 21. — Dr. R. Bentley, ob. 1742, at 80. — Villar Maria Villars, ob. 1734, at 82.

1710. — Sachswerfel sentenced by the parliament of England, March 23. — Donay taken by Marlborough and Eugene, June 15. — The Spaniards defeated by the allies at Almenara, July 27; again at Saragossa, Aug. 9. — The Academy of Lyons established. — The English defeated by the duke de Vendome at Brihwega, Dec. 6, when general Stanhope was taken prisoner. — The battle at Villa Vidofa, Dec. 16. — The Spaniards were defeated by Starengem. — Dr. Hare, bishop of Chichester, ob. 1740, at 79. — R. Harley, earl of Oxford, ob. 1724, at 63.

1711. — Gironne taken by the duke de Noailles, Jan. 23. — War declared by Peter, emperor of Russia, against the Turks, March 8; a battle of 3 days between the Turks and Russians. — Bouchain taken by Marlborough, Sept. 13. — Joseph Addison, ob. 1719, at 48. — Henry St. John, lord Bolingbroke, ob. 1751, at 73.


1713. — A treaty of peace and commerce between Great Britain and Holland, at Utrecht, Jan. 29. — Peace between Russia and the Ottoman Porte. — A treaty between Great Britain and Spain, at Madrid, March 26. — Peace between Great Britain and France, at Utrecht, April 11; between France and the duke of Savoy, April 11; between France and Portugal, April 11; between France and Prussia, April 11; between France and the States-General, April 12; between Great Britain and Spain, July 13; and treaty of commerce between them, Dec. 9. — Matthew Prior, ob. 1724, at 57.

1714. — The bull Unigenitus received in France. — The opposition of Saturn to the sun observed at Paris, Feb. 29, 8° 15' P.M. — The treaty of Rallad between France and Germany, March 6. — The interest of money fixed in England at 5 per cent. — The king of Spain takes Barcelona, and Cordova. — The treaty of Breden between France, Germany, and Spain, Sept. 7. — War declared by the Turks against Venice, Dec. 7. — The accession of George, elector of Hanover, to the kingdom of Great Britain, Aug. 1, when queen Anne dies, at 50. — Francis Atterbury, bishop of Rochester, banished 1721, ob. 1732, at 70.

1715. — A conjunction of Venus with the sun observed at Paris, Jan. 25, 5° 19' P.M. — Louville observed the obliquity of the ecliptic to be 23° 28' 24". — The treaty of Utrecht between Spain and Portugal, Feb. 13. — A rebellion in Poland. — The Turks conquer the Morea. — The barrier treaty of Antwerp between Germany and Holland, Nov. 15. — The battle of Preton-pans, between the king's forces and the rebels Nov. 13; the battle of Dumbarton, or Sheriff-muir, between the same, Nov. 13. — The Pretender lands near Aberdeen, Dec. 22. — Louis XIV. dies Aug. 21, at 77. — John Hardouin, ob. 1729, at 83. — John, duke of Argyle, ob. 1743, at 61.


1718. — Charles XI. attempts the conquest of Norway. — The
C H R O N O L O G Y.

A.D.
The English defeat the Spanish fleet near Syracuse, July 31.—The treaty of Paffarowitz, between the Germans, Venetians, and Turks, July 21.—The quadruple alliance, between Germany, Great Britain, France, and Holland, Aug. 2. To this treaty the king of Sardinia acceded, Nov. 8.—Great Britain declares war against Spain, Dec. 22.—A comet appeared—its perihelion Jan. 4, 10 15' P.M.—ascending node 89° 15' 20″—inclination 31° 12′ 57″—retrograde.—Abbe Vertot, ob, 1735, xii. 85.—Earl Macclesfield, lord chancellor, ob, 1732, xii. 66.

1719.—The Spanish troops evacuate Sicily.—Peace between Spain and Great Britain, June 26.—Peace between Poland and Sweden; between Hanover and Sweden, at Stockholm, Nov. 20.—The battle of France Villa, June 6.—Vigo taken by lord Cobham, Oct. 10.—The Tsaltiphi scheme at its height in France, in November, and December.—John Law, comptroller-general of finances, ob, 1729, xii. 58.—Dr. John Friend, ob, 1728, xii. 53.

1723.—An offensive and defensive league between Sweden and England, Jan 21.—Peace between Sweden and Prussia, at Stockholm, Jan. 21.—The South Sea scheme begins April 7, and ends Sept. 29.—Peace between Sweden and Denmark, June 3.—A great earthquake in China, June 11.—The Tsaltiphi company in France dissolved, June 27.—Publickence in France.—The kingdom of Sardinia ceded to the duke of Savoy, Aug. 7.—Bernard de Montfaucon, ob, 1741, xii. 86.

1724.—A treaty of peace between Great Britain and Spain, at Madrid, June 13.—A defensive alliance, between Great Britain, France, and Spain, June 13.—A treaty of peace between Sweden and Ruffia, at Nylland, Aug. 19.—Dr. Samuel Clarke, ob, 1729, xii. 54.—Sir Robert Walpole, earl of Orford, ob, 1745, xii. 71.

1725.—Peace between the English and Moors, Aug. 12.—A great revolution in Peru, Oct. 13.—The war of Mulcovy assumed the title of emperor of Ruffia.—Roggewein makes discoveries in the Pacific ocean.—The Chirilians and Jefuits banished out of China.—The autumnal equinox observed at Paris, Sept. 23, 10° 20′ A.M.—Dr. Jonathan Swift, ob, 1745, xii. 78.

1713.—A comet appeared—its perihelion, Sept. 17, 3° 10′ A.M.—ascending node 19° 1′ 16″—inclination 49° 25′—retrograde.—Dr. Edmund Halley, ob, 1742, xii. 81.

1724.—An earthquake in Denmark.—Protestants perfected in Scotland.—An Academy of Sciences established at Petersburg.—Philip V. regains his kingdom to his son Lewis, Jan. 15, who reigns about one and two months.—John Albertus Fabricius, ob, 1736, xii. 67.—Duke de Riperpa, the Spanish minister, disgraced 1726, ob, 1737.

1725.—The treaty of Vienna, between the emperor and the king of Spain, April 31.—War between the Perrians and Turks.—The treaty of Hanover between Great Britain, France, and Prussia, against Germany and Spain, Sept. 31, acceded to by Holland and Sweden.—Dr. John Arbuthnot, ob, 1735.—Cardinal Henry, French minister, ob, 1745, xii. 56.

1726.—The value of current coins fixed in France, in June.—An earthquake at Palermo, Aug. 21.—Hermann Boehaave, ob, 1738, xii. 70.

1727.—The treaty of Copenhagen between Great Britain, Denmark, &c., April 16.—The Spaniards besiege Gibraltar, May 20.—Peace between Persia and the Ottoman Porte.—The aberration of the fixed stars discovered and accounted for by Bradley.—The siege of Gibraltar begun by the Spaniards, May 20th, and continued till April 1728.—King George I. dies June 11, xii. 68.—Dr. Edward Chandler, bishop of Durham, ob, 1730, xii. 83.

1728.—The treaty of Wellmington, between Great Britain and Holland, May 27.—The congress of Soiffons, June 13.—The university of Holstein founded.—A colony of Danes passed into Greenland.—A great burning in Copenhagen.—An earthquake in China, Sept.—Cardinal Polignac, ob, 1741, xii. 80.—Sir R. Temple, lord Cobham, ob, 1749, xii. 74.

1729.—A comet appeared—its perihelion, June 13, 6° 16′ P.M.—ascending node 18° 35′ 17″—inclination 7° 1′ 58″—direct.—The treaty of Sixville, between Great Britain, France, and Spain, Nov. 9.—Dr. Edmund Gibson, bishop of London, ob, 1743, xii. 79.

1730.—War between the Ottoman Porte and Persia.—An earthquake in China.—A revolution at Constantinople, Sept.—The usurpation of the Afghans in Persia ended.—The Persians under Koul-Khan gain a signal victory over the Turks.—Dr. Benj. Hoadly, bishop of Winchester, ob, 1761, xii. 85.

1731.—A treaty between the king of Great Britain and the emperor at Vienna, March 16.—A new treaty between the emperor, and the kings of Britain and Spain, at Vienna, July 23.—A treaty of union and defensive alliance between the electorates of Saxony and Hanover, at Driesdon, Aug.—A great earthquake at Naples.—Alexander Pope, ob, 1741, xii. 80.

1732.—The Spanish fleet defeated the Moors on the coast of Barbary, June 20.—The summer solstice observed at Paris, June 21, 28° 30′ 2′ A.M.—The Pragmatic sanction confirmed by the diet of the empire, Jan. 11.—Charles Rollin, ob, 1741, xii. 80.

1733.—The Jesuits expelled from Paraguay, Jan.—A double election of a king in Poland.—A war between France and Germany.—A treaty between the kings of France, Spain, and Sardinia.—Abé edu Bos, ob, 1732, xii. 72.—Charles lord Talbot, lord chancellor, ob, 1735, xii. 54.

1734.—A battle between the Persians and Turks at Babyl, Feb.—The French defeat the Imperialists at Poma, June 18.—Philiburg surrendered to the French, July 7.—The city of Danzic submitted to Augulis, July 10.—The battle of Gnatalla on Sunday, Sept. 10, in which the king of Sardinia defeats the Imperialists.—A commercial treaty between Great Britain and Ruffia, Dec. 2.—Bernard de Fontenelle, ob, 1756, xii. 100.—W. Pulteney, earl of Bath, ob, 1704, xii. 81.

1735.—A treaty of alliance between Denmark and Sweden.—The Persians entirely defeat the Turks, May 20.—The French and their allies succed against the Imperialists in Italy.—The preliminaries of peace between France and Austria signed at Vienna, Oct. 3.—Dr. Thomas Sherlock, bishop of London, ob, 1761, xii. 84.

1736.—Peace between Spain and the house of Anfria.—War between the Ruffians and Turks.—Koul Khar makes peace with the Turks, and is proclaimed king of Persia, by the title of Shah Nadir, Sept. 29.—Calloni observed the transit of Mercury over the sun's disk, at Thury, Nov. 11, 10° 43′ A.M.—Dr. George Berkeley, bishop of Cloyne, ob, 1752, xii. 78.
A.D. 1747. — A comet appeared—its perihelion, Jan. 19, 8° 20' P. M.—ascending node, $\nu = 16^\circ 22'$. — The comet, in alliance with Ruffia, declares war against the Turks, July 2.—A dreadful hurricane at the mouth of the Ganges, Oct. 12.—Colin Maclaurin, ob. 1746. x. 48.—Philip earl of Hardwicke, lord chancellor, ob. 1747. x. 74.

1748. — The Russians invade Crim Tartary.—The order of St. Januarius instituted at Naples.—A treaty between the emperor and the French king, at Vienna, Nov. 18.—The autumnal equinox observed at Paris, Sept. 23; 7° 21' A.M.—the sun's aperture in $\phi = 35^\circ 15'$. — James Thomson, ob. 1748. x. 48.—Lord president Forbes, ob. 1747. x. 62.

1749. — Schah Nairi becomes master of the empire of Mogulus.—A treaty between Great Britain and Denmark, in May.—A comet appeared—its perihelion, June 6, 10° 0'. P. M.—ascending node, $\nu = 27^\circ 15'$. — The Russians defeat the Turks at Choczim, Aug. 8.—Peace between Germany and the Ottoman Porte, Aug. 21—between Ruffia and the same, Nov.—War declared between England and Spain, Oct. 23.—Admiral Vernon took Porto-Bello, Nov. 21.—A treaty between France and Holland, at Verfailles, Dec. 21.—An intense frost in Britain.—Dr. Joseph Butler, bishop of Durham, ob. 1752. x. 60.

1750. — War between Poland and Hungary.—Peace between the Perlians and Turks, Okt.—The emperor Charles VI. dies, Oct. 9, which begins the general war in Germany, that continues 8 years.—Henry Fielding, ob. 1754. x. 48.—Arthur Onslow, ob. 1768. x. 76.

1751. — The battle of Molwitz, in which the Prussian defeat the Imperialists, March 30.—War between the Ruffians and Swedes.—Vernon takes Carthagena, June 19.—The Prussians become masters of Silesia, Okt. 20.—A revolution in Russia, Dec. 6.—Carlos de Secondat baron Montefique, ob. 1753. x. 67.—Frederick prince of Wales, ob. 1751. x. 44.

1752. — A comet appeared—its perihelion, Jan. 28, 4° 21'. P. M.—ascending node, $\nu = 5^\circ 34'$. — The battle of Cazall, between the Prussians and Austrians, May 6.—Peace between Austria and Prussia.—The Austrians besiege Prague, Aug. 16—Dec. 16.—A defensive alliance between Great Britain and Prussia, at Weilmünster, Nov. 18.—A comet appeared—its perihelion, Dec. 31, 9° 15'. A. M.—ascending node, $\nu = 8^\circ 10'$. — The battle of Dettingen, June 16, in which the allied army defeats the French.—A treaty of defensive alliance between the king of Great Britain and the empress of Ruffia, Feb.—A dreadful plague in Sicily, May.—War in Germany between the Hungarians, British, French, and Austrians.—Peace between Ruffia and Sweden at Abo, Aug. 17.—A comet appeared—its perihelion, Sept. 10, 9° 16' A.M.—ascending node, $\nu = 5^\circ 10' 25'$. — An alliance between Great Britain, Hungary, &c. at Worms, Sept. 13.—The alliance of Moscow, between Great Britain and Ruffia, Dec. 11.—G. Frederick Handel, ob. 1759. x. 56.

1753. — A comet appeared—its perihelion, Feb. 19, 8° 17'. P. M.—ascending node, $\nu = 15^\circ 45'$. — The French attempt to invade Britain defeated, Feb. 24.—A sea-fight off Toulon, between the French and English fleets, Feb. 22.—War of Great Britain against France declared, 31.—War of Hungary and France declared, April 7.—Siege and surrender of Menin, June.—Prague taken by the king of Prussia, Sept. 16.—Fribourgh surrendered to the French, Nov. 1.—Commodore Anfon arrives at St. Helens, after having completed his voyage round the world.—Dr. James Bradley, ob. 1762. x. 70.—Henry Pelham, English minister, ob. 1754. x. 90.

1754. — The quadruple alliance of Warfaw, between Great Britain, Austria, Holland, and Poland, Jan. 8.—The French defeated by the Austrians at Raffnshoden, April 4.—The battle of Fontenoy, between the French and allies, April 11.—Schah Nairi defeats the Ottoman army at Erzerum in May.—The Prussians defeat the Austrians at Strigian, June 4.—The French took Tournay, June 8.—Ghent, June 12—Bruges, July 18—Oudenarde, July 21—Dendermonde, Aug. 12.—Ollent. Aug. 23.—Newport, Sept. 5.—Athl, Okt. 9.—The English become masters of Lionsbourg and Cape Breton, June 6.—The rebellion in Scotland begins in July.—The Prussians defeat the Austrians at Sohr, Sept. 19.—The rebels defeat the king's army at Pretont-panhs, Sept. 21.—The king of Sardina almost flripped of his dominions by the Spaniards, Okt.—The treaty of Drefden, between Prussia, Poland, Austria, and Saxony, Dec. 23.—Carlisle taken by the duke of Cumberland, Dec. 30.—Dr. Conyers Middleton, ob. 1756. x. 67.—Count de Saxe, marshal of France, ob. 1759. x. 54.

1755. — The rebels defeat the royal forces at Falkirk, Jan. 17.—Peace between Persia and the Ottoman Porte in Jan.—Count Saxe takes Brfisels, Feb. 29, and soon after Anwerp.—The royal army defeated and dispersed the rebels at Culloden, April 15.—The defensive alliance of Peterburg, between Austria and Ruffia, May 22.—The prince of Conti takes Mons, July 10—Charleroi, Aug. 2.—Count Clermont takes Namur, Sept. 10.—Count Saxe defeats the allies at Rocoux, Okt. 11.—Lima destroyed by an earthquake, Okt. 17.—William Hogarth, ob. 1764. x. 67.—William Augustus, duke of Cumberland, ob. 1765. x. 45.

1756. — The French fleet defeated by Anfon and Warren, May 3.—A comet appeared—its perihelion, Feb. 17, 11° 45'. P. M.—ascending node, $\nu = 26^\circ 26'$. — Retrograde.—The prince of Orange elected flatherholder of the Uniteed Provinces, May 2.—The defensive alliance of Stockholm, between Prussia, Poland, and Sweden, May 29.—The French defeat the allies at Laffeldt, July 2.—The French fleet defeated by admiral Hawke, Okt. 14.—Bergen-op-Zoom taken by the French, Sept. 5.—Kouli Khan murdered.—A revolution in Persia.—Jacques Caffini, ob. 1756. x. 79.—George lord Anfon, ob. 1762, x. 62.

1757. — A comet appeared—its perihelion, April 18, 7° 25'. A. M.—ascending node, $\nu = 22^\circ 55'$. — The comet appeared—its perihelion, June 7, 1' 24'. P. M.—ascending node $\nu = 39^\circ 43'$. — Retrograde.—Maëstricht taken by the French, May 7.—The peace of Aix-la-Chapelle, between Great Britain, France, Spain, Austria, Sardinia, and Holland, Okt. 7.—Benjamin Robins, ob.
1749.—Nova Sentia peopled.—A league between the pope, Venetians, &c. against the Corsairs of Algiers and Tunis.—Pierre Bourguier, ob. 1753, xt. 61.—Philip, Earl of Chester, ob. 1773, xt. 79.

1750.—Two shocks of an earthquake in England, Feb. 8, and March 5.—Interest on the public funds, reduced to 3 per cent. Feb. 28.—An academy of sciences founded atStockholm.—The commercial treaty of Madrid, between Spain and Great Britain, Oct. 5.—Bernard de Belidor, ob. 1761, xt. 64.—Allen, Earl Bathurst, ob. 1773, xt. 91.

1751.—Peace between Spain and Portugal.—Frederic, prince of Wales, dies, March 20, xt. 44.—Thomas Simpson, ob. 1761.

1752.—The new lyle introduced into Great Britain, Sept. 3 counted the 14th.—N. Louis de la Caille, ob. 1762, xt. 49.

1753.—The British Museum established at Montague-house by act of parliament.—Dr. Edward Young, ob. 1765, xt. 83.

1754.—A dreadful eruption of Etna.—A great earthquake at Constantinople, Grand Cairo, &c. Sept. 2.—The French attack an English fleet on Monongahela, &c. on the Ohio, April 17.—Mr. Washington intercepts a small body of French, June 1.—Dr. John Leonard, ob. 1766, xt. 75.—John duke of Bedford, ob. 1771, xt. 61.

1755.—War declared between the Dutch and Algerines, April 10.—Quito in Peru destroyed by an earthquake, April 28.—Braddock defeated and killed near Fort du Quebec, July 5.—The French destroyed near lake George, Sept. 8.—A convention between Great Britain and Russia, at Peterburgh, Sept. 30.—Lithia destroyed by an earthquake, Nov. 1.—Dr. Thomas Birch, ob. 1766, xt. 61.—Admiral Edward Boscawen, ob. 1761, xt. 50.

1756.—A treaty between Great Britain and Prussia, Feb. 16.—War declared in England against France, May 17.—An engagement between the English and French fleets off Minorca, May 20.—Blenkener surrendered Minorca to the French, June 28.—Calcutta taken by the viceroy of Bengal, June 20.—Olavego taken, Aug. 14.—Dr. Robert Smith, ob. 1768, xt. 79.—William Pitt, Earl of Chatham, ob. 1778, xt. 70.—The king of Prussia defeats the Austrians at Lowofchurch, Oct. 1.

1757.—Calcutta re-taken, Jan. 2.—Damien’s conspiracy against the king of France, Jan. 5.—The king of Prussia invades Bohemia.—Chandongare taken, March 23.—The battle of Prague, May 6, in which the king of Prussia defeats the Austrians.—The battle of Kollin, June 18, in which the king of Prussia is repulsed by count Daun.—The battle of Plassey, in the East Indies, June 23.—The battle of Halleinbeck, July 26, in which the French defeat the allies.—The French take Verdon, Aug. 26, and Bremen, Aug. 29.—The convention of Closter-fecha, Sept. 8.—A comet appeared—its perihelion, Oct. 21, 7° 55' P.M.—ascending node 19° 12' 50"—inclination 12° 50' 20"—direct.—The battle of Roebbeck, Nov. 5, in which the Prussians defeat the French and Austrians.—The Austrians defeat the Prussians near Breflaw, Nov. 22.—The Prussians defeat the Austrians at Lellia, Dec. 5.—The king of Prussia takes Breflaw, Dec. 21, and becomes master of Sileia.—Dr. Thomas Seeker, archbishop of Canterbury, ob. 1768, xt. 75.

1758.—Minden reduced by prince Ferdinand, March 14.—A treaty between Great Britain and Prussia, April 11.—The English take Bengal, May 1.—The French take fort St. David’s, June 2.—The French defeated by prince Ferdinand at Crevelt, June 23.—Count Dann compelled by the king of Prussia to raise the siege of Olmuzt, July 1.—The English repulsed at Ticonderago, July 8.—The Hanoverians defeated by the French at Sangarhausen, July 23.—Loupburg taken by the English, July 27.—Cherburg taken by British troops, Aug. 8.—The Prussians defeated by the Austrians at Frankfort on the Oder, Aug. 12.—The Ruffians defeated by the king of Prussia, at Zoundorf, Aug. 25.—The allies defeated by the French at Landwehagen, Oct. 10.—The king of Prussia defeated by count Dann at Hockkirchen, Oct. 14.—The king of Prussia and his generals raise the sieges of Colberg, Hents, Cowf. Torcau, Leipfie, and Drefden, in October.—The English take fort du Quebec, Nov. 25.—A treaty between Great Britain and Prussia, Dec. 7.—Gorce taken by commodore Keppel, Dec. 29.—P. Francis Roycas, ob. 1776, xt. 95.—General James Wolfe, ob. 1759, xt. 33.

1759.—A comet appeared—its perihelion, March 13, 15° 56' A.M.—ascending node 24° 39' 35"—inclination 17° 45' 15"—retrograde.—The French defeated by prince Ferdinand at Bergen, April 13.—Guadaloupe surrendered to the English, May 1.—Fort Niagara reduced by Sir William Johnson, July 24.—The French defeated by the allies at Minden, Aug. 1.—The Ruffians defeated by the king of Prussia, at Cunerdorf, Aug. 12.—The Jefuits expelled from Portugal, Sept. 3.—An engagement between the English and French fleets near Pondicherry, Sept. 10.—General Wolfe defeats the English and takes Quebec, Sept. 17.—Boscawen defeats the French fleet off Gibraltar, Aug. 18.—Hawke defeats the French fleet off Belleile, Nov. 20.—A comet appeared—its perihelion, Nov. 27, 2° 19' P.M.—ascending node 19° 39' 24"—incl. 7° 59' 22"—direct.—Ballec and Tripoli destroyed by an earthquake, Dec. 5.—A comet appeared—its perihelion, Dec. 17, 20° 41' A.M.—ascending node, 11° 58' 65' 19"—inclination 4° 37' 24"—retrograde.—Dr. Zachary Pearce, bishop of Rochester, ob. 1774, xt. 84.—Henry Fox, lord Holland, ob. 1774, xt. 96.

1760.—The English defeated by the French at Quebec, Apr. 28.—A transit of Venus over the sun, June 6.—The French defeated by the allies at Lydford, July 16.—The Prussians defeated by the Austrians at Landflut, June 23.—The allies defeated by the French at Corbach, July 16.—The French defeated by the allies at Warbourg, July 31.—The Austrians defeated by the king of Prussia at Pfaffendorf, Aug. 15.—The Prussians defeat the Austrians in Saxony, Aug. 30.—The English become masters of Montreal, and of Canada, Sept. 8.—Berlin taken and plundered by the Auffrians and Ruffian troops, Oct. 9.—Earthquakes in Syria, Oct. 13.—The prince of Brunswick defeated near Rihenberg, Oct. 16.—The king of Prussia defeats the Austrians at Torgau, Nov. 3.—King George II. dies, Oct. 25, xt. 77.—Fr. Ar. de voltaire, ob. 1778, xt. 84.

1761.—Pondicherry taken by Col. Coote, Jan. 15.—The French defeat the Hanoverians, &c. near Granburg, March.
CHRONOLOGY.

A.D.

March 21.—Belleisle surrenders to the English, June 7.—The allies defeat the French at Kremdenecker, July 15.—A league between France and Spain, Aug. 31.—The Russians defeated at Colberg, Sept. 16.—King George III. married, Sept. 8; crowned Sept. 22.—A process against the Jesuits in France.—George Lord Lyttelton, ob. 1773, Oct. 64.—Charles Townshend, ob. 1767, Oct. 42.

1762.—War against Spain, Jan. 5.—Czatina dies, Jan. 6.—Martinico surrenders, Feb. 4; Grenada, &c., March 4.—Peace between Russia and Prussia, March 5.—War between Portugal and Spain, May 23.—A comet appeared,—its perihelion, May 29, 3° 10'. A.M.—ascending node, 16° 25'. inclin. 84° 41';—direct.—War declared by France and Spain against Portugal, June 23.—The allies defeat the French at Grabenstein, June 24.—A revolution in Russia, July 6.—Hannover surrenders to the English, Aug. 12.—Prince of Wales born, Aug. 12.—The Jesuits expelled from France in August.—Prince Ferdinand deposed by the French at Johannesberg, Aug. 30.—A battle between the allies and French at Bruecher-muhl, Sept. 21.—Marilla taken by the English, Oct. 6.—Schweinfurt surrenders to the king of Prussia, Oct. 9.—Prince Henry defeats the allies at Freyberg, Oct. 29.—The allies begin and take Cassel, Nov. 1.—Peace between Great Britain and France at Toulainbleau, Nov. 3.—M. de Condamme, ob. 1774, Dec. 74.

1763.—The peace of Paris, between Great Britain, France, and Spain, acceded to by Portugal, Feb. 10.—The peace of Huberburg between Hungary and Prussia, Feb. 15.—Peace between Prussia and Poland, Feb. 15.—The expulsion of the Jesuits from France completed.

1764.—A comet appeared, Jan. 3, 8° 11'. N.—its ascending node, 30° 28'. 0'.—inclin. 53° 54'. 11';—retrograde.—A treaty between Russia and Prussia, April 15.—Count Stanislav Poniatowsky unanimously elected king of Poland, Sep. 6.—Famine and pestilence in Italy.—An earthquake at Lisbon, Dec. 26.—Monro defeats Sujaah Dowlah, at Buxar, Oct. 23.—Byron makes discoveries in the Pacific ocean.—C. V. Lannius, ob. 1778, Dec. 70.

1755.—The regency bill passed in England, May 15.—Sujaah Dowlah defeated by general Carnac, May 3; and soon after, Bengal established by lord Clive under the British government.—Duke of Cumberland dies, Oct. 31.—Dauphin dies, Dec. 20.—Chevalier de St. George dies, Dec. 31.—Dr. Thomas Rutherford, ob. 1771.—James Stewart, Pretender, ob. 1766.—A comet appeared, March 8,—its ascending node 30° 4'. 10' 0'.—inclin. 40° 35'. 20';—retrograde.—The American flame aét repealed, March 18.—An interruption in Spain compelled the king to leave Madrid, March 25.—A comet appeared, April 5.—its ascending node 8° 17'. 22'. 19';—inclin. 8° 18'. 45';—direct.—A treaty of commerce and navigation between Great Britain and Russia, at Petersburg, June 20.—A great earthquake at Constantinople.—The Jesuits expelled from Bohemia and Denmark.—David Hume, ob. 1776, Dec. 66.

1757.—The Jesuits expelled from Spain, Genoa, and Venice, April 2.—Martinico almost destroyed by an earthquake.—The Protocols tolerated in Poland, Nov. 2.—Wallis and Carteret make discoveries in the Pacific ocean.—Jean Jacques Roufleau, ob. 1778.

1758.—The Royal Academy of Arts established in London.

A.D.—The Turks declare war against the Russians.---The Infidels expected from Naples, Malta, and Parma.---Act making the Irish parliament otiose, passed Feb. 5.—Duguayville makes discoveries in the Pacific ocean.—Violent commotions in Poland.—David Garrick, ob. 1779, Oct. 63.—Robt. lord Chve ob. Nov. 25, 1774.

1760.—First battle of Chozun, April 50; second battle of Chozun, July 13; third battle of Chozun, Sept. 17.—The Russian fleet enters the Mediterranean, in December.—Cook makes discoveries in the Pacific ocean.—Paul Bell from Corica, June 11, which was reduced.—Thomas Gray, poet, ob. July 30, 1774.—Capt. James Cook, ob. Feb. 14, 1779.

1770.—The Russians defeat the Turks, near the river Pruth, Aug. 1.—An earthquake at St. Domingo.—The right of Falkland island settled.——Bender taken by Rorn, Sept. 28.—Oliver Goldsmith, poet, ob. April 14, 1774.—Edward lord Hawke, ob. Oct. 17, 1774.

1771.—An emigration of 500,000 Tourngouts from the coasts of the Caspian sea to the frontiers of China.—Lord Mayor of London committed to the Tower, March 27.—The Turkish fleet burned by the Russians at Cime, Natalia, July 5.—Dr. Warburton, bishop of Gloucester, ob. July 7, 1779.—John (Dunning) lord Alfinburn, ob. Aug. 18, 1780.

1772.—A revolution in Denmark, when the queen was imprisoned, Jan. 17.—Augufla, princes of Wales dies Feb. 8, at 53.—Infurrection at Christianstad, which ended in a revolution in Sweden, that made the king absolute, Aug. 13, and completed at Stockholm, Aug. 19.—Poland dismembered by the empress of Russia, the king of Prussia, and the house of Austria.—Dr. William Hunter, anatomist, ob. March 15, 1772.—Dr. George Saville, ob. Jan. 1772.

1773.—Cook makes discoveries in the Pacific ocean, and failed to 71° 10' S. lat.—The order of the Jesuits suppressed by the pope's bull, Aug. 25.—Disturbances in America begin by the destruction of tea on board three ships at Boston, Dec. 18.—Mons. d'Alembert, ob. Oct 27, 1783.

1774.—Dr. Franklin's petition dismissed, Jan. 29.—Literary property determined, Feb. 22.—Grenville's act for elections made perpetual, March 31.—Boston port-bill passed, March 31.—Louis XV. dies May 10, at 64.—Turkish army ruined, June 20.—Peace between the Russins and Turks, July 21.—The ancient parliament of Paris restored, Nov. 12.—A comet appeared.—its perihelion Aug. 12, 11° 11'. P.M.—ascending node 1° 39'. inclin. 8° 6' 0';—direct.—L. Euler, mathematician, ob. Sept. 1783.—Charles Stewart, Pretender, ob. March 10, 1789.

1775.—Hollister in America begin at Lexington, April 19.—Action at Bunker's hill, June 17.—The Spanish troops land near Algiers, July 8.—St. John's taken by Montgomery, Nov. 2.—The assault of Quebec, Dec. 31.—Dr. Samuel Johnson, ob. Dec. 13, 1784.

1776.—General Howe quits Boston, March 17.—Congre's assume independence, May 15, and declares it July 4.—Attack on Charlestown, June 28.—General Howe lands on Staten Island, July 3.—Battle on Long Island, Aug. 27.—N. York taken, Sept. 15, and Fort Washington, Nov. 16.—Rhode island occupied, Dec. 8.—The affair at Trenton, Dec. 26.—Austria granted religious toleration, and abolished torture—also in Poland.
A.D.

1777—Ticonderoga taken by general Burgoyne, July 6.—General Howe embarks his army off Staten island, July 24—and lands in Chesapeak bay, Aug. 29.—Battle on the Brandywine, Sept. 11.—Philadelphia taken by the British, Sept. 26.—Battle of German town, Oct. 4.—General Burgoyne's army surrenders at Saratoga, Oct. 16.—Montif. Buffan, ob. April 16, 1788.


1780.—Sir George Rodney took 22 sail of Spanish ships, Jan. 8.—Engagement with Langara, Jan. 18, near Cape Vincent.—An engagement between the English and French fleets off Martinico, April 17.—Charlestown in America surrendered to the British arms, May 12.—An insurrection and riot in London in June.—Five British East India ships and a large fleet of West India ditto, captured by the combined fleets of France and Spain, in lat. 36° 40' and long. 15° 3 W. from London, Aug. 9.—Lord Cornwallis gains a signal victory over the American forces at Cambden, South Carolina, Aug. 16.—Torture abolished in France by edict, Aug. 25.—A most dreadful hurricane in the Leeward islands, in October.—War declared against Holland, Dec. 20.

1781.—Sir George Rodney and general Vaughan took the island of St. Eufatia, Feb. 5—re-taken, Nov. 17.—Lord Cornwallis defeated the American forces, at Guildford, March 17.—An engagement between the English and Dutch fleets, near the Dogger bank, Aug. 5.—The English army, commanded by Lord Cornwallis, surrendered to the united forces of America and France, at York town, October 19.

1782.—Minorca surrendered to the Spaniards, Feb. 4.—An engagement between the English and French fleets near Trincomale in the East Indies, Feb. 17.—Sir George Rodney defeated the French fleet commanded by count de Grasse, off Dominica, April 12.—An engagement between the English and French fleets near Trincomale in the East Indies, April 12.—Another engagement near Trincomale in September.—Gibraltar besieged by the Spaniards from 1780 to Sept. 13 of this year, when their floating batteries were burnt by red-hot balls from the garrisons, commanded by general Elliott.—Independence of America admitted Nov. 30.

1783.—Preliminaries of peace between Great Britain, France, and Spain, Jan. 20, and America declared independent.—Armistice between England and Hol.
A.D. 1789.—Insurrections in France, March.—States-general of France convened, May 5.—French attempt to invade Ireland in January, when their forces were dispersed by a storm in Bantry bay.—Nobility in France renounced their pecuniary privileges, May 23.—The French king makes concessions, June 28.—Revolution in France, July 3—and declared a republic.—Battue at Paris destroyed, July 14.—Insurrection in Brabant, Aug. 10.—Benedict taken, Oct. 8.—Ghent surrendered, Nov. 23—and Brüssels, Dec. 12.—Nootka, in the N.W. of America, settled by the English.—Earthquake at Bergo-di-fan-Sapoloro, in Tuscany, Sept. 29, which destroyed the cathedral, bishop's palace, with the adjacent town of Castello, &c.; and Borgo had 150 houses destroyed, and 50 houses, &c. swallowed up by an opening of the earth.—An inundation in Scotland, and the north of England, in July.—Sunday-schools first established in Yorkshire in 1784, became about this time general in England and Scotland.—At Corin, a magazine of gunpowder and bomb-hills blew up, and killed 180 men, March 11.

1790.—Affignats first issued in France, April 17.—New confederation at Paris commemorated, July 14, in the field of Mars.—Religious houses suppressed by the national assembly in France, amounting to 4,500.—Titles of honour abolished in France by the national assembly.—Canal of Bourbon, between the Oise and Paris, is begun. See CANAL.—Earthquake in Wiltshire, near Airmie, March 6.—Inundation of the river Don, near Doncaster, and the Derwent and Trent, Nov. 20.

1791.—Riot in Birmingham, July 14, in which several houses and meetings were destroyed, on occasion of the commemoration of the French revolution, by a few persons assembled at a tavern for that purpose.—The king, queen, and royal family, of France attempted to escape out of the kingdom, but were detained by force, June 21, and brought back prisoners to Paris; functioned the national constitution, Sept. 15.—Insurrection of the negroes at St. Domingo, amounting to 35,000, against the whites, of whom above 300 were massacred, in September; again in 1794.—Protestants permitted to have churches in France.—Bangalore in the East Indies taken by capl. Cornwallis.—Battle of Seringapatam.—The Austrians defeat the French near Moins, April 30.—At Constantine 53,000 houses were destroyed between March and July.—Earthquake in Scotland, in October—in Sicily and Calabria, October—at Libon, Nov. 27—at Zant, in the Adriatic, Dec. 2.—Avignon declared by the national assembly to belong to France.—Washington city in America founded.—Roman Catholics relieved in England by an act passed in 1776 and this year.

1792.—The title of citizen only allowed in France.—France declared itself a republic.—The king of France attended on the national assembly, and renounced the sovereignty, Aug. 19, when he was compelled to claim their protection, and they sent him to the Temple, where he was confined as a prisoner, separate from the queen, &c.—Battle of Seringapatam, in which Tipoo was reduced by capl. Cornwallis. —The Austrians defeated at Longwy, Aug. 14.—The French defeated at Grand-pre, Sept. 10.—Battle of Valore between the French and Austrians, Sept. 20.—of Menhould between the Prussians and French, Oct. 2.—of Condé, Oct. 2.—of Hauer, Oct. 27.—of Buffu, Nov. 4.—of Jemappe, Nov. 6, when Dumourier entered Brabant—of Arderlechi, Nov. 13.—of Thielmont, Nov. 17.—of Varoux, Nov. 27.—Flanders overrun by the French this year, and in 1794, afterwards declared part of that republic.—Liege taken by the French.—Fire at Contantine, Sept. which destroyed 7000 houses.—Earthquake in the counties of Bedford, Linceter, Lincoln, Nottingham, &c. March 2.—The custom-house at Seville destroyed by fire, May 7, with 40,000l. damage.—Shields cotton manufactory, valued at 45,000l., destroyed by fire, Feb. 9.—Leopold, emperor of Germany, poisioned, March 1.—King of Sweden assassinated, March 16.—The lake of Harenerton, in the county of Kerry, Ireland, a mile in circuit, sunk into the ground with all its 6th, March 25.

1793.—Dumourier, French general, seized the commissioners from the national convention, and quitted the army, April 2.—Holland invaded by the French.—French king brought to trial, Jan. 19, condemned, Jan. 20, and put to death, Jan. 22.—Queen beheaded, Oct. 16.—War with France by the English, Prussians, Austrians, Sardinians, and Italian states.—Toulon taken by admiral Hood.—Battle of Hockhein, between the Austrians and French, Jan. 7.—of Aldenheven, Feb. 28.—of Dix-la Chapelle, Jan. 15.—of Tongres, March 4.—of Jurvienden, near Thielmont, March 18.—of Thielmont, March 19.—of Lovaine, or the Iron mountain, March 22.—of Coblenz, April 1.—of Caffel, April 7.—of Tourna, between the Austrians and English, and the French, May 3.—of St. Amand and Manile, May 10.—of Valence, between the allies and French, May 22.—of Mannheim, May 30.—of Furnes, between the Dutch and French, June 27, and between the Austrians and French, June 26.—of Villiers, July 23.—of Cambrai, or Caesar's camp, Aug. 5.—of Lincelles, Aug. 18.—of Furnes, Aug. 21.—of Remond, Aug. 29.—of Dunirk, between the English and French, Sept. 7.—of Quenoiy, Sept. 11.—of Limbach, between the Austrians and French, Sept. 12.—of Menin, Sept. 15.—of Toulon, between the English and French, Oct. 1.—of Weffensburgh, between the Austrians and French, Oct. 14.—of Maubeuge, between the allies and the French, Oct. 16.—of Basmont, Oct. 19.—of Orchies, Oct. 20.—of Wanzenaw, Oct. 23.—of Landau, Nov. 29.—of Toulon, when it surrendered to the French, Nov. 19.—of Lebach, Nov. 27.—of Rouillon, between the Spaniards and French, Dec. 11.—of Perpiagin, Dec. 20.—Ypres surrendered to the French, under Moreau, June 17.—Earthquake at Domingo, April 4.—at Shaffenburg and Salisburgh, Sept. 29.—A piece of land in Finland, 40,000 square ells in extent, sunk 15 fathoms in Feb.
Chronology.

A.D.


Cleves taken by the French.—Landrecy surrenders to the French, July 15.—St. Lucia taken by the English.—Maeltricht taken by the French, Nov. 4—Namur taken by the French, July 13.—Troes taken by the French.—Telegraphs, invented in 1687, put into practice by the French this year, and by the English Jan. 28, 1796.—Sea fight June 1, in which lord Howe totally defeated the French fleet, took six ships of war, and sunk several.—Craton surrendered to the French, June 15.—Dippe laid in ashes by the English, July 14.—Martinaco taken from the French, March 23.—Earthquake in Turkey, July 3—of which destroyed three towns containing 11,700 inhabitants—also near Naples, June 13, which almost destroyed the city of Torre-del-Grasco.—Copenhagen had its royal palace, &c. destroyed by fire, Feb. 26, to the amount of 4,500,000 florins; above 100 persons lost their lives. At Grenelle, near Paris, an explosion of powder-mills proved fatal to 3,000 persons, and destroyed several buildings, Sept. 3.

1795.—Louis XVII. of France died in prison, June 8, and the princesa Maria Thersea Charlotte was delivered up in exchange for deputies, Dec. 26.—Amsterdam taken possession of by the French, Jan. 18.—Stadtholder and family obliged to quit Holland, when the French took possession of the United States, Jan. 21, and retired to England. —Warren Hailings, after 7 years trial, acquitted April 23.—Battle on the Waal, allies and French, Jan. 11—of Nantes, Chouans and re- publicans, Jan. 13—of Catalonie, March 5—of Neuf-Monville, March 5 and 18—of Figueres, when the Spaniards were defeated. April 5—of Piedmont, when the Piedmontese were defeated, April 12—of Pormant in Catalonie, when the French were defeated, June 14—of Piedmont, when the French were defeated, June 24, 27, and July 1—of Pamplona, when the French were defeated, July 9—of Bilboa, when the Spaniards were defeated, July 15—of Quiberon, the emigrants defeated, July 21—of Urrutia, the French defeated, July 30—of Vittoria, the Spaniards defeated, Aug. 14—of Piedmont, the Austrians defeated, Aug. 20—of La Pietra, the French defeated, Aug. 31—on the Lahn, dito, Sept. 19—of Munheim, the Aus- trians defeated, Sept. 23—of Piedmont, the French de-feated, Oct. 1—on the Mayne, the French defeated, Oct. 11—of Mentz, the French defeated, Oct. 26—of Worms, ditto, Nov. 8—of Moselle, ditto, Nov. 22—of Deux-Ponts, ditto, Nov. 28—of Allentz, ditto, Dec. 8—Breda taken by the French.—Briell feizd by them in January.—Oape of Good Hope taken by the English in June, and again in 1867.—Dort taken by the French, Jan. 10.—Delfeldorp surrendered to the French, Sept. 6.—Rankendal, taken by the French, Nov. 12.—Luxembourg surrendered to the French, after a severe siege, June 7.—Malacca surrendered to the English, Aug. 17.—Manheim re-taken by the Austrians, Nov. 27, with 10,378 prisoners and 4 generals, &c.—St. Mungouilles taken by sir Sidney Smith, in July.—Sir Edward Pellew took 15 sail, and burned 7, out of a fleet of 35 sail of transports, March 8.—The French fleet defeated, and two ships of war taken by admiral Hotham, March 14.—Admiral Con- wallis took 8 transports under convoy of 3 French men of war, June 7—11 Dutch East Indiamen were taken by the Sceptre man of war and some armed Indiamen, June 19.—The French fleet defeated by lord Bridport, June 25, and 3 ships of war taken near L'Orient.—Sierra Leone nearly destroyd by a French frigate.—Trincinmole in Ceylon taken by the English.—Utrecht surrendered to the French, Jan. 18.—The sovereignty of Poland dissolved, and the kingdom divided between Ruffia, Austria, and Prussia, Nov. 25, and the king retired on a pension of 200,000 ducats. Peace be- tween Prussia and France—also between France and Spain—700,000 ducats destroyed by fire at Constantinopole, Aug.—The arsenal, admirality, &c. with near 50 fleets, containing 1,757 houks, in Copenhagen, were destroyed by fire, June 5.—A dreadful eruption of Mount Vesuvius.

1796.—Subscription loan to government for 18 millions for carrying on the war against France was filled in less than 10 hours, Dec. 5.—Bamberg taken by the French, Aug. 4.—Battle of Piedmont, the Sardinians totally defeated by the French, April 14—of Lodhi, between the French and Aultians, May 11—of Mantua, May 29—of Wetzlaw, French defeated, June 4—near Kir- pen, French under Jourdan, defeated by general Krat, June 20—Austrians defeated by Jourdan, July 6— Archduke repulsed by the French, July 8.—Siege of Mantua raised, July 23.—Austrians defeated by Jour- dan, Aug. 11.—Jourdan defeated by the archduke near Nurnberg, Aug. 18.—French defeated by the Aultians, near Neuweit and Amberg, Aug. 24.— Jourdan defeated near Munich, Sept. 11—near Lamber, Sept. 18; and at Lhyn on the Leck, Sept. 19.

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1797. —Bank of England declined paying their notes in specie, except the fractional parts, Feb. 25.—Issued 26½ million notes and dollars, in payment, March 6, and called in the dollars in the following October.

—Ireland invaded by the French.—Mutiny on board the fleet at Portmouth for advance of wages, &c., April 18, which subsided May 15, when an act passed to raise their wages, and the king pardoned the mutineers. —Another mutiny at the Nore, which, after blocking up the trade of the Thames, subsided June 19, when several of the mutineers were executed.

—Penny and two-penny pieces of copper first issued in England, June 26.—A die of a reduced size was cut for them in 1806. —Revolution in Venice, May 17.—Battle between the Austrians and Bonaparte, in Italy, Jan. 19 and 27, when the Austrians were defeated. —Bonaparte defeated the archduke, April 1.—The Austrians again defeated on the Upper Rhine, May 27, when the French took Frankfort, Kehl, &c. —The English relinquished the Isle of Elba. —The French invaded South Wales without success, Feb. 22.—Ireland put under martial law, May 19.—The Spanish fleet defeated by Sir J. Jervis, and 4 line of battleships taken, Feb. 14.—The Dutch fleet defeated by admiral Duncan, on the coast of Holland, when their 2 admirals and 15 ships of war were captured or destroyed, Oct. 11.—Trinidad taken by the English with 4 ships of the line. —Trieff feized by the French, but recaptured by the Austrians, April 14.—Verona taken by the French, and great part destroyed by fire, April 28.—Venice seised, and their republic abolished by the French, and soon after part of their territories seised by the Austrians, and surrendered to them by the French. —Scientific societies and reading-rooms suppressed by an act of parliament, June 21.—Seven-shilling pieces were issued in England in December of this year.

—The total exports of British manufacture in this year amounted to £29,271,047, and in the next year, 1798, to £34 millions. —Newspapers first published at Conflan-

1798. —An earthquake at Sumatra did great damage, and above 350 perfons perished, Feb. 20. —The whole country between Santa Fe and Panama destroyed by an earthquake, including the cities of Guazon and Quito, with 25,000 inhabitants, in February. —In the same month several violent shocks were felt in the West Indies. —St. Domingo declared itself independent, in January. —Tyrol seised by the French. —Loretto pillaged by a French army, and the Made- 

1756.—Louis XVIII. retired to Peterborough, and was allowed a procession by the emperor of Russia, April 3.—The pope quitted Rome, when the French took possession of the city, Feb. 26, and Rome declared itself independent as a republic; the pope's authority annulled; and he died their prisoner in Sept. 1799.—Alexandria in Egypt taken by the French. —Aleffandria in Italy taken by the French, and surrendered to the Austrians and Russians, July 24, 1799.—Malta taken by the French, July 11.—The Swiss troops totally defeated by the French, and their independence abolished, Sept. 19.—Battle between the Irish rebels and the king's forces, at Killeen, May 22—and at several other places, in all which the insurgents were defeated—in Connought where the French killed 7000 Irishmen; they were all taken prisoners, Sept. 7. —The hostages, gates, and sluices of the canal at Buerze, destroyed by the English, May 19. —Genoa seised by the French, who were repulsed, Aug. 17, 1799—taken by the English and Austrians in May 1800, and surrendered to the French in the following July. —The French invaded Ireland, and landed at Killalla bay, Aug. 22, 1798 men, who surrendered themselves prisoners on Sept. 7 following.—Marcou isles defended against the French troops, May 7.—Fiedmont surrendered to the French, Dec. 6—recovered in 1799. —The French fleet of 17 ships of war, totally defeated, and 9 of them taken, by Sir Horatio Nelson, Aug. 1, near the Nile in Egypt.—The French off the coast of Ireland, confisling of 9 ships, by Sir J. B. Warren, Oct. 12, when he took 5 of them.—War between France, Naples, and Sardinia, Nov.—Earthquake at Sienna in Italy, when 50 persons lost their lives, May 25.—Voluntary contributions for the support of government against the French invasion amounted to upwards of 24 millions—boules 135,332.11s. 2d. remitted from Bengal.

1799. —Coin in circulation in England, 44,000,000. —Corfia, which put itself under the protection of England in June 1794, and in Nov. 1798, relinquished this year. —Ancona taken possession of by the French in July 1795, and surrendered to the Imperialists, Nov. 13, this year.—Battle near Naples between the French and Neapolitans, Jan. 18.—The archduke Charles totally defeated the French, and took 2000 prisoners, March 14 and 26, near Stockach. —The French defeated near Verona, March 5, 25, and 26; and again 30, and April 5.—The French defeated by the Austrians, April 10 and 26, near Cremona—by the Russians near Milan, April 27, 11,000 killed and taken prisoners—near Caffano, April 27.—Bonaparte repulsed at Are by the Turks and Sir Sidney Smith, April 16—defeated near the Aula, March 29, 31, and May 5.—Defeated by Suwarow near Aleksandria, May 17—defeated at Zurich, with the loss of 3000 men, June 3—by Suwarow, June 19, when the French lost 12,683 men, 7 can-
A.D. 1798—Bonaparte's life attempted by an explosion of combustibles, Dec. 24.—Union of Great Britain with Ireland debated.—Battle of Novi, Austrians and French, Jan. 8.—Savona, in Italy, April 8.—Veragio, April 10, French defeated.—Stockach, May 1, Austrians defeated.—Molitich, May 3, ditto.—Rifs, May 9, Austrians lost 500 men.—Broni, June 10, gave Austrians possession.—Milan to Placentia, of Marceno, 6000 Austrians killed, 8000 prisoners, and 45 pieces of cannon taken, June 21.—Hohenlinden, Austrians defeated, Nov. 3.—Mincio, Dec. 25, Austrians defeated.—Genoa taken by the English and Austrians in May, and surrendered to the French in July following.—Tuscany besieged by the French.—Union act for Ireland passed, July 2, and took place Jan. 1, 1802.—Bavaria taken by the English, Sept. 12.—Earthquake at Constantinople, Oct. 24, which destroyed the royal palace, and many buildings.—Curaçoa taken by the English, Sept. 24.—Invasion at St. Domingo, in October, which destroyed 1400 persons.—Gold mine discovered at Waterford in Ireland.

1801—Union with Ireland carried into effect, Jan. 1.

1802—Sir Ralph Abercromby, commanding the British army in Egypt, completely repulsed the French forces before Alexandria in Egypt, March 21—the brave general was wounded in this contest, which terminated so honourably to himself and the army, and died a few days after, universally lamented.—Peace between England, France, Spain, and Holland, March 27.—First flute of the Indiam Docks in Wapping laid, June 26.—Well India Docks, in the Isle of Dogs, opened Aug. 21.—An earthquake nearly destroyed Cronx, in Upper Hungary, June 12.—An inundation in Dublin and parts adjacent, Dec. 2 and 3.—Stockholm nearly destroyed by fire in June 1795, and again Nov. 15 this year.—Stadtholder of Holland, &c. renounced by the prince of Orange, in a formal treaty with France, July.—Life-boats invented by Mr. Greathed, who received a premium from parliament in May.

1803.—Prisoners of war, all the persons who happened to be in France at the commencement of the war, detained, contrary to the usage of nations, in May.—Bonaparte offers sums to Louis XVI, on condition of his relinquishing the crown in his favour, Feb. 26.—Go re retold to the French.—War between England and France.—Battle in the East Indies, between Scindiah and the English, the former defeated, Aug. 11.—Damaresu surrendered to the English, Sept. 25.—Lubec taken by the French, June 14.—Pobago taken by the English, June 30.—Hanover taken by the French, June 14.—A very bright meteor, which illuminated the atmosphere almost a minute, and rendered legible the writing on the signs in London, 1 April 5 in the evening, Nov. 15.

1804—France formed into an empire May 5, and Bonaparte, a Coruscan of moan extraction, crowned emperor December following.—A fleet of India ships under the commod
1805.—The remains of lord Nelson, after a grand funeral procul of the French, were interred in St. Paul's cathedral, Jan. 20.—Admiral Duckworth captured and destroyed the Spanish fleet of the line in the bay of St. Domingo, an 80 gun ship and two 74 s. taken, a three-decker and a 74 driven ashore and burnt.—Public funeral of the Right Hon. Wm. Pitt, (who died Jan. 23.) Feb. 22.—French squadron, consisting of the Marenzo, rear admiral Linois, and the Belle Poule of 40 guns, captured, on their return from India, by Sir J. B. Warren, March 15.—Prince of Orange died, April 22.—The proceedings on the impeachment of lord Melville commenced in Westminster-hall April 29.—The island of Capri taken by Sir Sidney Smith, April 22.—Holland erected into a kingdom, and Louis Bonaparte, the French emperor's brother, proclaimed king of it, by Bonaparte, with great ceremony; at St. Cloud, Paris, June 5.—A refolution to take effectual measures for abolishing the slave trade adopted, on the motion of Mr. Fox, by the house of commons, June 10.—A similar resolution adopted, on the motion of lord Grenville, in the house of lords, June 24.—Lord Melville's trial terminated, June 12—his lordship being acquitted by the peers.—The brilliant victory of Maida, in Calabria, obtained by Sir John Stuart, at the head of about 5000 British troops, over general Regnier, who commanded an army of more than 8000 French.—A treaty signed at Paris, between France on the one hand, and Bavaria, Wurtemberg, Baden, and several smaller German states on the other, by which the latter renounced their connection with the empire, and under the name of the "Confederacy of the Rhine," placed themselves under the protection of France, July 12.—Gaza surrendered to the French army, July 13.—A treaty of peace between France and Russia, signed at Paris on the part of the latter power by M. d'Oubril, July 20—refused to be ratified by the emperor of Russia, with the advice of his council, Aug. 13.—Surrender of Buenos Ayres and its dependencies to major general Beresford and sir Home Popham, July 28.—In consequence of the confusion of the Rhine, Francis II. published his resignation of the office of emperor of Germany, which dissolved that ancient constitution, Aug. 7.—Brilliant naval achievement by his majesty's ships Arethusa and Anson, in an attack on the enemy near Moro castle in the island of Cuba; the Spanish frigate Poona, of 38 guns and 347 men, being captured; twelve 24-pounder gun-boats being destroyed; each having a crew of 100 men, and the fort, mounting sixteen 36-pounders, blown up.—A manifesto against the French government, published by the emperor of Russia, at Petersburg, Aug. 30.—A tremendous hurricane at Dominica and Martinico, which did great damage to the islands, and destroyed many of the inhabitants, Sept. 9.—The Right Hon. Charles James Fox died, Sept. 13—and after a grand and impressive funeral, his remains were deposited in Westminster Abbey, Oct. 10.—Sir Samuel Hood, having under his command
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command the Centaur and Monarch, fell in with a French squadron, consisting of five frigates and two brigs from Rochefort, and captured four of the frigates, but lost his right arm in the action.—Hostilities commenced between the French and Prussians, by a skirmish near the bridge of Saalfeld, in which prince Ferdinand Louis of Prussia, who defended that bridge, was killed, Oct. 10.—A general action took place near Jena between the French and Prussians, in which the latter were defeated with immense loss, and the consequences of which were the almost complete annihilation of the army of the king of Prussia, and the occupation of almost the whole of his dominions by the enemy, Oct. 14.—Defeat, and surrender of the corps of the Prussian army, under prince Hohenlohe, to the French division, commanded by Murat, Oct. 21; soon after which the French gained possession of Stettin and Cuffin.—A proclamation addressed to the Poles from the French headquarters, announcing the advance of the French army to Poland, and promising, in the name of Napoleon, to render that country independent, if the people would shew themselves worthy of becoming a nation, Nov. 3.—The electors of Saxony and Hesse acceded to the confederation of the Rhine, Nov. 5.—The Prussian corps commanded by general Blucher, after a brave and skilful retreat, maintained against the three divisions of Bernadotte, Soult, and Murat, was attacked near Lubeck by a much superior force, and obliged to capitulate, Nov. 7.—Magdeburg surrendered to the French, Nov. 7.—The duke of Brunswick died at Ostenfion, near Altona, in consequence of a wound received in the battle of Jena, Nov. 9.—General Davout, with a French corps, enters Posen, Dec. 2.—Louis, king of Holland, issues a decree for enforcing Bonaparte's pretended blockade of the British Isles through all the countries occupied by the Dutch troops, December 2.—The French cross the Vistula, and occupy Praga, December 5.—Surrender of Thorn, Grudinckitz, Warsaw, &c.—Proclamation of the independence of Poland.—War between Russia and the Porte.

END OF VOL. VII.

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