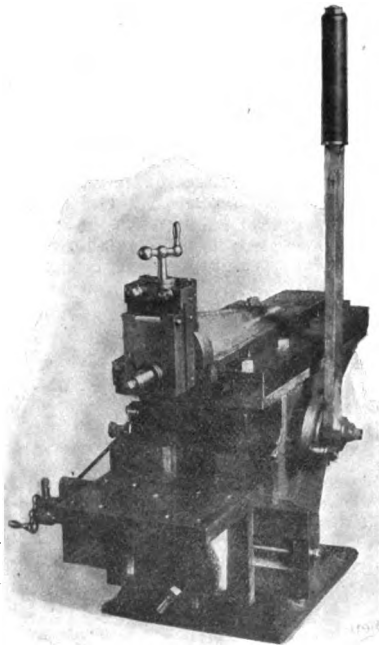


The Malterner Hand Shaper.

Machine shops with power have so monopolized the thought of machine tool designers that very little attention has been given to improving means for hand work, and as a result hand operations are performed in about the same way now that they have been for generations. No one heretofore has seemed to think of anything better than the cold chisel and file, short of some power driven tool. The simple device illustrated, a hand operator shaper, is therefore deserving of mention as practically the first attempt made to better the conditions in the small repair shops where power is not available. In conceiving the idea, the inventor, S. N. Malterner, Canton, N. Y., deserves most credit, for when the machine itself is analyzed there will be seen to be nothing remarkable or radically new in its mechanism. It is simply a sensible combination of perfectly well known mechanical principles, and the illustration tells the whole story.

Except for the drive it is merely a compact shaper of the usual pattern reduced to its simplest form. A completely rotary motion of the driving shaft is not necessary; in fact, it would be undesirable, so the reciprocating ram movement is effected in the most direct way by meshing a segment gear on the operating shaft with a rack on the underside of the ram. The down feed of the tool is by the usual screw, and is independent of the stroke, but the cross feed of the table is connected, so that an adjustable automatic feed is given the table during the operation of the hand lever.

Naturally the tool will find its greatest usefulness in garages, toolrooms, steamship engine rooms, roundhouses



A Hand Driven Shaper Designed by S. N. Malterner, Canton, N. Y.

and bicycle or other repair shops, although it is not without its value in almost any machine shop on certain small work. It does the work of a powerful machine. It perhaps is somewhat slower, but that disadvantage might easily be offset by a saving of time if it were necessary to carry the work to another department where power tools are installed, or if all of the latter were otherwise occupied.

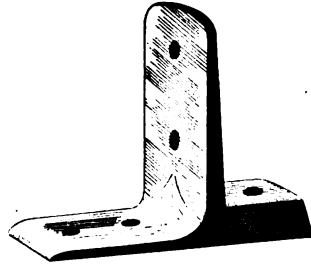
The accuracy of the machine was determined in a test in which a strip 7 in. long was cut with parallel edges: in this length there was a variation of only 0.0005 in. from true parallelism. A considerable leverage is given, and still this tool requires less labor than to file at a vise. The machine will take a block 8 in. long,

8 in. high and 7 in. wide, and will make a cut 1-16 in. deep in tool steel, and do it easily. It weighs 150 lb., and may be bolted directly upon a bench.

The inventor has placed the tool on the market, and it is manufactured by the Burke Machinery Company, Cleveland, Ohio.

The Perfection Post Anchor.

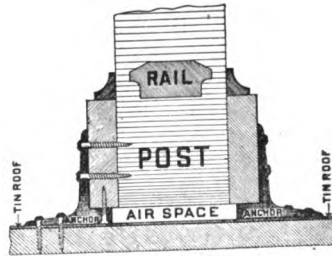
There are many objections to the customary method of attaching posts or standards for various purposes to buildings covered with metal roofs. It is quite common in large cities, where roofs have to be used for drying clothes and various other purposes, to support the wood posts directly on the tin plate, fastening them by driving nails through the tin into the roof structure beneath and then making the roof watertight by flashing around the



The Perfection Post Anchor.

posts, soldering the flashing fast to the roof at the bottom.

Patents have been granted to William Hammann for the Perfection Post Anchor shown in the accompanying illustration. It is made of malleable iron and heavily tinned. The sectional cut shows the method of connection with the roof and also with the post, whether the post is for a veranda railing or some other purpose. The anchor proper being tinned, can be readily soldered fast to the tin plate and the casting secured to the roof structure by means of screws, also soldered over. This work



Connecting Post Anchor to Roof and Post.

can best be done after the anchors are secured to the wood posts or rail bases by means of screws, as shown. There is advantage in a metal to metal connection, made waterproof by soldering and a support for the post which is firm. The Perfection Post Anchor also provides an air space beneath the post, so that no water soaked wood comes in contact with the metal of the roof. It is being made and put on the market by the Consolidated Sheet Metal Works, 661-673 Hubbard street, Milwaukee, Wis.

ALCOHOL FUEL has certain advantages over gasoline in the matter of storage. If a can of gasoline be left open near a flame, it is likely to explode by the ignition of its vapor. This could never occur with alcohol. Then again, water is useless to quench burning gasoline, serving only to spread the fire by floating the burning liquid. Alcohol can never present this danger, for it mixes with water in all proportions, and in so doing becomes non-inflammable. The use of the fuel in submarine boats, or other hazardous places, the superior safety of alcohol must lead to its ultimate adoption.