

Extract of Thorne and Simplex  
Typesetter Pages

# History of Composing Machines

A COMPLETE RECORD OF THE ART  
OF COMPOSING TYPE BY MACHINERY

**Fully Illustrated**

ALSO

## LISTS OF PATENTS

ON COMPOSING MACHINES, AMERICAN AND BRITISH,  
CHRONOLOGICALLY ARRANGED

BY

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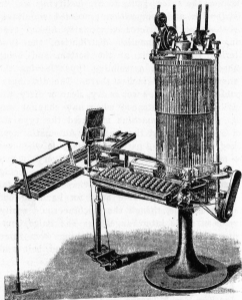
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all irregular characters, such as accents, reference marks, etc. The remaining types were advanced to their proper channels in the composing section of the machine, the spaces going to the justifying section. Distribution and composition proceeded simultaneously without interference, specially nicked type being used to accomplish distribution, the type entering the channels at the bottom and being pushed upward, the assembling types leaving the channels about two inches above. The distributor would handle the type wet or dry, clean or dirty, the distribution being stopped when any channel was full. Finally the machine measured the type set and a dial indicated the amount. Automatic stops locked every working part of the machine whenever its mechanism became deranged. Every movement was a positive mechanical one, there being no carrier belts or gravity devices. The model machines constructed were built for handling but one size of type, though the machine could easily have been made interchangeable. The Paige Compositor, nine feet long and weighing over three tons, was run by a quarter-inch round belt and required but one-twelfth horse-power.

#### THORNE AND SIMPLEX.

In 1880 Joseph Thorne, who had since 1869 been experimenting with typesetting machines of the usual pattern, adopted the cylindrical form of composing machine, and met the greatest success so far achieved with typesetting machines. The Thorne machine was a combined distributor and setter, its

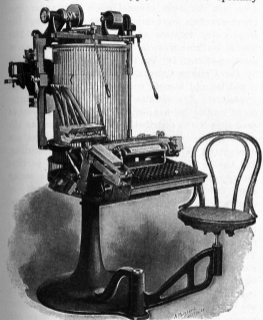
compactness being a strong point in its favor. It employed two type cylinders about fifteen inches in diameter, of ninety channels each, one surmounting



THE THORNE.

the other, the upper one rotating and feeding the type into the lower channels, from which a steel plunger, operated by a keyboard, ejected the bottom type on to a swiftly revolving disk, which whirled

it into a raceway and assembled it in a continuous line. The upper cylinder was loaded by inserting lines of the type, which was specially



THE SIMPLEX.

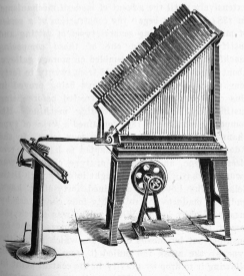
nicked, into the channels, the cylinder revolving and allowing the type to enter its proper channels in the lower magazine cylinder. As each channel in the

lower cylinder had at its entrance a combination of wards or lips which matched only the nicks in the appropriate type, only that particular letter could drop into the lower channel when both upper and lower channels were brought into register by the step-by-step rotation of the upper portion. The Thorne machine went into use in a large number of printing-offices. In 1898 the company was succeeded by the Unitype Company and the entire machine remodeled and brought out as the Simplex One-Man Typesetter. The Simplex is equipped with an automatic loading mechanism which inserts the lines of dead type in the distributing cylinder as fast as the channels are depleted, improved mechanisms are incorporated to insure distribution without fouling, and the justifying arrangements improved so that the operator, after assembling the type, can swing over and perform the justification instead of employing a second person, as in the Thorne. Quads and spaces are distributed directly to receptacles convenient to the hand of the justifier, and the matter can be leaded automatically if desired. The keys of the Simplex can be operated simultaneously in any combinations running from left to right without danger of transpositions. The output is from three to four thousand ems per hour, with one operator, while with one operating and another person justifying 9,000 ems per hour have been set. Machines are designed for only one size of type, occupy eight square feet of floor space and weigh less than eight hundred pounds. The Simplex requires about one-fourth horse-power and costs,

complete, \$1,500. Over five hundred Simplex machines are in operation in the United States alone.

#### WICKS COMPOSING MACHINE.

Frederick Wicks, of Glasgow, Scotland, inventor of the Wicks Rotary Typecaster, also invented a type-setting machine in 1883. A unique feature of the Wicks composing machine was the fact that not a single spring was used in its construction. The type was contained in upright inclined channels and



WICKS COMPOSING MACHINE.