Extract of Cox Setting and Distributing 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

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CHICAGO
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power. The New York "Sun" had a battery of three McMillan machines for several years, and they were used in a number of other offices.

A separate distributor was required with the McMillan. It consisted of a circular frame supporting hundreds of movable type channels, radiating from the center. The type to be distributed was placed on a galley beneath the machine and a blade raised a line at a time and thrust it at regular intervals into the central rotating disk which, by means of wards and special combinations of nicks in the type, distributed the letters to their appropriate channels, which when full were removed and placed in the composing machine. The distributor was capable of disposing of fifteen thousand ems an hour.

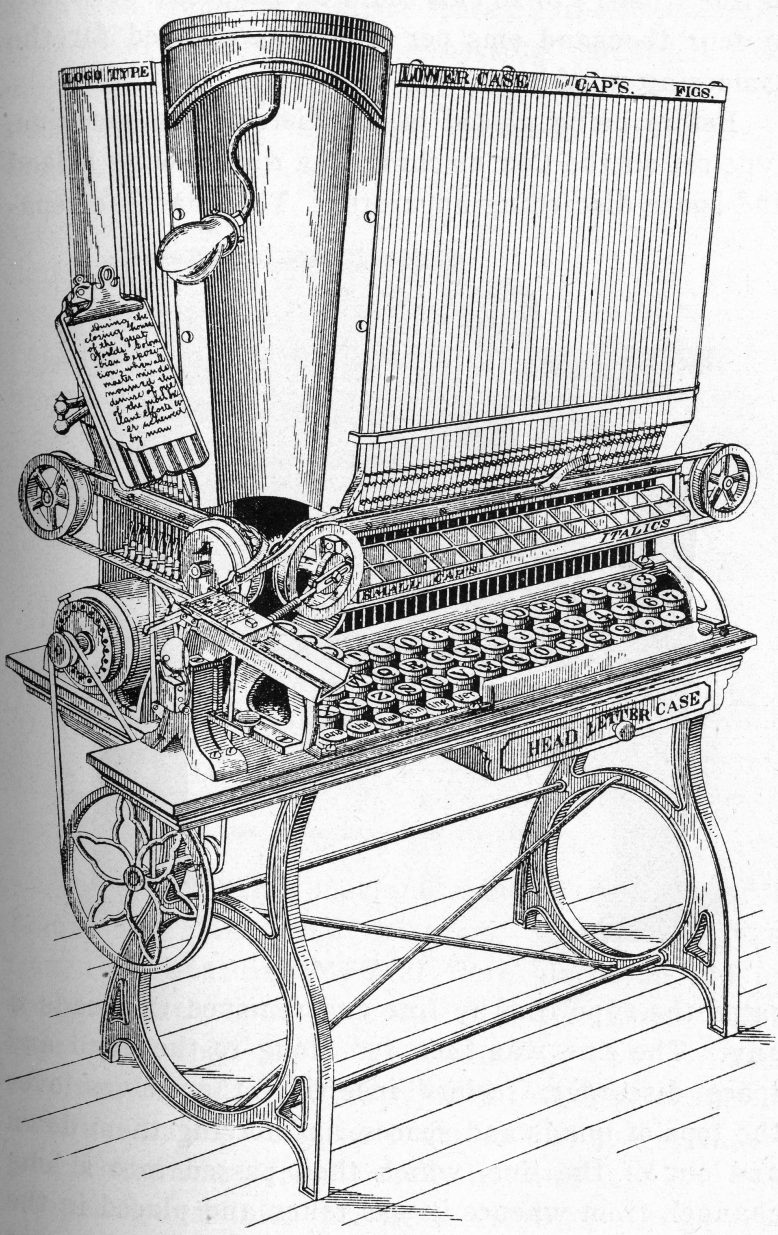
LORENZO DOW'S MACHINE.

Lorenzo Dow, of Boston, Massachusetts, was another one of those to adopt the cylindrical form of typesetting machine, he bringing out his machine in 1885. The father's inventive genius descended to his son, Alexander Dow, who in later years produced a more perfect form of an individual typesetting machine.

COX SETTING AND DISTRIBUTING MACHINES.

A new model of type-composing machine was introduced by Paul F. Cox, of Battle Creek, Michigan, in 1894. In this machine, logotypes and single types were contained in channels and carried by belts to the assembler, and justified into lines by hand. The logotype channels were at right angles

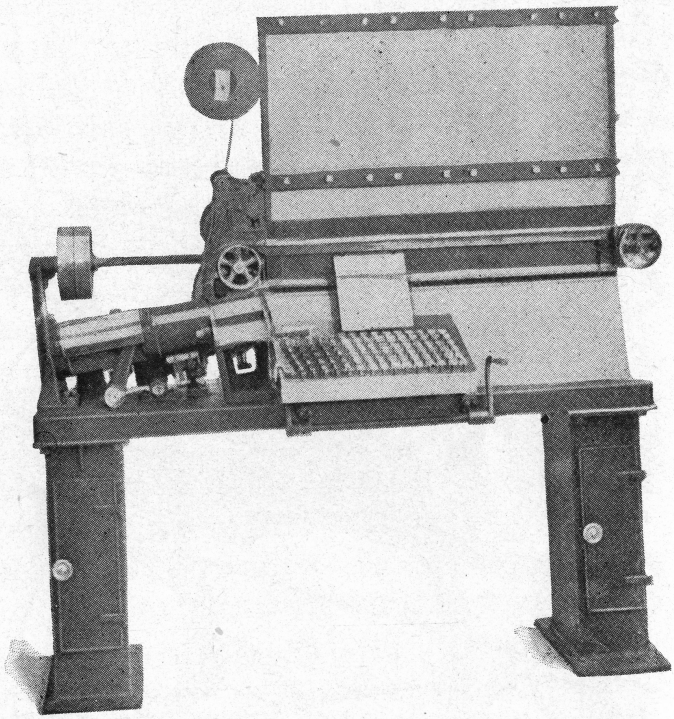
with the type channels, but the type was assembled at a common point. In 1894 Cox devised another novel composing machine, in this apparatus using corrugated spaces to accomplish justification of the composed lines of type. Three separate machines were required with the Cox method, a composer, a space and lead discarder, and a distributor. The composing machine had a number of vertical type containing channels, placed at an angle, so that the type was ejected by the operation of the keyboard on to a carrier belt, which conveyed the letters to the assembling point. Above the assembler a reel of soft metal ribbon was mounted, the operation of the space key causing a section of this ribbon to be unwound, cut off, crimped, and dropped into the line between the words as composition proceeded. It was also proposed to use previously cast crimped spaces in this machine. The line was overset, and when complete a lever to the right of the keyboard was depressed, throwing the machine into action. A small cylinder containing a number of slots, in one of which the line was assembled, now revolved, side pressure was applied and the line brought to the proper length by compressing the crimped spaces, another slot in the cylinder meanwhile being presented to the assembler for the reception of another composed line, the next partial revolution of the cylinder bringing the justified line to the galley, where the line was ejected, leaded or solid, as desired. One size of type only could be composed on the Cox machine, the range of justification being from a thin space to about an em quad in thickness. Any length



COX'S FIRST COMPOSING MACHINE.

of line from 13 to 26 ems could be composed. A speed of four thousand ems per hour was claimed for the composing machine.

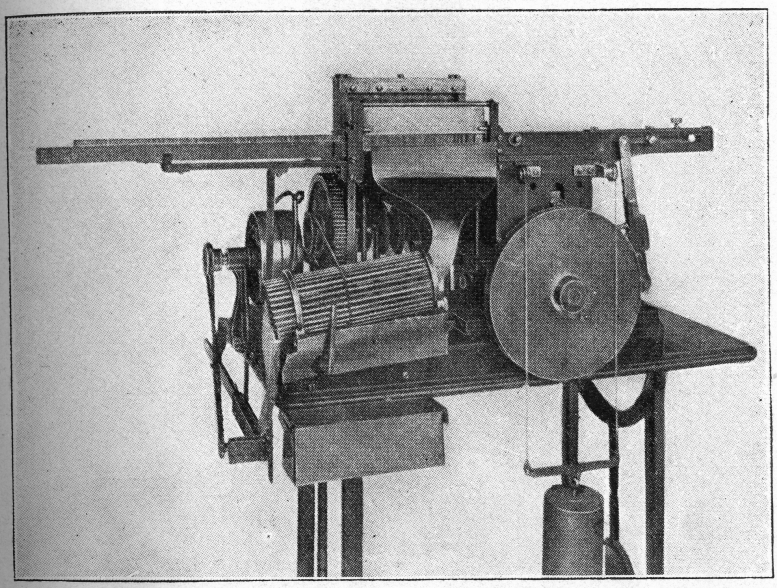
Before being placed in the distributing machine, type set on the Cox machine was run through a lead and space discarding apparatus. This machine sepa-



COX TYPESETTER.

rated the type line by line and removed the leads if any. The line was then fed along to the quad and space discarder, feelers inserting themselves over the tops of quads and spaces, and forcing them down and out of the line, which then passed into a long channel, from whence it was taken and placed in the distributing machine. The discarded quads were

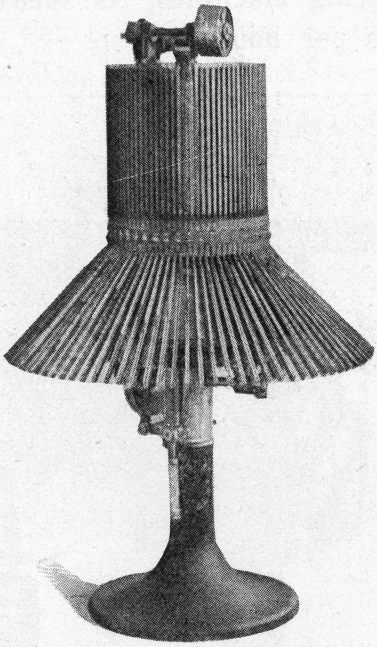
separated from the crimped spaces and assembled in a channel ready for the composing machine. One discarder was capable of handling dead matter for three distributing machines, its speed being thirty thousand ems per hour.



COX SPACE AND LEAD DISCARDER.

The distributing machine was a combination of Thorne and McMillan distributors. Channels of type from the discarding machine were placed on end in upright channels of the cylindrical distributor. The type was specially nicked, and as the cylinder revolved the type was distributed into type channels which radiated from the lower end of the cylinder, which channels were then removed and placed in the composing machine. Duplicate channels for the letters most used enabled distribution to be done

rapidly. One distributor was sufficient to supply two or more composing machines. Several Cox machines were placed in use, but upon the absorp-



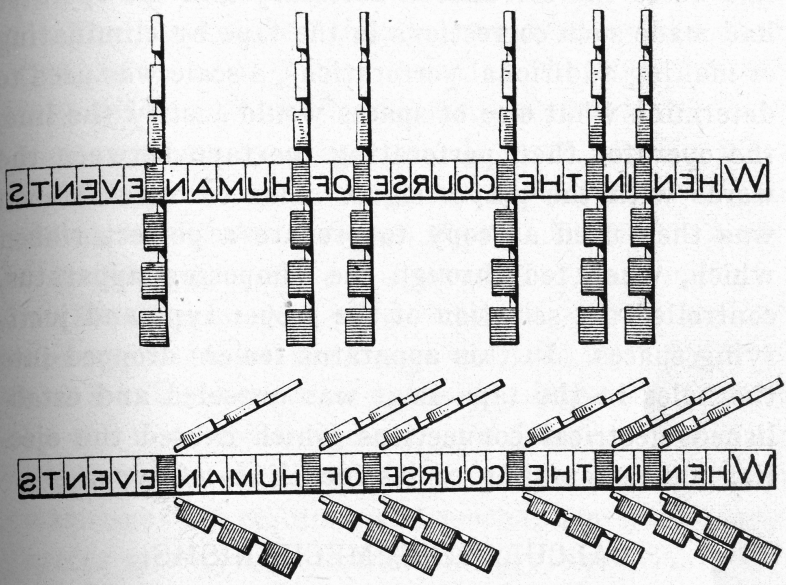
COX DISTRIBUTOR.

tion of the Cox patents by the Unitype Company they were withdrawn. An attempt was made to embody the Cox method of justification in the Simplex machine, but without success.

THE CONVERSE MACHINE.

Frank B. Converse, Jr., of Louisville, Kentucky, in 1894 invented a typesetting and automatic justifying machine, using foundry type. There were four groups of type channels in the Converse, with twenty-three channels in each group. Duplicate

Paul F. Cox, in 1898, invented what he called a "multi-space." It was a graduated wedge of type metal, the thick edge being inserted between the words and the line overset and the spaces retracted



COX'S MULTISPACE.

until the line filled the measure exactly. The portions of the spaces projecting above and below the type were then broken off and discarded. P. H. McGrath, in 1899, proposed to justify the lines in a similar manner, but using solid wedges of metal and sawing off the excess after the wedges had been advanced to spread the line.

SELECTION BY PERFORATIONS.

Automatic justification of the type set by machinery controlled by a perforated strip or ribbon was