

No. 684,104.

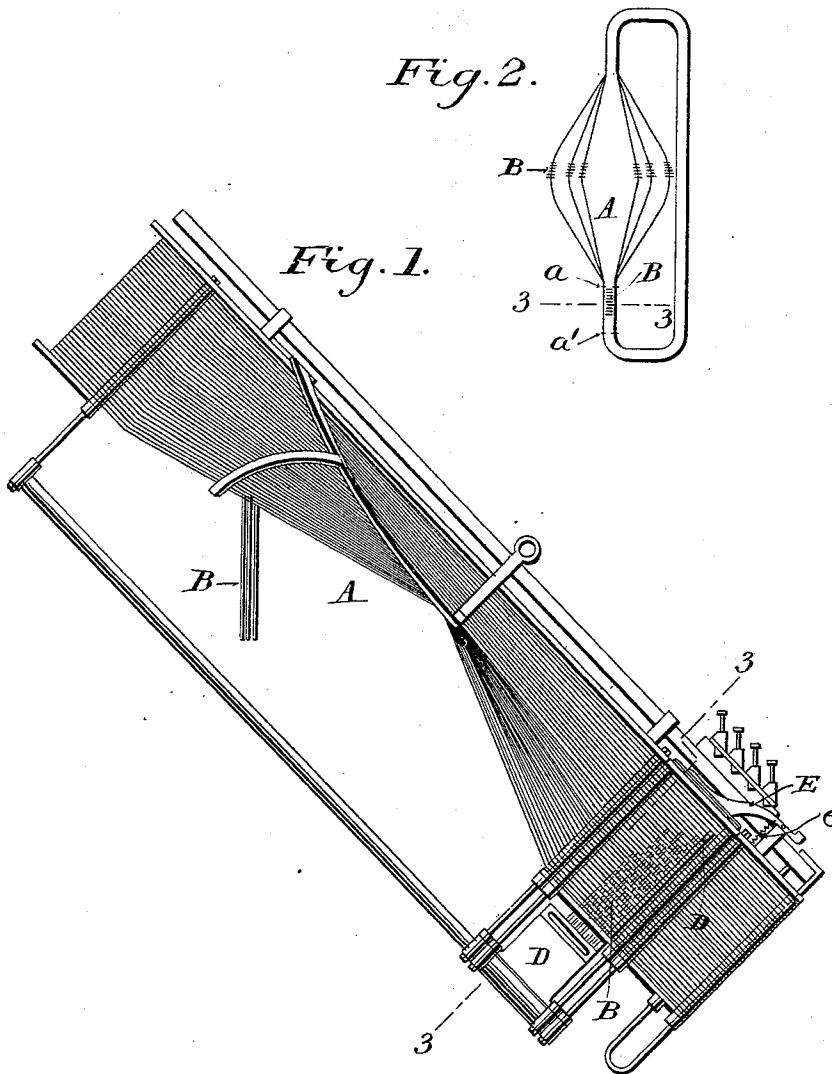
Patented Oct. 8, 1901.

J. R. ROGERS.
LINOTYPE MACHINE.

(Application filed June 24, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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A. R. Kimmel

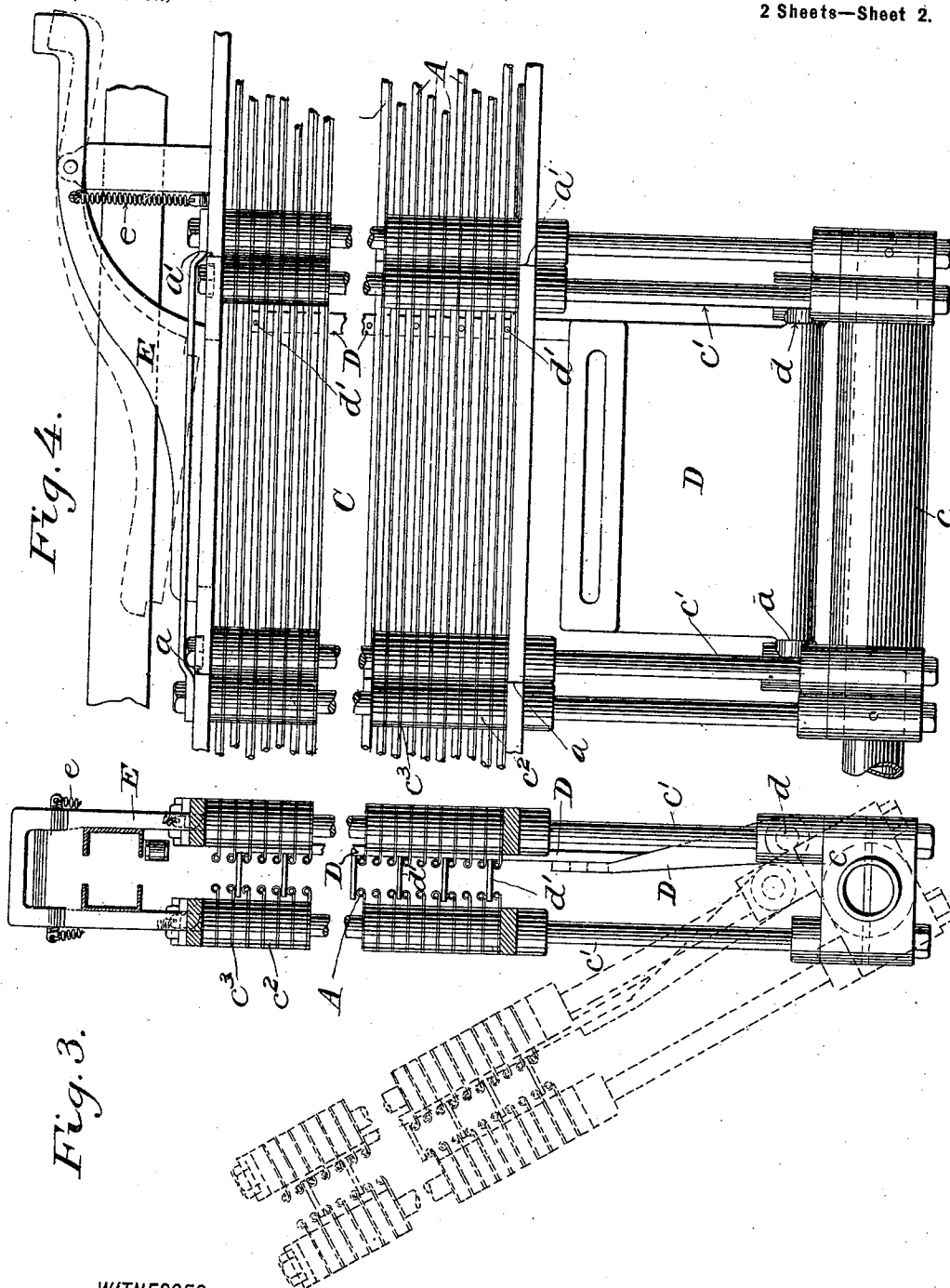
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J. R. ROGERS.
LINOTYPE MACHINE.

(Application filed June 24, 1901.)

2 Sheets—Sheet 2.

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN R. ROGERS, OF BROOKLYN, NEW YORK, ASSIGNOR TO MERGENTHALER
LINOTYPE COMPANY, OF NEW YORK.

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 684,104, dated October 8, 1901.

Application filed June 24, 1901. Serial No. 65,824. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. ROGERS, of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

This invention has reference to that class of linotype-machines in which the matrices are suspended on a series of inclined endless wires or guides which diverge at certain points in their length for purposes of distribution and converge toward their lower ends for purposes of assemblage or composition, as represented in Letters Patent of the United States issued to me on the 8th day of August, 1899, No. 630,412, and in application for Letters Patent filed on the 19th day of February, 1901, Serial No. 47,992.

In the machine as originally designed the guides were endless and stationary, and it was consequently impossible to remove matrices from or add them to the composed line for purposes of correction speedily or conveniently.

The aim of the present invention is to provide means in a machine of the class stated whereby speedy access may be given to the composed line in such manner as to permit the introduction or removal of individual matrices in the line for tabular work and the like.

To this end the invention consists in severing the endless guides at two points in their length, preferably on opposite sides of the space within which the line is assembled, and mounting the intermediate sections in such manner that they may be swung momentarily out of line with the fixed portions, thus exposing the ends of the guides so that the matrices may be moved on and off at will by hand.

In the drawings I have represented my invention as incorporated in a machine of the general construction shown in my application, Serial No. 47,992, above referred to. The drawings are limited to such portions of the machine as are necessary to an understanding of the invention. It is to be understood that in other respects the machine may be

constructed in exact accordance with said application or in any other equivalent manner.

Figure 1 represents a side elevation of the framework of the machine. Fig. 2 is a top plan view illustrating the general arrangement of the matrices. Fig. 3 is a cross-section on the line 3 3 of the preceding figure. Fig. 4 is a side elevation of the parts shown in Fig. 3 and at the lower end of Fig. 1.

Referring to the drawings, A represents a series of endless wires or guides sustained rigidly in position in a framework of any suitable construction and each intended to carry a series of pendent matrices all bearing the same letter or character. As shown in Fig. 2, a series of guides beginning at the upper end extend downward in diverging lines to a point midway of their length, after which they again converge toward their lower ends. The upper and lower ends are arranged in two parallel vertical tiers or rows on the right and left of the median line. From the lower ends these tiers are continued in parallel lines to one side and then rearward and upward each to its point of beginning, so that the matrices B, held in storage on the respective guides at or near their points of greatest divergence by escapements operated by finger-keys, will when released by the action of the finger-keys and escapements one at a time descend the converging guides and assemble in line between the lower parallel ends of the guides, as indicated in Figs. 1 and 2. The assembled line (by mechanism not shown) is advanced between the parallel portion of the guides to a casting mechanism and thereafter carried upward and returned to the point at which the guides diverge, whereupon the individual matrices descending their respective guides are distributed and held in reserve until demanded again.

In carrying my invention into effect I sever the lower parallel ends of the guides at the points *a a'*, as indicated in Fig. 2, and I connect the sections or short lengths lying between the points of division by any suitable framework which will hold them in their proper relations to each other and admit of their being swung bodily to one side, as in-

indicated by dotted lines in Fig. 3. This movable section or gate regardless of the details of construction is in fact a movable carrier or holder C, adapted to receive the successive
5 matrices as they are assembled in line and to sustain the composed line of matrices and carry it out of line with the fixed guides to an exposed position, permitting the matrices to be removed by sliding them out at will.

10 In order to detain the matrices within the movable carrier during composition, I provide the carrier with a detent D, which may be of any suitable construction. In the form shown this detent is simply a finger mounted
15 at its lower end on a pivot *d* and provided at its upper end with a series of horizontal fingers *d'*, lying transversely to the length of the guides and spanning the space between them, so that the descending matrices will be
20 arrested by the detent.

In the form shown the carrier or gate C consists simply of a base portion *c*, having upright rods or arms *c'* secured thereto, these arms in turn supporting a series of washers
25 *c²* and the intermediate plates *c³*, which sustain the matrix-guides. The adjacent stationary ends of the guides are sustained in like manner by plates and washers supported by fixed vertical rods. The washers, support-
30 ing-plates, and rods are of especially the same construction and arrangement as those represented in my application, Serial No. 47,992, above referred to. When the gate or carrier C is in its upright or normal position,
35 the short guide-sections thereon aline with the main guides, which are practically continuous and which operate in precisely the same manner as in my original structure. In order to hold the gate in its normal or opera-
40 tive position, I propose to employ locking devices, which may be of any ordinary construction. A simple device for the purpose is the double or forked latch E, pivoted to the main frame and having its two arms ar-
45 ranged to engage at their lower ends in the two sides of the gate, the engagement being maintained by a spring *e*, Fig. 4. When it is required to remove or rearrange the matrices in the composed line, the latch is depressed
50 at its lower end and disengaged from the gate, as shown in dotted lines in Fig. 4, after which the gate is swung outward to the left, as indicated by dotted lines in Fig. 3. The individual matrices may be removed by slid-

ing them from the upper ends of the short 55 guide-sections or by withdrawing the detent D and removing them at the lower end.

It will be understood by the skilled mechanic that the gate or carrier C may be of any construction preferred, provided only it 60 it is adapted to receive the matrices from the guides above and deliver them to the guides below and also adapted to move from its normal position in such manner as to permit the removal of the matrices therefrom. 65

Having described my invention, what I claim is—

1. In a linotype-machine, inclined converging matrix-guides having parallel ends to assemble and retain the matrices, said ends 70 mounted in a laterally-movable support, substantially as described, whereby the removal and insertion of matrices are permitted.

2. In a linotype-machine, a series of endless matrix-carrying guides, whereon the des- 75 ignated matrices are assembled in line, said guides having their assemblage portions movable at will out of line with the remaining portions, to permit access to the assembled line and the addition or removal of matrices. 80

3. In a linotype-machine, a series of endless inclined matrix-carrying guides, substantially as described, in combination with a laterally-swinging frame or gate, support- 85 ing movable portions of the guides, whereby access may be given to said movable portions to permit the rearrangement of matrices thereon.

4. In a linotype-machine, the inclined converging guides with parallel lower ends di- 90 vided from the remaining portions, the hinged frame or gate sustaining the divided portions of the guides, and a detent to retain the assembled matrices within the gate when the latter is opened. 95

5. In a linotype-machine, the fixed matrix-guides, having separable portions mounted in a hinged gate or support, in combination with means for locking the gate in place to 100 maintain the continuity of the guides.

In testimony whereof I hereunto set my hand, this 29th day of May, 1901, in the presence of two attesting witnesses.

JOHN R. ROGERS.

Witnesses:

FREDERIC C. WHEELER,
JOHN PAIDSEN.