No. 797,413. PATENTED AUG. 15, 1905.

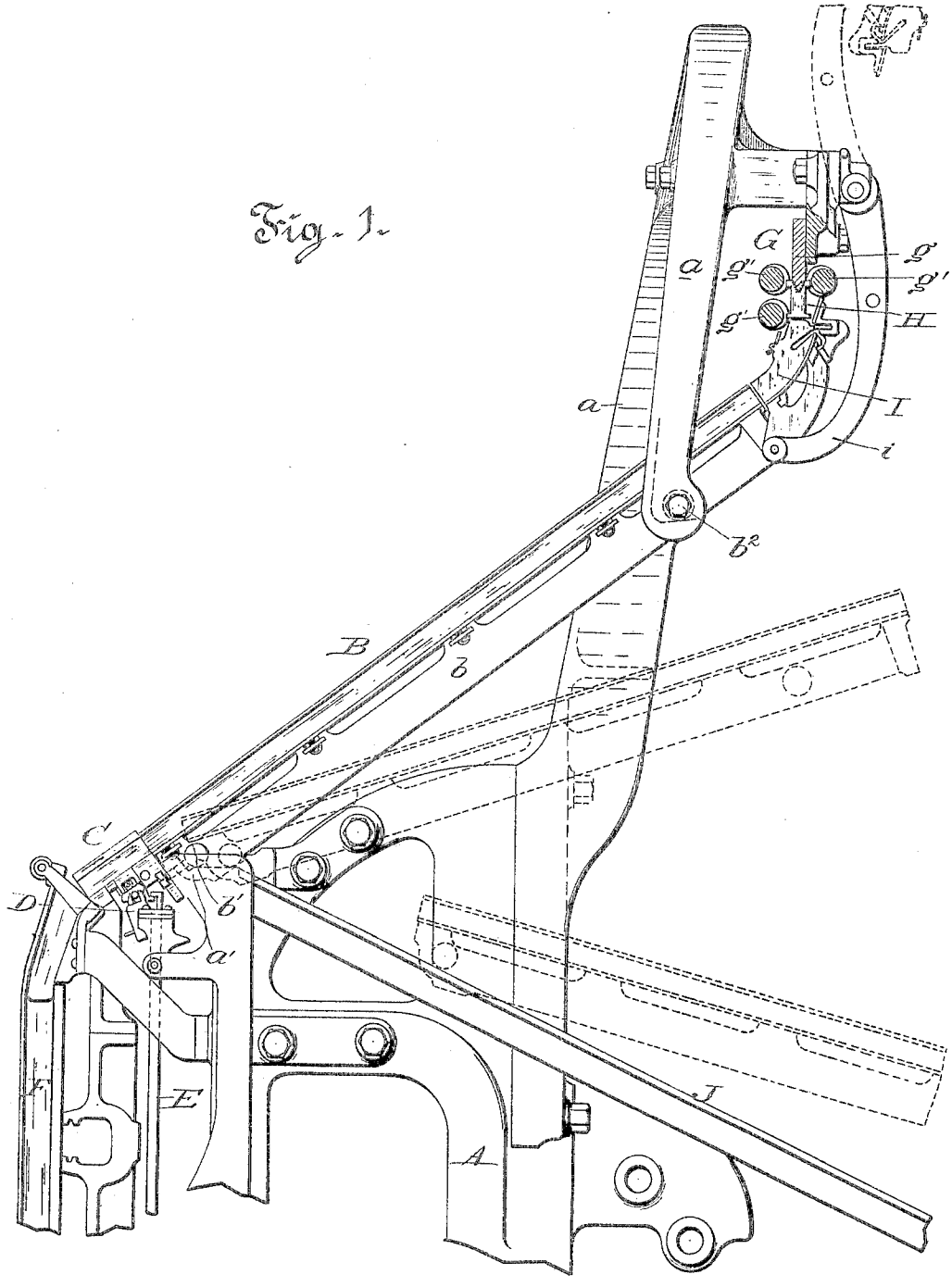
P. T. DODGE.

LINOTYPE MACHINE.

APPLICATION FILED MAR. 17, 1905.

2 SHEETS—SHEET 1

Fig. 1.



Witnesses
F. A. Kennedy.
D. Burdett.

Inventor
Philip T. Dodge

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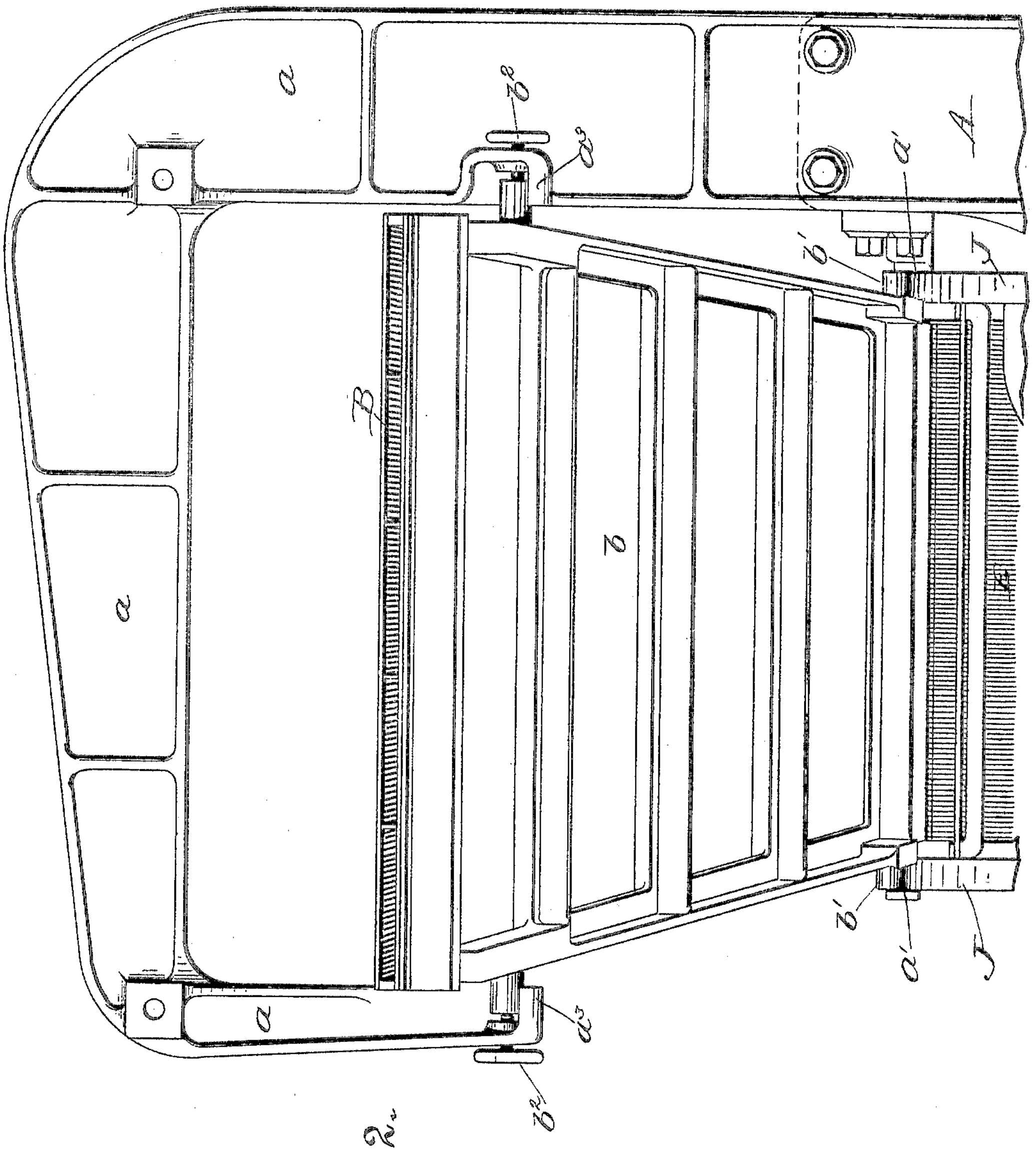

Fig. 2.

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UNITED STATES PATENT OFFICE.

PHILIP T. DODGE, OF BROOKLYN, NEW YORK, ASSIGNOR TO MERGENTHALER LINOTYPE COMPANY, A CORPORATION OF NEW YORK.

LINOTYPE-MACHINE.

No. 797,413. Specification of Letters Patent. Patented Aug. 15, 1905.

Application filed March 17, 1905. Serial No. 250,623.

To all whom it may concern:

Be it known that I, PHILIP T. DODGE, 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.

My invention has reference to linotype-machines of the general organization represented in Letters Patent of the United States No. 436,532, wherein circulating-matrices are stored in an inclined channeled magazine, from which they are delivered at the lower end by escapement mechanism and to which they are delivered at the upper end by distributing mechanism.

In order to permit speedy change in the type-faces produced, it is the practice to remove the magazine and substitute another containing matrices of a different character. The magazine as ordinarily constructed, with the matrices therein, exceeds one hundred pounds in weight and can be removed only by two men passing it outward over an elevated bar at the rear.

The object of the present invention is to expedite the removal and replacement of the magazine and to lessen the amount of labor required in so doing.

To this end it consists in a frame and magazine so constructed and combined that the rear elevated end of the magazine may be turned downward from its operative position, while the forward end is supported in the frame, and in the combination with said magazine and frame of guide-rails or equivalent supports mounted in the main frame in position to sustain the magazine as it is drawn from or carried into the frame preparatory to its being turned upward in the operative position.

Referring to the drawings, Figure 1 represents a side elevation of the upper part of a linotype-machine with my improvement incorporated therein, the magazine being shown in full lines in its operative position and in dotted lines in the successive positions which it assumes during its insertion or removal. Fig. 2 is a rear elevation of the same.

Referring to the drawings, A represents the rigid main frame; B, the inclined channeled magazine in which the matrices are stored; C, an "escapement-bar," so called, fixed on the main frame and forming a continuation of the magazine. This bar is provided with internal channels corresponding to those in the magazine through which the matrices pass and with the usual series of escapement devices D, controlled by vertical reeds E from a finger-key mechanism for the purpose of delivering the matrices one at a time as required.

F is the channeled front through which the matrices are delivered to the assembling mechanism below.

G is the distributing mechanism, sustained in the main frame and consisting, as usual, of a fixed horizontal bar g and parallel screws g', the bar being toothed along its lower edge to engage and suspend the matrices H as they are advanced by the screws g' until they arrive over the proper channels in the magazine.

I is a vertically-channeled throat or entrance forming an upward continuation of the magazine and adapted to receive the matrices falling from the distributer and direct them downward into the magazine, as usual. This throat is pivoted to suspending-arms i, which are in turn pivoted at their upper ends to the main frame, so that they may be swung backward and upward to carry the throat away from the magazine when it is to be moved.

The magazine, which in the form shown is independent of the throat and the distributer at the upper end and the escapement mechanism at the lower end, is secured upon a base-frame b, whereby it is sustained in operative position and prevented from sagging. This base-frame—in effect, a part of the magazine—is provided at the lower forward end with laterally-projecting journals or trunnions b', which are seated in notches or bearings a' in the main frame, thus sustaining the forward end of the magazine in operative relation to the escapement mechanism. The rear end of the magazine-frame is supported at the two sides by bearings a^3 in the frame and secured by pins or screws b^2, seated in the main frame and adapted to be withdrawn at will in order to permit the magazine to swing downward at the rear end in the manner represented in dotted lines.

J J are two side rails or plates fixed to the main frame and lying in a fore-and-aft direction in such position that when the magazine is turned downward they will receive and support it. As the magazine is inserted or withdrawn the trunnions at its forward end will ride upon these rails or plates, as indicated in dotted lines. As the magazine is pushed into the machine they serve to guide the trunnions

to their seats in the main frame and also to sustain the weight of the magazine, so that when in its lowered position it may be easily inserted or removed.

After the forward end of the magazine has been carried home over the guides to its seat in the main frame the operator may easily swing the rear end upward to its operative position and secure it by the supports b^2, after which the throat or entrance I is swung down into position.

In order to permit the upward and downward motion of the magazine as described, the main frame must be constructed in such manner as to leave an open or unobstructed space beneath the magazine and between it and the temporary supports J. This is best accomplished in the manner shown by extending from the main frame an arm a upward on one side of the magazine and thence horizontally over and across the magazine and downward at its opposite side. This overbanging or overreaching arm serves also as a support for the distributing mechanism and the throat.

The essence of the invention lies in constructing and arranging the frame and the magazine so that the latter may be released at will and turned downward from its operative position and in combining therewith temporary guides or supports for the lowered magazine and a joint or connection of any suitable character at the forward end of the magazine to determine its position and to admit of its being swung vertically.

Having described my invention, what I claim is—

1. In a linotype-machine, a main frame, a magazine having one end directly and separably jointed to the frame that it may be disconnected at will, and means for sustaining the free end of the magazine in operative position, said means adapted to permit the release of the magazine at will.

2. In a linotype-machine, the main frame, an inclined removable magazine having its lower end connected with the main frame by a separable joint, means to sustain and release the upper end of the magazine, and means to sustain and guide the magazine during its insertion and removal.

3. In a linotype-machine, the main frame, with escapement mechanism, and the magazine-guide fixed thereon, in combination with the removable magazine adapted to slide inward on the guide and thereafter swing upward to its operative position, and means to sustain the magazine in said position.

4. In a linotype-machine and in combination with a removable magazine, the main frame having guides to sustain the ingoing magazine, said parts constructed and arranged to permit the magazine to be turned upward from the entering position to the operative position.

5. In a linotype-machine, the main frame provided with seat a', overhanging arm a, and guide J, in combination with the magazine adapted to move on the guides to and from the seat, and means on the frame to engage and sustain the rear end of the magazine.

In testimony whereof I hereunto set my hand, this 11th day of March, 1905, in the presence of two attesting witnesses.

PHILIP T. DODGE.

Witnesses:
JOHN F. GEORGE,
K. L. BRENNAN.