

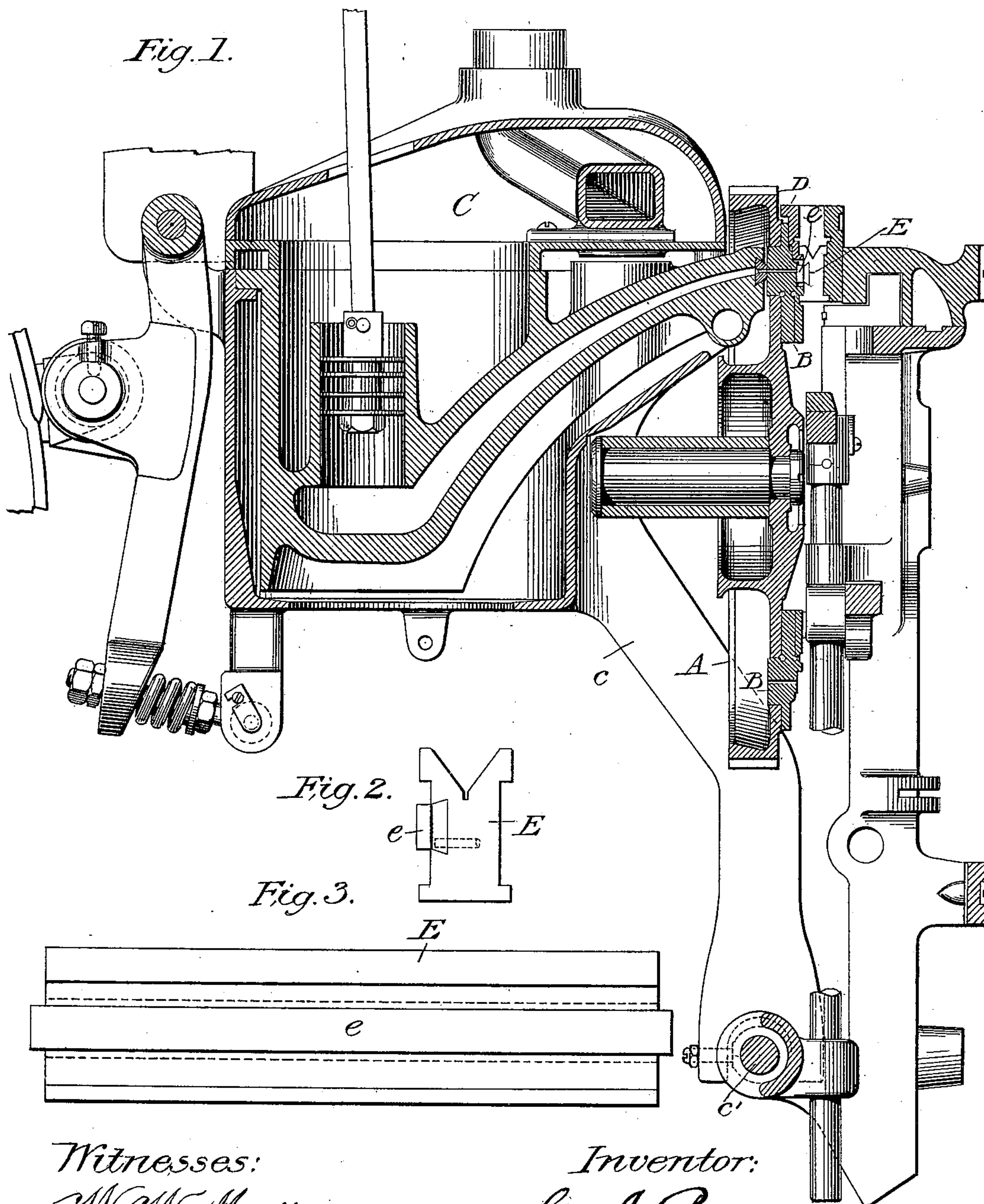
No. 652,881.

Patented July 3, 1900.

G. A. BATES.
LINOTYPE MACHINE.

(Application filed Apr. 11, 1900.)

(No Model.)



Witnesses:
W. W. Mortimer.
J. J. Elmore.

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Att.

UNITED STATES PATENT OFFICE.

GEORGE A. BATES, OF NEW YORK, N. Y., ASSIGNOR TO THE MERGENTHALER
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LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,881, dated July 3, 1900.

Application filed April 11, 1900. Serial No. 12,467. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. BATES, of New York, (Brooklyn,) county of Kings, and State of New York, have invented a new and
5 useful Improvement in Linotype-Machines, of which the following is a specification.

Linotype-machines now in general use are adapted to produce linotypes or printing-slugs of the same height as ordinary printers' type,
10 so that the slugs and the type may be used jointly in the form. In making up forms for advertising purposes, for tabular matter, and for many other classes of work containing extensive blanks it is necessary to
15 use leads, slugs, or filling-pieces having blank upper edges and of materially less width than the linotypes in order that there may be no danger of their receiving the ink and transferring it to the paper. The object of
20 the present invention is to adapt an ordinary linotype-machine to produce these low slugs, which are now purchased in the market and which being rapidly mutilated and destroyed are a source of much expense to the printer.

To this end the invention consists, essentially, in substituting for the ordinary mold adapted to cast type-high slugs a mold reduced in height or length from front to rear, whereby it is adapted to give form to the low
30 slugs, and in combining with this mold a filling-piece adapted to fit against its face and close its forward side, this filling-piece being preferably adapted to fit within the first elevator by which the matrix-line is sustained
35 when the machine is operated in the ordinary manner.

Referring to the accompanying drawings, Figure 1 is a vertical section through the casting mechanism of a machine having my improvement incorporated therein, the parts being in operative position. Fig. 2 is an end
40 view of the filling-piece, and Fig. 3 a face view of the same.

Referring to the drawings, A represents an
45 ordinary vertical mold-carrying wheel, having fixed therein one or more slotted molds B, as usual.

C represents the ordinary melting-pot, carried by supporting-legs *c*, sustained at their
50 lower ends by the horizontal shaft *c'*, allowing the pot to swing against and away from

the back of the mold, which is filled at suitable intervals with molten metal, delivered from the mouth of the pot by means of the usual pump therein.

D represents the first elevator, employed ordinarily for the purpose of sustaining the line of matrices in front of the mold.

In carrying my invention into effect I construct the mold in the usual manner, except
60 that it is reduced in thickness from front to rear, so that the slug cast therein will be of less height than the ordinary linotype-slugs. During the casting of these low slugs it is obvious that the front of the mold must be
65 closed to prevent the escape of the molten metal. This result is secured by the employment of the filling-block E, (shown in Figs. 2 and 3,) adapted to be inserted into the elevator D in the same manner that a line of matrices is ordinarily inserted. The filling-block
70 has the same general outline as a matrix, but is of greater thickness from front to rear, its rear face having a longitudinal projection *e*, adapted to fit tightly against the face of the
75 mold. It will be understood that this projection takes the place of that portion of the mold which was cut away at the front to reduce the height of the slug.

In the drawings I have shown the filling-piece as constructed with a dovetail groove,
80 into which the projecting bar *e* is driven; but it is understood that it may be constructed in one or more pieces and in any form which will adapt it to close the face of the mold.

The machine, with its low mold and filling-piece, operates, so far as the casting is concerned, in the same manner as when producing linotypes—that is to say, the mold is advanced against and closed by the filling-
90 piece, the pot-mouth closed against the rear face of the mold, and the pump actuated to fill the mold with molten metal, which solidifies in the form of a low slug. The parts then separate, the mold-wheel makes a partial revolution, and the slug is ejected into the receiving-galley of the machine in the same manner that linotypes are delivered to the galley.

The commercial linotype-machines are generally provided with two adjustable molds,
100 commonly set for slugs of different sizes. It

will be observed that if one of these molds is replaced, as shown in the drawings, by the low mold, the latter may be permitted to remain permanently in the machine, and thus
5 the machine may be adjusted in an instant by the removal or insertion of the filling-piece to produce linotypes or low slugs, as demanded.

In the drawings I have represented only such parts of the machine as are necessary to
10 an understanding of my invention. The remaining parts may be constructed and arranged in any ordinary or suitable manner.

While I have shown my device as applied to the ordinary Mergenthaler machine of com-
15 merce, it is to be understood that the invention is applicable to any and all machines in which slugs are cast in a mold against assembled matrices.

Having described my invention, what I
20 claim is—

1. In a linotype-machine constructed to produce type-high slugs, a low mold in combination with a filling-piece, adapted to co-operate therewith substantially as described.

2. A linotype-machine having a matrix-
support D, adapted to sustain matrices in proper relation to a type-high mold, in combination with a low mold B and a filling-piece E, adapted to close the front of said mold. 25

3. In a linotype-machine, a mold below type height in combination with a filling-piece adapted to enter the first elevator and to close the face of the mold, substantially as described. 30

4. The attachment for a linotype-machine, comprising a mold of less than type height and a filling-piece adapted to coöperate with and close said mold, substantially as described and shown. 35

In testimony whereof I hereunto set my hand this 21st day of March, 1900, in the presence of two attesting witnesses. 40

GEORGE A. BATES.

Witnesses:

C. E. GRANT,
F. W. DAVIS.