

No. 757,099.

PATENTED APR. 12, 1904.

P. T. DODGE.
LINOTYPE MACHINE.

APPLICATION FILED DEC. 16, 1903.

NO MODEL.

Fig. 1.

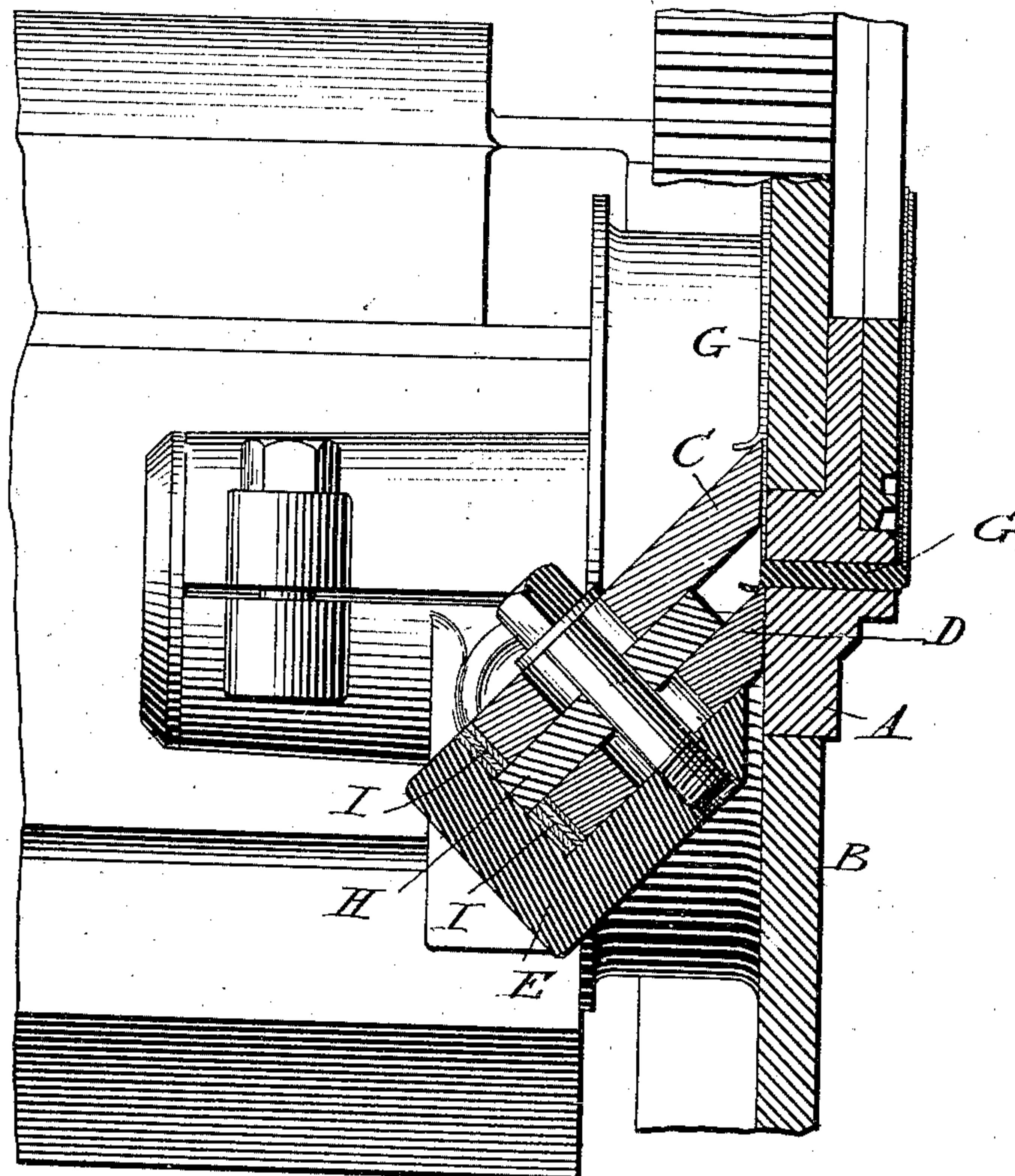
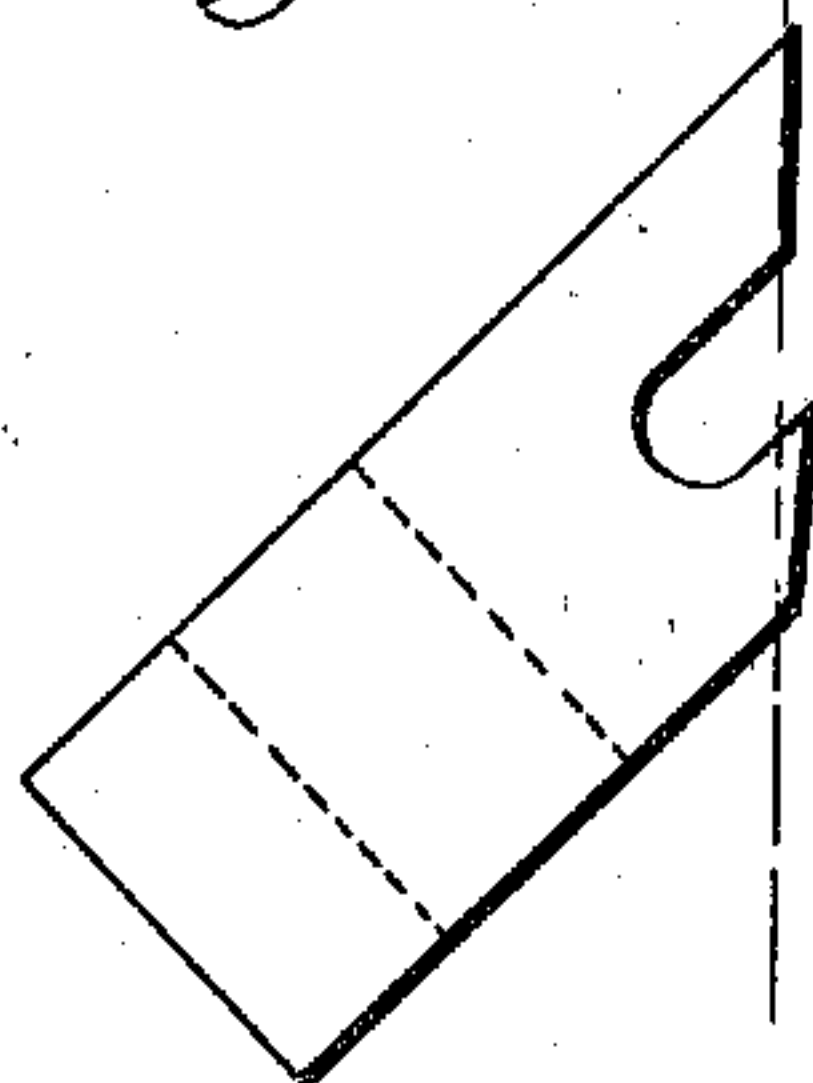


Fig. 2.



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

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 757,099, dated April 12, 1904.

Application filed December 16, 1903. Serial No. 185,368. (No model.)

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 improvements in the Mergenthaler linotype and kindred machines wherein linotypes or printing-bars of type-metal are cast in a slotted mold against a line of matrices at its front. In this class of machines the base of the slug is trimmed flush with the back of the mold while it is contained therein, this for the purpose of rendering the slug exactly "type high." The metal is delivered into the mold from the mouth of a melting-pot, which closes temporarily against its rear face, and when the metal and the pot are separated the base of the slug is commonly irregular and frequently of such height that a large amount of metal must be removed. In practice it is found that when it is attempted to remove this metal by a single shaving-knife, especially if the metal is of such a hard character as is used in printing, the knife is subjected to severe and dangerous strain and frequently the slug is loosened and displaced in the mold, so that it is trimmed to an improper height.

The object of my invention is to overcome this difficulty; and to this end it consists in the combination, with the mold, of two trimming-knives or a knife having two trimming edges, the first adapted to remove the greater portion of the metal and bring the slug to approximately the required height and the second acting thereafter to remove the remaining metal and by a smooth finishing cut bring the slug to the final dimensions required.

In the accompanying drawings, Figure 1 represents a vertical section through the mold and trimming-knives of a Mergenthaler machine constructed in accordance with my invention. Fig. 2 represents a double-edged knife as constructed in a single piece.

A represents the slotted mold in which the linotype is cast rigidly secured in an intermittingly-rotating wheel B, by which it is pre-

sented first in position to cooperate with the matrices and the pot in order that the slug may be cast therein and thereafter rotated to carry it past the trimming-knives and finally to the point at which the slug is ejected. These parts will all be of the ordinary construction and arrangement.

C and D represent the two knives for trimming the base of the slug, supported in the main frame E and secured by a plate F or otherwise supported and secured. The upper knife C is arranged with its cutting edge a slight distance away from the rear face of the passing mold A, in which the slug G is contained, while the lower knife D is arranged so that its edge bears against and passes closely over the rear face of the mold. The face of the mold serves to guide the knife and control its action, causing it to cut the slug in a straight line and limiting the amount of metal removed and determining the height of the slug. When, therefore, the advancing mold carries the rear edge of the slug past the knife C, it acts to cut away or remove the greater portion of the protruding metal, after which the knife D in turn acts to remove the remaining metal and trim the base of the slug flush with the rear face of the mold.

It is manifest that the form of the knives and the devices for supporting, securing, and adjusting them may be changed at will, provided that there is no departure from the mode of action herein described.

As shown in the drawings, the knives are slotted longitudinally to permit of their independent adjustment to and from the mold and are separated by a plate or washer H in order to leave an opening through which the chips produced by the lower knife may readily escape. The knives may be supported against end motion and adjusted by means of liner-plates I, inserted behind them, as shown in the drawings, or in any other suitable manner.

The knife shown in Fig. 2 is made in a single piece with two cutting edges, one in advance of the other, and with an intermediate space or opening through which the chips may escape laterally.

It will be observed that under my organization of parts I am enabled by the first knife to remove from the base of the slug the greater part of the metal protruding beyond the mold 5 without subjecting the slug to pressure against its base or to such strain as would be liable to disturb its position in the mold and that thereafter by the second blade, arranged to rest against and to be controlled by the rear face of 10 the mold, I am enabled to remove the remaining excess of metal and to dress the base of the slug flush with the back of the mold. In short, the employment of the two knives acting successively is of peculiar and special advantage in the linotype-machine in that I am 15 enabled to remove the excess of metal from the slug without disturbing the latter in the mold and also to give to the base of the slug a smoothness and accuracy of finish not obtainable by a single knife required to serve the 20 double purpose of removing the surplus metal

and making the finishing cut or cut which determines the height.

Having thus described my invention, what I claim is— 25

In a linotype-machine and in combination with a mold wherein the slug or linotype is cast, two successively-acting knives, the first arranged to remove the principal portion of the protruding metal, and the second acting 30 directly against the back of the mold, whereby it is adapted to give a smooth finishing cut and to render the slug of definite and uniform height.

In testimony whereof I hereunto set my hand, this 3d day of December, 1903, in the presence of two attesting witnesses. 35

PHILIP T. DODGE.

Witnesses:

JOHN F. GEORGE,
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