

J. McNAMARA.
SLUG FOR LINE CASTING MACHINES.
APPLICATION FILED OCT. 30, 1908.

1,045,162.

Patented Nov. 26, 1912.

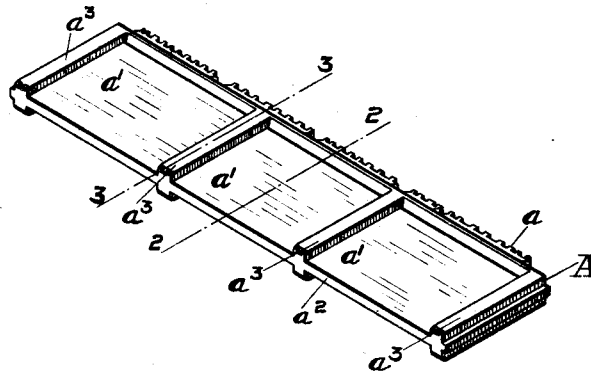


Fig. 1.

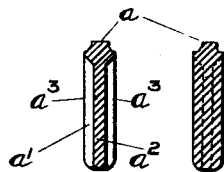


Fig. 2. Fig. 3.

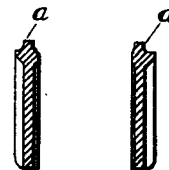


Fig. 4. Fig. 5.



Fig. 6.

WITNESSES:

George D. Hartley
F. M. Eggleston

INVENTOR

James McNamara
BY *Philip T. Davis*
ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES McNAMARA, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR TO MERGENTHALER
LINOTYPE COMPANY, A CORPORATION OF NEW YORK.

SLUG FOR LINE-CASTING MACHINES.

1,045,162.

Specification of Letters Patent.

Patented Nov. 26, 1912.

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To all whom it may concern:

Be it known that I, JAMES McNAMARA, a citizen of the United States, residing in the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented a new and useful Improvement in Slugs for Line-Casting Machines, of which the following is a specification.

My invention relates to printing slugs, having on one edge and integral therewith the characters to print an entire line, such slugs being generally known under the trade-mark "Linotype." It is the practice to assemble these slugs side by side to produce a printing "form." In order to secure the proper arrangement or "display" of the matter, it is frequently necessary to change the head space or foot space of a given line on the slug, or in other words, to change the width of the blank surface above or below the characters on the slug, to increase or decrease the white space in the print between one line and another. As linotype machines are commonly constructed, this change cannot be practically or readily effected in the production of the slugs, because the mold has on one side a fixed casting position and the matrices are presented always in the same relation to the mold. To overcome these difficulties, I form the slug with vertical ribs and intermediate recesses in both sides, and also form it with a continuous upper surface of maximum width bearing the characters and overhanging the ribs and recesses on both sides. In this manner I produce a slug which is light, in which the broad type bearing surface is given ample support, and from which either side may be easily shaved away in order to bring the type characters to the required distance from either vertical side and from the next line of characters in the form. It follows that slugs constructed on my plan may be readily modified so that any one or more of them will have the required head space or foot space, so that when the slugs are assembled side by side the characters will stand the required distance apart, regardless of the original thickness of the slug.

The mechanism for producing the slugs and trimming them may be of any suitable character, but special mechanism for the purpose will form the subject of a separate application.

In the drawings,—Figure 1 is a perspec-

tive view of my improved slug. Figs. 2 and 3 are cross sections of the same on the correspondingly numbered lines of Fig. 1. Figs. 4 and 5 are sectional views illustrating the manner in which the slug may be trimmed on opposite sides in order to change the relation of these sides to the type characters formed on the upper edge. Fig. 6 is a view illustrating the manner in which the slug may be reduced to establish the proper location of eccentric or one-sided characters with reference to the sides of the slug.

Referring to the drawings, A represents the body of the slug, commonly type high, having on the upper edge, properly justified, the type characters *a*. The opposite sides of the slug are formed with two, three or more cavities, *a*¹, for reducing the thickness of the body of the slug, as shown at *a*². On each side, between the cavities, are formed vertical ribs, *a*³, two, three or more in number, extending from the base upward to near the top or upper edge. The upper edge bearing the type characters is made of maximum width, and on both sides, overhangs the ribs *a*³ and the cavities *a*¹. These ribs assist in supporting the upper type bearing edge, and their vertical side faces stand flush with the side faces of the upper edge, or practically so, in order that the characters assembled side by side may be locked firmly together in a solid "form."

The upper, overhanging edge of the slug is made of a width sufficient to receive the largest type characters required, and in practice is frequently much larger, owing to the fact that the machine cannot always be adjusted to produce these type characters in the required position on the upper face.

It will frequently happen, as illustrated in Fig. 6, that the type characters will need to appear much nearer one side or edge of the slug than the other. In such case the slug originally cast of full width is reduced from the opposite side, as indicated by the dotted line in said figure. When thus modified it will have the proper thickness and will have the characters in proper relation to the two sides. Fig. 4 illustrates a slug which has been thus reduced from one side to reduce the foot space, and Fig. 5 illustrates a slug reduced from the opposite side to decrease the head space without affecting the foot space.

In some special cases, where small characters are cast on a large slug, it is advisable to reduce the slug from both sides. This is particularly advantageous, because
5 in commercial linotype machines matrices for characters of any size may be inserted in the machine at will and reproduced on a large slug, which can then be reduced to the suitable thickness without changing the
10 mold in the machine. It is practically impossible to reduce speedily or accurately a solid or unrecessed slug. The formation of cavities on both sides has the effect not only of reducing the weight, but of reducing the
15 area of the surface which must be cut away to reduce the thickness. When slugs are formed as herein shown, all with a top face of maximum width adapted to carry type characters of the largest size in common use
20 and with recesses on both sides, it is possible to utilize the mold which may happen to be in the machine in connection with matrices which produce characters above or below the required positions, and thereafter trim the
25 slug on one or both sides in order to reduce it to the required thickness and at the same

time bring the characters into the required relation to its two vertical faces. This is of great advantage, since it avoids the necessity of changing or adjusting the mold in
30 the machine when special lines are to be cast, and also because it renders available for special purposes matrices which could not otherwise be used except after changing the mold. 35

What I claim as my invention is:

A printing slug formed with a longitudinal web and recesses at both sides thereof and having a printing edge provided with
40 type located substantially in the plane of the longitudinal web and also projecting portions which overhang the recesses on both sides of the web, so that it may be reduced or trimmed at either side.

In testimony whereof I hereunto set my
45 hand this 22d day of October, 1908, in the presence of two attesting witnesses.

JAMES McNAMARA.

Witnesses:

WESLEY BARRETT,
WM. J. ROGERS.