

H. DEGENER.
 MATRIX SETTING AND TYPE LINE CASTING MACHINE.
 APPLICATION FILED SEPT. 12, 1910.

1,011,590.

Patented Dec. 12, 1911.

Fig. 1.

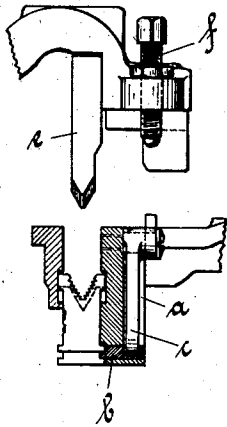


Fig. 2.

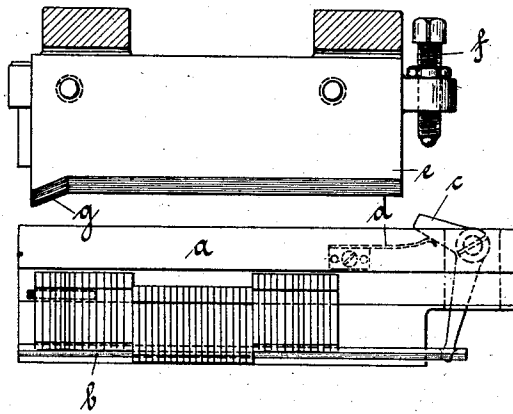
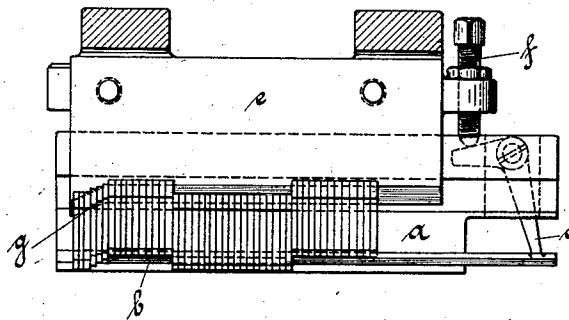


Fig. 3.



Witnesses:
[Signature]
[Signature]

Inventor:
[Signature]

UNITED STATES PATENT OFFICE.

HEINRICH DEGENER, OF BERLIN, GERMANY, ASSIGNOR TO MERGENTHALER LINOTYPE COMPANY, A CORPORATION OF NEW YORK.

MATRIX-SETTING AND TYPE-LINE-CASTING MACHINE.

1,011,590.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed September 12, 1910. Serial No. 581,534.

To all whom it may concern:

Be it known that I, HEINRICH DEGENER, a resident of 26 Hollmannstrasse, Berlin, German Empire, manager, having invented certain new and useful Improvements in Matrix-Setting and Type-Line-Casting Machines, do hereby declare that the following is an exact specification of the same.

In matrix setting and type line casting machines of the Mergenthaler system, for the purpose of producing mixed copy the matrices provided with several characters of different kinds, are caught up at different levels. During the casting, the matrices are then standing with their bottom edge or foot on bars which, after the casting is completed, are withdrawn, in order to bring the matrices with their bottom edge or foot into one plane for the purpose of distribution. The devices hitherto known in which the bars are withdrawn from the line in the direction toward the compositor, have, however, the disadvantage that a sufficient supporting and guiding is impossible, and consequently the matrices are not adjusted in the line in a proper manner. Moreover, in the constructions hitherto known, more particularly when the levers withdrawing the bars are not absolutely straight, it can easily happen that the bars are withdrawn in an oblique manner, so that the matrices are only partly released. According to this invention, the disadvantage in question is remedied by a longitudinal movement being effected instead of the transverse movement of the bar, so that a portion of the matrices are released, and the remaining ones, still standing on the bar, are brought into their bottom position during the further movement of the line toward the distributor.

The construction of the device according to this invention is illustrated by way of example in the accompanying drawing in which—

Figure 1 is a section through the casting carriage shortly before it has reached its highest position. Fig. 2 shows the same parts seen from the front, and Fig. 3 shows the casting carriage in its highest position after the release of the bar.

The casting carriage *a* which is of the well known construction, carries a bar *b* adjustable from the right to the left, on which are standing the bottom lugs of the matrices collected in the upper position. As this bar

need not make any transverse movement in the direction toward the matrices, it can be well supported. Further, in the casting carriage *a* is mounted a bell crank lever *c* engaging with one arm with the bar *b*, while the other arm is free and always pressed upward by a spring *d*, so that under the influence of the said spring, the bar is moved to the left. On the frame of the machine is arranged the well known bar or rail *e* intended to withdraw the spacers, and further, there is mounted a stop screw *f* against which during the ascent of the casting carriage the free branch of the bell crank lever *c* strikes, so that in that way the bar *b* is pulled a little to the right (Fig. 3). In that way, the foremost matrices nearest to the distributor, are rendered free, and can take up the position required for distributing. The bar *e* preferably can be provided with a beveled portion *g* acting on the upper edge of the matrices and positively pressing the same down into the position if they should fail to fall into the position by gravity. The bar or rail *e* can act both on the inner portion of the matrices provided with teeth, or if the said portion is to be protected, it could act by means of suitable projections on the upper edge of the upper lugs. Of course the bar or rail *e* could also be made straight, and at a suitable point of the frame could be arranged a curved guide acting on another portion of the matrices, for the purpose of pulling the matrices into the bottom position.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a typographical composing machine, in combination with plural letter matrices, the casting carriage provided with means for sustaining the matrices in elevated position, the said means being longitudinally movable with respect to the carriage to permit the leveling of the matrices.

2. In a typographical composing machine, in combination with plural letter matrices, the casting carriage provided with means for sustaining the matrices in elevated position, the said means being movable to a limited extent longitudinally of the carriage to permit the leveling of the matrices.

3. In a typographical composing ma-

chine, in combination with plural letter matrices, the casting carriage provided with means for sustaining the matrices in elevated position, the said means being movable to a limited extent longitudinally of the carriage, together with additional means to effect the leveling of the matrices when the said sustaining means are partially withdrawn.

10 4. In a typographical composing machine, in combination with plural letter mat-

rices, the casting carriage *a* provided with a longitudinally movable bar *b*, means for moving the said bar longitudinally, and the rail *e* formed with the inclined portion *g*. 15

In witness whereof I have hereunder set my hand in presence of two witnesses.

HEINRICH DEGENER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
