(No Model.) 3 Sheets—Sheet 1.

W. S. MARDER.

TYPE CASTING MACHINE.

No. 544,317. Patented Aug. 13, 1895.

FIG. 1.

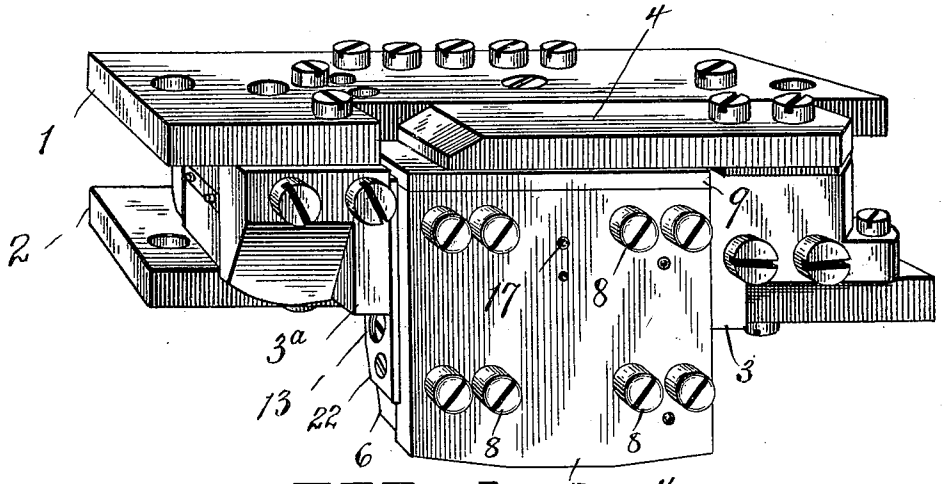


FIG. 2.

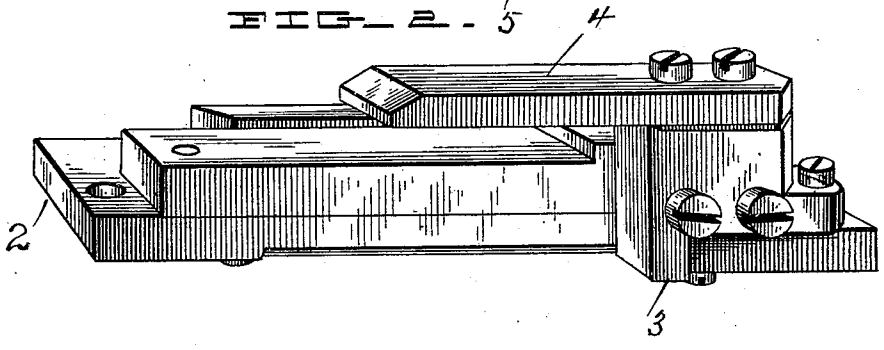
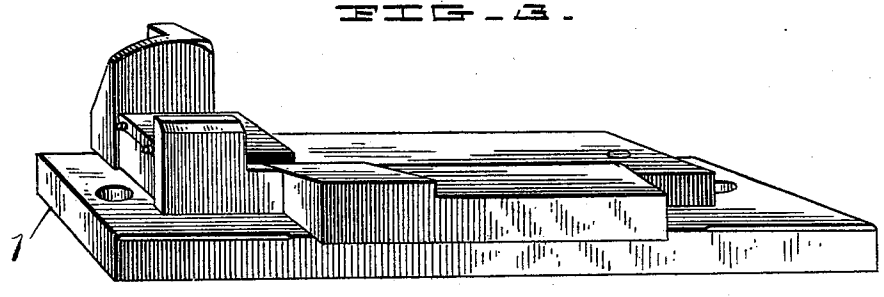


FIG. 3.



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(No Model.) 3 Sheets—Sheet 2.

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TYPE CASTING MACHINE.

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FIG. 4.

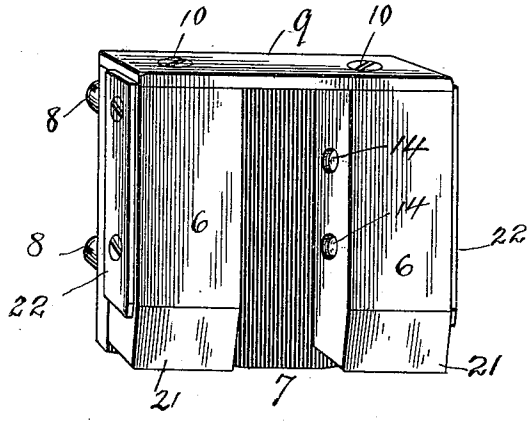


FIG. 5.

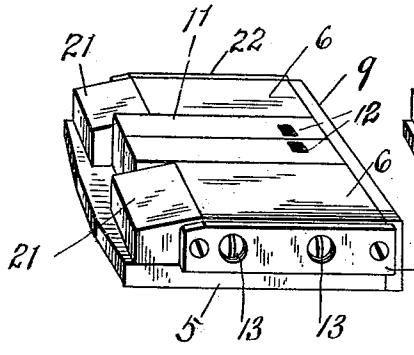


FIG. 6.

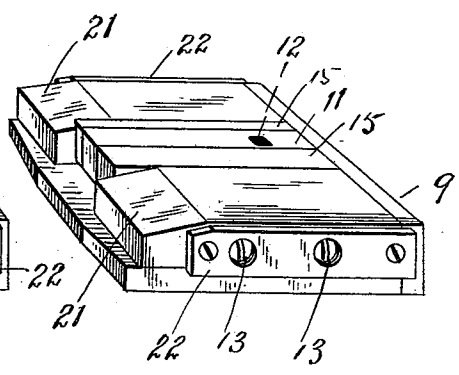
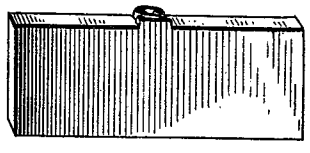


FIG. 7.



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(No Model.) 3 Sheets—Sheet 3.

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TYPE CASTING MACHINE.

No. 544,317. Patented Aug. 13, 1895.

Fig. 8.

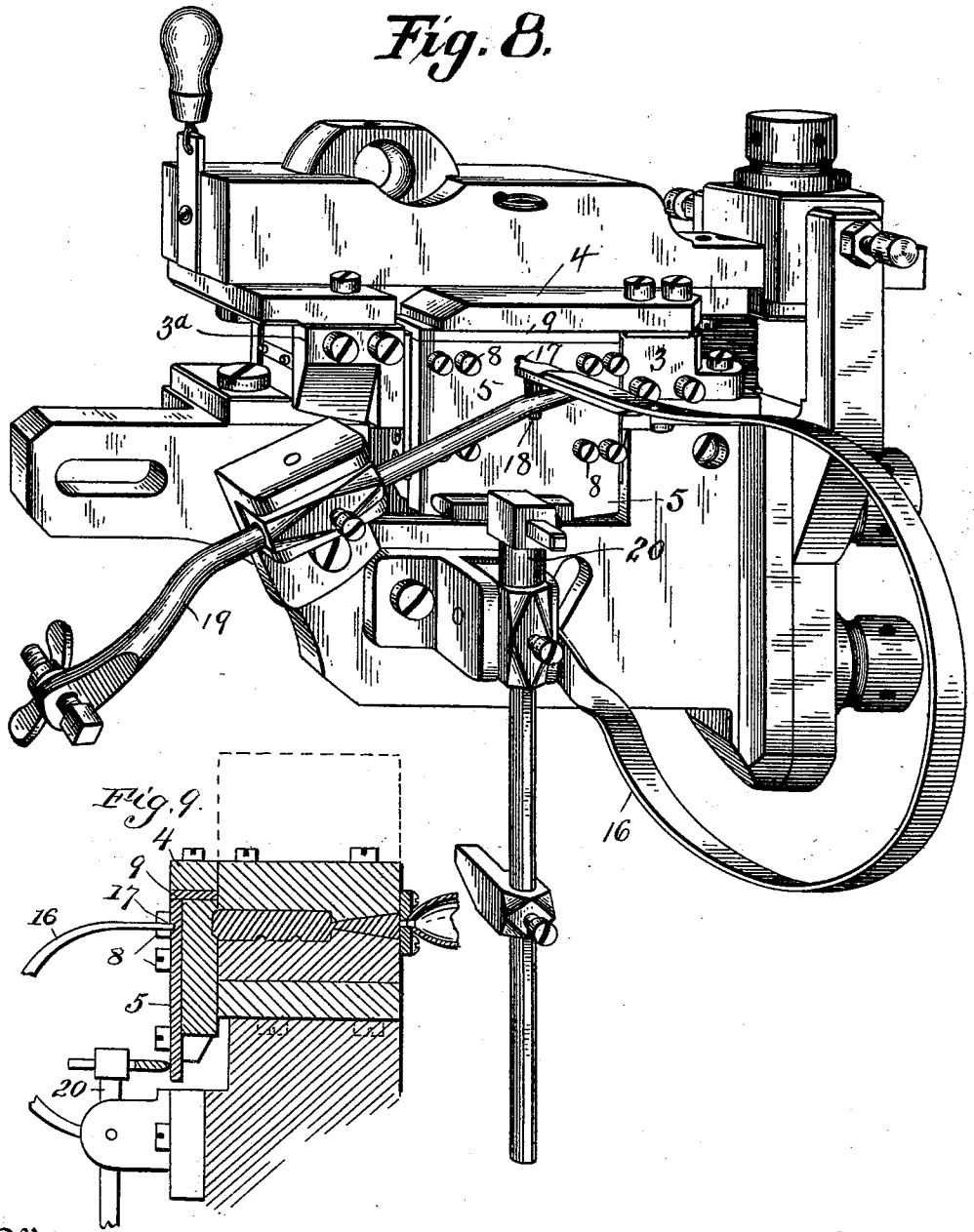

Fig. 9.

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UNITED STATES PATENT OFFICE.

WALTER S. MARDER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE AMERICAN TYPE FOUNDERS' COMPANY, OF NEW JERSEY.

TYPE-CASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 544,317, dated August 13, 1895.

Application filed August 31, 1894. Serial No. 521,815. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. MARDER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Type-Casting Machines, of which the following is a full, clear, and exact specification.

My invention relates more particularly to the mold of a type-casting machine, and the improvements have especial reference to means for casting what is known in the art as "compositors' slugs."

The primary object of my invention is to provide means whereby these slugs may be cast at one operation, as readily and accurately as the ordinary type are now cast, from any desired number of matrices.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter disclosed are attained, all as fully explained with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a perspective view of the two mold-sections, showing my improvements in connection therewith. Figs. 2 and 3 are, respectively, the lower and upper sections of the mold shown separated. Fig. 4 is an inner or face view of my improved box for holding the matrices, as hereinafter described, shown in perspective. Fig. 5 is an end perspective view of said box, showing two matrices therein. Fig. 6 is a similar view showing one matrix and two blanks secured in the box. Fig. 7 is a perspective view of the slugs cast by my improvements. Fig. 8 is a perspective view of a mold-block and mold, showing my improvements in connection therewith and in position for casting; and Fig. 9 is a detail vertical section taken transversely of the mold, showing the mold filled.

Like signs of reference indicate like parts throughout the several views.

In carrying out my invention I employ a box for the reception of the matrix or matrices, and which box holds such matrix or matrices in the mold or in contact with the mold during the casting operation, the box being provided with means for clamping the matrices in place, whereby any number of matrices may be cast from at one time. This box is equal in width to the space between the register-blocks of the mold—that is to say, it is equal in width to the length of the slug to be cast; and the face of the box on either side of this cavity is dressed and of extended area, so as to fit against the faces of the mold and form the upper end of the body portion of the slug on either side of the character.

Referring to the drawings, 1 and 2 represent, respectively, the upper and lower sections of the mold, the former of which sections is provided with the usual register-block 3 and stool-piece 4, while the other is provided with a similar register-block 3^a. The mold thus constituted may be of the usual or any suitable form, with the exception that the stool-piece 4 is considerably elongated as a consequence of employing the wide box for the matrices which the stool-piece holds in place, as hereinafter described.

My improved box for the reception of the matrix or matrices is more clearly shown in Figs. 4 to 6, inclusive, and it preferably consists of a back plate 5 and two side pieces or blocks 6, which are rigidly secured to the inner face of the plate 5 with a space 7 between them by means of screws 8 or other suitable devices, the upper ends of the blocks 6 being connected together by an end piece 9, secured thereto by means of screws 10, and thus constituting with the pieces 5 6 the box for the reception of the matrices 11, which are placed between the blocks 6, in the manner shown in Fig. 5, and securely held in position against the end plate 9, which constitutes a gage for determining the location of the characters 12 of the matrices. The matrices may be clamped in position by any suitable means, but I preferably provide one of the blocks 6 in the side, as shown in Figs. 5 and 6, with a pair of set-screws 13, whose heads are countersunk, so as to be out of the way of the register-blocks 3, while their inner ends are adapted to protrude through the bores 14 in the block 6 and impinge the adjacent matrix.

When it is desired to cast a slug from a sin-

gle matrix of less width than the space 7 between the blocks 6 the surplus space may be filled by means of blanks 15, as shown in Fig. 6.

The faces of the blocks 6 are dressed, and the sum of their width in cross-section added to the width of the space 7 is equal to the length of the body of the slug shown in Fig. 7.

In inserting my improved matrix-box in the machine the upper section 1 of the mold is elevated in the usual manner, and the box is then inserted between the lower section and the end of the usual matrix-spring 16, so as to rest against the register-block 3^a. The upper section of the mold is then lowered and the stool 4 rested upon the upper edge of the box, while the other register-block 3 comes against the side edge in the manner shown in Fig. 1, the faces of the blocks 6 resting snugly against the faces of the mold-sections, whereby the interior of the mold comprised by the two mold-sections, the matrix, and the blocks 6 will consist of an elongated cavity having the intaglio 12 at its mid-length or at any other desired point in its length. The back of the plate 5 of the box is provided with a socket or cavity 17 for the reception of the pointed end of the matrix-spring 16, which latter is provided with the usual lug or finger 18, against which bears the end of the matrix-spring lever 19 for holding the matrix-box firmly in position. At the conclusion of the casting operation the upper end of the matrix-box is thrown outward after the manner of manipulating an ordinary matrix by means of the matrix-lever 20, which bears against the lower edge of the plate 5, as shown in Fig. 8, and to the end that the lower edge of the matrix-box may be carried farther inward the lower ends of the blocks 6 are beveled at 21, as shown in Figs. 5 and 6.

The outer edges of the blocks 6 are provided with plates 22, secured thereto in any suitable way, which come against the register-blocks 3 3^a and hold the edges of the blocks 6 away from the latter, the edges of the plates 22 being arranged slightly below the faces of the blocks 6, so as to avoid contact with the faces of the mold-sections.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a type casting machine, the combination with a mold, of a box for the reception of the matrix, said box being independent of the matrix and having dressed faces adapted to fit against the face of the mold, and means for pressing said box against the mold, substantially as set forth.

2. In a type casting machine, the combination with mold sections having register blocks and a stool-piece, of a box for receiving and holding a matrix, adapted to fit between said blocks and stool and having the broadened faces adapted to fit against the mold sections, and means for holding said box in place, substantially as set forth.

3. In a type casting machine, the combination with the mold sections having register blocks and a stool-piece, of a box for receiving and holding a matrix, adapted to fit between said blocks and stool piece and having broadened faces adapted to fit against the mold sections, set screws arranged in the side of said box and adapted to impinge the matrix, and means for holding said box in place, substantially as set forth.

4. In a type casting machine, the combination with a mold having register blocks, of a box for receiving and holding a matrix, adapted to fit between said register blocks, set screws countersunk in the side of said box and adapted to impinge said matrix, and means for holding said box in place, substantially as set forth.

5. In a type casting machine the combination with a mold, of a box for receiving and holding a matrix, consisting of a plate, two blocks secured to said plate with a space between them and having broad dressed outer surfaces adapted to fit against the mold, the gage bar 9 secured across the ends of said blocks, set screws passing through one of said blocks and adapted to impinge the matrix, and means for holding said matrix box in place, substantially as set forth.

6. As a new and useful article of manufacture, a matrix box provided with the blocks 6 secured together and having their ends beveled, and said box being provided with a space between said blocks 6, for receiving and removably holding a matrix, substantially as set forth.

7. In a type casting machine, the combination with the mold having register blocks, of a matrix box having the blocks 6 provided with dressed surfaces adapted to fit against the mold, and the plates 22 secured to the blocks 6 and adapted to come against the said register blocks, substantially as set forth.

8. In a type casting machine the combination with the mold block and mold provided with a matrix spring, of a box for receiving and removably holding the matrix, adapted to fit against the mold and being provided in its outer side with a socket for the reception of the end of the said matrix spring, substantially as set forth.

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