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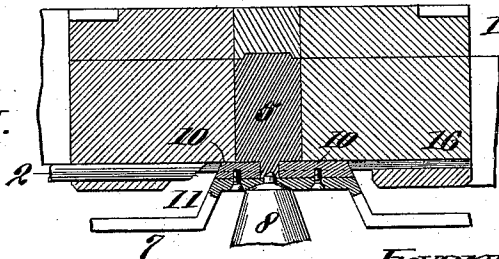
TYPE MOLD.

Patented Mar. 9, 1897.

Fig. II,

Fig. II, showing a perspective view of the mechanism. It includes the handle 7, the lever 11, the spring 9, and the contact 10. The lever 11 is shown in a position where it is about to engage the contact 10. The spring 9 is shown in a position where it is about to engage the contact 10. The contact 10 is shown in a position where it is about to engage the lever 11.

Fig. III.



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(No Model.)

2 Sheets—Sheet 2.

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TYPE MOLD.

No. 578,544.

Patented Mar. 9, 1897.

Fig. IV.

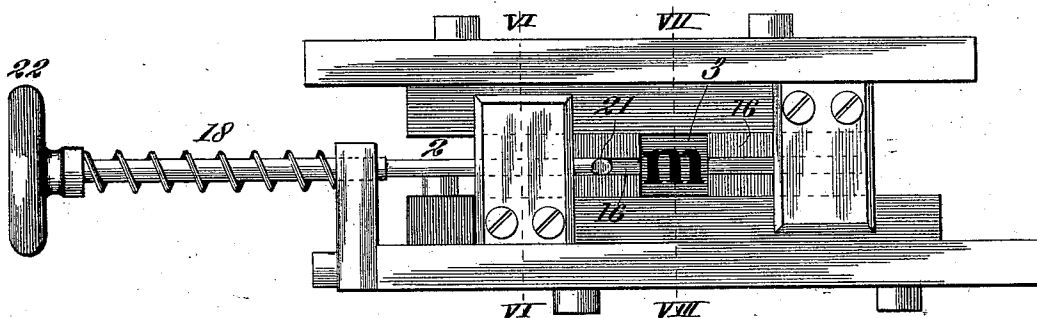


Fig. V.

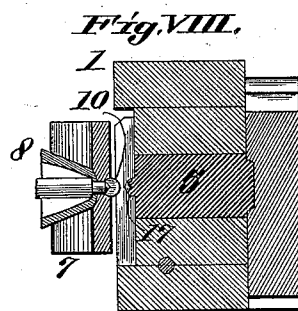
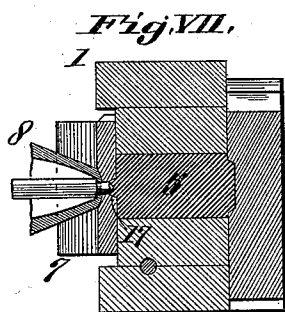
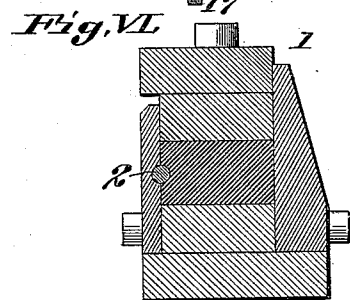
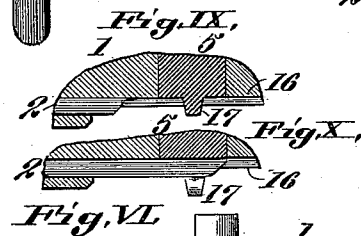
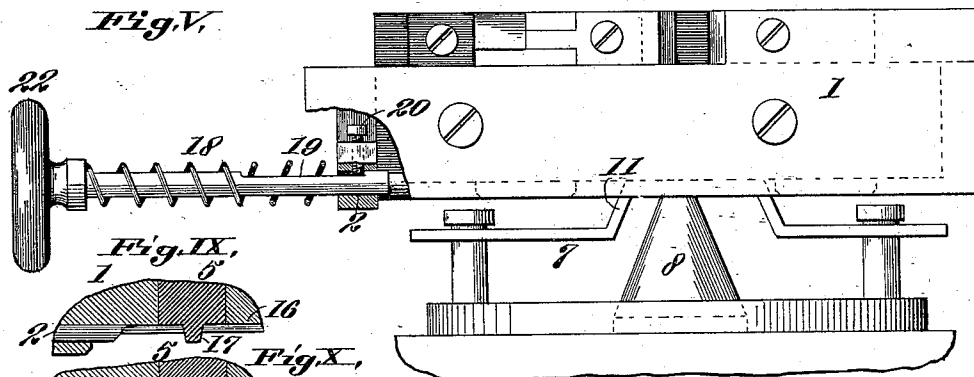


Fig. XIII.

Fig. XI.

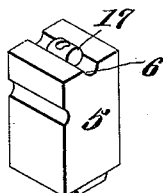
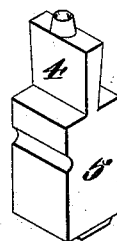
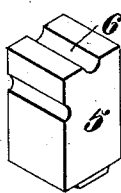


Fig. XII.



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UNITED STATES PATENT OFFICE.

WILLIAM F. CAPITAIN, LOUIS W. KLUTE, AND GEORGE F. WELLS, OF
ST. LOUIS, MISSOURI.

TYPE-MOLD.

SPECIFICATION forming part of Letters Patent No. 578,544, dated March 9, 1897.

Application filed October 8, 1896. Serial No. 608,234. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM F. CAPITAIN, LOUIS W. KLUTE, and GEORGE F. WELLS, citizens of the United States, residing at the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Type-Molds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The object of our invention is to construct a mold device for casting type whereby the type is formed without the usual jet produced by the mold-gate and whereby a groove is formed in the bottom of the type in the act of casting, thus dispensing with the necessity of breaking off the jet and forming the groove in the bottom of the type after the type comes from the mold.

Our invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of our improved mold. Fig. II is a perspective view of the nipple-plate. Fig. II^a is a perspective view of a modified form of nipple-plate. Fig. III is a detail section showing part of the mold and part of the plate and showing the jet portion of the nozzle of the melting-pot. Fig. IV is a back view of the mold. Fig. V is a top view of the mold, showing part of the melting-pot and showing the nipple-plate in position. Fig. VI is a transverse section taken on line VI VI, Fig. IV. Fig. VII is a similar view taken on line VII VIII, Fig. IV, with the nipple-plate in position. Fig. VIII is a section taken on line VII-VIII, Fig. IV, showing the mold slightly moved back from the nipple-plate. Figs. IX and X are detail views of the mold, illustrating the operation of the knife or cutter that removes the small projection formed on the bottom of the type in casting. Fig. XI is a perspective view of the type cast in our mold before the projection formed in casting has been removed. Fig. XII is a similar view after the projection has been removed. Fig. XIII is a perspective view of the type cast in an old mold and showing the jet which it has heretofore been necessary to remove before forming the groove in the bottom of the type.

Referring to the drawings, 1 represents a mold for casting type. This mold is made in the usual way and is of common construction, except that it is formed without a gate, and it is constructed to receive a rod 2, that forms a knife or cutter, as hereinafter explained. 55

These molds have heretofore been made with a gate through which the metal is introduced into the mold-cavity 3. This gate forms a jet 4 on the type 5, (see Fig. XIII,) and it has heretofore been necessary to take the type when it came from the mold and break off this jet, and then to form a groove 6 (see Fig. XII) in the bottom of the type. 65

Our invention enables us to cast the type without the jet portion 4 and to put the groove in the bottom of the type at the time the type is cast, thus dispensing with the necessity of having the type pass through two or more operations (to break off the jet and then to form the groove) after it comes from the mold before it is in condition for use. The type as it comes from the mold with our invention is ready for the printer. 75

7 represents a nipple-plate adapted to be hung on the melting-pot in front of the nozzle 8 of the pot, as shown in Fig. V. This plate is provided with a perforation 9, through which the metal passes from the nozzle of the pot into the mold. Heretofore a plate with such an opening has been used and suspended on the melting-pot and the type-metal passed through the perforation in the plate into the gate of the mold. In our invention the plate, however, is modified or changed by forming on its outer face a rib 10, that forms a groove 6 in the bottom of the type. This rib is divided, as shown in Fig. II, into two parts, thus leaving a sprue-space opposite the perforation 9 to permit the passage of the molten metal into the mold-cavity. 85

The central part of the plate 7 is formed with an offset portion 11, that, when the mold is moved up toward the pot to receive the molten metal, is received between the top 12 and bottom 13 of the mold and allows the face 14 of the plate to fit up against the back 15 of the mold, the outer ends of the rib 10 being received by a groove 16, formed in the back of the mold. (See Fig. III.) The position that the plate occupies with relation 100

to the mold when the latter is moved up to receive the molten metal is shown in Fig. III and also in Fig. VII. After the metal has been poured, the mold is moved in a direction
 5 away from the melting-pot, and consequently away from the plate 7, as the latter is supported by the former, and there will be found on the bottom of the type a slight projection 17, (see Fig. XI,) formed in the groove
 10 in the bottom of the type, and to remove this projection before the type leaves the mold we provide the cutting-rod 2 above referred to. The inner end of this rod fits in the groove 16 in the back of the mold, and the
 15 rod passes through a hole drilled in the mold, as seen in Fig. I. The rod is held in its outer position, as seen in Figs. I, IV, and V, by means of a spiral spring 19, and the rod is held from turning by having a non-circular
 20 portion 19, that receives the end of a set-screw 20. The inner end of the rod is tapered off to form a cutting edge 21. The diameter of the rod is such that it snugly fits in the groove 16, and when the mold has been slightly moved
 25 away from the melting-pot, so as to disengage the rib 10 on the nipple-plate from the groove 16, the outer end 22 of the cutter is struck, thus moving the inner end of the cutter from the position shown in Fig. IX to the position
 30 shown in Fig. X, thereby cutting off the projection 17. The spring returns the cutter to its normal position, and as the mold is moved farther away from the melting-pot the type drops out in a finished condition and minus
 35 the jet portion 4 heretofore formed on the type, and with the groove 6 in its bottom, so that the type as it comes from the mold is ready for use.

Our invention may in a measure be carried
 40 out without the rib on the nipple-plate, as shown in Fig. II^a, as with such an arrangement the type will be formed without the jet projection 4, and could be grooved by the cut-

ter 2 plowing a recess entirely across the heel of the type.

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We claim as our invention—

1. A type-mold formed with an open rear end and with a groove in its back, in combination with a nipple-plate formed with a perforation, and with a rib on the face thereof
 50 fitting said groove, and a cutter carried by said mold and working in the groove; substantially as described.

2. A type-mold formed with an open rear end and with a groove in its back, in combination with a nipple-plate formed with a central offset portion having a perforation, and with a rib on the face thereof fitting in said groove and a cutter carried by said mold and working in the groove; substantially as described.
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3. The combination of a mold formed with an open rear end and with a groove in its back, a nipple-plate and a cutter carried by the mold to cut a groove in the heel of the
 65 type; substantially as described.

4. The combination of a mold formed with an open rear end, a nipple-plate and a cutter carried by the mold to cut a groove in the heel of the type, substantially as described.
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5. The combination of a mold formed with an open rear end, a removable nipple-plate arranged to normally close said rear end, a cutter carried by the mold to cut a groove in the heel of the type, and means for automatically returning the cutter to its normal position, substantially as set forth.
 75

In testimony whereof we have hereunto set our hands this 6th day of October, 1896.

WM. F. CAPITAIN.
 LOUIS W. KLUTE.
 GEO. F. WELLS.

In presence of—

GEO. H. KNIGHT,
 E. S. KNIGHT.