

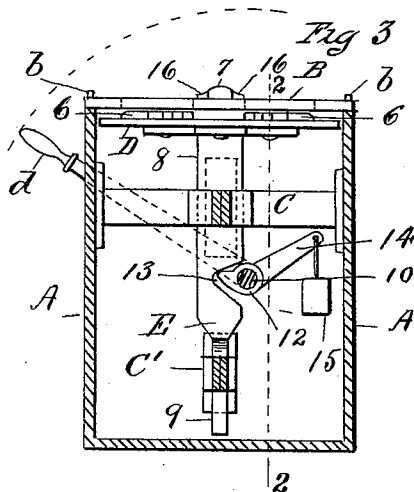
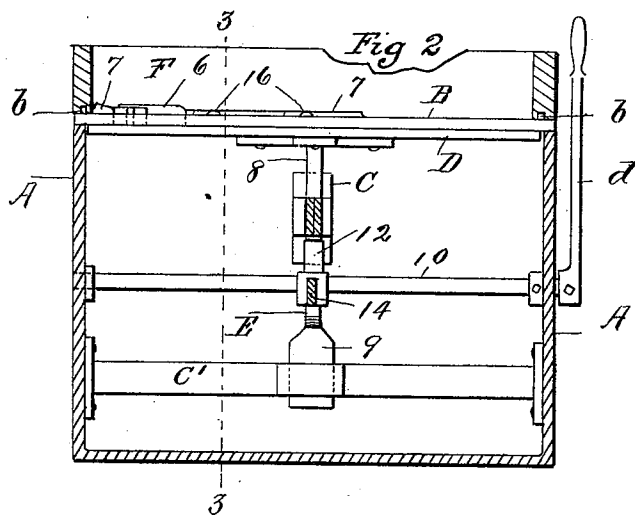
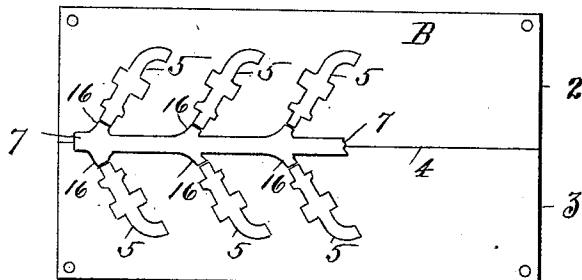
(No Model)

E. MILLETT.
MECHANICAL MOLDING DEVICE.

No. 582,869.

Patented May 18, 1897.

Fig 1



WITNESSES

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ELIE MILLETT, OF SPRINGFIELD, MASSACHUSETTS.

MECHANICAL MOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 582,869, dated May 18, 1897.

Application filed August 24, 1896. Serial No. 603,725. (No model.)

To all whom it may concern:

Be it known that I, ELIE MILLETT, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Mechanical Molding Devices, of which the following is a specification.

This invention relates to mechanical molding devices for iron and brass foundry use, the object being to provide a machine which is easily manipulated, of strong and simple construction, and affording easy access to the pattern-plate for cleaning it; and the invention consists in the construction of the machine, as fully set forth and claimed in the following specification.

In the drawings forming part of this specification, Figure 1 shows a top plan view of a stripping-plate. Fig. 2 is a section on line 2 2, Fig. 3, the stripping-plate and pattern-plate being shown in full lines and a part of a flask shown in position on the machine. Fig. 3 is a section on line 3, Fig. 2, the stripping-plate and pattern-plate being in full lines and separated from each other.

Referring to the drawings, A is a rectangular cast-iron box constituting the frame of the machine, open on its upper side.

B is a stripping-plate made, preferably, of brass, and is substantially of the same area as the top of the box A, and is removably secured on the said box in the position shown in Figs. 2 and 3 by the dowel-pins *b*, passing through suitably-located holes near the edges of said plate. Said stripping-plate consists of two parts of equal dimensions 2 and 3, united by their edges on line 4. Perforations 5 are made through said plate coinciding with the outline of the patterns 6 on the pattern-plate D, which latter plate has a reciprocating vertical movement in said box A. The said perforations 5 are oppositely located relative to the center line 4 of the stripping-plate and are perpendicularly in line with the patterns 6 on the plate D under them, which patterns are secured to the surface of said plate.

The "gate" part 7 of the pattern, instead of being secured to the pattern-plate D, is secured to the stripping-plate B, as shown, either by soldering or in any other suitable manner, centrally over the line of union 4 of

said plates 2 3 and serves as a partial means of uniting said parts.

The pattern-plate, having fixed thereon the patterns in such numbers as is deemed desirable and in positions registering with the perforations 5 in the stripping-plate, is supported for reciprocating motion in box A by a metal standard E, secured to the under side thereof by screws or otherwise, and consists of two flat portions cast in one piece, the upper one of said two portions 8 lying at right angles to the lower portion 9. These two portions of the standard E pass through two iron braces C C', secured to the sides and ends of the box in any convenient way.

The standard E is made of two right-angulardisposed parts only for the purpose of permitting the right-angular disposition of the braces therefor, whereby a true vertical movement of the pattern-plate is more easily attained and whereby said plate better resists any pressure brought to bear upon it when the sand is rammed into the flask F, fitted over the top of box A on top of the stripping-plate, as shown in Fig. 2.

The means for reciprocating the pattern-plate consist of a shaft 10, rotatably supported in the ends of the box and passing close to the standard E of the pattern-plate. On said shaft in line with said standard is fixed a cam 12, which engages with a suitable notch 13, cut in the edge of the standard, and suitably secured to the shaft is an arm 14, supporting a weight 15 of such dimensions as will approximately counterbalance the pattern-plate and standard. On one end of shaft 10, which projects through the side of the box, a suitable hand-lever *d* is secured, by which the said shaft may be partially rotated to raise the pattern-plate by the action of the cam (moving with said shaft) on the edge of the notch 13, above mentioned. Said cam is so located on the shaft 10 that when the pattern-plate has reached its limit of vertical movement and lies in contact with the under side of the stripping-plate the point of the cam is practically in a line, vertically, over the center of the shaft, whereby said pattern-plate is rigidly held against any downward movement by reason of pressure on the pattern-plate, as in ramming sand into the flask on top of the

stripping-plate. The patterns on said pattern-plate are secured to the face thereof in the positions described and are raised up above the surface of said pattern-plate to a height equal to the thickness of the stripping-plate, so that when the pattern-plate is raised the patterns will project through the stripping-plate to the same degree that they would project above the surface thereof if the perforations were not made therein and they were laid on the surface of the stripping-plate. When the pattern-plate is thus raised, the ends of the patterns next to the gate join closely the ends 16 of the gate portion on said stripping-plate

In operating this invention the hand-lever *d* is operated to raise the pattern-plate, whereby the patterns are made to project through the stripping-plate, and a part of a molder's flask is put onto the top of the box A, the stripping-plate and patterns forming the bottom of the flask. Sand is then put into the flask and tamped in in the usual manner. The hand-lever is thrown back, thus returning the pattern-plate to the position shown in Fig. 3. This movement withdraws the patterns from the sand. The flask is then lifted off from the box and the other half of the flask put on, and the operation is repeated.

It is obvious that if the patterns on both sides of the center line *4* of the stripping-plate are not exactly placed when the parts of the

flask are put together the mold-cavities in the two halves of the flask will not lie directly opposite each other and the casting made therein will be imperfect.

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

A molding-machine consisting of a frame, a pattern-plate having a series of patterns secured thereon and supported for reciprocatory movement in said frame, suitable means for imparting said movement thereto, consisting of the standard E, one portion of which is arranged at right angles to the other, the braces C, C', located at right angles to each other, the shaft 10, lever *d*, cam 12 on said shaft, and the weighted arm 14, a stripping-plate, consisting of two equal parts united along one edge thereof, removably supported on said frame, said stripping-plate having therein perforations registering vertically with said patterns, a gate portion 7, the arms 16 of which terminate at one end of said perforations, secured to said stripping-plate centrally on the line of the united edges of said plate, and a flask removably engaging said stripping-plate, substantially as set forth.

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Witnesses:

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