J. T. PEET.

MACHINES FOR OPERATING MOLDERS' MATCH-PLATES.

No. 169,473. Patented Nov. 2, 1875.

Fig. 1

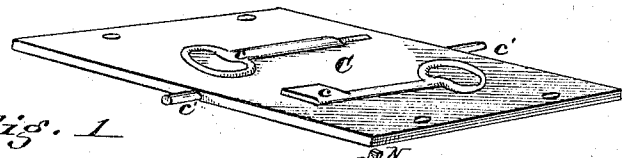


Fig. 2

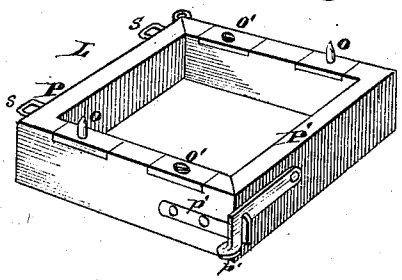
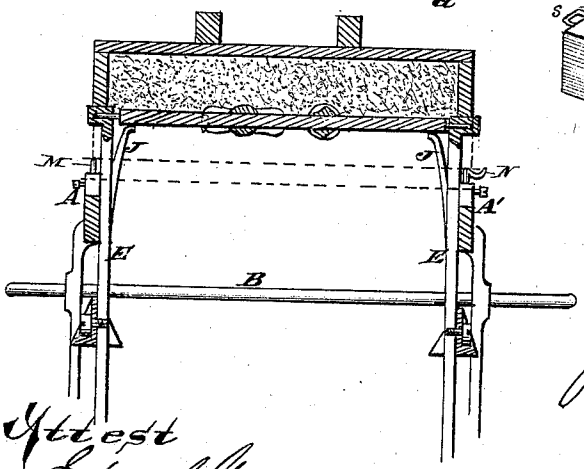


Fig. 3



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IMPROVEMENT IN MACHINES FOR OPERATING MOLDERS' MATCH-PLATES.

Specification forming part of Letters Patent No. **169,473**, dated November 2, 1875; application filed March 6, 1875.

To all whom it may concern:

Be it known that I, JOHN T. PEET, of Cincinnati, Hamilton county, State of Ohio, have invented an Improvement in Machine for Operating Molders' Match-Plates, of which the following is a specification:

My invention relates to devices for reversing match-plates and drawing the same from the mold in such a way that the "drag" and "cope" may be molded separately, yet adapted to match properly when united for casting; and my invention consists, in connection with suitable frame-work, of devices for journaling the match-plate, for supporting it firmly in position for molding and dropping it for the double purpose of drawing the pattern squarely from the mold, and enabling the match-plate to be reversed. My invention further consists in a peculiar construction of the flask to be used in connection with this reversible match-plate.

Figure 1 is a perspective view of a machine embodying my improvements, with the reversible match-plate detached from its journals for convenience of illustration. Fig. 2 is a perspective view of the flask specially adapted for use in connection with the machine shown in Fig. 1. Fig. 3 is a vertical section through the upper part of the machine.

A A′ represent the sides of the frame of the machine. They are made adjustable in the connecting-bars B B′ B″ B‴, for the purpose of enabling the same framing to receive different sizes of match-plates. C is the match-plate. It is, as usual with such plates, provided on each face with a half of the pattern C, so located that when both halves of the flask are molded they will match when united for the process of casting. The match-plate is provided with trunnions *c′ c′*, to fit within the bearings D D, which are supported firmly upon the sliding standards E E. These standards are formed with rack-teeth *e*, and are vertically reciprocated by means of shaft F, pinions G, and jointed handle or lever H. In the elevated position of the standards, which is the position in which the ramming of the flask takes place, the jointed lever H can be engaged behind the bar B′, and in this position secure the apparatus firmly under the process of ramming. The sides A are firmly secured to the bars B, at any desirable location, by the set-screws *b*, and the sides may be fitted with rollers *a*, to facilitate the moving of the machine. Cross-bars I I′ are secured to the standards E E′, and to these cross-bars the flexible fingers J J are secured, the joint between these fingers and the bars I I being, if necessary, an elastic or yielding one, to assist in permitting the required motion of the fingers. At the top of the frame-sides A recesses K are formed, having inclined backs, against which the backs of the fingers rest.

In the movement of the standards E E and fingers J J upward, the inclined backs of the recesses force the fingers inward to the position shown in Fig. 3, which position enables the fingers to act as supports for the match-plate during the process of ramming. In the act of lowering the standards E, after the one half of the flask has been rammed, the fingers retire by reason of their flexibility or the resilience of their joints, with the cross-bars I I′, into the recesses K, as shown in Fig. 1, so that the plate C is at liberty to swing on its journals to present the opposite side for the presentation to the other half of the flask. In the same act of lowering, also, the flask L seats itself on top of the pins or projections M M′ N N′, and as the plate C lowers still farther, its patterns *c* are drawn accurately from the sand, which is a very important consideration.

The projections N N′ may have hooks on, to facilitate the turning over of the flask upon them at the side of the machine.

The flask to be used with this machine is composed, as usual, of a drag and cope, both of the construction illustrated in Fig. 2. It is composed of two elbow-pieces, P P′, hinged together at one corner, and latched securely at the opposite corner by latch *p* and hook *p′*. At the "parting" side it is provided with pins O O, diagonally located, and two matching apertures, O′ O′, also diagonally located, so that as the plate C has four holes for pins, the pins of either drag or cope will connect with it, and when the drag and cope are put together, after the two parts have been molded separately, the pins of each will fit into the holes of the other. The pins or studs M M′ N

N′ are adjustable vertically to permit of angular adjustment of the flask.

I claim—

1. The combination of frame A B, swinging match-plate C, inclines K, standards E E′ D, and supporting-fingers J J, connected and operating substantially as and for the purpose specified.

2. The combination of the adjustable sides A, standards D E D E, swinging match-plate C, bars B B′ B″ B‴, and set-screws *b*, substantially as and for the purpose specified.

3. The combination of the standards E *e*, shaft F, pinions G, and jointed lever H, and the bar B, substantially as and for the purpose specified.

4. In combination with the four-holed match-plate C, the hinged and latched flask P P′ *p p′*, having diagonally-arranged pins O, and holes O′ on opposite corners to the pins, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

JOHN T. PEET.

Witnesses:
EDGAR J. GROSS,
J. L. WARTMANN.