(No Model.)

G. J. KEENAN.

MOLDER'S FLASK.

No. 485,764. Patented Nov. 8, 1892.

Fig. 1.

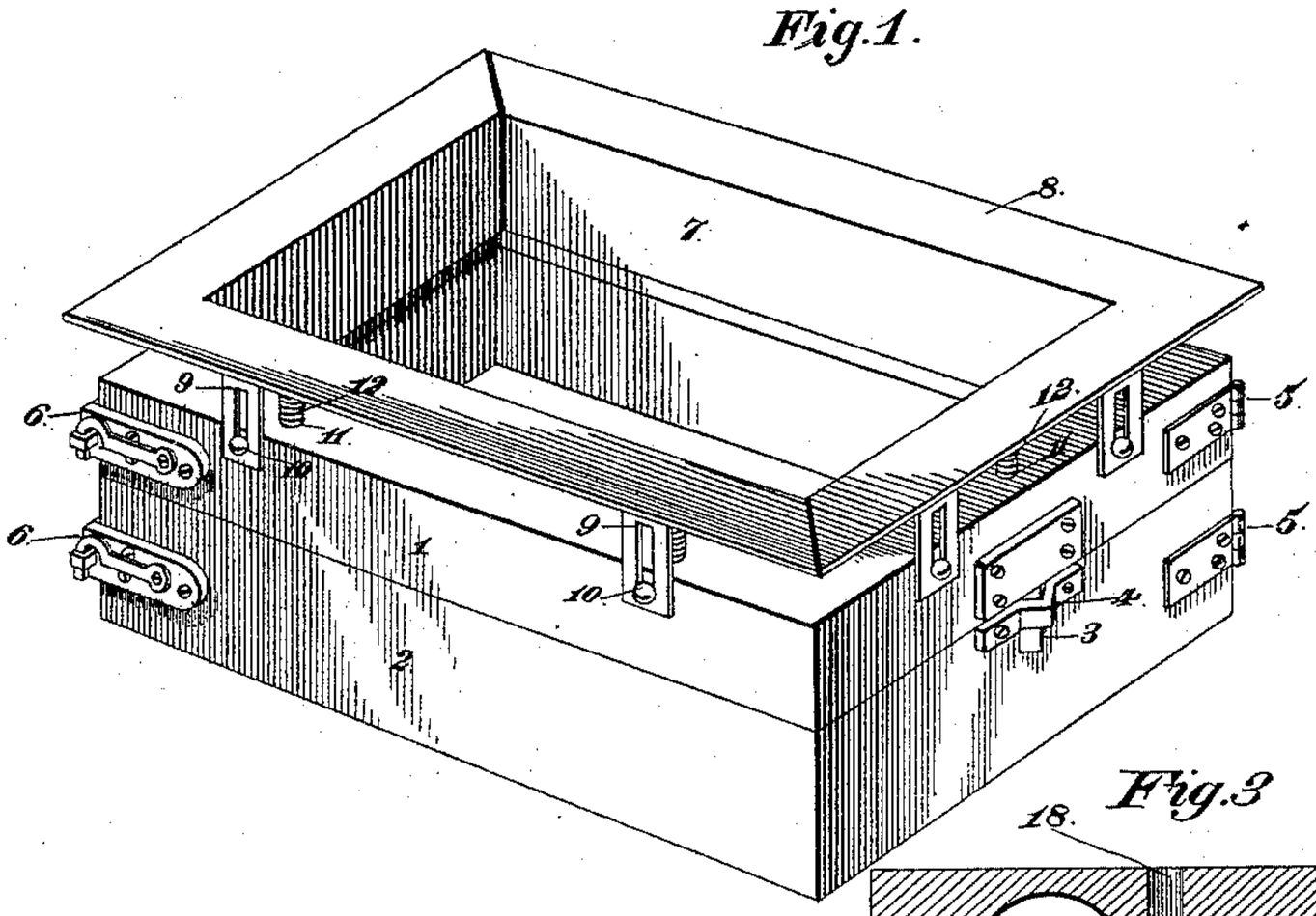


Fig. 2.

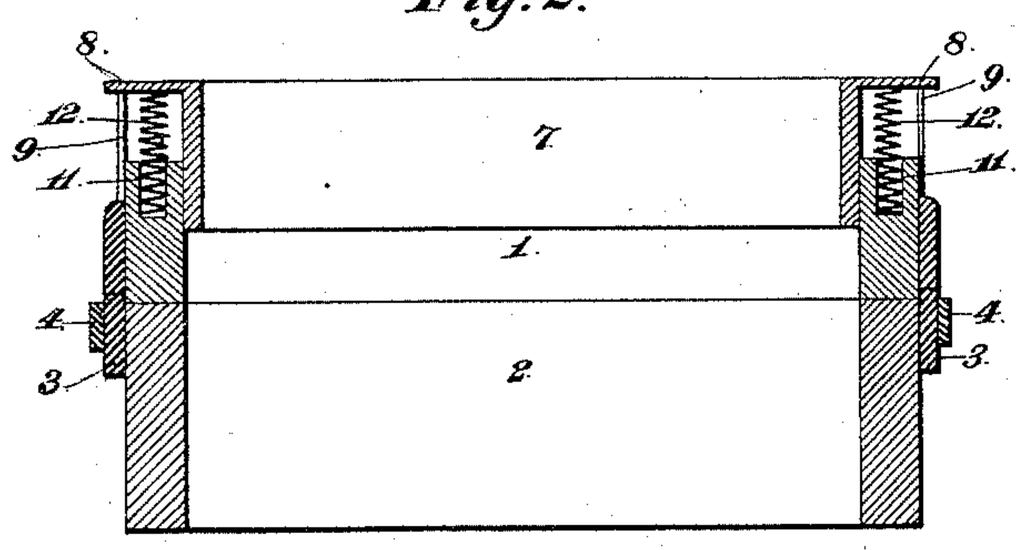
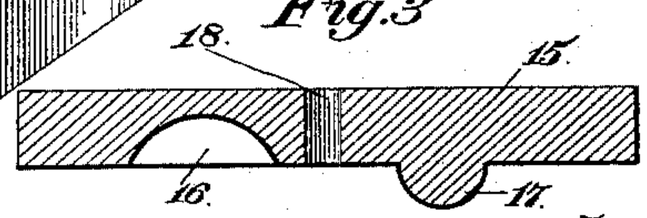


Fig. 3.



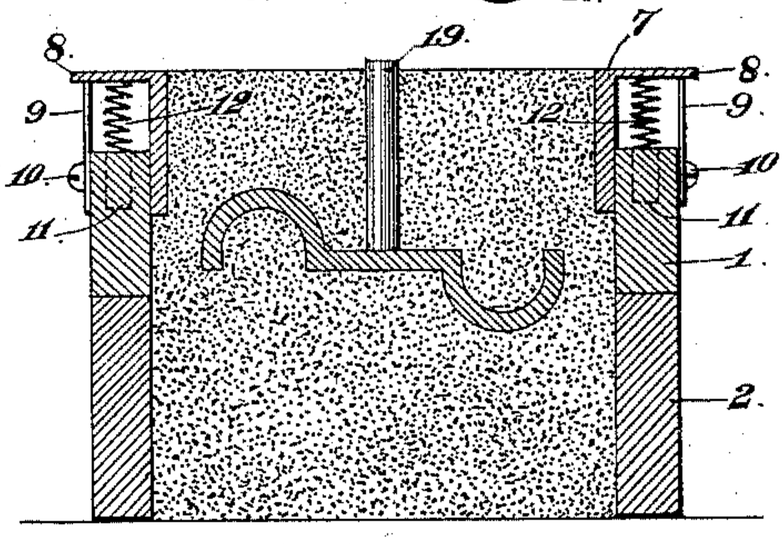


Fig. 4.

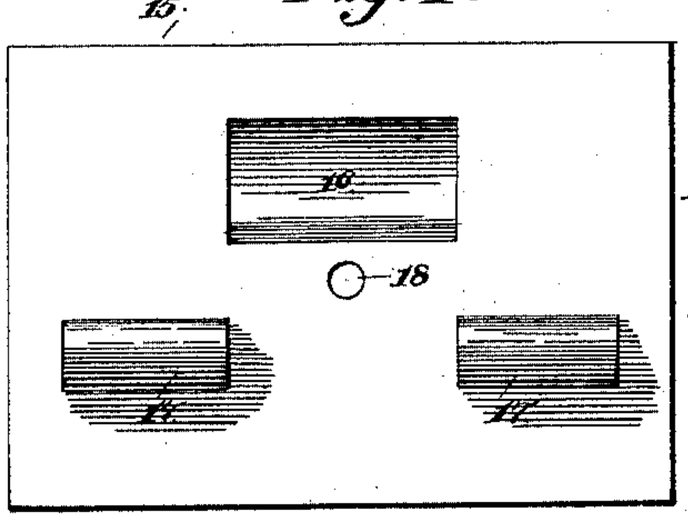
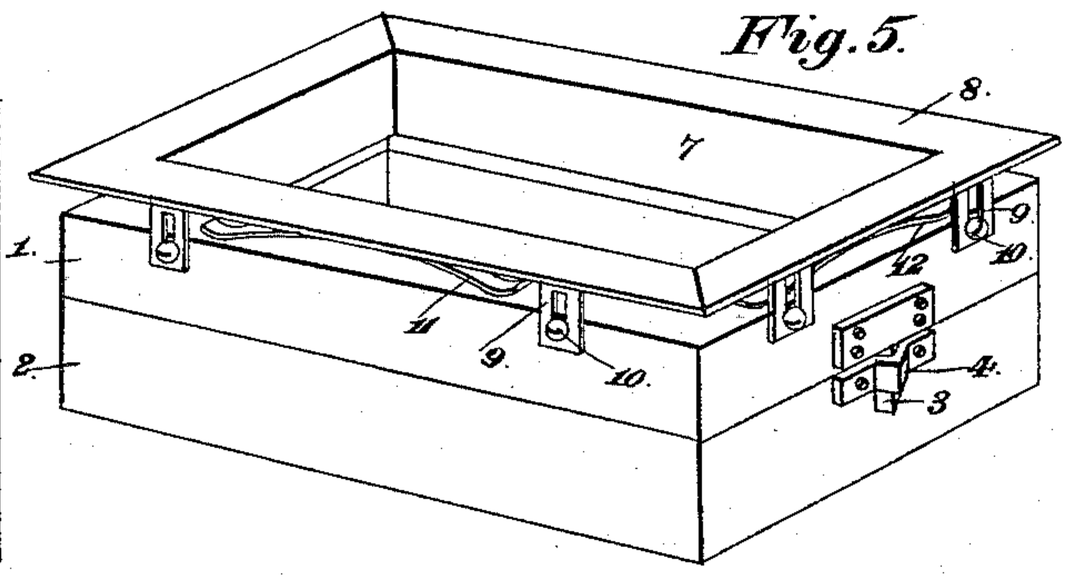


Fig. 5.



Witnesses

M. E. Fowler

J. R. Driggers.

Inventor

George J. Keenan

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

GEORGE J. KEENAN, OF BUFFALO, NEW YORK.

MOLDER'S FLASK.

SPECIFICATION forming part of Letters Patent No. 485,764, dated November 8, 1892.

Application filed June 5, 1891. Serial No. 395,226. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. KEENAN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Molder's Flask, of which the following is a specification.

This invention relates to molders' flasks; and it has for its object to provide a device of this class in which the sand may be compressed around the pattern without the use of a follower fitted to the flask.

A further object of the invention is to provide for the compression or tucking of the sand around the pattern without the use of the fingers or of the peener usually employed.

Further objects of the invention will be hereinafter referred to, the invention consisting in the construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of a flask constructed in accordance with my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a transverse sectional view showing my improved flask with the pattern in position and with the press-board arranged above the flask. Fig. 4 is a bottom plan view of a press-board adapted to be used in connection with my improved flask. Fig. 5 is a perspective view showing a modified construction of the flask.

Like numerals of reference indicate like parts in all the figures of the drawings.

My improved flask is composed in the usual manner of the upper and lower sections, (designated, respectively, 1 and 2,) and the former of which is provided with downwardly-extending lugs 3, adapted to engage the catches or holders 4 at the upper edge of the lower section, thus enabling the said upper and lower sections to be connected detachably. The frames composing the said upper and lower sections may be hinged at one of their corners, as shown at 5 in Fig. 1 of the drawings, or each of the said frames may be rigidly connected at its corners, as shown at Fig. 5. When the frames are hinged, suitable latches or connecting devices, such as 6, will be provided at the corners diagonally opposite to the hinged corners.

Suitably mounted to slide vertically in the upper section 1 of the flask is a frame 7, which is provided at its upper edge with a laterally-extending flange 8, extending beyond the upper edge of the flask. Said flange is provided with downwardly-extending vertically-slotted lugs 9, through which screws 10 are inserted into the sides of the flask, with which the said vertically-sliding frame is thus connected. The upper edge of the flask is provided with vertical recesses 11, in which are mounted coiled springs 12, which press upwardly against the flange 8 of the vertically-sliding frame, which is thus forced automatically in an upward direction. The frame 7, with its flange 8, when fitted to the hinged flask (shown in Figs. 1, 2, and 3) is made in two separate parts or sections connected independently to the sections of the flask, and also when fitted to the flask shown in Fig. 5 the said sliding frame may comprise two separate parts or sections, as illustrated. The said sliding frame, with its flange, may be made of any desirable material, such as wood, metal, or wood and metal combined.

The press-board which is used in connection with my improved flask is designated by 15, and said press-board is to be provided on its under side with recesses, as 16, or projections, as 17, or with both, which shall register with any convex or concave portions of the pattern that may have been placed in the flask, thereby causing the sand to be packed as nearly evenly as possible around all portions of said pattern. I moreover provide the said press-board with an opening or perforation, as 18, for the accommodation of the sprue 19, which I place in the flask with the pattern, thus avoiding the necessity for subsequently gouging the pour-hole or gate through which the molten metal is to be poured into the mold.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation of my invention will be readily understood. The vertically-sliding frame is first adjusted to the desired height and the sand is then placed in the flask in the usual manner and struck off even at the top. The press-board is then placed in position upon the flange at the upper edge of the vertically-sliding frame and pressed downward, thus com-

pacting and compressing the sand around the pattern, the frame sliding vertically within the flask serving to press the sand laterally, while the downward pressure is imparted by the press-board. The flange 8 of the vertically-movable frame 7, which projects beyond the upper edge of the flask, will serve to prevent the sand from accumulating upon the edge of the flask, and thus interfering with the operation. The projections 17 may be secured detachably by means of screws upon the under side of the press-board in any place or places where their presence may be required, and the under side of said press-board is likewise to be provided with the recesses 16 at the proper points. When more than one sprue is used, it is obvious that the press-board must be provided with perforations to admit of the passage of the same.

My improved flask is adapted to be used in connection with molding-machines—such, for instance, as that shown in the patent to Ellis Keenan, Jr., No. 442,123, issued on the 9th day of December, 1890, and in which the press-board is mounted at the lower end of a vertically-reciprocating stem or plunger operated by suitable mechanism. It is obvious that the size of the press-board is immaterial, provided only that its area is larger than that of the flask, so that the latter shall be completely covered by the said press-board.

The press-board which has been herein described is made the subject of a separate application for Letters Patent, filed June 5, 1891, Serial No. 395,227, and is not claimed as a part of the present invention, having been shown for the purpose of illustration only.

It is obvious that when a match plate is used the lower half or drag, as well as the upper half or cope of the flask, is to be provided with the vertically-sliding interior frame, which forms the subject of my invention. In this case the drag or lower half of the flask, after being subjected to the action of the press-board, is turned over, so as to enable the cope to be fitted thereto, as will be readily understood.

Instead of the coiled springs herein shown and described as interposed between the upper edge of the flask and the flange of the vertically-sliding frame for the purpose of forcing the latter in an upward direction, springs of any other suitable construction may be employed—such as flat bow-springs—as have been shown in Fig. 5 of the drawings.

Having thus described my invention, what I claim is—

1. The combination, with a molder's flask, of a vertically-sliding frame composed of separate parts or sections connected independently and movably with the sides of the flask, substantially as set forth.

2. The combination, with a molder's flask, of a vertically-sliding flanged frame composed of separate parts or sections, the slotted lugs depending from the flange of the sections of said frame, and the screws extending through said slotted lugs into the sides of the flask, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE J. KEENAN.

Witnesses:

ELLIS KEENAN, Jr.,

J. W. ARGUS.