

C. D. SMITH.
MOLDING FLASK.
APPLICATION FILED NOV. 22, 1909.

948,528.

Patented Feb. 8, 1910.

Fig. 1.

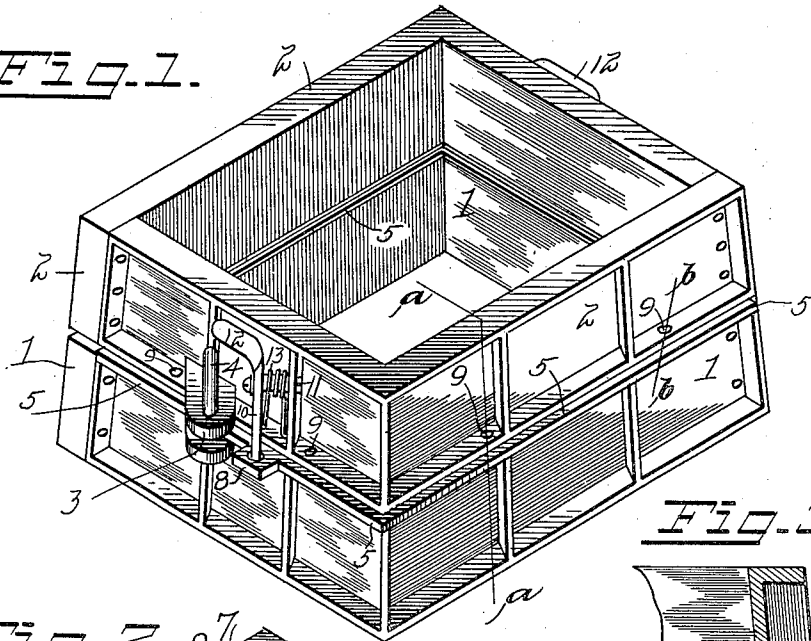


Fig. 3.

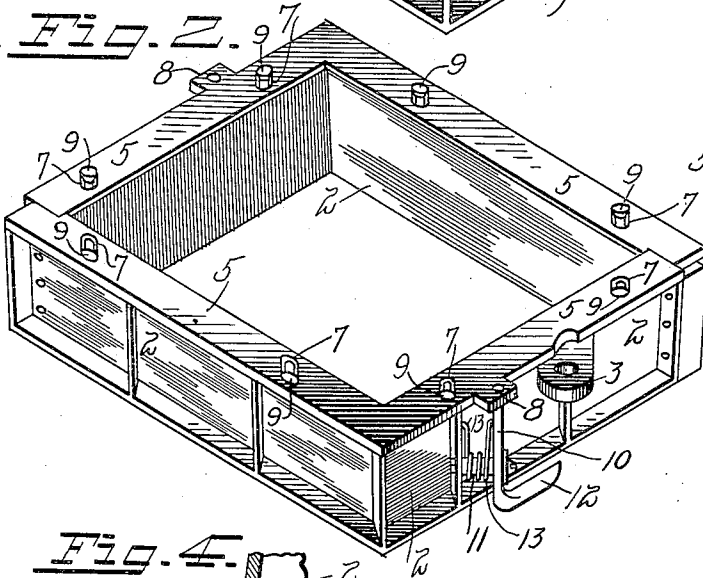
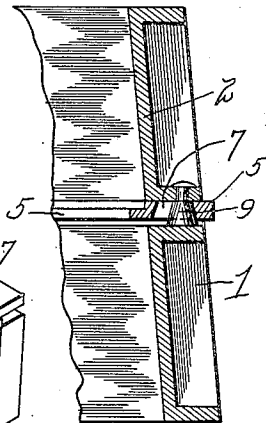
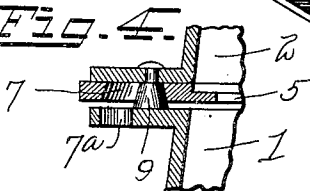


Fig. 4.



Chas. D. Smith

Inventor

R. M. Carty

Attorney

Witnesses

M. Siebler

Howard S. Smith

UNITED STATES PATENT OFFICE.

CHARLES D. SMITH, OF DAYTON, OHIO.

MOLDING-FLASK.

948,528.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed November 22, 1909. Serial No. 529,291.

To all whom it may concern:

Be it known that I, CHARLES D. SMITH, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Molding-Flasks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in molding flasks, and more specifically to the sand strip which lies between the cope and drag sections of the mold and the means for operating said sand strip as will hereinafter be more particularly described.

The object of the invention is to provide in a molder's flask, convenient means which enable the sand strip to be slid outwardly in removing the flask from the mold and by the same grip which seizes the flask in the movement of the same.

With these and other objects in view, which will readily appear in the description, reference is made to the accompanying drawings of which—

Figure 1 is a perspective view of a molding flask constructed in accordance with my invention. Fig. 2 is a bottom view in perspective of the cope portion of the flask with the slidable sand bars. Fig. 3 is a sectional view on the line *a—b* of Fig. 1. Fig. 4 is a section on line *b—b* of Fig. 1.

In the accompanying drawings the flask is shown comprising the lower portion or drag 1 and the upper portion or cope 2, the latter portion matching in shape and size the drag portion and completing the flask. It will be understood that the flask may be made of any material found most suitable, and in a tapering shape from bottom to top. It is desirable to taper the two parts of the flask from bottom to top in order to facilitate the flask sections being removed from the sand after the mold is completed. At the opposite ends of the cope and drag sections of the flask, apertured ears 3 are provided for the reception of dowel pins 4 by means of which the opposite ends of the flask are united and the two parts of the flask are kept in alinement. Secured to the lower edges of the side and ends of the cope

section 2, are sliding sand bars 5 which are provided with diagonally extending cam slots 7 which taper downwardly from their upper surfaces. These sand bars when in their inner position as in Fig. 2, extend inwardly from the inner margin of the cope section as is clearly shown in Fig. 3. Extending into and through the tapered diagonal slots 7, are a series of tapered guide pins 9 which rigidly extend from the bottom edges of the side and ends of the cope 2. The lengths of these guide pins 9 are greater than the thickness of the sand bars 5. Owing to this, said tapered pins engage the top edges of the drag portion 1 and provide a clearance between the sand bars and the drag, and prevent the sand bars 5 from undue friction in their movement. In order to prevent the slots 7 in the sand bar clogging up and thus interfering with a free movement thereof, openings 7^a are provided in the top ledge of the drag 1. These openings lie on the outer sides of the guide pins 9 immediately below the outer ends of said slots 7 as clearly shown in Fig. 4.

Extending from the ends of the two sections forming the sand bar are apertured projections 8 which are adapted to receive the end of the lever 10. There is one of these levers located at each end of the flask upon pins 11 which rigidly extend from the outer sides of the ends of the cope section of the flask. The upper portion of each of said levers is enlarged as at 12, to provide a convenient place for the hand of the operator to grip in turning said levers on their fulcrums to move out the sand bars 5 in freeing the flask from the mold. Surrounding each of the fulcrum pins 11 is a spring 13, one end of which is inserted and made fast in the end of the cope and the other end of which is inserted and made fast in the lever 10. The effect of these springs is to maintain the sand bars 5 in their inner positions, as in Fig. 2, whenever pressure is released from the levers 10. The levers 10 are manipulated to move outwardly the sand bars 5 when it is desired to raise the two sections of the flask from the mold. In this operation the hand of the operator at each end of the flask, presses downwardly upon the end 12 of said lever and at the same time grasps with the fingers the apertured ears 3 and lifts the entire flask from the mold. After the pressure is released from the levers 10

at each end of the flask, the springs 13 throw the sand bar 5 to its normal position. When it is desired to lift the cope section of the flask, as in removing the pattern, the operating levers 10 are not actuated, the sand bar being moved with the cope while in its normal position.

It will be understood that when the sand bars are drawn outwardly to their limit, the entire body of sand is prevented from being retained in the flask, and owing to the tapered form of the flask its removal is facilitated.

Having described my invention, I claim:
In a molding flask, the combination with the cope and drag portions thereof, of sand bars mounted between the adjacent edges of said cope and drag, said sand bars having a series of diagonal slots in the body there-

of, and apertured extensions on the end portions thereof, tapered guide pins extending from the cope and through the diagonal slots in the sand bars, said tapered guide pins being of a greater length than the thickness of the sand bars in order that said sand bars may be free from contact with the drag portion of the mold, operating levers for the sand bars fulcrumed on the ends of the cope and projected into the apertured extensions of the sand bars, and springs exerting a normal pressure on said levers to maintain the sand bars in their normal position.

In testimony whereof I affix my signature, in presence of two witnesses.

CHARLES D. SMITH.

Witnesses:

MATTHEW SIEBLER,
HOWARD S. SMITH.