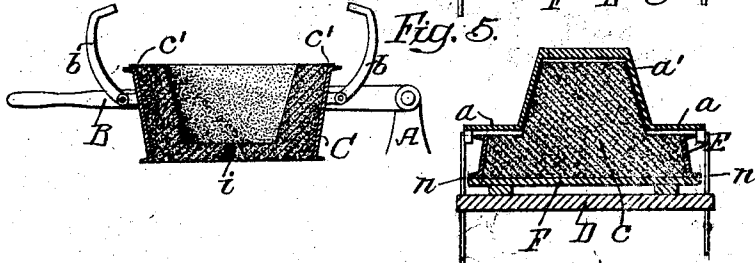
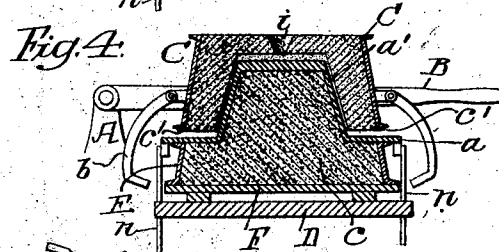
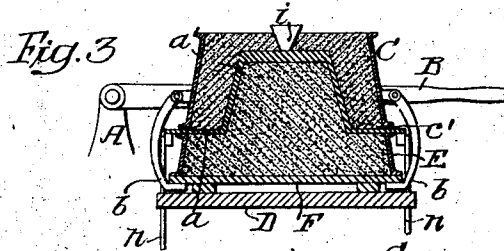
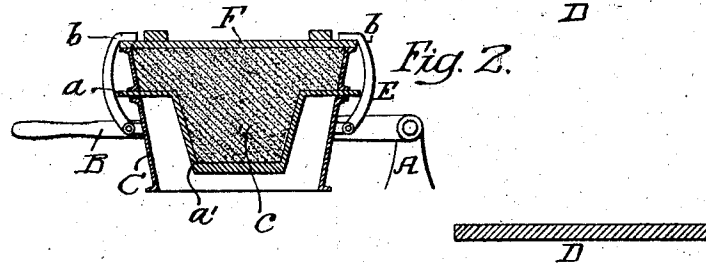
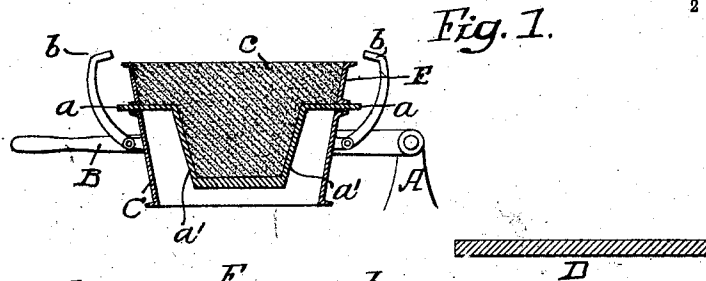


A. C. MOTT, JR.
PROCESS OF MAKING MOLDS.
APPLICATION FILED JUNE 20, 1912.

1,074,006.

Patented Sept. 23, 1913

2 SHEETS—SHEET 1.



Witnesses—
Walter A. Pullinger
Walter A. Burrows

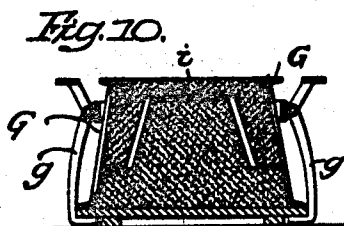
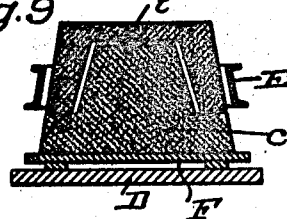
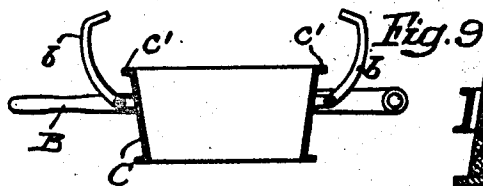
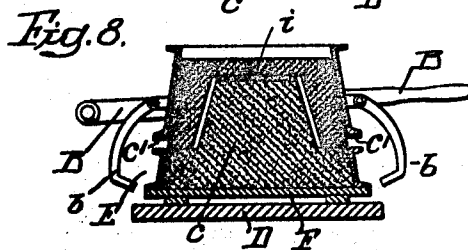
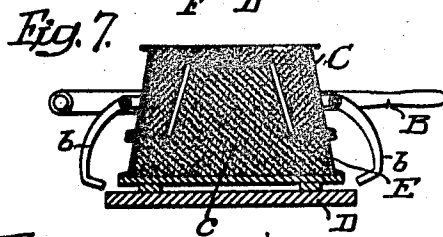
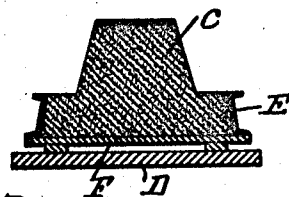
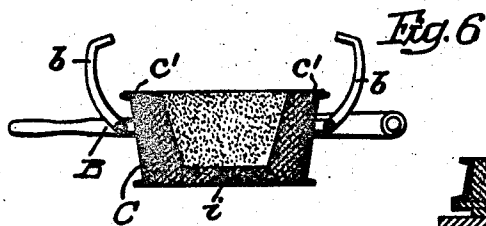
Inventor—
Abram C. Mott Jr.
by his Attorneys—
Howe & Son

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2 SHEETS—SHEET 2.



Witnesses—
Walter H. Pullinger
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Howard & Howard

UNITED STATES PATENT OFFICE.

ABRAM C. MOTT, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO ABRAM COX STOVE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

PROCESS OF MAKING MOLDS.

1.074,006.

Specification of Letters Patent.

Patented Sept. 23, 1913.

Application filed June 20, 1912. Serial No. 704,807.

To all whom it may concern:

Be it known that I, ABRAM C. MOTT, JR., a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in the Process of Making Molds, of which the following is a specification.

This invention relates to certain improvements in the process of making sand molds.

The object of the invention is to make the mold in such a manner that accuracy is assured and to avoid, as much as possible, the handling of the flasks in making the mold.

In the accompanying drawings:—Figures 1 to 10, inclusive, illustrate the steps in the process of making a mold; the views being in diagrammatic section.

In the present instance, I have illustrated my improved process in connection with what is known as a turn-over table, forming part of a molding machine, but it will be understood that the invention can be carried out without the use of a molding machine, if desired.

In Fig. 1 of the drawings I have shown a bearing A forming part of the frame of a molding machine to which the turn-over frame B is pivoted. D is the table onto which the flasks are turned. C is a section of a flask, which is secured to the frame B in any suitable manner. Mounted in this flask is the match board *a* having a pattern *a'*. This pattern, in the present instance, is deep and extends to a considerable depth in the flask C. Mounted on the match board is the second section E of the flask. The walls of this section are on a line with the side walls of the section C of the flask.

When the flask is in the position illustrated in Fig. 1, the sand *c* is rammed in the flask E and in the depression in the pattern *a'*, as in Fig. 1. Then the bottom board F is placed on the flask, as illustrated in Fig. 2, and the fasteners *b*, which are pivotally mounted on the flask C are passed over the bottom board, as shown, so as to secure the bottom board to the flask. The next step in the process is to turn the frame B on its pivot so as to deposit the flask on the table D; the bottom board F resting on the table, as shown in Fig. 3. The section C of the flask is then rammed, as illustrated in Fig. 3, and the sprue *i* is inserted at this

step in the process so as to form the pouring opening.

To separate the sand previous to the ramming of the sand in the flask C, the mold supports *c'* are projected into the flask, as shown in Fig. 3, so that when the sand is rammed therein it will be retained in the flask. The hooks *b* are then removed and the table D lowered. As the table is lowered, the match board *a* and bottom section E of the flask are drawn away from the top section C, as shown in Fig. 4, and, upon the continued downward movement of the bottom section, the sand is drawn away from the pattern *a'*, as the match board *a* is held by stops *m*. These stops may be movable so as to lift the match board if desired. As illustrated in Fig. 5, both the upper and lower sections of the mold are now free of the pattern. The frame B is then turned back to its original position, Fig. 5, with the flask C and the upper half of the mold therein, exposing the match board and the pattern which are then readily removed from the lower portion of the mold; leaving the other half of the mold in the position illustrated in Fig. 6. The frame B is then turned over again so as to bring the upper half of the mold directly in line with the lower half on the table D. The table is then raised so as to bring the lower half of the mold in contact with the upper half, Fig. 7. Then the mold supports *c'* are withdrawn and the table again lowered, and, as there is nothing to support the sand within the flask C, the mold is withdrawn from the flask, as in Fig. 8, and the frame B turned over, as in Fig. 9, after which the flask E can be removed. Fig. 9, leaving the two parts of the sand mold together intact and resting on the bottom board F. At this point, the board with the mold can be removed from the table D.

I preferably make the flasks tapered, as shown, thus making the mold with tapered exterior walls, and I mount a frame G on the mold before pouring. This frame has hooks *g* pivoted thereto, which extend under the bottom board and hold the frame G in place on the mold, after which the metal can be poured into the mold. This frame not only forms the support for the sides of the mold, but also holds the mold against movement of the sand due to pouring.

ing, so that top weights, usually employed, can be dispensed with.

I perforate the sides of the frame, as shown, not only to lighten the frame, but also to permit the gases to escape which may pass through the sand of the mold.

Thus it will be seen, by my improved process, that I can quickly and accurately form sand molds and can use the flasks over and over again, prior to the pouring operation. It is also to be noted that I provide for the retaining of the sand in the mold during the pouring operation and this frame G can be placed on the mold prior to said operation and then placed on another mold; dispensing with a large number of flasks and weights.

I claim:—

The process herein described of making sand molds, said process consisting in first inverting one section of a mold; placing a match board with a pattern thereon in the mold; mounting another section of the mold

on top of the match board; ramming the last mentioned mold with sand; then mounting the bottom board thereon; securing the bottom board to the two sections of the flask with the match board between the flasks; turning over the flasks with the bottom board; ramming the first flask with sand while the flasks are still secured together; releasing and separating the flasks with the sections of the molds from the pattern; removing the pattern; replacing the flasks with the molds therein; detaching the first mentioned flask from its mold; and then detaching the second flask from its mold, leaving the two parts of the mold in position for pouring.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ABRAM C. MOTT, JR.

Witnesses:

JOS. H. KLEIN,
WM. A. BARR.