S. Smith,

Casting Pattern.

No. 110,689. Patented Jan. 3. 1871.

Fig. 1.

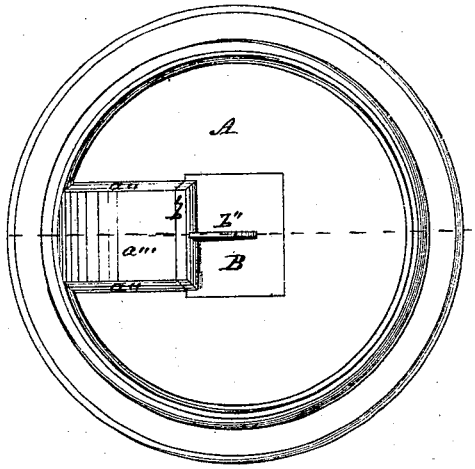


Fig. 2.

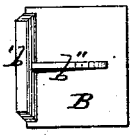


Fig. 3.

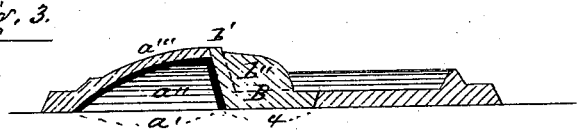


Fig. 4.

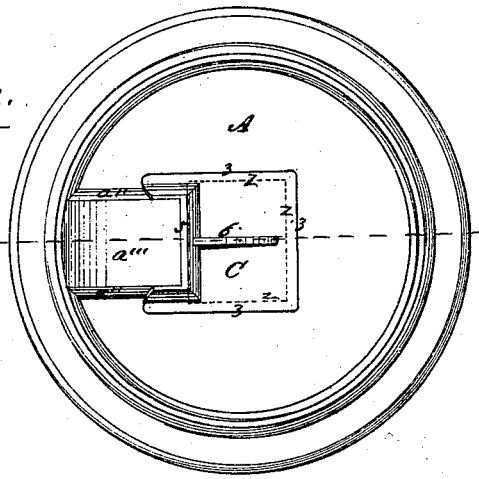


Fig. 5.

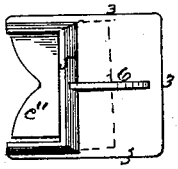
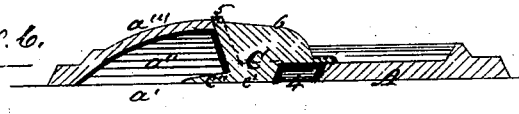


Fig. 6.



Inventor
Samuel Smith

Witnesses:
Benj. Mussey
H. P. Nicholson

United States Patent Office.

SAMUEL SMITH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND CHARLES NOBLE & CO., OF SAME PLACE.

Letters Patent No. 110,689, dated January 3, 1871.

IMPROVEMENT IN PATTERNS FOR MOLDING STOVE-LIDS.

The Schedule referred to in these Letters Patent and making part of the same.

I, SAMUEL SMITH, of the city of Philadelphia, in the State of Pennsylvania, have invented certain Improvements in the Patterns for Molding Stove-Lids, of which the following is a specification.

Nature and Objects of the Invention.

My improvements relate to the mode of indenting the green-sand core in a pattern for producing the necessary projection or lip of the usual lifter-cavity required in the cast-metal lid; and

My invention consists substantially of a stove-lid pattern, having the higher or deeper end of the core-cavity in the said pattern open and in communication with a large square hole made through the pattern, and providing the said openings with a temporary stopper to remain applied while the lid is being molded in the flask, and then to be removed and a core-indenting slide applied in the square hole, which slide, on being pushed forward, makes the required indentation in the green-sand core in the cavity of the pattern, and being afterward slipped backward and lifted out of the hole, and the lid-pattern then withdrawn, the flask may be closed for the casting-operation, as heretofore—

The object of my invention being to afford simple and reliable devices for the purpose of indenting the green-sand core that will not be liable to become choked or obstructed by the sand in using.

Description of the Accompanying Drawing.

Figure 1 is a plan view of the under side of the pattern, having the temporary stopper applied as required in molding; and

Figure 2, a like view of the temporary stopper, detached.

Figure 3 is a vertical central section of fig. 1 above the dotted line *v w* of that figure;

Figure 4 is a plan view of the under side of the pattern, having the indenting slide applied and slid forward into the position against the core-box of the said pattern, as required to make the indentation in the green-sand core therein; and

Figure 5 is a like view of the said indenting-slide, detached.

Figure 6 is a vertical central section of fig. 4 above the dotted line *x y* of that figure.

General Description.

The pattern A has a flat plane constituting its upper or face side, with a cavity, *a'*, the sides *a''* of which and the bottom *a'''* form a core-box which is open at its deeper end, and thus communicates with a square through hole 4 in the pattern A, (see figs. 1 3 6 and the dotted lines *z z* in fig. 4.)

The temporary stopper B is a plate of the same thickness as the pattern-plate A, and has two elevated portions *b' b''*, one of which, *b'*, fits against and closes the open end of the core-box *a'' a'''*, while the flat part of the stopper B fits into and closes the square hole 4 in the pattern-plate A, and at the same time fitting flush with both the upper and under sides of said pattern-plate, (see figs. 1 and 3,) the elevated portion *b''* serving as a handle for inserting and withdrawing the said stopper.

The indenting-slide C has, on its under side, a flat portion, *c'*, which corresponds in width with that of the square hole 4 in the pattern-plate A, but is as much shorter as the length of the projecting indenting-tongue *c''* requires, to allow of said slide C being readily applied downward into the square hole in A.

When so applied, it rests on flanges 3 3 3, so that it can be easily slid forward and backward on the pattern-plate A with its flat under side *c'* and the under side of its tongue *c''* flush with the face side of the said pattern-plate A.

The tongue *c''* corresponds nearly, in its width, with the width of the cavity *a'*, so that, when the implement is slid forward, the said tongue *c''* will enter the sand-core in the cavity *a'*, and thus produce the indentation necessary for forming the projection in the lifter-cavity of the lid to be cast.

The upper side of this indenting-slide C is provided with two upward projections 5 and 6, one of which, 5, abuts against and closes the open end of the cavity *a'* when the implement has been pushed forward to make the indentation in the said core, (see figs. 4 and 6;) and the other projection, 6, serves as a handle for inserting, operating, and removing the implement from the pattern A.

Operation.

The pattern is molded with the stopper B inserted in the square hole 4 thereof, as represented in figs. 1 and 3. The flask is then packed, the stopper B lifted out, and the indenting-slide C put in its place and pushed forward, so as to cause its tongue *c''* to make the required indentation in the green-sand core in the cavity *a'*, then slipped back to its first position and lifted out, and, finally, the pattern A withdrawn, and the flask closed for the well-known casting operation.

It will be seen that as the stopper B and the indenting-slide C are separate from each other, and both of them detachable from the pattern-plate A in using, the difficulty arising from the entrance of sand in choking or obstructing the operation of any of the permanently-attached indenting-slides in use, cannot occur in the use of this invention.

The devices herein set forth are also more simple and inexpensive of construction than any other detachable device or implement in use, while they are equally effective for the purpose.

Claim.

I claim as my invention—

The stopper B and the indenting-slide C, constructed to operate, respectively, in combination with the open cavity *a'* and the communicating-hole 4 in the pattern-plate A, substantially as and for the purpose hereinbefore set forth and described.

SAMUEL SMITH.

Witnesses:

BENJ. MORISON,

F. P. NICHOLSON.