D. WALTHER.

Molding Instrument.

No. 165,633. Patented July 13, 1875.

Fig. 1.

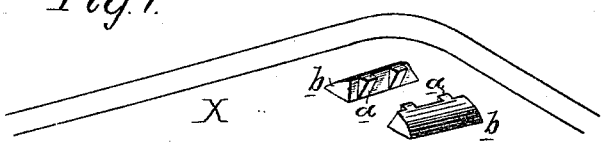


Fig. 2

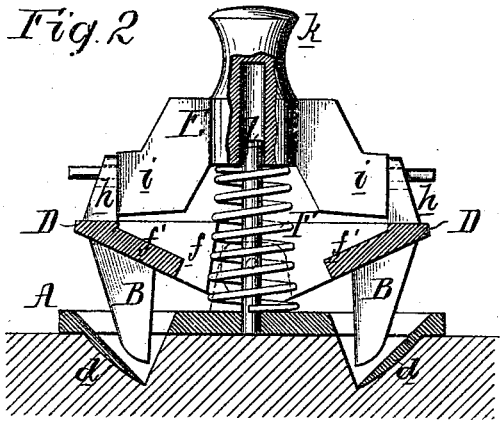


Fig. 4.

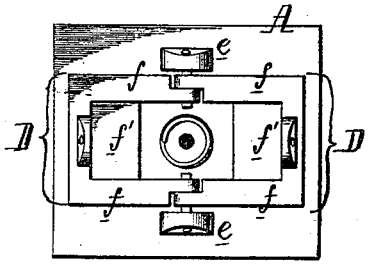


Fig. 3.

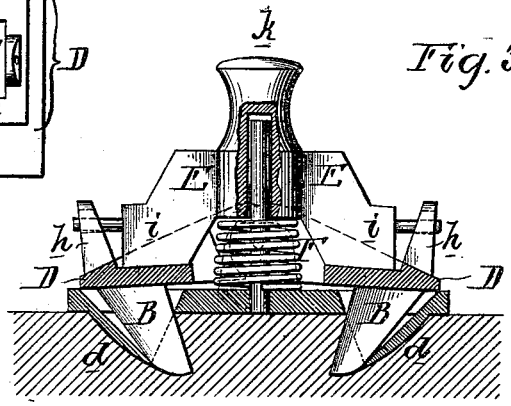
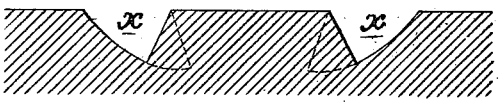


Fig. 5



Witnesses,
Harry Smith
Hubert Howson

Daniel Walther
by his Attorneys,
Howson and Sons

UNITED STATES PATENT OFFICE.

DANIEL WALTHER, OF READING, PENNSYLVANIA.

IMPROVEMENT IN MOLDING INSTRUMENTS.

Specification forming part of Letters Patent No. **165,633**, dated July 13, 1875; application filed May 7, 1875.

To all whom it may concern:

Be it known that I, DANIEL WALTHER, of Reading, Pennsylvania, have invented an Improved Molding-Instrument, of which the following is a specification:

The object of my invention is to construct a simple, cheap, and effective instrument for forming in a mold for casting the bottom plate of a stove, recesses which, when the plate is cast, form foot-retaining lugs on the said bottom plate; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the under side of a portion of the bottom plate of a stove, showing the character of the foot-retaining lugs; Figs. 2 and 3, vertical sectional views in different positions of my improved instrument for molding the same; and Fig. 4, a sectional plan on the line 1 2.

In that class of foot-retainers for stoves shown in the perspective view, Fig. 1, the dovetailed projection on the top of the foot fits between and is retained by lugs *a*, projecting from ribs *b*, formed on the bottom plate X of the stove, and it is to facilitate the formation of these lugs *a* that my invention is designed. A is the base of the instrument, on the under side of which are formed two projections, *d d*, which are recessed in order to allow for the passage of plates B, carried by two hinged frames, D, pivoted to studs *e* on the base-plate, each frame D consisting of two opposite arms, *f*, and a connecting-plate, *f'*. On the top of each frame D, near its outer edge, is formed a stud, *h*, to an opening in which is adapted a pin on the end of one of the arms *i* of a frame, E, which is maintained in an elevated position, as shown in Fig. 2, by the pressure of a spring, F. The frame can be depressed, however, by pressing upon a knob, *k*, a central pin, *l*, attached to the base-plate of the instrument, and adapted to a central opening in the frame E, serving to steady and guide the latter during its vertical movements.

The mode of using the above-described instrument is as follows: The surface of the mold is in the condition shown in Fig. 5, recesses *x x* having been formed in it by suitable projections on the pattern of the bottom plate. Into these recesses are introduced the projections *d d* on the base-plate A of the instrument, the various parts being in the position shown in Fig. 2. The frame E is now depressed, and so operates the pivoted frames D as to cause their plates B to be forced out into the body of the sand between the projections *d d*, (see Fig. 3,) thus forming openings in the same, which, when the plate is cast, produce the lugs *a*. (Seen in Fig. 1.) After the frame E has been depressed to its full extent, it is permitted to recover its former position, in order to withdraw the plates B from the sand and allow the instrument to be removed and applied to another portion of the mold. Owing to the fact that the frames D, which carry the plates E, are pivoted at their ends, the said plates will be caused to enter the sand at an angle, and will gradually compress the same as they are thrust into it, thus forming a recess with clear and well-defined edges.

I do not claim, broadly, the combination of a plate, recessed projections, and formers capable of being thrust into the sand from within said projections; but

I claim as my invention—

1. A molding-instrument in which are combined the plate A and its recessed projections *d* and the pivoted frames D, with their plates B, substantially as set forth.

2. The combination of the pivoted frames D, and their studs *h*, the vertically-guided frame E, and the spring F, all substantially as set forth.

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

DANIEL WALTHER.

Witnesses:

A. B. WARNER,

F. M. BANKS.