

(No Model.)

A. KENWORTHY.  
CLAMP FOR MOLDS.

No. 576,678.

Patented Feb. 9, 1897.

Fig. 1.

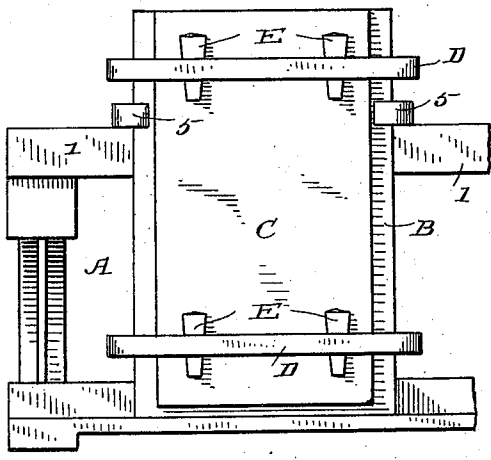


Fig. 2.

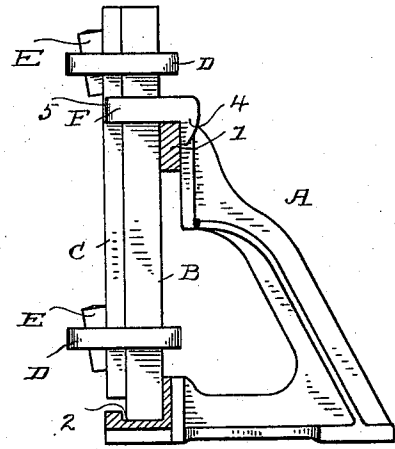


Fig. 3.

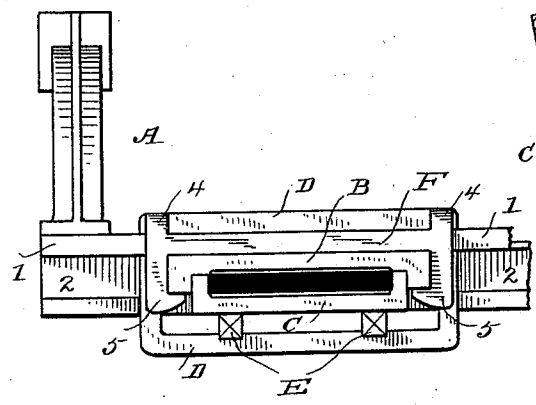


Fig. 4.

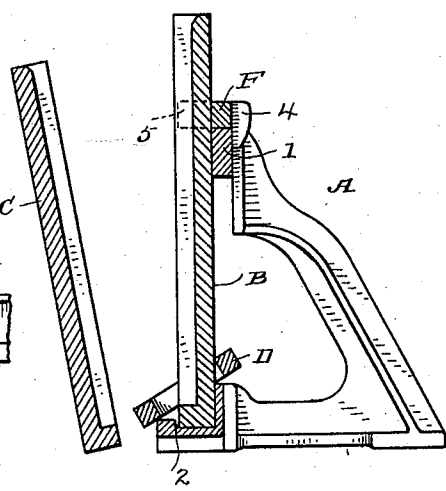


Fig. 5.

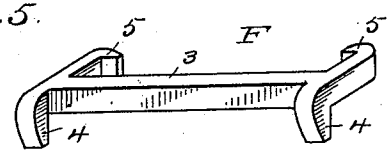
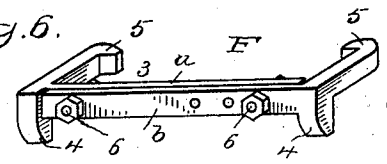


Fig. 6.



WITNESSES

H. A. Lamb.  
Susan V. Keley

INVENTOR

Abel Kenworthy  
By A. M. Wooster  
Atty.

# UNITED STATES PATENT OFFICE.

ABEL KENWORTHY, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE  
BENEDICT & BURNHAM MANUFACTURING COMPANY, OF SAME PLACE.

## CLAMP FOR MOLDS.

SPECIFICATION forming part of Letters Patent No. 576,678, dated February 9, 1897.

Application filed October 29, 1896. Serial No. 610,444. (No model.)

*To all whom it may concern:*

Be it known that I, ABEL KENWORTHY, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Clamps for Molds; and I do hereby 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.

My invention relates to apparatus for casting ingots and bars of brass, copper, and other metals, and has for its object to provide a clamp which will retain the mold in position upon a rack, will permit molds to be slid freely along the rack, and will permit the front of the mold to be detached from the back for dressing or any other purpose, leaving the back of the mold and the clamp in position on the rack.

With these ends in view I have devised the novel clamp of which the following description, in connection with the accompanying drawings, is a specification, letters and numbers being used to designate the several parts.

Figure 1 is an elevation of one end of a rack, showing the parts of the mold fastened together in the ordinary manner by bands and wedges and a mold held in a vertical position on the rack by one of my novel clamps; Fig. 2, a view of the mold and clamp as seen from the right in Fig. 1; Fig. 3, a plan view corresponding with Figs. 1 and 2, except that the upper band and its wedges are removed; Fig. 4, a section of the rack, clamp, and parts of the mold and the lower band, showing the manner in which the front of the mold is detached from the back for dressing or for any purpose whatever; and Figs. 5 and 6 are perspectives of different forms of my novel clamp, the form illustrated in Fig. 6 being extensible.

A denotes a rack which may be of any ordinary or preferred construction. The rack is ordinarily made long enough to accommodate a number of molds and is provided with a bar 1, which is in practice made vertically adjustable to accommodate different heights of molds and to which the back of the mold is secured by my novel clamp. I have shown

the rack as provided with a groove 2, in which the bottom of the mold rests, and have shown the rack as arranged to hold the mold vertically, but the mold may of course be inclined, if preferred.

B denotes the back of a mold of ordinary construction; C, the front of the mold; D, bands of ordinary construction, and E wedges which are ordinarily placed between the front of the mold and the bands to retain the two parts of the mold in position.

F denotes my novel clamp, which consists of a longitudinal bar which I have indicated by 3, lugs 4, which extend downward parallel with each other from bar 3 and are adapted to engage part 1 of the rack, and hooked arms 5, which are adapted to engage the front side of the back of the mold. These arms extend from the bar 3 in the same plane therewith, and the hooks extend toward each other and in a direction substantially at a right angle with the lugs 4. The said hooks and lugs have smooth bearing-surfaces; that is, they are free from projections which would interfere with the hooks being slid up along the mold or the entire clamp being slid along the bar or rail 1 of the rack.

In Fig. 6 I have shown a form of my novel clamp in which bar 3 is made extensible, said bar in this form consisting of two parts *a* and *b*, each of which is made integral with one of the hooked arms, said parts being locked together by bolts 6, which pass through holes in parts *a* and *b*.

The use of my novel clamp in casting will be readily apparent from the drawings. In Figs. 1 and 2 the mold is in position for the pouring of metal. In order to remove an ingot and to dress the mold, it is necessary, of course, to detach the front of the mold from the back. The back of the mold, however, is not removed from the rack. The operator removes the wedges and the upper band, then removes the wedges from the lower band, and allows the lower band to drop down, as in Fig. 4. The front of the mold may then be removed, leaving the back of the mold and the clamp in position on the rack. After dressing the parts of the mold the front is placed back in position, the lower band is raised and secured in place by wedges, and

then the upper band and wedges are placed in position, as clearly shown in Figs. 1 and 2. The mold is then ready for use again.

Having thus described my invention, I  
5 claim—

1. The combination with a mold-rack having a bar or rail to support the back of the mold, of a clamp adapted to rest on and slide along said bar and provided with a forwardly-  
10 projecting hook at each end, the two hooks being connected together only at the back of the mold whereby the front of the latter is unobstructed.

2. A clamp for retaining a mold in position on a rack, consisting of a bar 3 having  
15 lugs 4 parallel with each other and extending downward from said bar, and having hooked arms 5 extending from said bar in the same plane therewith and provided with hooks extending toward each other, the bearing-sur-  
20 faces of the lugs and hooks being free from

projections whereby they are adapted to be slid or moved along the engaged portions of the mold and rack.

3. A clamp for retaining a mold in position on a rack, consisting of a longitudinally-adjustable bar 3 having lugs 4 parallel with each other and extending downward from said bar, and having hooked arms 5 extending from said bar in the same plane therewith and provided with hooks extending toward each other,  
30 the bearing-surfaces of the lugs and hooks being free from projections whereby they are adapted to be slid or moved along the engaged portions of the mold and rack.  
35

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

ABEL KENWORTHY.

Witnesses:

E. L. FRISBIE, Jr.,  
F. S. LEWIS.