(No Model.)

R. ANDERSON.

CHILL MOLD FOR SASH WEIGHTS.

No. 333,191. Patented Dec. 29, 1885.

Fig. 1.

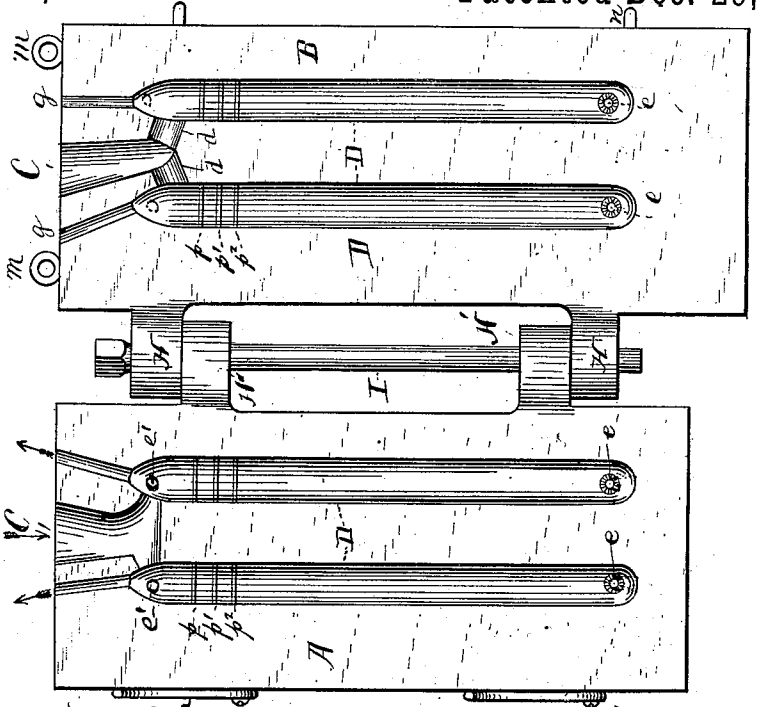


Fig. 2.

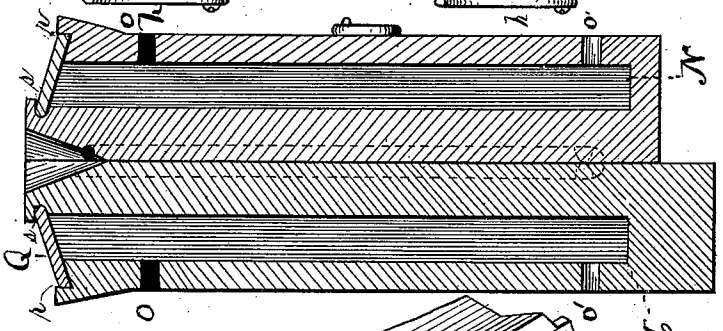
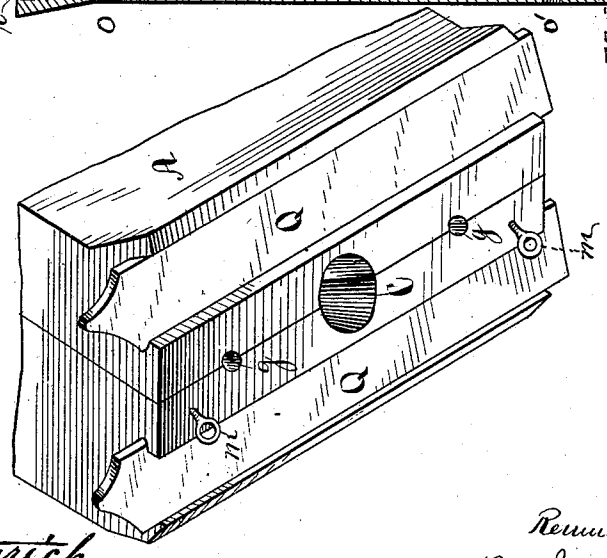


Fig. 3.



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UNITED STATES PATENT OFFICE.

REMUS ANDERSON, OF URBANA, OHIO.

CHILL-MOLD FOR SASH-WEIGHTS.

SPECIFICATION forming part of Letters Patent No. 333,191, dated December 29, 1885.

Application filed August 18, 1884. Serial No. 140,853. (No model.)

To all whom it may concern:

Be it known that I, REMUS ANDERSON, a citizen of the United States, residing at Urbana, in the county of Champaign and State of Ohio, have invented certain new and useful Improvements in Combination Chill-Mold for Casting Sash-Weights, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to molds for casting sash-weights. The object of the device is to provide a mold that is quickly chilled, can be easily and quickly filled and emptied, and the weights formed be uniform in size and smoothly finished. Such a mold is shown in the accompanying drawings, and its peculiar construction and operation hereinafter fully set forth in the specification.

In the drawings, Figure 1 is an elevation of the chilled mold; Fig. 2, a vertical section of same, and Fig. 3 a top perspective view of the mold.

The mold consists of two pieces, A B, provided with lugs or hinges H H', united by a bolt, I, so that the two parts may swing back and forth. One side—A, for instance—is provided with pivoted hooks *h*, which turn down over pins *n* on the opposite side, so as to hold the parts together when the mold is being filled. Each side has one or more permanent "impressions" or chambers, D, to receive the molten metal, such impressions conforming in shape to a sash-weight. A single gate or sprue, C, leads to the impressions D through the channels *d*, both channels opening into the sprue. Air-vents *g* lead from the top of the mold to the chambers for the ready escape of air. Each impression D has near its bottom and integral with the mold a pin, *e*, (shown in section, Fig. 2,) at right angles to the longitudinal axis of the depression to form the cord-eye. Similar pins, *e*, are also preferably made near the upper end of the impressions, so as to provide an eye at each end of the weight. One or more ridges, *p p' p²*, are formed in the impressions near the top (or bottom) which leave slight depressions in the weights, for the following purpose: The impressions D are generally made of a length for a certain size weight—say, ten pounds. Now, if an order for eight-pound weights be received, or it is desired to have in stock a quantity of such weights, the ten-pound weight as soon as it falls from the mold is struck with a hammer at ridge *p* and broken off evenly at that point. If a seven or six pound weight be required, then the original weight is broken at *p'* or *p²*. This avoids the necessity of manufacturing a special mold for each required size of weights. Moreover, the weight when broken, as described, has no ragged or uneven edges where broken. If a heavier weight—such as sixteen, eighteen, or twenty pounds—be required, then a weight, such as described, can be secured to one of the ten-pound weights. In this case both cord-eyes *e e'* are utilized. It will thus be seen that by this construction any desired weight can be obtained without guess-work or mutilation of the weights.

The sides A B are made of cast-iron, and, in order to prevent them from becoming heated when the molten iron is poured, I have provided a water back or chamber, M N, at each side, which is kept filled with cold water. This prevents expansion of the sides and tends to cause the metal weight to cool rapidly and at the same time contract uniformly, thus preventing cracks or seams and insuring uniformity in the structure.

The single sprue with the double inlets *d* serves a useful purpose. If the water in the chamber becomes heated so that its effect is lost, or, in case no water is in the water-chamber, the metal can be poured, and the expansion of the two sides A B or in the two impressions on each side, remain uniform. If the metal were poured first into one and then the other of the impressions D through separate sprues, the first one to receive the molten metal would expand so quickly as to cause the weight formed in the next one to become warped.

Water is introduced into and discharged from the chambers by means of the openings *o o*.

The upper end of each piece A B is shouldered, as at *r s*, to form guides for a sliding cover, Q, which prevents particles of molten metal falling into the water-chambers.

It is obvious that the cover may be hinged to either side and be swung back.

The molds may be supported in any con-

venient manner, but I prefer to hang them on the water-supply pipe, and for this purpose screw-eyes *m* are placed on the top of the mold, the water-pipe passing through them.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a chilled mold for sash-weights, the combination of the hollow sides A B, having the upper grooves, *r s*, the sliding cover, the impressions D, projections *p*, pins *e*, single central sprue and inlets therefrom to the impressions, lugs H H, and fastening devices for holding the sides when closed, as set forth.

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

REMUS ANDERSON.

Witnesses:
J. W. BYLE,
T. CHOWNING.