(No Model.)

W. S. PLATT.

MOLD FOR CASTING METAL.

No. 331,437. Patented Dec. 1, 1885.

Fig 1

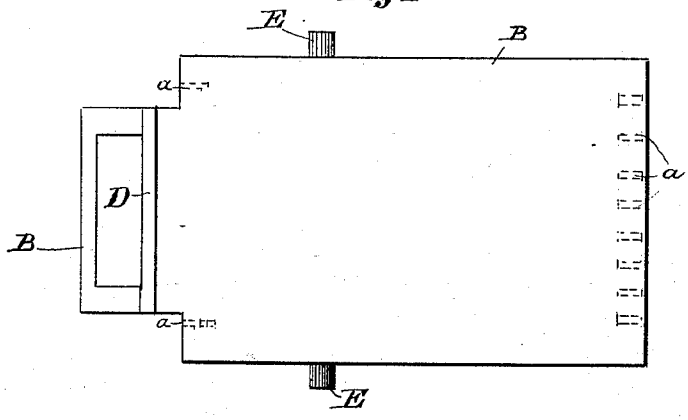
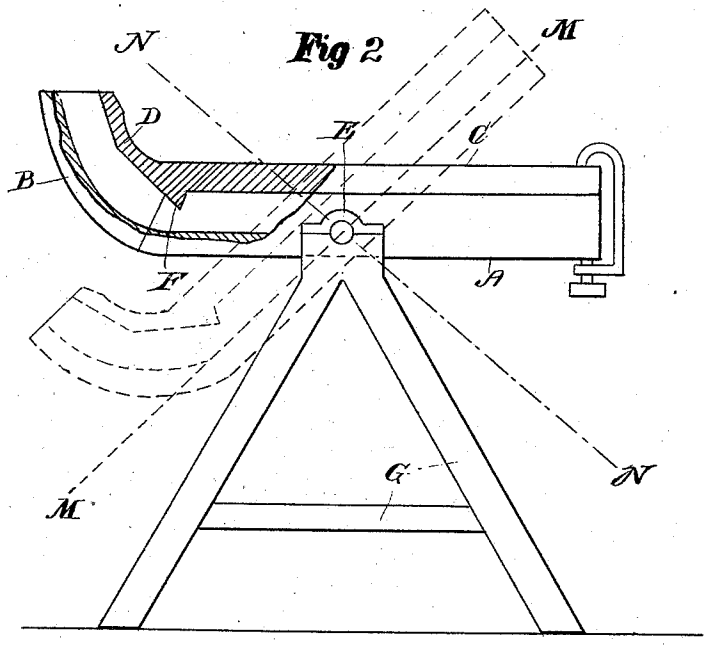


Fig 2



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM S. PLATT, OF WATERBURY, CONNECTICUT.

MOLD FOR CASTING METAL.

SPECIFICATION forming part of Letters Patent No. 331,437, dated December 1, 1885.

Application filed April 9, 1885. Serial No. 161,686. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. PLATT, 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 Molds for Casting Metal; 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 certain novel and useful improvements in molds for casting metal, but more especially to molds for casting zinc ingots, battery-plates, and the like, and has for its object to provide a device of this description in which the ingots or plates cast will be exceedingly homogeneous in structure, free from blow-holes or honey-comb and from dross or other impurities which were upon the surface of the molten metal; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully explained, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction, I will describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of a mold constructed in accordance with my improvement, vent-holes being shown in dotted lines; and Fig. 2, a side elevation of a mold supported on its trunnions and partly in section.

A is the body of the mold, having the end B thereof curved upward or extending upward at an angle to the body of the mold, and C is a cover fitting closely upon the top of A and curved at D to correspond to the curve of said body. The cover is secured in place upon the mold in any desired manner, as by clamps, one of which is shown in Fig. 2. In the upper edge of the body of the mold, both at its lower end and at the upper end, at either side of the projecting mouth, are shallow grooves *a* (shown in dotted lines) extending the whole width of the metal forming said edge, and adapted, when the cover is secured in place, to form vent-holes, through which the air within the mold may readily escape before the advancing mass of molten metal. The vents at the forward end of the mold are found expedient on account of the metal filling the throat during the pouring, and especially when the mold is almost full. The upward curving of the two portions B and D forms a mouth, and this, at its point of entrance to the body of the mold, is contracted to form a throat by means of a downward projection, F, from the cover. E are trunnions secured to or formed integral with each side of the body of the mold, and these are adapted to be supported upon a stand, G, so that the mold may readily be turned thereon.

In using my improvement the workman in beginning to pour the metal turns the mold upon its axis to substantially the plane indicated by the dotted lines M M of Fig. 2, with the mouth portion thereof below the bottom of the mold and pointing upward, as shown in dotted lines at Fig. 2. On account of the angle at which the body of the mold stands the metal can only enter the mouth as far as the throat, and therefore collects at that point. Then, still continuing to pour as rapidly as possible, the workman slowly turns the mold upon its pivotal point, so that the fluid metal collected at the mouth of the mold and that subsequently poured travels down the mold in a solid mass. The advantage gained by this method will be readily understood, in view of the fact that in ordinary stationary molds the metal trickles down the sides, and small portions in cooling quickly are not incorporated with the other portions which follow. When sufficiently filled, the mold is turned to a plane substantially indicated by the line N N, and left, that the metal may congeal.

The purpose of the contraction at the throat formed by the depending projection F is twofold: that the complete casting may be more readily severed from the metal which has hardened outside the throat, and also to exclude any dross which was upon the surface of the fluid metal when first introduced within the mouth of the mold.

I do not desire to be limited in my invention to any particular form of mold, nor to the precise details of construction shown in the drawings, for these are not vital in my invention.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. A mold for casting metal, having a curved mouth-piece and contracted throat, and trunnions upon either side thereof, whereby it may be supported and whereon it may be turned, substantially as set forth.

2. A mold for casting metal, having a mouth curved upward and contracted at its opening into the body of the mold, pivotal points upon either side thereof, and vent-holes at both ends, substantially as described.

3. A mold for casting metal, pivotally hung and provided with a mouth set at an angle or curve to the body of the mold, whereby the lower end of the mold may be elevated above the mouth thereof, and metal is retained in the mouth while the mold is so inverted, substantially as set forth.

4. In a mold of the character described, having a curved mouth and pivotally hung, vent-holes at the upper and lower ends of the mold, whereby the air may escape before the incoming metal, substantially as specified.

5. The combination of the body of the mold A, curved upward at B, and having trunnions E and vents *a*, with the cover C, turned upwardly at D and adapted to be secured to the body of the mold, substantially as set forth.

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

WILLIAM S. PLATT.

Witnesses:
S. S. WILLIAMSON,
W. T. HAVILAND.