Letsome T. Wooster's Impvt in Flasks for Casting Brass & Similar Metals.

118174

PATENTED AUG 15 1871

fig. 1.

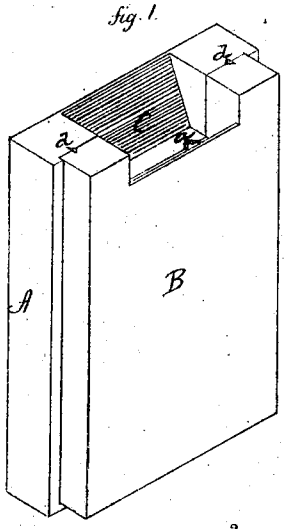


fig. 3.

fig. 2

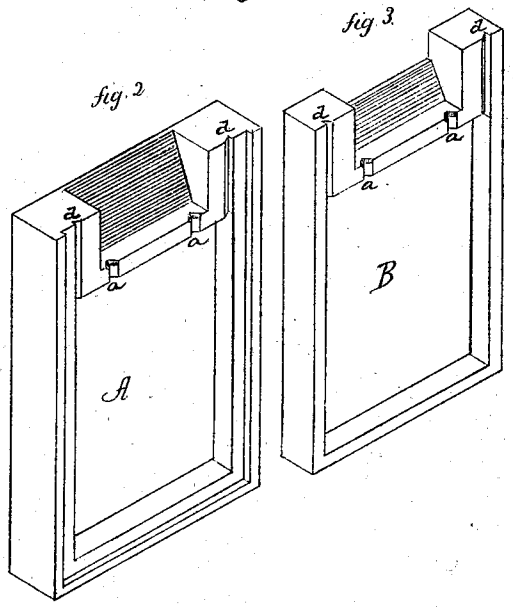
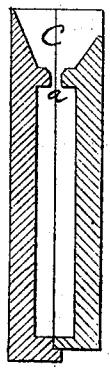


fig. 4



Witnesses.
John H. Shumway
A. J. Lebbets

Letsome T. Wooster
Inventor
By his Atty.
John E. Earle

UNITED STATES PATENT OFFICE.

LETSOME T. WOOSTER, OF ANSONIA, CONNECTICUT.

IMPROVEMENT IN PROCESSES FOR CASTING BRASS INGOTS.

Specification forming part of Letters Patent No. 118,174, dated August 15, 1871.

To all whom it may concern:

Be it known that I, LETSOME T. WOOSTER, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Flasks or Molds for Casting Brass and similar Ingots; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes a part of this specification, and represents, in—

Figure 1, a perspective view of the flask; Fig. 2, a perspective view of one part; Fig. 3, a perspective view of the other part; and in Fig. 4, a vertical central section.

This invention relates to an improvement in the construction of flasks or molds for casting brass, copper, and similar ingots.

In casting metals, when the metal is taken from the furnace and exposed to the air the surface instantly oxidizes, and in pouring this is kept back by any suitable instrument; but the fresh metal, in the act of pouring, (the flask used for casting ingots always being open at the top,) is again exposed, and, consequently, more or less oxidized. The result of this is that the metal when taken from the flasks is found to be oxidized upon the surface to such an extent as to require the removal of this surface. It will be understood that by the word ingots I mean plates which are cast preparatory to being rolled to produce sheets of metal. Upon such plates a pure surface cannot be attained until all the oxidized particles are removed, and with this removal more or less of the good metal will be taken, thus necessitating the loss of a large proportion of metal. Another difficulty in casting ingots arises from the fact that foreign substances which may be in the crucibles pass into the flask or mold with the metals.

To overcome these difficulties is the object of my invention; and it consists in the method or process, hereinafter described, for casting ingots by means of a flask constructed with a tunnel-shaped mouth, with one or more openings through the tunnel into the flask, so that in pouring the tunnel will be more or less filled with the molten metal, and the metal passing from the tunnel into the flask does not come in contact with the external atmosphere.

A is one part and B the other part of a flask, the lower part of which is constructed in the usual manner for casting plates preparatory to rolling. These flasks or molds are usually made of sufficient length and open at the top, so that the metal is poured directly from the crucible into the flask, which occasions the difficulties before referred to. To avoid this I close the top of the flask and form a recess, C, therein, as seen in Fig. 4, of a tunnel-shape, and from the bottom of this recess one or more perforations, *a*, lead into the flask. As a vent I form a small groove, *d*, from the top down into the flask.

These flasks are first oiled preparatory to pouring, and, standing in an upright position, the molten metal is poured into the tunnel-shaped recess C so as to quickly fill the said recess, thus covering the perforations *a*. Through these perforations the molten metal runs into the flask, the tunnel being more or less filled with fresh metal. The oxidized portion remains in the top of the tunnel, and that which runs through into the flask not being exposed to the atmosphere is in no way affected thereby, and all foreign substances in the metal, naturally rising, lie upon the surface of the metal in the tunnel, and this tunnel is kept full to a greater or lesser extent until the flask is filled; hence, as no oxidization takes place in the flask, the plate comes from the flask with a free and pure surface, ready for the rolls. The oil within the flask ignites so soon as the hot metal strikes it. The flame and gas passing through the vent *d* with great force make it impossible for the air to remain within or enter into the flask.

I claim as my invention—

The method herein described for casting ingots by means of a flask constructed in the manner herein set forth.

LETSOME T. WOOSTER.

Witnesses:

EDWARD A. WADHAMS,

JOHN D. BALLOU.