W. J. ADAMS.

Casting Mold-Board.

No. 213,027 Patented Mar. 11, 1879.

Fig. 1.

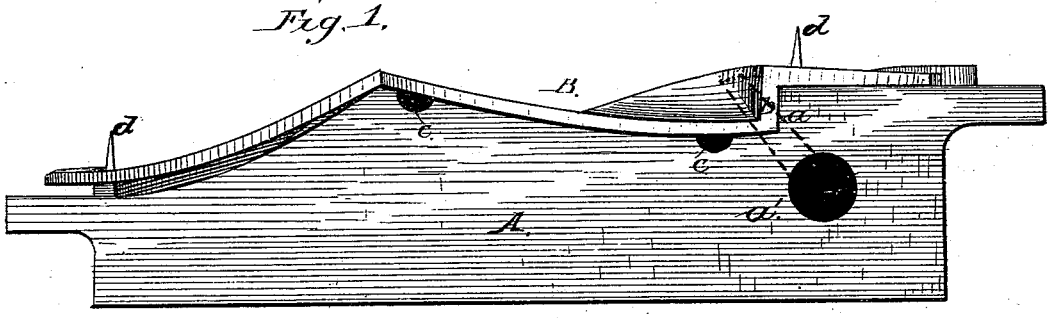


Fig. 2.

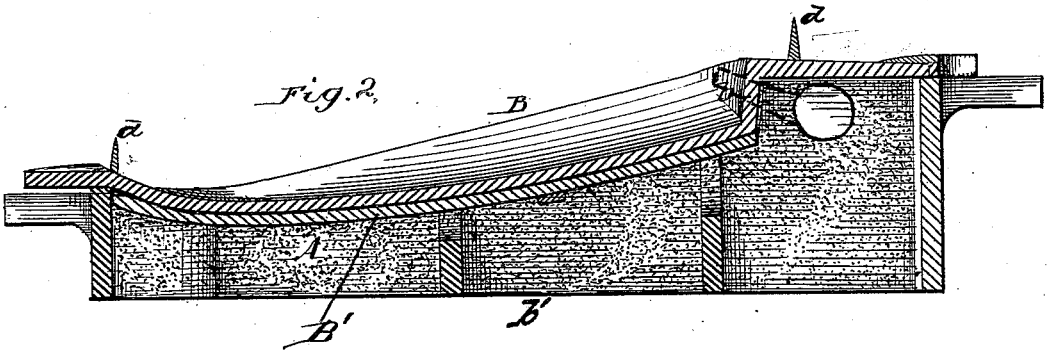
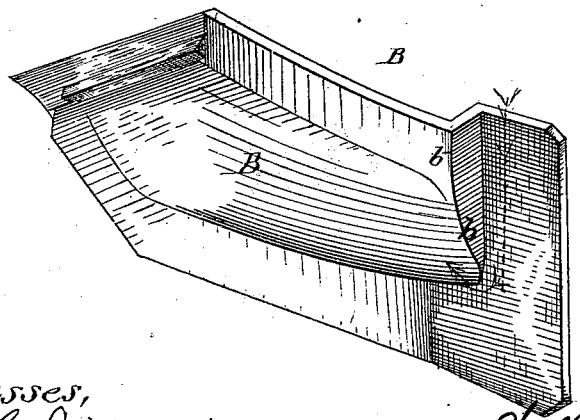


Fig. 3.



Witnesses,

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UNITED STATES PATENT OFFICE.

WILLIAM J. ADAMS, OF PLYMOUTH, INDIANA.

IMPROVEMENT IN CASTING MOLD-BOARDS.

Specification forming part of Letters Patent No. **213,027**, dated March 11, 1879; application filed December 7, 1878.

To all whom it may concern:

Be it known that I, WILLIAM J. ADAMS, of the city of Plymouth, in the county of Marshall and State of Indiana, have invented certain new and useful Improvements in Chilled Mold-Boards for Plows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a plan view of my improved flask for casting chilled mold-boards for plows. Fig. 2 is a longitudinal section thereof with the pattern in place, and Fig. 3 is a perspective view of the chill.

The same part in the several figures is designated by the same letter.

This invention relates to certain improvements in flasks for casting chilled mold-boards; and it consists in the providing of the chill at one end, upon the inner side, with an offset or shoulder tapered downwardly toward the bottom of the flask, substantially as hereinafter more fully set forth.

In the accompanying drawings, A refers to the flask, provided at each end with handles for manipulating the same. One side of the flask is boarded, as at *b'*, Fig. 2, in the usual way, to confine the sand placed therein and used in molding. The other side of the flask is covered by the chill B adapted to conform to the shape it is intended to impart to the proposed mold-board. The gate end of the flask A is shouldered, as at *a*, in proximity to the gate-opening *a'* in the upper side of the flask. The chill B is provided at that end next to the gate end of the flask A, upon its inner side, with an offset or shoulder, *b*, tapering downwardly toward the bottom of the flask A, as shown in Fig. 3. B' is the pattern, packed against the chill B, as seen in Fig. 2, and into the cavity formed or produced by the removal of which the molten metal is passed, after the causing of the said metal to pass down into the flask, as hereinafter more fully set forth.

As the molten or liquid metal is poured into the flask through the gate *a'*, it will be seen that the flowing metal will be prevented, by reason of the shoulder or offset *b*, from coming immediately into contact with the chill, but will be caused to pass down to the bottom of the mold-chamber of the same, which will allow the body of the molten metal to settle down and rise and flow over the chill with the sediment or extraneous particles, such as slag or sand, resting upon its upper surface, to be forced ahead of the rising metal, and be driven off by the escaping gas through the vents or apertures *c c*.

By causing the metal to take this course it will be observed that the mold-board will be formed or cast free of impurities of the character above referred to, which, when removed or knocked out in finishing the mold-board, would leave the latter in what is termed in the art a "honey-combed" state.

In addition to obviating these disadvantages, I also, by my improvement, am enabled to cast the mold-board throughout of entirely pure or solid metal, thereby producing a superior article, and one possessing greater strength, and capable of receiving a better finish than the mold-board cast in the old way.

The chill may be obtained, among other ways, by applying any cooling agent to the chill B.

d d are projections upon the outside of the chill, through which holes are made for the insertion of a rod or bar with which to lift the chill from the flask, to permit of the removal of the contents of the latter.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

In a flask for casting mold-boards for plows, the chill B, provided at one end, upon its inner side, with an offset or shoulder, *b*, tapered downwardly toward the bottom of the flask, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM J. ADAMS.

Witnesses:

N. S. WOODWARD,

J. F. TROWBRIDGE.