G. WIARD.

Casting Plow-Points.

No. 165,046. Patented June 29, 1875.

Fig. 1.

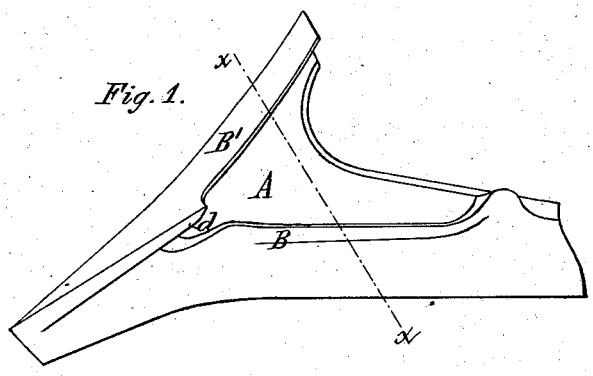


Fig. 2.

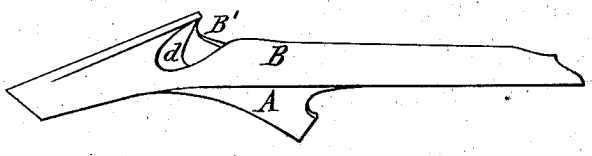


Fig. 3.

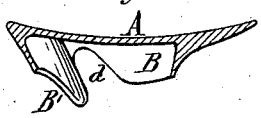
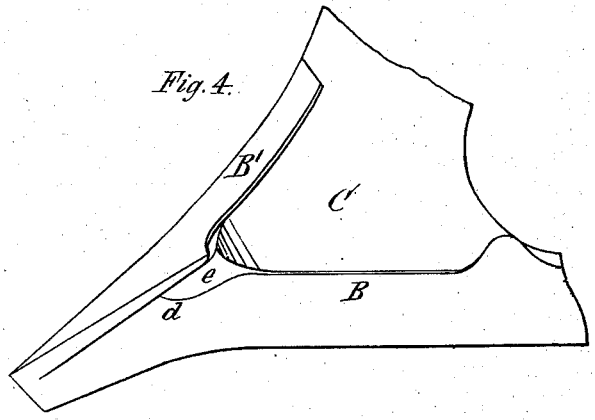


Fig. 4.



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Witnesses

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THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

GEORGE WIARD, OF EAST AVON, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO C. W. HOUGH, OF SAME PLACE.

IMPROVEMENT IN CASTING PLOW-POINTS.

Specification forming part of Letters Patent No. **165,046**, dated June 29, 1875; application filed May 11, 1875.

To all whom it may concern:

Be it known that I, GEORGE WIARD, of East Avon, in the county of Livingston and State of New York, have invented certain Improvements in Plows, of which the following is a specification:

My invention relates more particularly to that class of cast-iron plow-points which are provided on the rear side with two converging flanges, forming a socket for securing the lower end of the beam or mold-board in place.

Previous to my invention the molding and casting of these plow-points has been attended with considerable loss of time and material from the following causes: In molding these points the sand composing the wedge-shaped portion of the mold which forms the angular socket in the casting has to be rammed tightly, in order to render the tip of this portion sufficiently strong to resist the pressure of the gases and molten iron. When so packed the sand is apt to adhere to the pattern, in consequence whereof a portion of the tip is frequently detached from the mold in withdrawing the pattern, thus requiring the latter to be replaced, sometimes several times, before the mold is completed. As these plow-points have to be cast with the flanges downward, the escape of the air and gases from the chamber formed within the mold is so difficult and slow as to frequently prevent the molten iron from filling the mold, causing air-spaces in the casting, which render the same unfit for use. Furthermore, in pouring the molton iron into the mold, the former, in entering under the tip of the wedge-shaped portion, frequently raises or deranges the same, whereby the casting is spoiled.

The object of my invention is to remedy these defects; and it consists in constructing one of the flanges on the back of the plow-point near their point of intersection, with a notch or recess, which enables the mold to be formed with a corresponding bridge or support, which strengthens or braces the tip of the wedge-shaped portion of the mold, facilitates the molding, and furnishes an escape for the air and gases during the process of casting.

In the accompanying drawing, Figure 1 is a rear elevation of a plow-point provided with my improvement. Fig. 2 is a bottom edge view thereof. Fig. 3 is a section in line *x x*, Fig. 1. Fig. 4 is a rear view of the point with the lower end of the beam inserted in its socket.

Like letters of reference designate like parts in each of the figures.

A is the curved body of the plow-point, and B B′ the flanges arranged on its rear side, forming a socket for the reception of the lower end C of the beam in plows having iron beams, and of the mold-board in plows constructed with wooden beams. *d* is the notch or recess formed in the flange B at or near the point at which it meets the flange B′, as clearly shown in the drawing. The notch *d* is represented in the mold by a corresponding bridge of sand connecting the tip of the wedge-shaped portion of the mold with the sand on the outer side of the flange B. This bridge forms a brace or support for the tip of sand, firmly connecting it with the other parts of the mold, and preventing its being withdrawn with the pattern or deranged by the action of the air and gases or the inflowing molten iron, while at the same time it forms a communication between the different bodies of sand composing the mold, so as to permit a more ready escape of the air and gases confined and generated therein, thereby insuring the production of sound and perfect castings with facility and dispatch.

The end C of the beam or mold-board is preferably provided with a projecting extension or lip, *e*, fitting in the slot *d* of the flange B, and forming an additional fastening or connection between the beam or mold-board and plow-point.

What I claim as my invention is—

A plow-point provided on its rear side with flanges B B′ and notch *d*, substantially as and for the purpose hereinbefore set forth.

GEORGE WIARD.

Witnesses:

F. RAMSDEN,

ISAAC DIBBLE.