J. T. SPEER.
PLOWS.

No. 195,668. Patented Sept. 25, 1877.

Fig. 1.

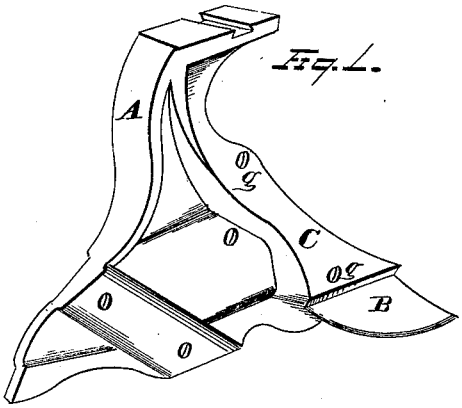


Fig. 3.

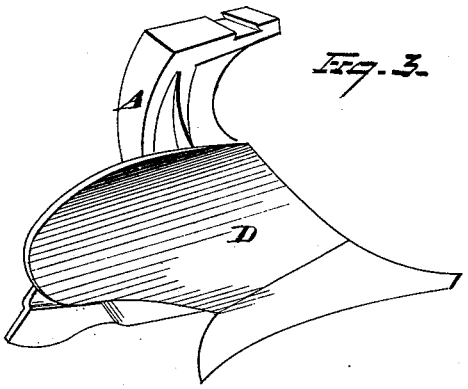


Fig. 2.

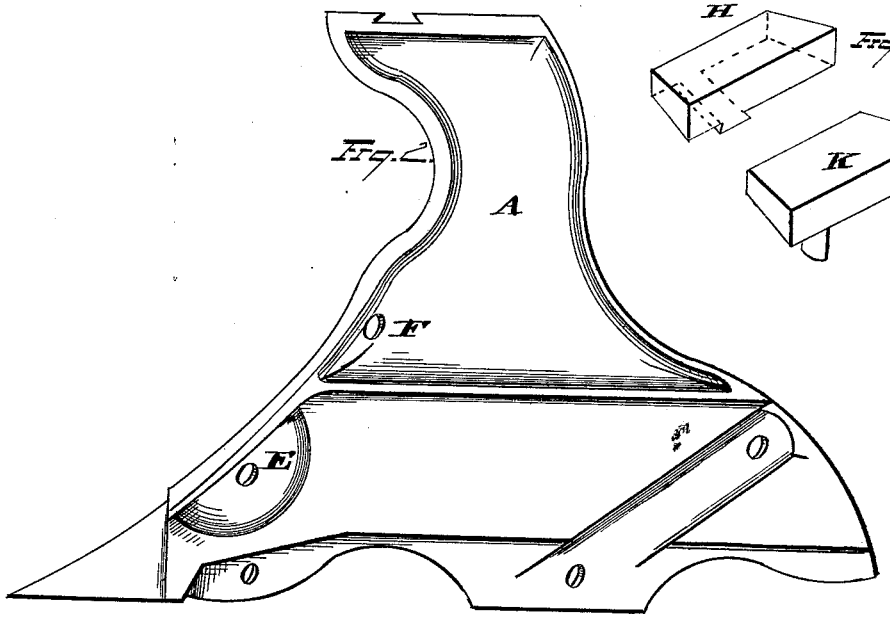
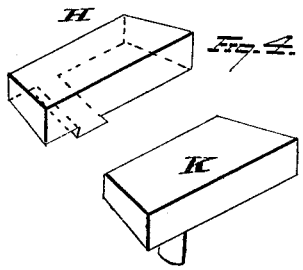


Fig. 4.



WITNESSES
E. A. D. Nottingham
A. W. Bright

INVENTOR
Joseph T. Speer.
By Leggett & Leggett.
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOE T. SPEER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **195,668**, dated September 25, 1877; application filed July 10, 1877.

To all whom it may concern:

Be it known that I, JOE T. SPEER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Plows; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in plows, and is designed to furnish a plow-standard adapted to be made in a two-part flask whose pattern, without section or division, can be made equal in its bearings to the ordinary standard or skeleton cast in a three-part flask.

According to my invention the standard is formed with a recessed bed for the share or point, adapted to receive the same in its entire bearing-surface, a continuous projection along its front edge, adapted to afford a continuous raised bearing for the mold-board, together with fastening bolt-holes made as follows: The land-side body of that portion of the standard constituting this continuous front-edge bearing is made recessed or open-worked, and within the openings so made bolt-holes for attaching the mold-board are suitably cored, the object being to secure the mold-board to the standard as near the land-side edge of the mold-board as is possible; the advantage consisting in protecting the parts from undue or unnecessary strain, which results in the instance of passing the bolts through a supporting rib or strip formed on the inner side of the standard, or on that side farthest from the land. In the latter case, in order to attach the parts, the bolts pass through the mold-board so far back from the cutting-edge, and to one side of the central line of draft, that a mechanical "moment" exists in favor of the force applied against the mold-board, and the latter is consequently weakened in its operation and resisting action.

By casting these recesses on the land-side of the standard, the cored holes for the mold-board bolts readily admit of securing the mold-board to the standard, so as to obviate the above-mentioned leverage disadvantage, while at the same time the mold-board has constant bearing throughout its length against the seat-projection along the forward edge of the standard.

Referring to the drawings, Figure 1 is a view, in perspective, of a standard embodying my invention. Fig. 2 is a view, in elevation, of its land-side. Fig. 3 shows the standard with the mold-board attached. Fig. 4 represents detail parts used in casting, as hereinafter described.

The standard A is formed with the seat B, suitable for receiving in recessed bearing the share or point of the plow, and conforming in its dimension to a share of any desired or special construction. Above this share-seat, and extending up the entire front of the standard for a suitable distance, is the forward-edge projection C, adapted to give a constant horizontally-inclined bearing to the mold-board D. It is of any desired curve or conformation, the object being only to furnish a continuous seating for the mold-board throughout its vertical length.

The land-side body of the standard is made open-worked, with the recesses or chambers E and F, giving room for securing the bolts *g*, which connect the mold-board with the standard. This allows the bolts to be passed through the mold-board as near its land-side edge as desired, and connects it with the standard in a secure and firm engagement.

The remaining body of the standard's land-side is also preferably made with the open-work, as shown, which both renders the plow light and reduces unnecessary stock. The seating for the land-side proper is also thus well formed, and all parts adapted for a close and accurate fitting, though these last-mentioned features may be omitted, as they are simply optional.

In Fig. 4 of the drawings I show certain devices used in molding the standard, and whose office is to the following effect: Instead of making the standard in two parts, or with a joint in the share-bed, I use the loose piece H, which is placed on top of the standard. In molding, this piece is first withdrawn from the sand, thereby allowing the pattern of the standard to be drawn or delivered diagonally. This delivers the under angle of the share-

bed, and the space occupied by said loose piece is filled up by the chill K, having a suitable core, which latter forms the hole for the beam-bolt.

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

A standard cast with the continuous front-edge projection, forming a raised bearing for the mold-board, the share-seat, adapted to receive the share in its entire bearing-surface, and the recesses surrounding the bolt-holes on the land-side of the standard, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 2d day of July, 1877.

JOE T. SPEER. [L. S.]

Witnesses:
F. C. DORRINGLA,
ORIN P. VAN METER.