

J. P. & J. E. PRUTZMAN & J. P. McINTYRE.
FLOW.

No. 177,000.

Patented May 2, 1876.

Fig. 1.

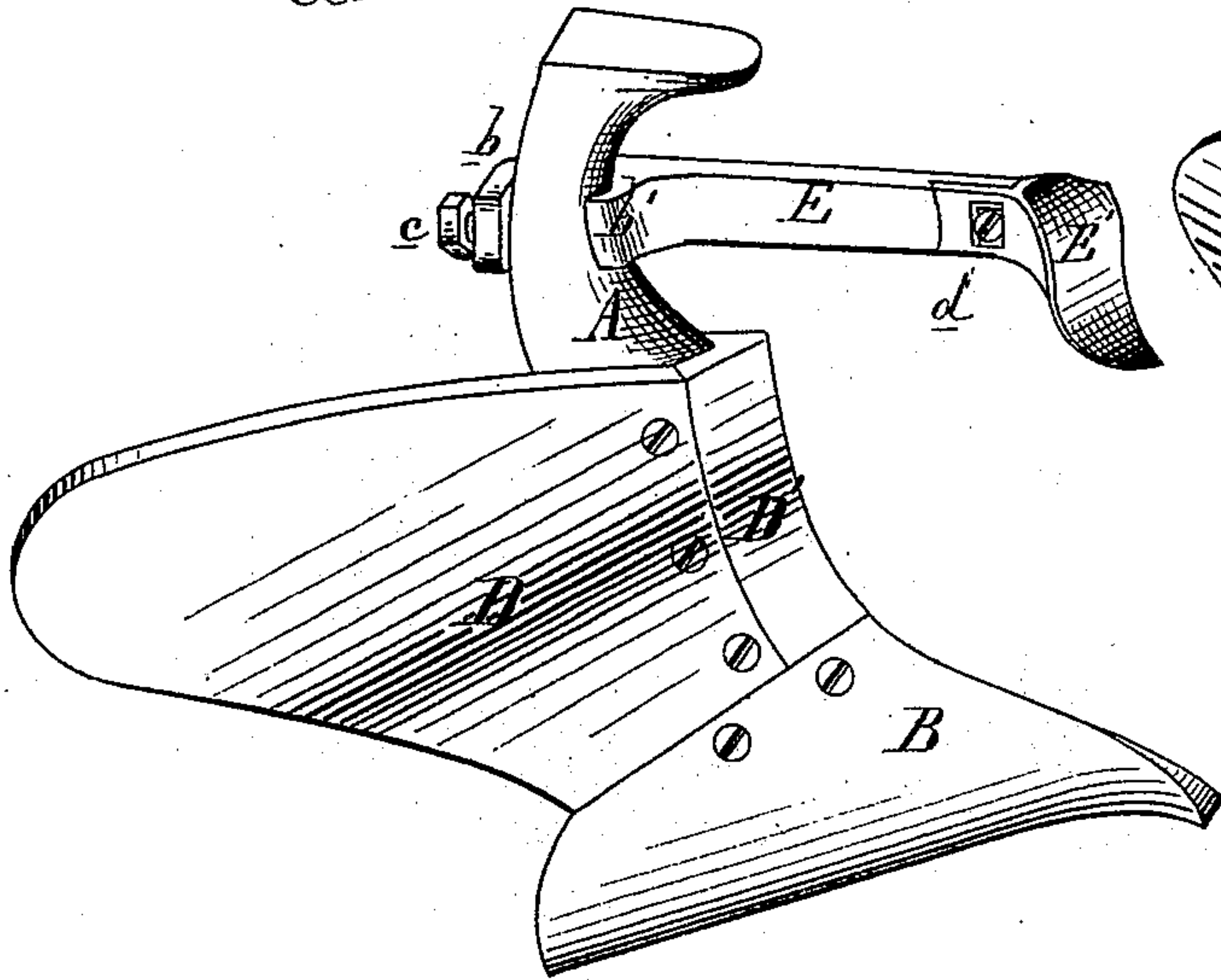


Fig. 3.

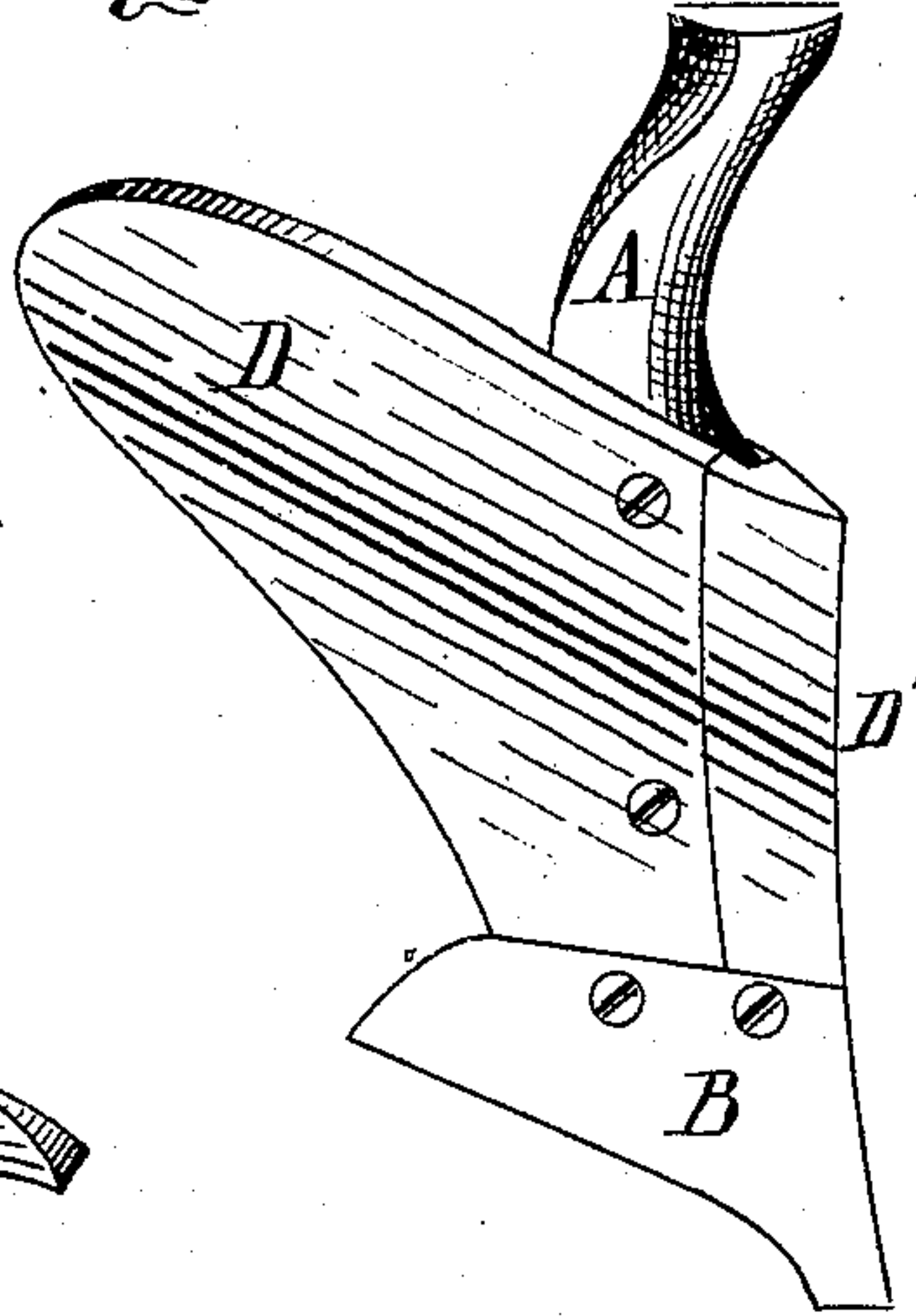
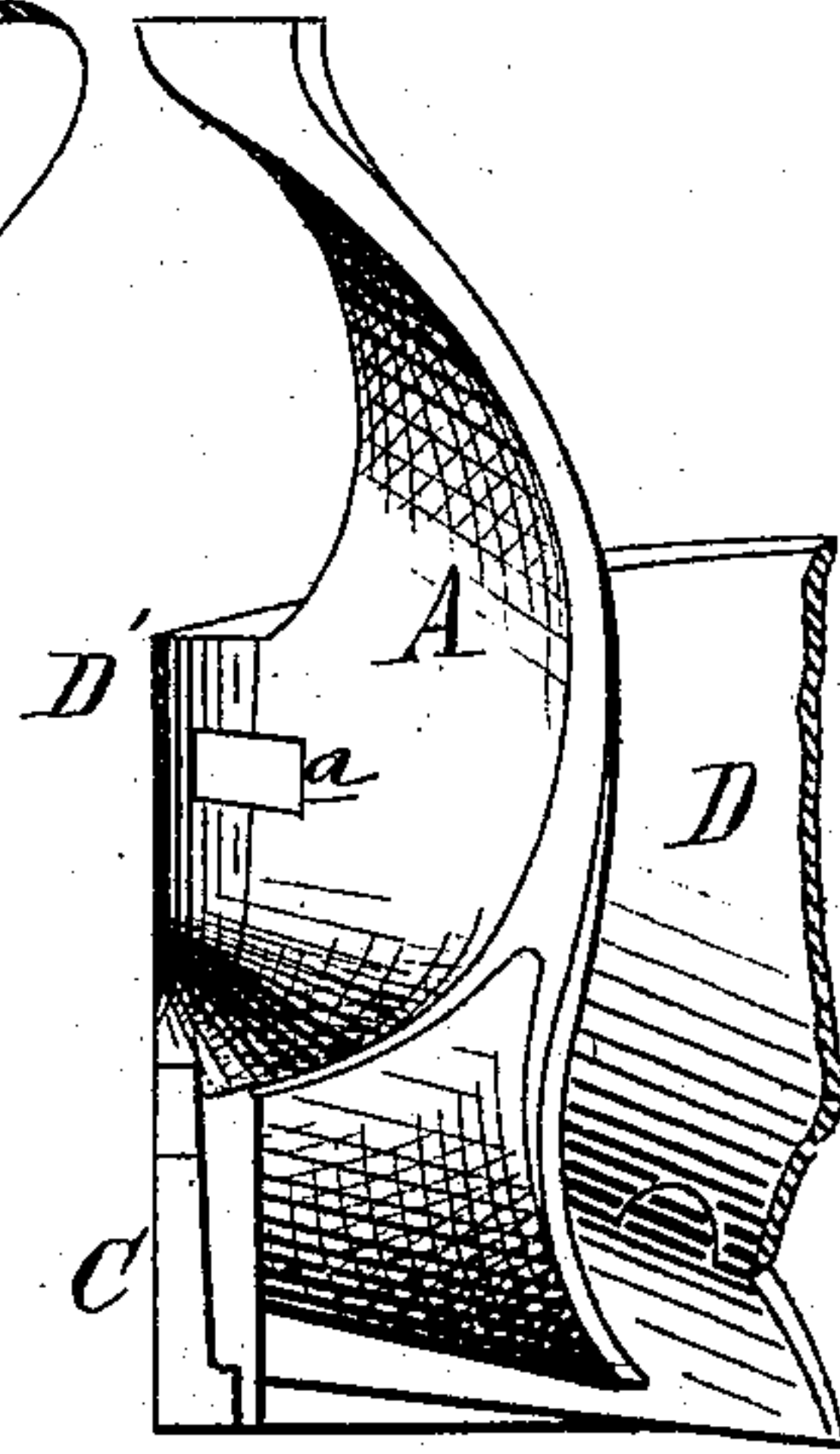
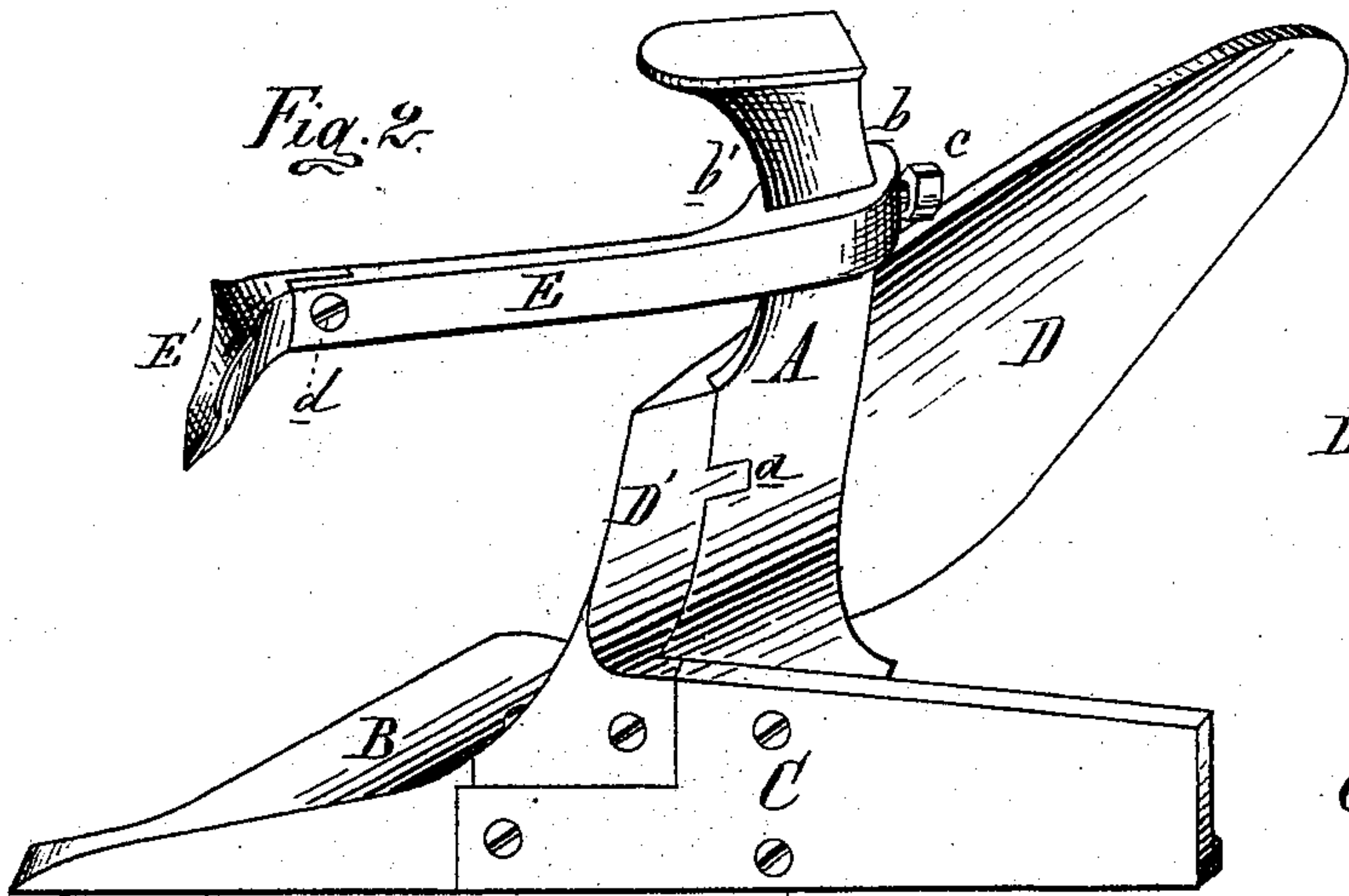


Fig. 4.



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PLOW.

No. 177,000.

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Fig. 5.

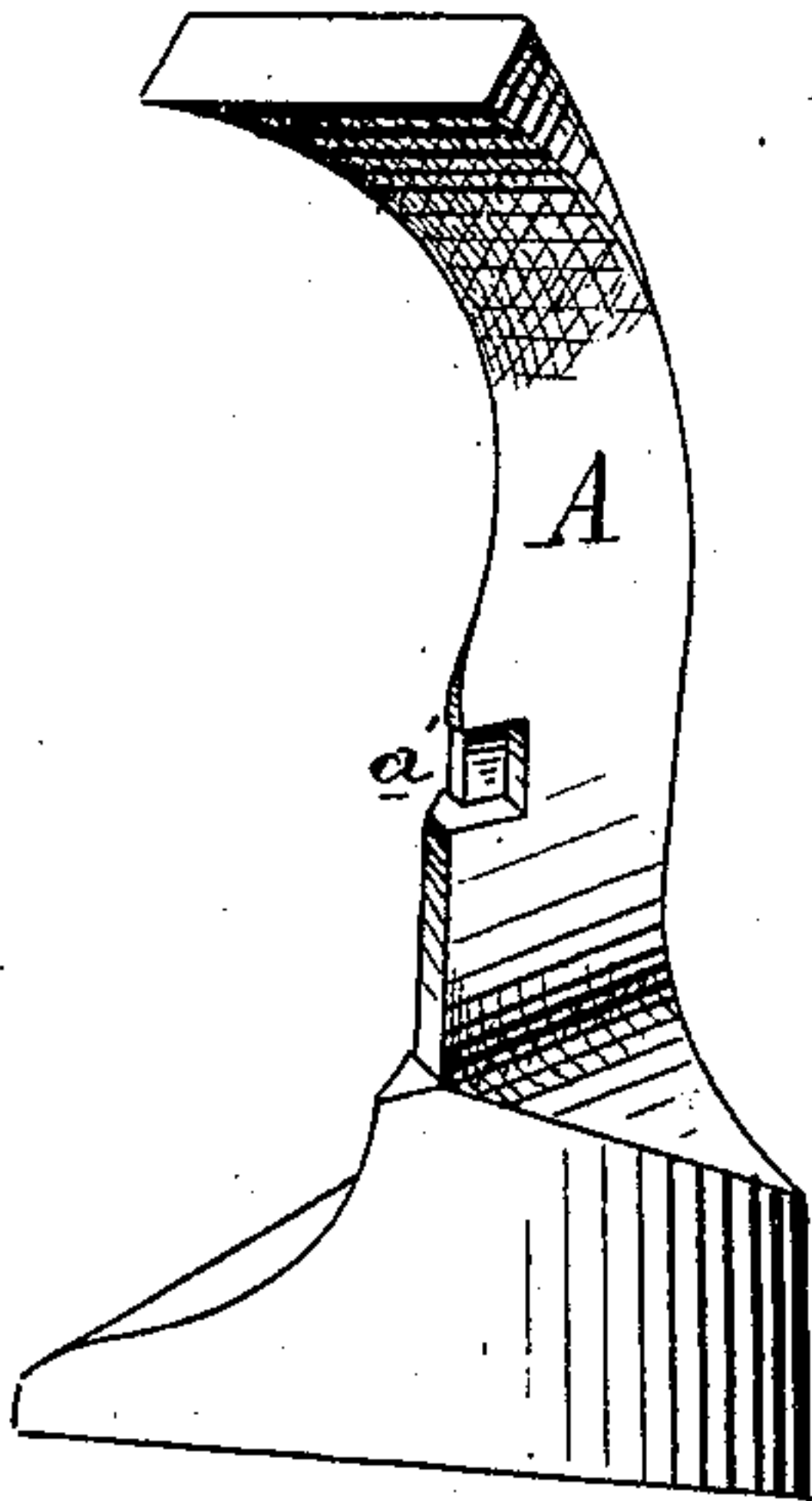


Fig. 6.

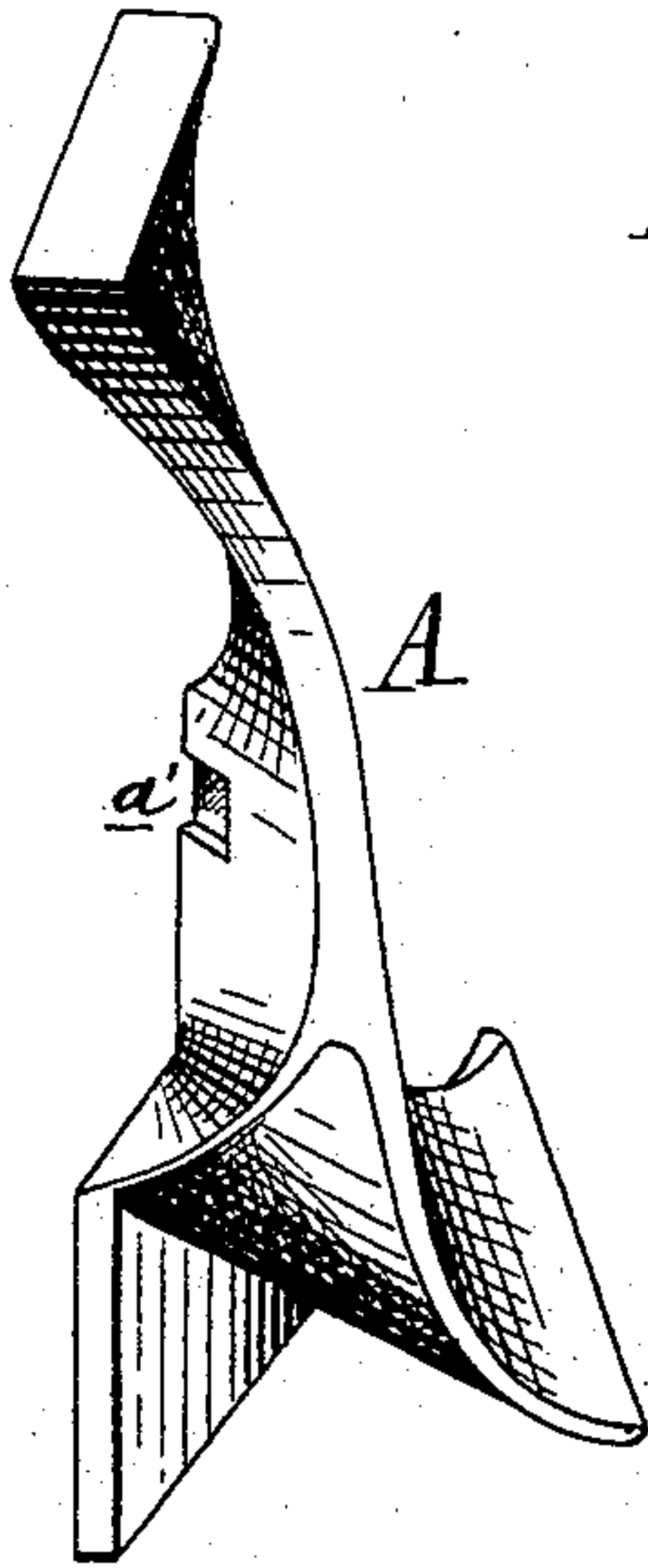
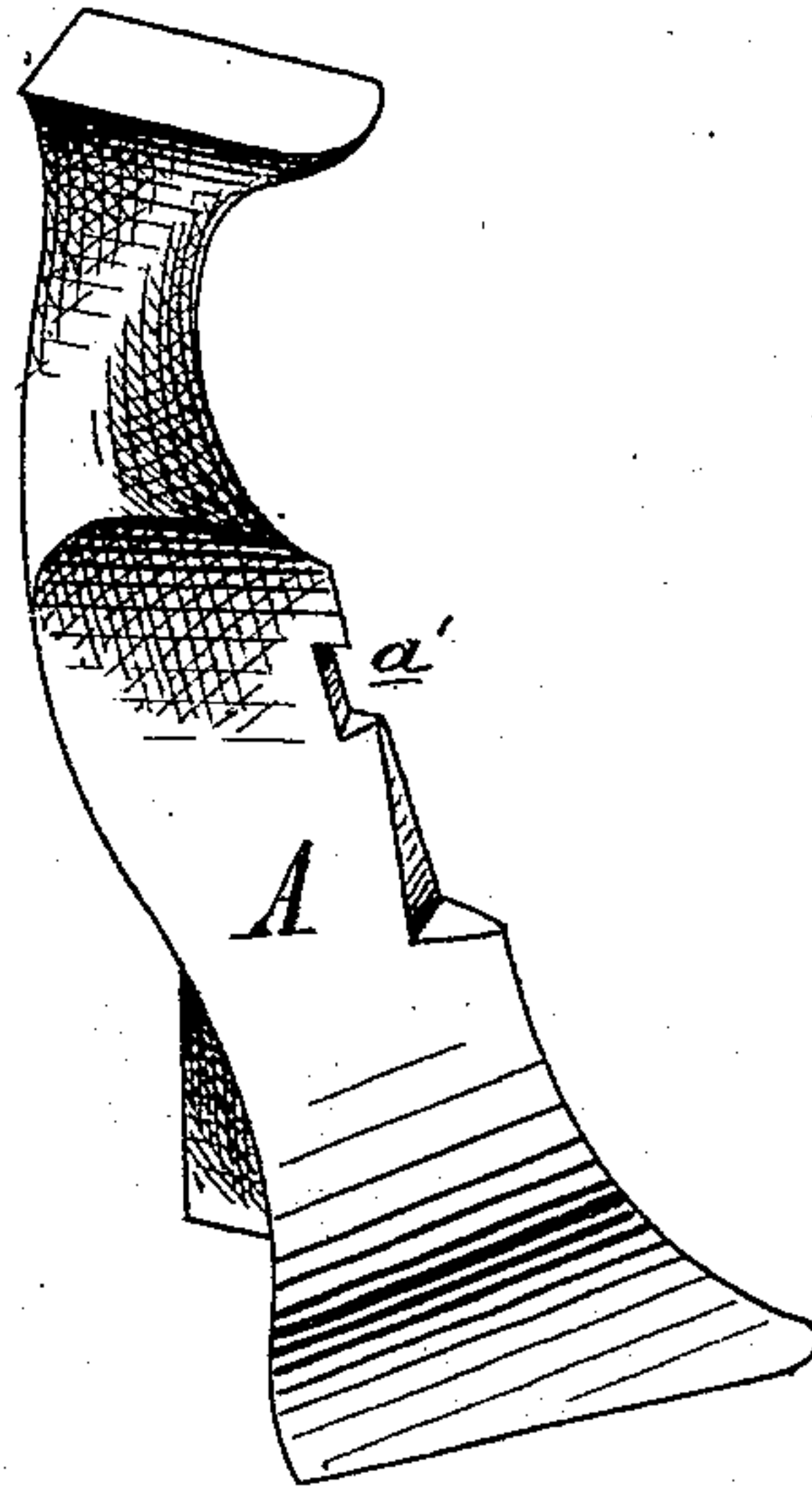


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN P. PRUTZMAN, JOSEPH E. PRUTZMAN, AND JAMES P. MCINTYRE, OF
THREE RIVERS, MICHIGAN.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 177,000, dated May 2, 1876; application filed
March 8, 1876.

To all whom it may concern:

Be it known that we, JOHN P. PRUTZMAN, JOSEPH E. PRUTZMAN, and JAMES P. MCINTYRE, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented an Improvement in Plows, of which the following is a specification:

The nature of our invention relates to certain improvements in a side-draft plow; and consists, first, in the manner of securing the shin to the mold-board; second, in the peculiar means for securing a horizontal jointer-arm to the neck of the standard; and, further, in the combination, with the peculiar standard, of the peculiar point, land-side, mold-board, and shin, all as more fully hereinafter explained.

Figure 1, Sheet 1, and Fig. 2 are, respectively, perspective views of the plow, looking at it from "furrow" and "land." Figs. 3 and 4 are front and rear elevations. Figs. 5, 6, and 7, Sheet 2, are perspective views of the standard, looking at it from the rear and both sides.

In the drawing, A represents the standard, on whose toe is bolted the point B, in the rear of whose side the land-side C is bolted to the side flange of the standard. D is the mold-board, whose breast is secured by countersunk bolts to the face side of the standard, which, above the top of the land-side, is curved suddenly toward the said mold-board, with also a torsional twist, to conform to the position and outline of the mold-board, which it receives and supports. Above the mold-board the neck of the standard is curved back or inclined again to a point directly over the land-side, so that the beam, when secured to its head, will be over the land-side, thus making it a side-draft plow. D' is the shin of the mold-board, whose heel forms a portion of the land-side, and is secured by a bolt to the side of the standard. The furrow edge of the shin abuts against the breast of the mold-board, while the other side is cut in, in line with inner face of the standard, whose front edge is received in an offset in the rear edge of the shin. The latter is se-

cured thereto by a dovetail or hooked lug, *a*, cast on its rear edge, which lug hooks into a recess, *a'*, Sheet 2, cast in the standard before the heel of the shin is bolted to the side of said standard.

As will be seen on reference to Sheet 1 of the drawings, the land-side and shin of the mold-board have a perpendicular cut, while the standard is so curved above the land-side as to form a support for the breast of the mold-board, while it is freed from all friction from the land, passing all obstructions beyond the line of the beam, thus preventing clogging, and is finally curved at the neck, so as to bring the beam directly over the land-side.

E is a horizontal arm, with a lateral lug, *b*, cast on the heel, and a hook-lug, *b'*, which embraces the angular front edge of the neck of standard, while the lug *b* passes behind it. The arm may be adjusted and secured at any point on the neck by set-screw *c*, tapped through the lug *b*, as shown; but a wedge or key may be used for the purpose in lieu of the set-screw, if preferred.

A jointer, E', or a cutter, is secured by a bolt, *d*, through a vertical slot in its shank to the front end of the arm, the shank of the jointer being "halved" onto that of the arm with square shoulders, so that a single bolt suffices to keep the jointer in position. The latter can, by means of the connection described, be readily adjusted to any required slight alterations in horizontal plane without disturbing the arm, which, from its greater weight, is not so easy of adjustment, and, besides, the jointer can be quickly replaced by a vertical cutter, if desired.

What we claim as our invention is—

1. In a side-draft plow, the combination, with the standard A, of the form substantially as shown, having the dovetail recess *a'*, of the shin D', inclosing the front edge of the said standard, and cut inwardly to correspond with the face of the same, and having the lug *a*, all substantially as described and shown.

2. The combination, with the standard of a plow, of the arm E, having the lugs *b b'*,

which grasp the neck of the standard, and the set-screw *c*, setting against the said standard, constructed and arranged substantially as described and shown.

3. In a plow, the combination of the standard *A*, of the form substantially as described, of the point *B*, the land-side *C*, the mold-board *D*, and the shin *D'*, when the several parts are

constructed, arranged, and connected substantially as shown and specified.

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JAMES P. MCINTYRE.

Witnesses:

JOHN COWLING,
D. D. THORP.