G. & T. WIARD.

Plow.

No. 165,903. Patented July 20, 1875.

Fig: 1.

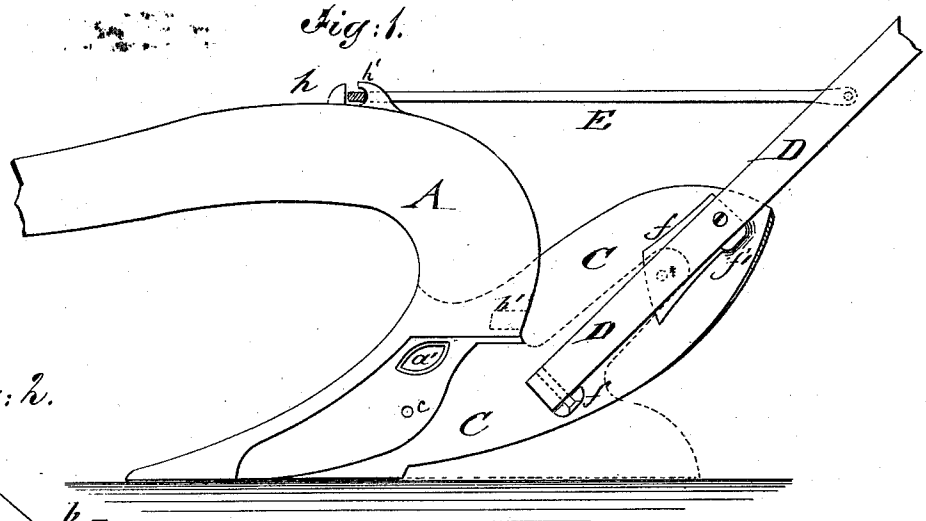


Fig: 2.

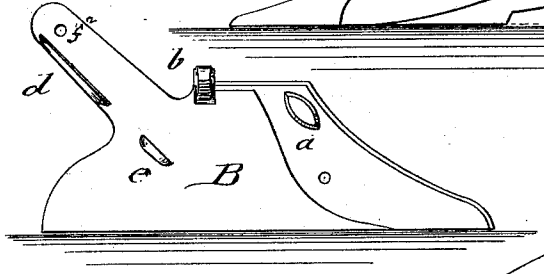


Fig: 3.

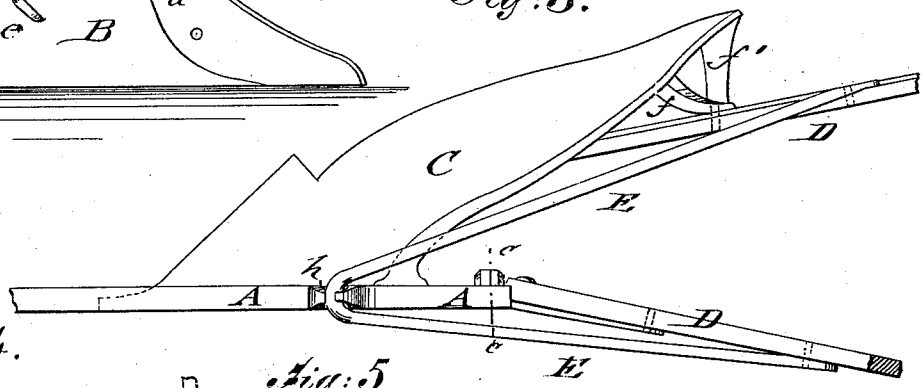


Fig: 4.

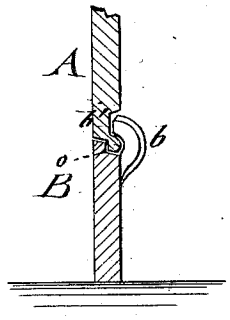
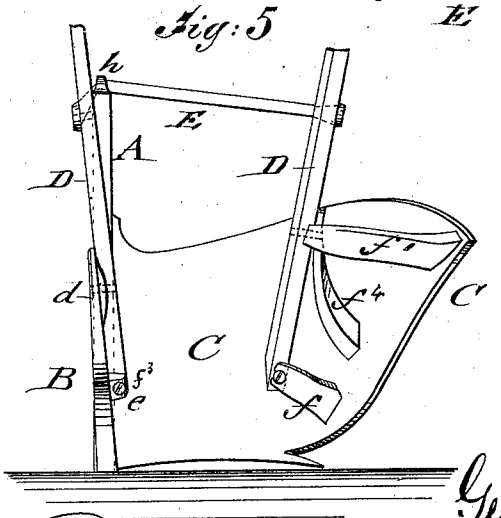


Fig: 5



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UNITED STATES PATENT OFFICE.

GEORGE WIARD AND THOMAS WIARD, OF EAST AVON, N. Y., ASSIGNORS TO GEORGE WIARD AND CHARLES W. HOUGH, OF SAME PLACE.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **165,903**, dated July 20, 1875; application filed June 12, 1875.

To all whom it may concern:

Be it known that we, GEORGE WIARD and THOMAS WIARD, of East Avon, in the county of Livingston and State of New York, have invented a new and Improved Plow, of which the following is a specification:

In the accompanying drawing, Figure 1 is a side elevation of our improved plow with land-side detached; Fig. 2, a rear view of land-side; Fig. 3, a top view of the plow; Fig. 4, a vertical section of land-side, taken on line *c c*, Fig. 3; and Fig. 5, a rear elevation of the plow.

Similar letters of reference indicate corresponding parts.

Heretofore land-sides have been attached to plow-beams by bolts, grooves, and ribs, and offsets on the land-side, and in wooden-beam plows with lugs and projections, and various other means; but they are objectionable in some degree, owing to the fact that none of the plans take all the strain from the holding-bolt, and divest it of a tendency to bend or wear and become loose.

The object of our invention, in part, is to overcome the troubles above named; and our invention consists, first, in a land-side having a hook and projection fitting with a lug and recess on the beam, as more fully hereinafter described; second, in improved devices for supporting and bracing the plow-handles.

In order that those skilled in the art may make and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A represents an iron beam, having recess *a'* and a lug, *b'*; B, the land-side; C, the mold-board, and D the handles. We provide the land-side with a projection, *a*, to fit into the recess *a'* of the beam, and with a hook, *b*, that overlaps a beam-lug, *b'*. These, together with a fastening-bolt, *c*, serve to prevent a vertical and longitudinal, as well as a lateral, movement.

The overlapping hook *b* and beam-lug *b'* prevent any vertical strain or wear whatever on the bolt *c*. The recess *a'* on the beam and the projection *a* on the land-side, owing to their location and shape, avoid any movement or wear in a horizontal line, or any line between a horizontal and vertical.

It will thus be seen that the only strain that can come upon the holding-bolt *c* is in its direct longitudinal line, or in the line of its greatest resisting capacity, and even this is in a measure relieved by the hook *b* and lug *b'*.

We fasten the land-side handle D by passing a bolt, f^2, transversely and horizontally through land-side, as well as handle, and by a bolt, f^3, passed at right angles to f^2, and vertically up through a lug, *e*, and the handle. This gives the necessary security of two bolts without so weakening the handle as to render it liable to split at the lower end. We fasten the mold-board handle D by bolting it to three supporting projections, f f^1 f^4, the two former serving as subjacent rests, while the latter acts as a lateral counter-brace, and is of great importance in giving a strong and reliable support. E is the brace from the beam to the handle, the same being usually made in two pieces, and each bolted to the side of beam. We make this in one piece, and flatten it at the bend, so that when held perpendicularly it readily enters a socket, *h*, on top of beam, and, being then turned toward handles, passes under a lip, *h'*, that entirely precludes the possibility of its upward escape or play.

These several improvements have been found very convenient and reliable in practice, while they materially lessen the cost of manufacturing this class of plows.

We are aware of the patents to E. Wiard, June 23, 1874, No. 152,445, and reissue No. 5,941 of June 30, 1874, and lay no claim to the devices therein set forth and claimed; but,

Having thus described all that is necessary to a full understanding of our invention, what we claim as new is—

1. The land-side B, constructed with the offset *o* and projecting semicircular hook *b*, where it joins the rear edge of the beam, and the projecting elliptical lug *a* near its upper

forward edge, in combination with the beam A, constructed with the locking-lug b' and recess a', and fastening-bolt c, as described.

2. A mold-board handle fastened by two subjacent supports, $f f^1$, one side support, f^4, and two bolts placed at right angles to each other, as and for the purpose specified.

3. The one-piece handle-brace E, flattened at the bend, and combined with a socket having undercut lip h', as and for the purpose specified.

GEORGE WIARD.
THOMAS WIARD.

Witnesses:
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WM. J. HARRIS.