

G. & T. WIARD.
 PLOW.

No. 175,889.

Patented April 11, 1876.

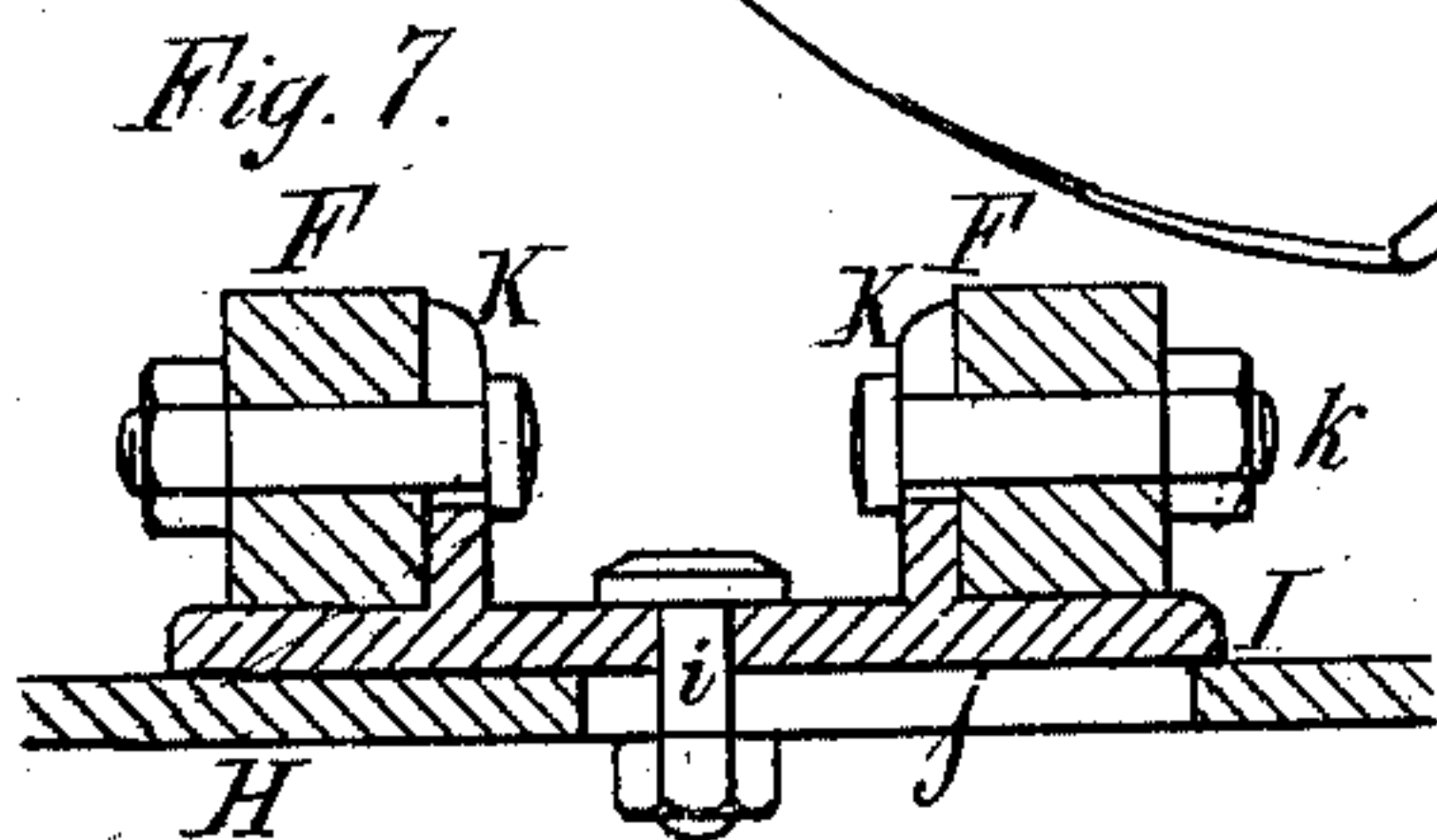
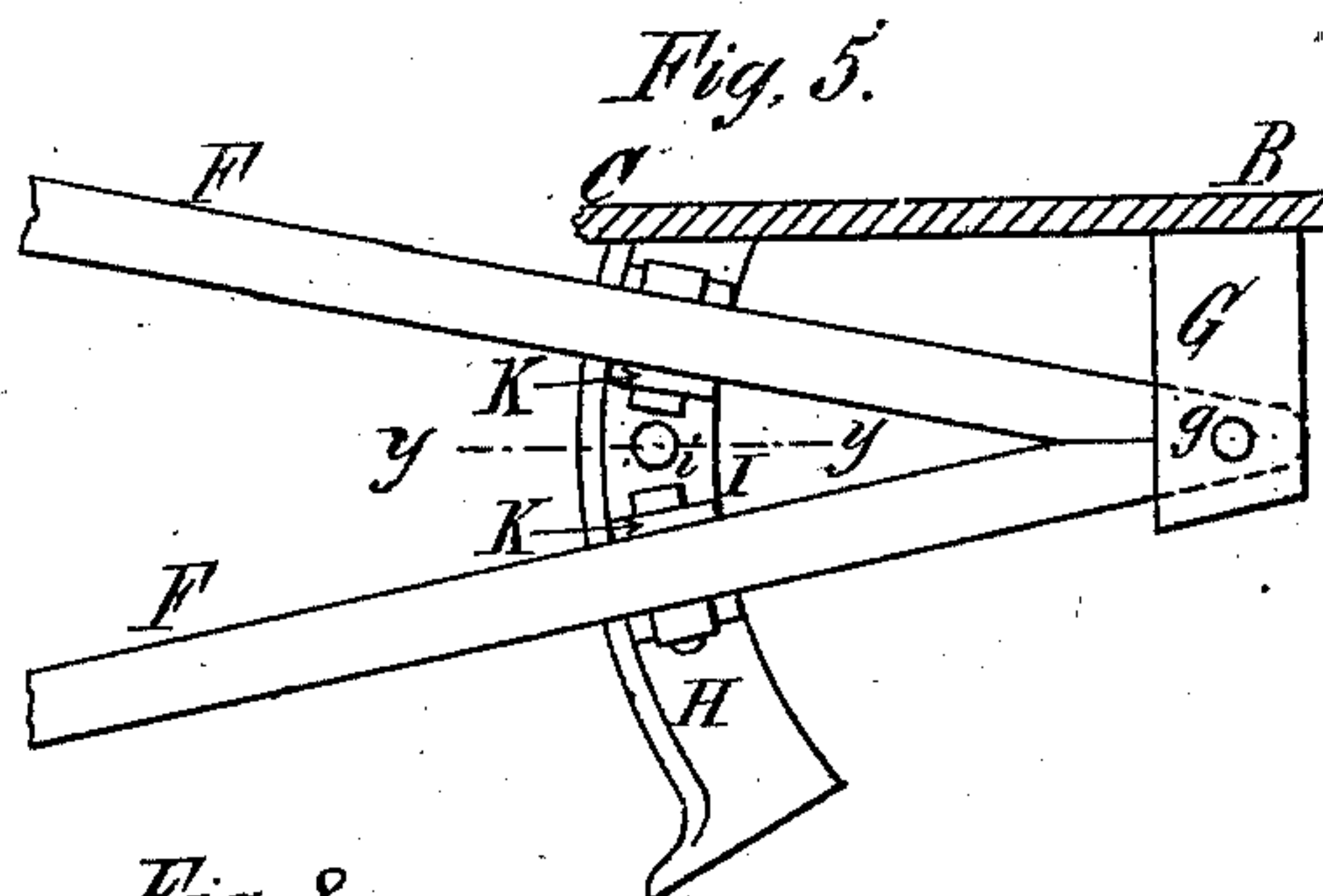
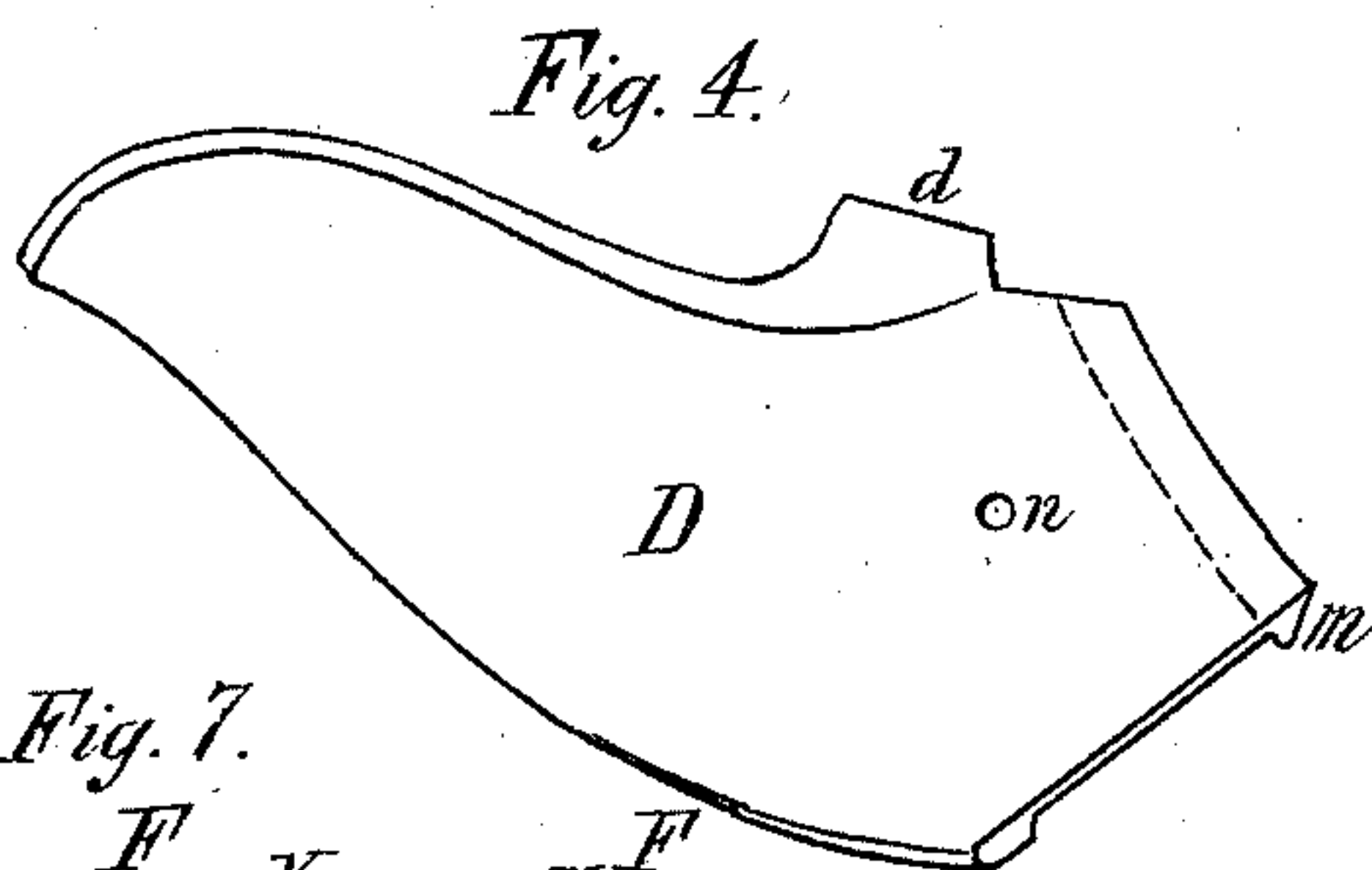
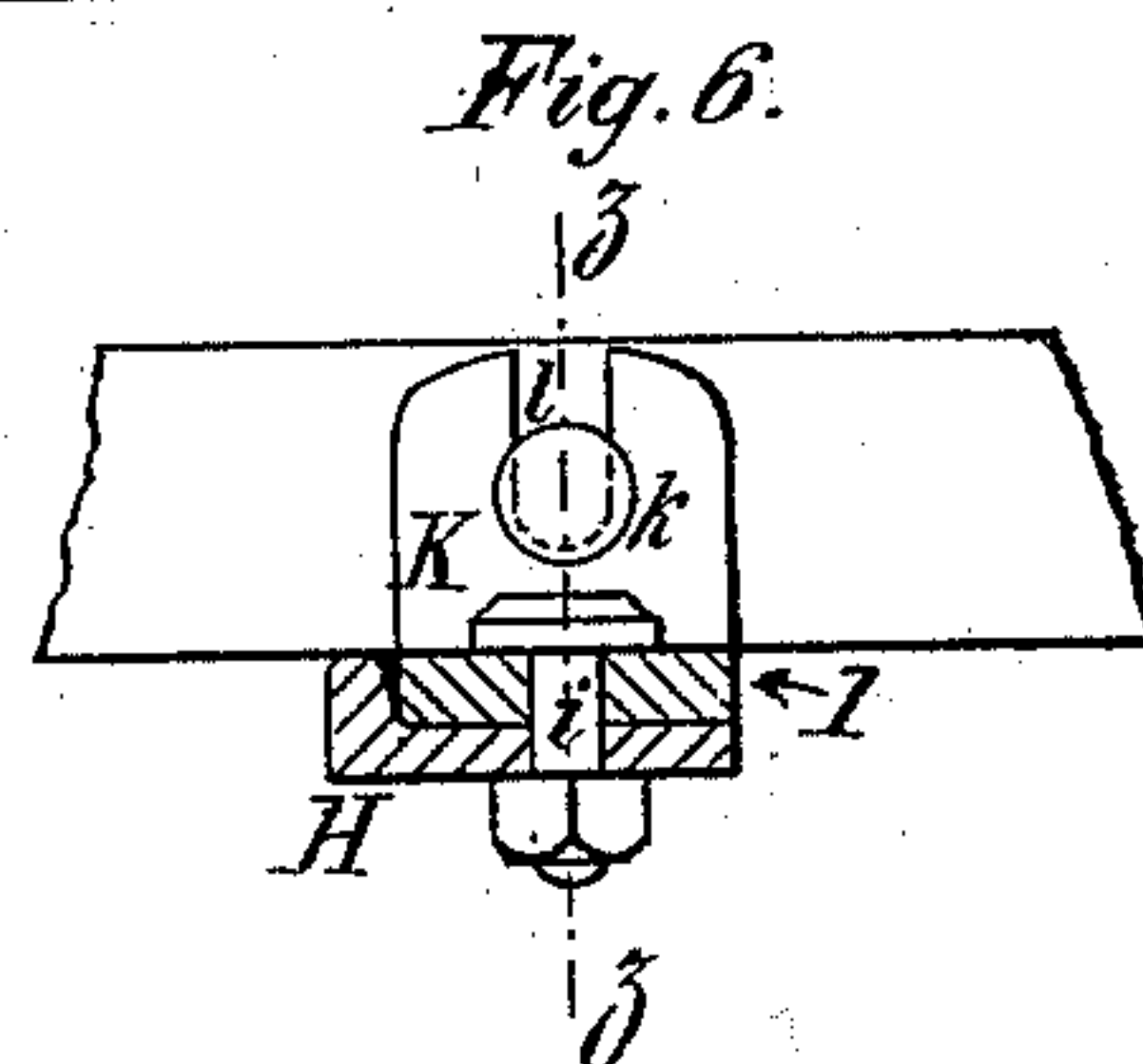
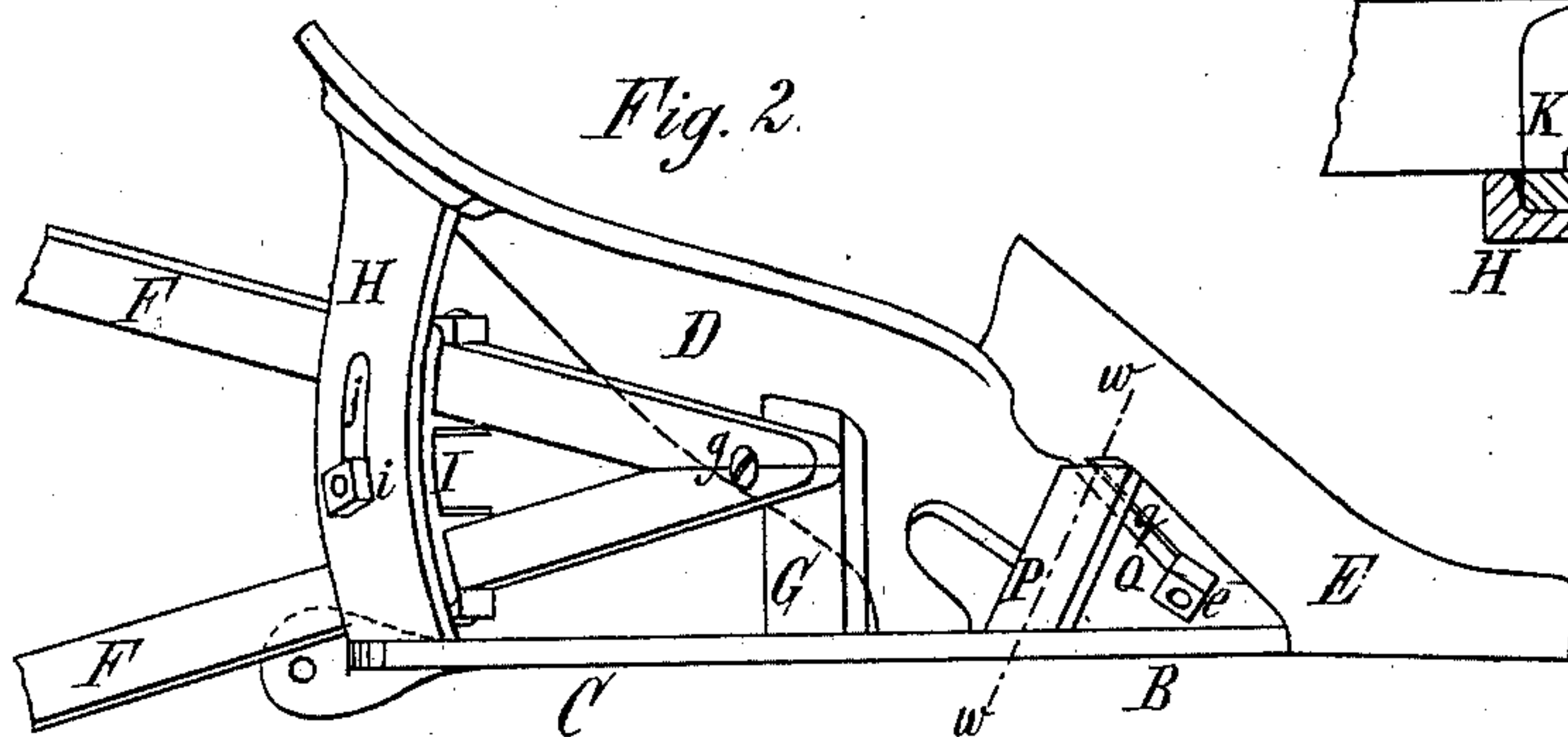
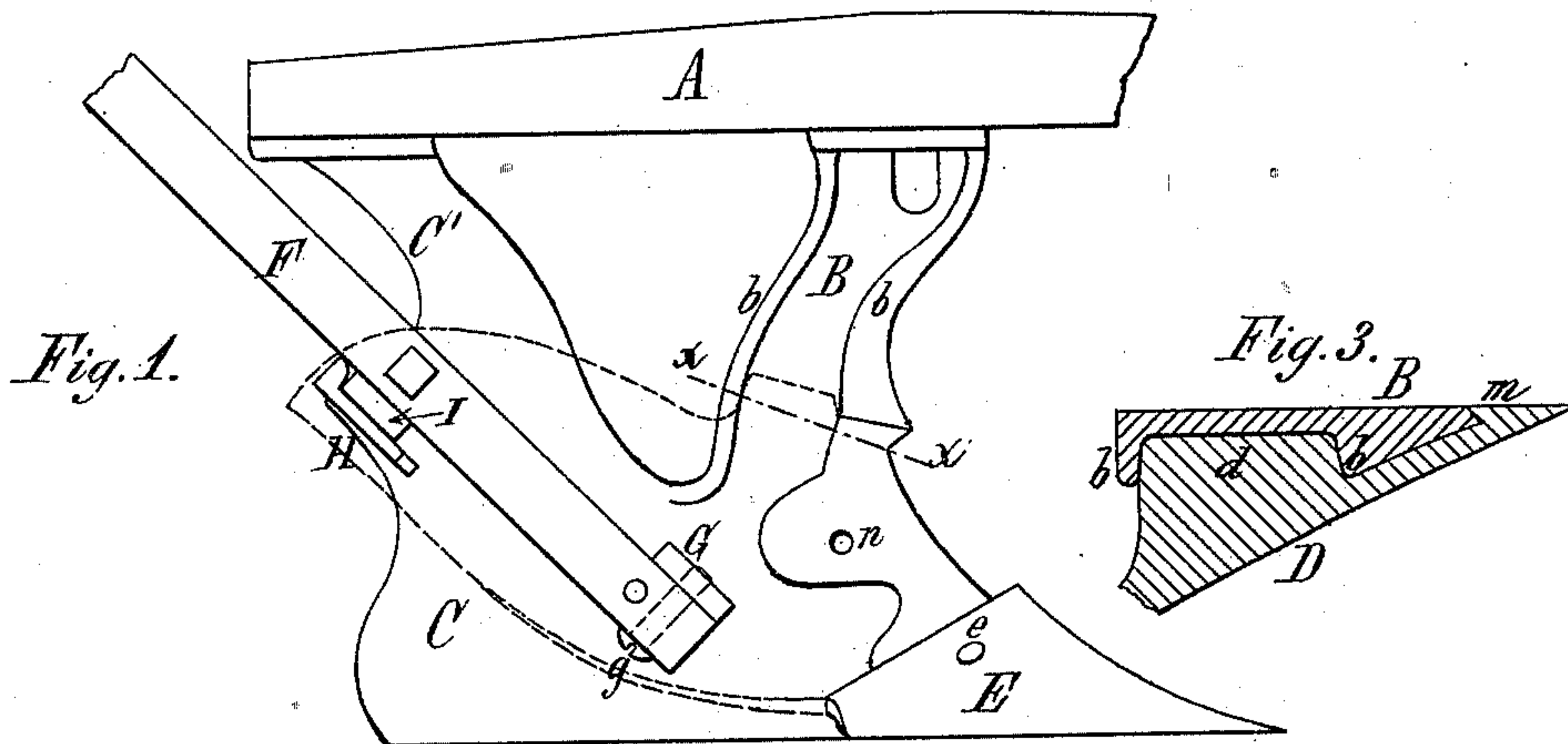
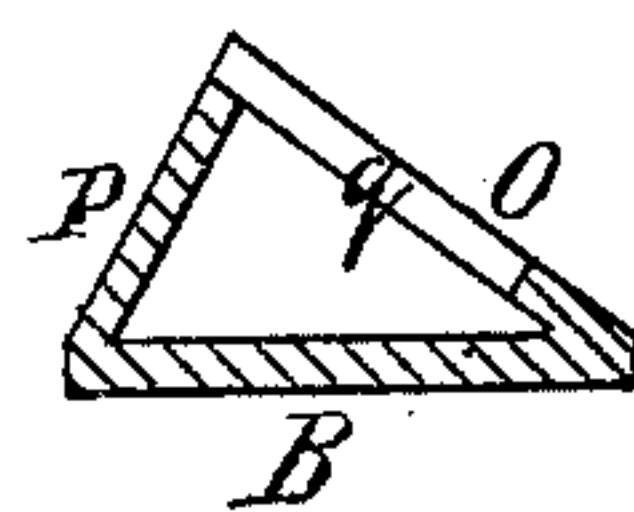


Fig. 7.



George Wiard
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 By Edward Wilhelm, Atty

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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. 175,889, dated April 11, 1876; application filed
January 25, 1876.

To all whom it may concern :

Be it known that we, GEORGE WIARD and THOMAS WIARD, both of East Avon, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Plows, which improvements are fully set forth in the following specification, reference being had to the accompanying drawing.

Our invention relates to a plow more especially designed for use in nurseries and similar localities, where it is required to plow in close proximity to trees, fences, and other objects.

Our invention consists of certain devices for rendering the plow-handles adjustable, also of certain means for securing the mold-board to the standard, and lastly, of an improved construction of the toe or lower front end of the standard, as will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a side elevation of our improved plow with the mold-board removed. Fig. 2 is a bottom-plan view thereof. Fig. 3 is a fragmentary section on an enlarged scale in line *x x*, Fig. 1. Fig. 4 is a detached view of the mold-board. Fig. 5 is a detached plan view of the handles and their supports. Figs. 6 and 7 are sections on an enlarged scale in lines *y y*, Fig. 5, and *z z*, Fig. 6, respectively. Fig. 8 is a section in line *w w*, Fig. 2.

Like letters of reference refer to like parts in each of the figures.

A represents the beam of the plow; B, the standard; C, the land-side; D, the mold-board; E, the plow-point, and F F, the handles. The standard B and land-side C are cast in one piece, and the latter is provided with a secondary standard, C', forming a rear support for the beam. The handles F F are secured together at their lower ends, and attached to the under side of a transverse brace, G, by means of a screw bolt or pivot, *g*. The brace G is cast in one piece with the land-side and standard, and bears with its outer end against the mold-board, so as to form an auxiliary support therefor. H represents a curved transverse brace cast with or secured to the land-side C at its rear end, underneath the handles, so as to bear with its outer end against

the rear end of the mold-board, which is provided with a suitable socket for receiving the end of the brace H. I represents an adjustable plate attached to the brace H, by means of a bolt, *i*, passing through the curved slot *j* in the brace. The plate I is provided with two upwardly-projecting lugs, K, to which the handles F F are secured by means of bolts *k* passing through slotted holes *l*, arranged at right angles to the plate I. The curve of the brace H and slot *j* is described from the pivot *g*, as a center, and the brace H is preferably provided along its upper edge with a rib or rim against which the plate I fits. Upon loosening the bolts *k*, the handles are readily adjusted vertically, so as to raise or lower the same, as may be desired; a slight adjustment of the bolts *k* producing a considerable elevation or depression of the extreme ends of the handles. By loosening the bolt *i*, the plate I is enabled to be laterally adjusted with the handles secured thereto, so as to bring the latter nearer to the land-side or the mold-board, as may be required, thereby adapting the plow to be run closer to a tree or other object than a plow provided with fixed handles. The standard B is provided on the side on which the mold-board is arranged with two ribs, *b b*, as clearly shown in Figs. 1 and 3. *d* is a projecting lug or brace, formed with the mold-board, so as to fit between the ribs *b b* of the standard, and *m* is a ledge or flange formed along the curved front edge of the mold-board so as to overlap the edge of the standard, as clearly shown in Fig. 3, whereby the mold-board is most firmly secured to the standard. The strains and shocks to which the mold-board is subjected are directly received by the brace *d* and flange *m*, thereby relieving the fastening bolt or screw *n* of the mold-board, and enabling a single fastening-bolt to be used even for heavy plows, while at the same time forming a more secure and reliable fastening for the mold-board than heretofore obtained by several heavier bolts. O represents the plate or flange formed with the toe or lower front end of the standard B, for supporting the point E, which is secured thereto by a bolt, *e*. The plate O is arranged at an acute angle to the standard and land-side, and provided on

its rear side with a lateral brace, P, cast in one piece with the standard B and plate O, for strengthening the latter. The peculiar form of this triangular casting, composed of the standard B, plate O, and brace P, makes it very difficult to cast the hole for the bolt *e* in the plate O, as the metallic die required to be arranged in the mold for forming the bolt-hole is liable to get misplaced, and operates to chill the casting so as to produce imperfect castings. In order to avoid this difficulty, we provide the plate O, instead of the above-mentioned bolt-hole, with a slot running parallel with the lower edge of plate O to its outer end, where the end of the slot is covered by the brace P, so as not to weaken the plate O. The slot *q* is readily formed in the mold, and answers all the purposes of the bolt-hole.

We claim as our invention—

1. The combination, with the standard and land-side B C, mold-board D, and handles F F, of the pivot-bearing G, slotted transverse

brace H, and adjustable bearing-plate I, having slotted lugs K for making the handles laterally and vertically adjustable, substantially as and for the purpose hereinbefore set forth.

2. The combination, with the standard B, provided with ribs *b b*, of the mold-board D, provided with lug *d* and overlapping ledge *m* for securing the mold-board to the standard, substantially as and for the purpose hereinbefore set forth.

3. The combination, with the standard B and brace P, of the toe-plate O, provided with slot *q* for receiving the bolt *e*, and for facilitating the casting of the parts in one piece, substantially as and for the purpose hereinbefore set forth.

GEORGE WIARD.
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Witnesses:

F. RAMSDELL,
ISAAC DIBBLE.