2 Sheets—Sheet 1.

W. M. TOWERS.

PLOWS.

No. 190,932. Patented May 15, 1877.

Fig. 1.

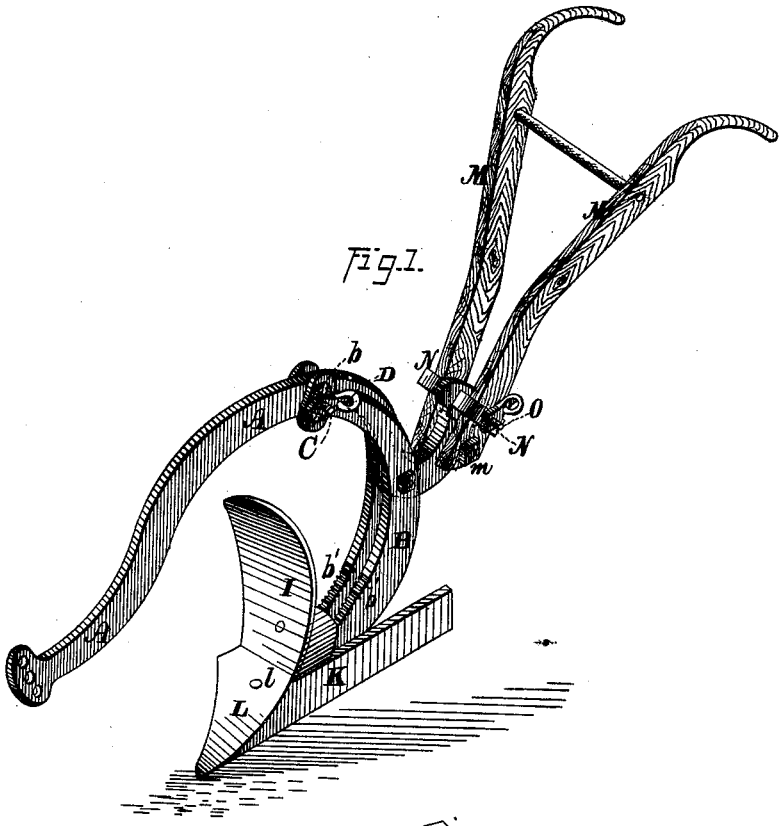


Fig. 2.

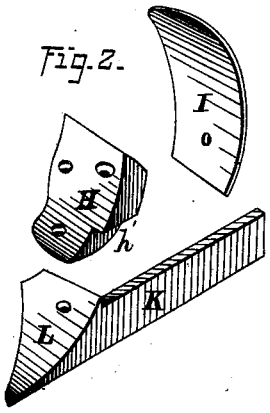
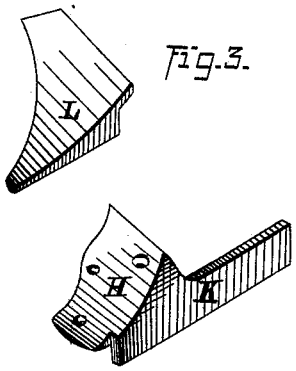


Fig. 3.



WITNESSES:
Jas. C. Hutchinson.
Henry C. Hazard.

INVENTOR.
Wm. M. Towers, by
Prindle and Layton Attys

2 Sheets—Sheet 2.

W. M. TOWERS.

PLOWS.

No. 190,932. Patented May 15, 1877.

Fig. 4.

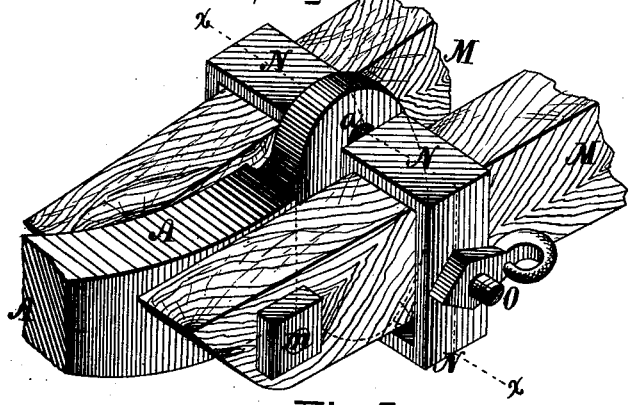


Fig. 5.

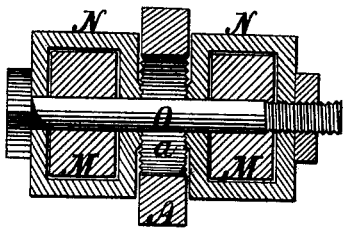
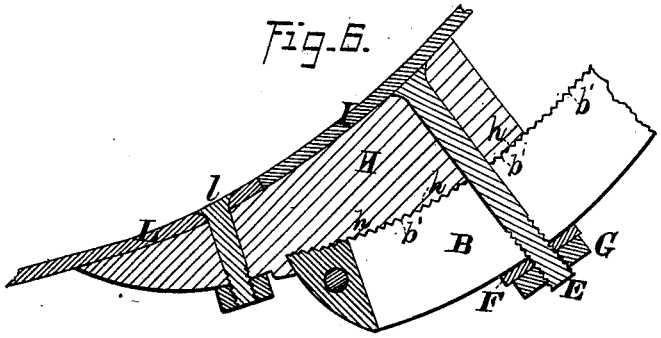


Fig. 6.



WITNESSES.

Jas. E. Hutchinson.

Henry C. Hazard

INVENTOR.

Wm. M. Towers, by

Prindle and Le Grand his Attys

UNITED STATES PATENT OFFICE.

WILLIAM M. TOWERS, OF ROME, GEORGIA.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **190,932**, dated May 15, 1877; application filed April 3, 1877.

To all whom it may concern:

Be it known that I, WILLIAM M. TOWERS, of Rome, in the county of Floyd, and in the State of Georgia, have invented certain new and useful Improvements in Plows; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a plow containing my improvements. Fig. 2 is a like view of the land-side and point, the mold-board, and the block employed for connecting the same with each other and with the plow-foot. Fig. 3 is a perspective view of the plow-point and land-side, constructed separately, while the latter has the connecting-block constructed with and forming part of the same. Fig. 4 is a like view of the rear end of the plow-beam and the front ends of the handles at their points of connection, said parts being enlarged. Fig. 5 is a transverse section upon line *x x* of Fig. 4; and Fig. 6 is a vertical section of the mold-board, connecting-block, and the lower end of the plow-foot upon a line passing longitudinally through the center of the latter.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is, mainly, to enable a plow to be easily and quickly changed from the shovel form to the ordinary form employed for turning furrows, and, further, to increase its efficiency and render it readily adjustable for use with persons of different height; to which end—

It consists, principally, in the means employed for connecting the plow-point, mold-board, and land-side with each other and with the plow-foot, substantially as and for the purpose hereinafter specified.

It consists, further, in the means employed for connecting the handles to or with the plow-beam, and for rendering said handles vertically adjustable, substantially as and for the purpose hereinafter set forth.

In the annexed drawings, A represents a plow-beam, constructed longitudinally in the form of a double-reverse curve, which, near its rear end, is pivoted between the sections of a curved double plow-foot, B, at a point near the vertical center of the latter.

The upper ends of the plow foot B are widened laterally, and within each of such portions is formed a transverse slot, *b*, that receives a bolt, C, which passes horizontally through said slots, and through the intervening portion of the beam A. A head is provided at one end of said bolt, and upon its opposite threaded end is placed a nut, D, whereby the said ends of said foot may be drawn firmly against, and caused to hold in position, said beam.

By loosening the screw C the plow-beam A may be adjusted vertically within the limits of the slots *b*.

At the lower end of the plow-foot B the sections are connected together, and upon its upper front side is provided a series of transverse V-shaped grooves and projections, *b'*, as seen in Figs. 1 and 6, which grooves and projections correspond to, and engage with, similar parts upon the rear side of a shovel, when the plow is employed as a shovel-plow. A bolt, E, passing through said shovel and between the section of the foot B, is provided at its rear threaded end with a washer, F, and nut G, and holds said shovel in position upon said foot.

For use as an ordinary furrow-plow, I employ a block, H, which, at its rear side, is provided with grooves and projections *h*, that correspond to, and fit into, the grooves and projections *b'* of the plow-foot B, while the front upper side of said block conforms to and receives a mold-board, I, and its side is provided with a recess, *h'*, which receives a land-side, K.

As seen in Figs. 1 and 2, the land-side K is attached to and forms part of the plow-point L, so that a bolt, *l*, passing through the latter and through the block H serves to connect said parts together.

If desired, the land-side K and point L may be constructed separately, in which event the block H should be attached to, and form a part of, said land-side, as shown in Fig. 3, its forward end projecting beneath said point to a sufficient distance to enable a bolt to pass through and unite said parts. The bolt

E passes through the block H and through the foot B, and enables the furrow-turning plow to be secured to said foot, as in case of the shovel before described.

From the point where the beam A is pivoted within the foot B, said beam extends rearward and upward in a curve, and at its rear end is enlarged vertically, as shown in Figs. 1 and 4.

Midway between the pivotal bearing and rear end of the beam A are pivoted the lower ends of two handles, M, which from thence extend upward and rearward through two metal straps, N, one of which encircles each of said handles, and corresponds interiorly to the transverse shape and dimensions of the same.

A bolt, O, passes horizontally through the straps N, handles M, and the rear upper end of the beam A, and operates to confine said parts closely together.

In order that the rear ends of the handles M may be adjusted to, and secured in, horizontal position, the opening *a* in the beam A, through which the bolt O passes, is elongated upon a line which is concentric with the pivotal bearing of said handles, and the sides of said beam adjacent to said opening are serrated, or in any suitable manner roughened, while the inner face of each strap N is correspondingly roughened or serrated.

If, now, the bolt O is loosened, the handles M may be raised or lowered within the limits of the slot *a*, and again secured rigidly in place by tightening said bolt.

If desired, the pivotal bearing for the handles M may be the bolt O, and the adjustment may be effected by slotting the opening in the beam A, through which the bolt *m* at the lower end of said handles passes.

By means of the adjustment described, the handles can be raised or lowered to accommodate persons of different heights.

The attachment of the handles to the rear extended portion of the plow-beam enables the operator to readily control the motion of the plow, and to guide and keep in place the share, while his view of the ground where operated upon by the plow is unobstructed.

I am aware that blocks have before been employed for connecting together and securing to a plow-foot the parts composing the furrow-turning portion of a plow, and, also, that handles have before been pivoted to, and rendered vertically adjustable upon, the rear end of a plow-beam.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. As a means for combining the mold-board I, land-side K, and plow-point L with each other, and with the plow-foot B, the block H, provided with the recess *h'*, and constructed in the manner substantially as specified.

2. In combination with the rear end of the beam A, provided with the vertically-elongated slot *a*, and with the handles M, the bolt *m*, arranged to pivot their lower forward ends upon said beam, the straps N, encircling said handles, and the bolt O, passing horizontally through the latter, said straps, and said slot *a*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of March, 1877.

W. M. TOWERS.

Witnesses:
E. J. STEVENS,
JNO. M. BOWIE.