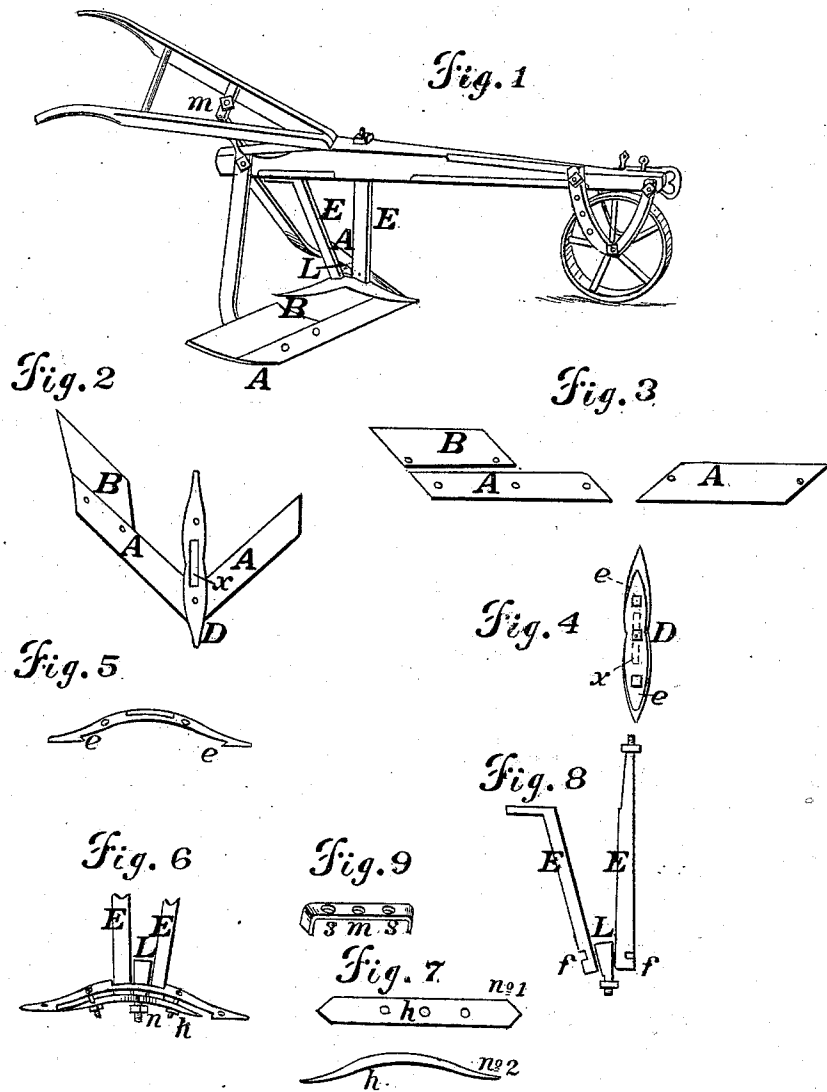


E. W. WALTON.

Cultivator.

No. 78,774.

Patented June 9, 1868.



WITNESSES:

H. M. Beadle
C. J. Brown

INVENTOR:

E. W. Walton
by
Geo. E. Munn
attys

United States Patent Office.

ELISHA WIARD WALTON, OF STOCKTON, CALIFORNIA, ASSIGNOR TO HIMSELF AND WILLIAM H. DERRICK, OF SAME PLACE.

Letters Patent No. 78,774, dated June 9, 1868.

IMPROVEMENT IN HORSE-HOES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ELISHA WIARD WALTON, of the city of Stockton, in the county of San Joaquin, and State of California, have invented a new and useful Improvement in Horse-Hoes, for the cultivation of vines, corn, cotton, and other things; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my horse-hoe.

Figure 2 is a sectional plan view of its two reversible shares and its reversible point, and also its occasional mould-board.

Figure 3 represents plan views of its right and left reversible shares, and its mould-board.

Figure 4 is an under side plan view of my double-pointed reversible horse-hoe point.

Figure 5 is a lateral view of the same.

Figure 6 shows my method of fastening the double standard, E E, of my hoe to the hoe-point D.

Figure 7 (first and second) represents different views of the stay-brace *h*, (also seen in fig. 6,) which is used for the double purpose of a fastening for the standards E E, and also as a clamp for the ends of the reversible shares A, and as a stay or support of the ends of the point D.

Figure 8 represents my double standard E E, with notches *ff* near its base, and also a wedge, L, terminating in a screw, which is provided with a nut, *n*.

Figure 9 is a brace-regulator of the handles of my hoe.

The same letters refer to like parts of my hoe in all the figures.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation more minutely.

I construct the beam, wheel, and clevis of my horse-hoe after the manner of ordinary horse-hoes and one-horse plows, but I provide the novel device, for attaching the handles to the beam, of making the upper portion of the standard E, which extends above the beam, a pivot, upon which the handles jointly turn.

I also provide a novel regulating-brace, fig. 9, for the handles of my hoe, perforating such brace with the holes 3, 4, and 5, as in the figs. 1 and 9, *m*. By this novel and useful arrangement, the handles can be kept centring from, or either handle can be set in line with, the beam, so that the hands of the person holding the hoe will be protected from contact with grape or other vines, corn, &c., while the shares of the hoe run closely to the row.

I construct the shares of my hoes (represented at A in the figures) with two novel and sharp edges, and make each share reversible in all directions upon its own side of the point D. This I do for the purpose of causing the natural wear of the shares to sharpen their own edges, for with use the front edges of the shares are worn most on the under side, and by my novel provision, when they become dulled from use, they are readily turned, and the unused edge presented, or they are turned over, and a sharp cutting-edge is again presented to the soil and weeds, without recourse to a blacksmith for sharpening, thus saving greatly in expense.

I also provide for my hoes the novel and useful point D. This also is reversible, and is provided, through its centre, with a mortise, X, figs. 2 and 4, for the reception of the lower ends of the double standard E E.

It will readily be seen that I make this point reversible, for reasons like those given for making the shares reversible.

In connection with the shares, my hoe presents another novel and useful feature, in that, toward the outer end of one or both of the shares, I attach the novel small mould-board B, the purpose of which is the throwing of a portion of the soil to the row, when desired, while, at the same time, the remaining portion of the uplifted soil and weeds, cut up by the shares, may be dropped loosely behind the hoe in the path of the shares. The advantages of this new contrivance will be obvious at a glance.

The standard of my hoe I construct in a novel manner, it being in two parts, as shown in figs. 1 and 8. Near the base of each section of these parts, I provide the notches *ff*, fig. 8, for the purpose of catching on and holding to the front and rear ends of the mortise *X*, and when adjusted to their places, I insert the wedge *L*, terminating in a screw, between them, and through the stay-brace *h*, seen in figs. 6 and 7, and, running on the nut *n*, they are immovably held in their proper position. When properly attached to the reversible point, their fastening appears as shown at fig. 6.

In order to prevent the hoe-point from springing, in use I form it with novel shoulders, *l l*, figs. 4 and 5, and provide, for insertion therein, the novel brace shown at *h* in fig. 6, and at *h'* and *h''*, fig. 7. The ends of this novel brace fit closely into the shoulder-sockets *l l*, and the brace is firmly attached to the hoe-point by the bolts and nuts appearing on either side of the wedge which fastens the double standard to the point.

It will readily be seen that, by this novel contrivance, great strength is added to the hoe-point, and, at the same time, admirable lightness is secured.

What I claim as my invention, of the above; and desire to secure Letters Patent for, is this:

1. I claim the regulating-brace *m*, constructed substantially as and for the purpose above shown.
2. The standard *E E*, of a horse-hoe, constructed substantially as above described.
3. The reversible hoe-point *D*, with its slot or mortise *X*, constructed and operated substantially as above shown.
4. The reversible shares *A*, and also their two sharp cutting-edges, constructed and operated substantially as above shown.
5. The mould-board *B*, in combination with the share *A*, substantially as above shown.
6. The wedge *L*, with its screw and nut, constructed and used substantially as and for the purpose above described.
7. A horse-hoe, with or without the mould-board *B*, constructed and operating substantially as above described.

ELISHA W. WALTON.

Witnesses:

R. W. BRUSH,

W. R. JEFFERSON.