

Ellis & Albertson,

Hoe.

No. 108,465.

Patented Oct. 18. 1870.

Fig. 1.

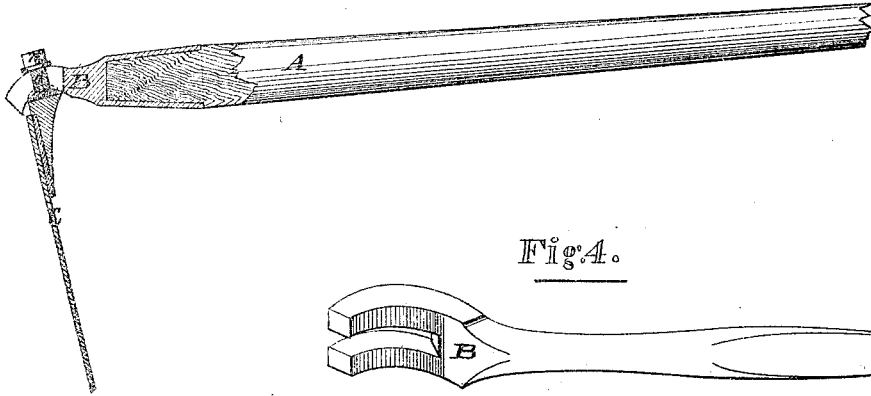


Fig. 4.

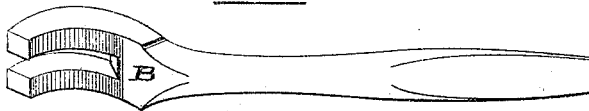


Fig. 2.



Fig. 3.

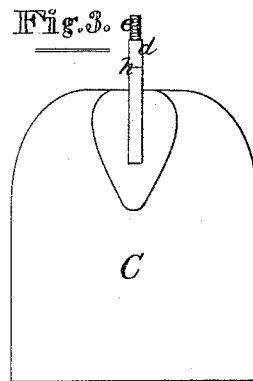


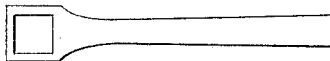
Fig. 5.



Fig. 6.



Fig. 7.



Witnesses.

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United States Patent Office.

AUGUSTIN ELLIS AND OLIVER ALBERTSON, OF SALEM, INDIANA.

Letters Patent No. 108,465, dated October 18, 1870.

IMPROVEMENT IN 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 we, AUGUSTIN ELLIS and OLIVER ALBERTSON, of Salem, in the county of Washington and State of Indiana, have invented a new and valuable Improvement in "Hoes;" and we 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 drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a partial section view of my invention.

Figures 2, 3, 4, 5, 6, and 7 are details.

Our invention relates to an improvement in hoes; and

It consists in the construction and novel arrangement of devices, whereby the angle which the blade of the hoe makes with the handle may be varied to suit circumstances.

The letter A of the drawing designates the handle of our hoe, to which is attached, either by shank or ferrule, a forked or slotted bar, B, curving forward or downward.

C represents the blade of our hoe, having whatever form may be most desirable for the purpose in view.

The tang *d* of the blade is rectangular, and of sufficient breadth from front to rear to prevent it from turning in the slot of or space between the forks of the curved bar B.

At the upper end of the tang is turned a screw, *e*, and near its lower end, on the rear side thereof, a shoulder, *h*, is formed.

D represents a washer of peculiar form, designed to be placed between the shoulder *h* of the tang and the curved fork B. Its upper side is convex, and it corresponds in curve with the concave under side of the bar B.

Both the convex side of the washer and the concave side of the bar or fork B are serrated transversely, to prevent slipping.

k k designate flanges, projecting upward at each side of the washer. They serve to prevent lateral movement.

n is the nut by means of which the devices are secured together.

The lower side of the washer has a plane surface, and the mortise or slot through the washer is rectangular, to suit the shape of the tang.

By means of these devices the angle or pitch of the blade may be varied to suit persons of different heights, or to adapt it to any kind of work.

The blade may be removed and refastened with great ease and rapidity, thereby rendering it possible for the workman to keep his hoe sharp without great trouble.

Different sizes and kinds of blades can readily be adapted to the same handle.

Rake-heads and other agricultural attachments may be also used in connection with the same handle.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of the concavo-convex bar B, forked or slotted, and the slotted plano-convex washer D, when arranged for adjustment, by a nut and screw, upon the shank of a hoe or rake, substantially as and for the purpose specified.

In testimony that we claim the above, we have hereunto subscribed our names in the presence of two witnesses.

AUGUSTIN ELLIS.
OLIVER ALBERTSON.

Witnesses:

DALE W. WILSON,
T. B. HOBBS.