A. WEBB.

Horse Hoe Cultivator.

No. 49,354. Patented Aug. 8, 1865.

Fig 1.

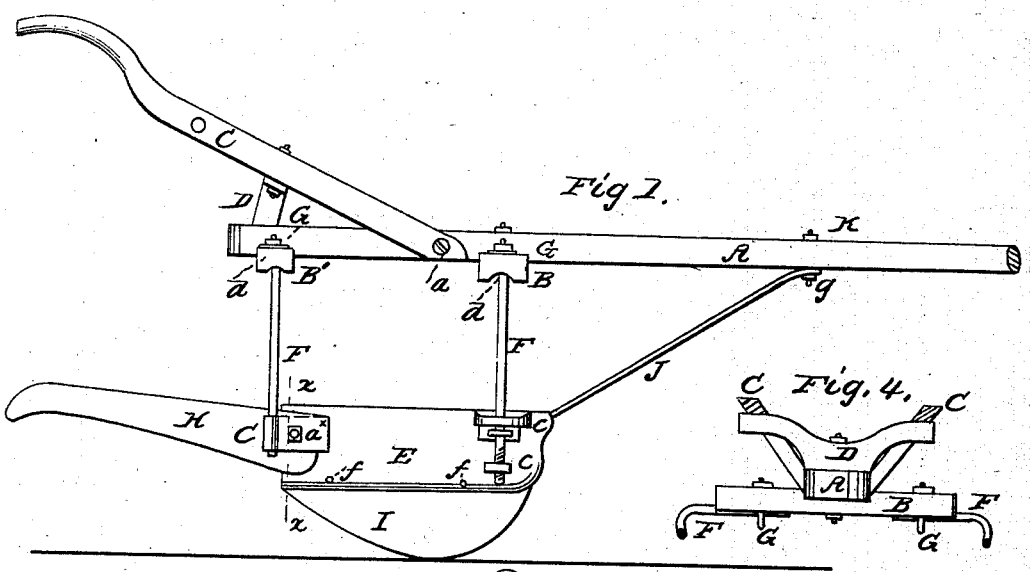


Fig. 4.

Fig. 2.

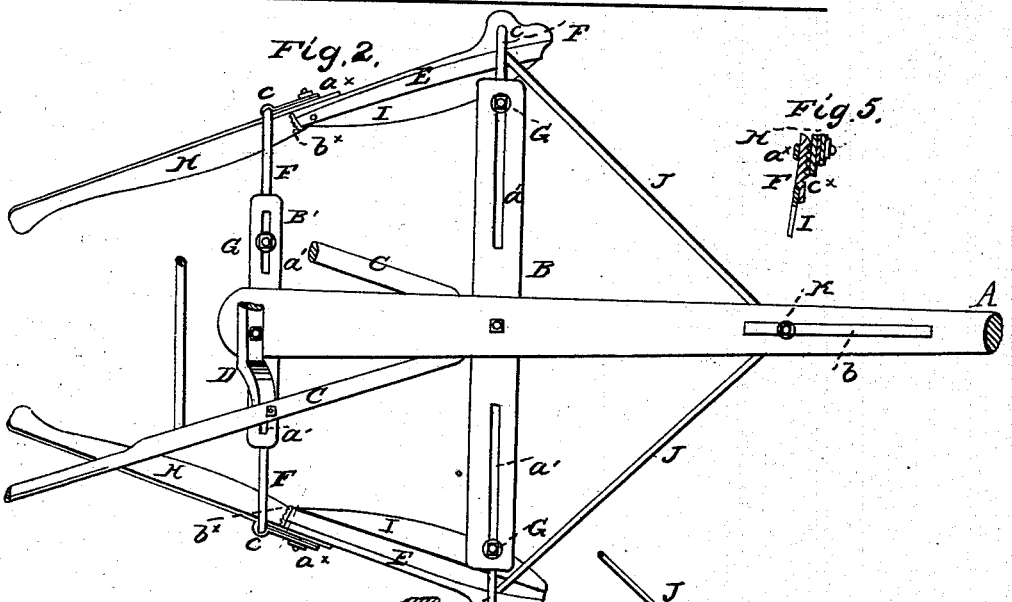
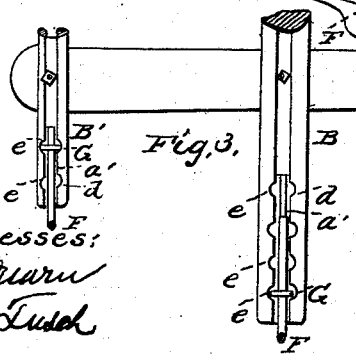


Fig. 5.

Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBION WEBB, OF BANGOR, MAINE, ASSIGNOR TO HIMSELF AND D. M. DUNHAM, OF SAME PLACE.

IMPROVED HORSE HOE-CULTIVATOR.

Specification forming part of Letters Patent No. **49,354**, dated August 8, 1865.

To all whom it may concern:

Be it known that I, ALBION WEBB, of Bangor, in the county of Penobscot and State of Maine, have invented a new and Improved Horse Hoe or Cultivator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention. Fig. 2 is a plan or top view of the same. Fig. 3 is an inverted plan of a portion of the same; Fig. 4, a back view of a portion of the same. Fig. 5 is a vertical transverse section of one of the blades and plates of the invention, taken in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to certain improvements on horse hoes or cultivators of that class which are provided with oblique hoes or shares.

The object of the invention is to render the hoes or shares of the machine capable of being adjusted with greater facility than hitherto, and also to render it stiffer or firmer, and to perform or work in a better manner.

A represents the draft-pole of the implement or machine, and B B′ are two cross-bars attached thereto, the front one, B, being considerably longer than the rear one, B′, as shown clearly in Fig. 2.

C C are handles, the lower ends of which are secured by bolts *a* to the draft-pole A, and are held in an inclined position by a curved support, D, which is firmly bolted to the rear of the draft-pole A.

The cross-bars B B′ are each slotted longitudinally at each side of the draft-pole A, as shown at *a′*, and the draft-pole also has a slot, *b*, made longitudinally in it. All of these slots are shown in Fig. 2.

E E represent two plates, which are secured or connected to the cross-bars B B′ by means of curved rods F, the lower ends of which pass through eyes *c* attached to or cast on the exterior or outer sides of the plates E E, as shown in Fig. 1. The upper parts of these rods F fit in grooves *d* made in the under sides of the cross-bars B B′, and they are secured to the latter by means of eyebolts G, which pass through the slots *a*, the eyes of said bolts fitting in notches *e* in the under sides of said cross-bars, as shown in Fig. 3.

By this arrangement it will be seen that the plates E E may be very readily adjusted nearer together or farther apart, and also made to have a greater or less oblique position relatively with each other, as may be required, the front ends of said plates always having a greater space between them than the rear ends, as shown in Fig. 2.

To the rear end of each plate E there is attached a blade, H, the lower edges of which are curved so as to be concave, as shown clearly in Fig. 1. To each plate E a hoe or share, I, is secured by rivets or bolts *f*. These hoes or shares are of convex form at their lower edges, as shown in Fig. 1. The plates E E are held in position by brace-rods J, which are secured to the draft-pole A by a single bolt, K, the latter passing through the slot *b* in the draft-pole and through eyes *g* in the brace-rods. By having the blades E of concave form, as shown, the upper surfaces of the hills are made or left flatter or nearer level than they otherwise would be, and by having the plates E E secured to the cross-bars B B′ by means of the rods F, grooves *a*, and notches *e* in said cross-bars, the bolts G, and the way in which the brace-rods J are applied, the plates E are rendered capable of being very readily adjusted nearer to or farther from each other, and also in a more or less oblique position, as may be desired.

The curved support D serves to hold the handles permanently in position, preventing any working or play of the same.

The blades H H are attached to the plates E E by a bolt, $a^{\times}$, and the inner sides of the blades are provided with a longitudinal rib, $b^{\times}$, which fits in any one of a series of grooves, $c^{\times}$, in the outer surface of the plates. By screwing up the bolts $a^{\times}$ the ribs will be firmly held in the grooves and the blades retained firmly at any desired point. (See Fig. 5.) This is an important feature of the invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The manner in which the plates E E are secured to the cross-bars B B of the machine,

to wit: the oblong grooves *a* in said bars B B, with notches *e* at their under surfaces, the curved rods F, and eyebolts G, all arranged in the manner substantially as and for the purpose specified.

2. The securing of the blades H to the plates E by means of a single bolt, $a^{\times}$, in connection with the ribs $b^{\times}$ and grooves $c^{\times}$, substantially as shown and described.

ALBION WEBB.

Witnesses
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