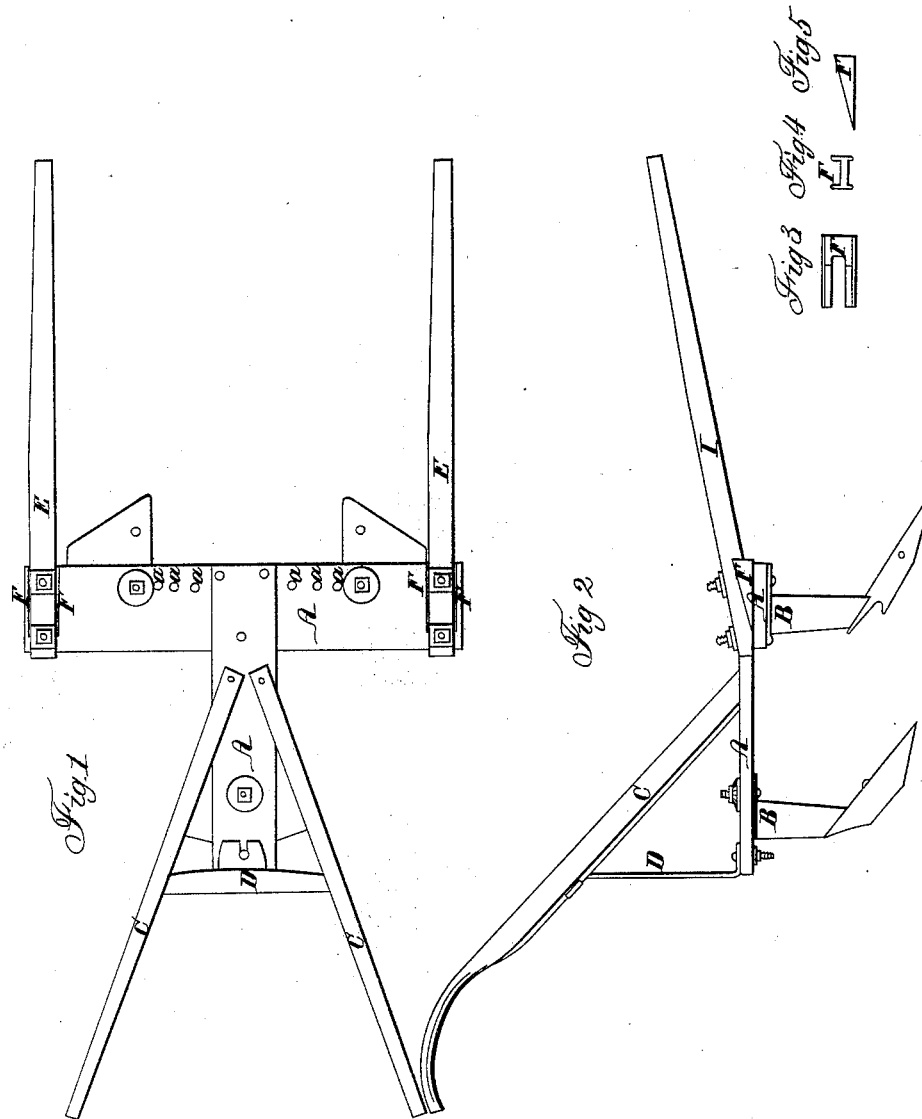


H. INGRAHAM.

Cultivator.

No. 45,612.

Patented Dec. 27. 1864.



Witnesses:
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UNITED STATES PATENT OFFICE.

HANFORD INGRAHAM, OF NAPLES, NEW YORK.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **45,612**, dated December 27, 1864.

To all whom it may concern:

Be it known that I, HANFORD INGRAHAM, of Naples, in the county of Ontario, in the State of New York, have invented a new and useful Improvement in Cultivators; 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, of which—

Figure 1 is a top or plan view of my improved cultivator. Fig. 2 is a side view of same; Figs. 3, 4, and 5, top, end, and side views of an eccentric flanged-shaped wedge detached from the machine, which is applied to that end of the shaft attached to same for the proper adjustment of it in a lateral position, and which will hereinafter be more particularly described.

The nature of my improvement consists in the construction of a cultivator (for cultivating corn) with adjustable thills or shafts, the object of same being to obviate the trouble and inconvenience of adjusting the strap to a high or low horse, so that the thills may be adjusted to suit the same by a simple, convenient, and effective method; in the application of an eccentric flanged-shaped wedge, above referred to, and to be referred to more particularly hereinafter; also, in the construction of a T-shaped frame in which simplicity and strength are attained, thereby obviating the labor and expense required in the construction of a more complicated one, where the different parts are mortised and joined together, and extensively braced by the simple bolting together of two plates in the form of a T, and the attachment of the thills and handles to same by bolts, and at the same time performing the work required of it in a satisfactory manner.

To enable any one skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

I construct the frame A, as seen in Fig. 1, of two plates or pieces of timber of the proper dimensions. The front end of the one is bolted on the top and center of the other, thus forming a frame nearly the shape of a T.

The shanks B, to which the teeth or points are secured, are of cast-iron. They are secured to the frame by means of bolts and caps on the top, and underneath there are slots in the shanks to receive the bolts, the same being headed to prevent their slipping through.

The handles C are supported by a cast-iron brace, D, in the form of a T. The cross-plate of same is securely bolted to the handles, as seen in Fig. 1. That part of the brace which projects from the center of this cross-plate is fastened at the bottom to the back end of the center plate of the frame by a bolt passing through a slot in the foot or knee part of same, as seen in Fig. 2.

The thills or shafts E are secured on the top, at each end of the cross-plate of the frame, by two bolts passing through each. On the cross-plate, and near the center one, on each side, are several holes, *a a*, through either of which a bolt may be inserted for the purpose of adjusting the teeth to suit the rows of corn to be cultivated. The center tooth is also bolted to the center plate a little forward of the foot of the brace. The thills or shafts are adjusted by means of a cast-iron eccentric wedge, F, with flanges on each side, which are also in the form of a wedge, thereby forming a double wedge—that is, the flanges on the side and that part to which they are joined or cast (being immediately underneath the thills) constituting two wedges. The wedges are inserted between the thills and cross-plate from the front side, as seen in Fig. 2, and thus form a kind of socket for the thills. Slots are made in them, as seen in Fig. 3, so as to clear the bolts and allow a free movement in the application of them for the adjustment of the thills, which are depressed or elevated, according to the height of the horse, the wedge being reversed or shoved in, as occasion may require. It will thus be seen, when found inconvenient to adjust the strap, by applying the wedges the desired result may be obtained—that is, as herein stated, adjusting the thills to a high or low horse, the nuts on the bolts above being loosened or tightened to suit the wedge.

Like letters indicate like parts in all figures of the drawings.

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

1. The construction and application of a cast-iron flange-shaped wedge for the adjustment of the thills, substantially as in the manner and for the purpose herein described.

2. The construction of a T-shaped frame, in combination with the adjustable thills, as herein arranged, substantially in the manner and for the purpose herein set forth.

HANFORD INGRAHAM.

Witnesses:

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