

W. H. HOWELL.

Cultivator.

No. 51,721.

Patented Dec. 26, 1865.

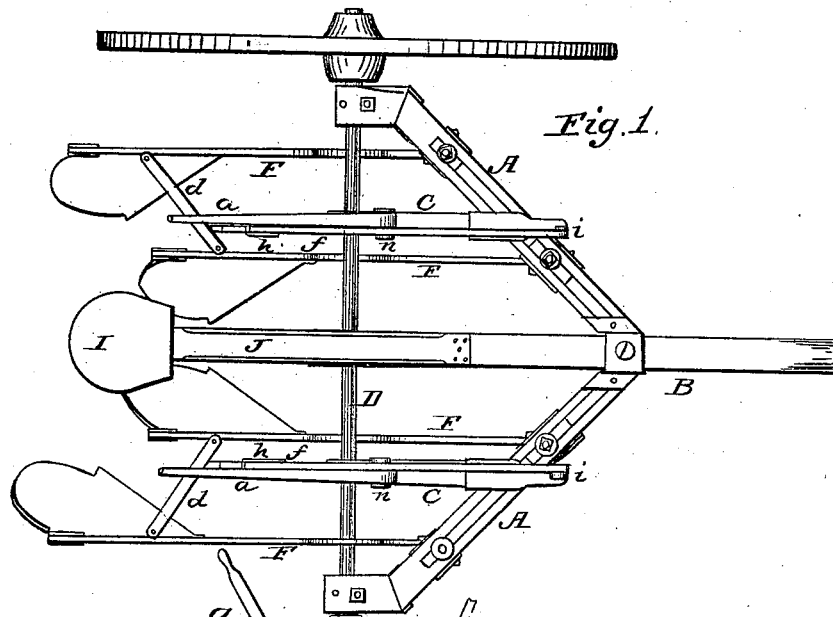


Fig. 1.

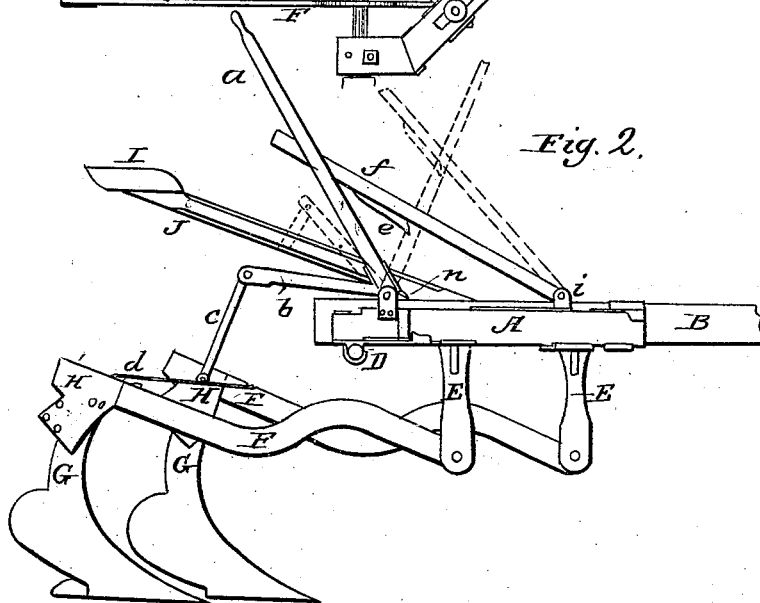


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 51,721, dated December 26, 1865.

*To all whom it may concern:*

Be it known that I, WILLIAM H. HOWELL, of Ewingville, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Cultivators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a top plan view, and Fig. 2 is a side elevation.

Like letters refer to like parts wherever they occur.

The nature of my invention consists in a novel construction of the frame, and a novel arrangement of the plows and the devices used for operating the same.

To enable others skilled in the arts to construct and use my improved cultivator, I will proceed to describe it.

I construct a triangular frame consisting of the slotted bars A A, arranged diagonally, and having their front ends secured to the tongue B, and their rear ends to the axle D, as shown in Fig. 1. Two other bars, C, are arranged longitudinally, as shown in Fig. 1, for the purpose of giving the frame greater strength and affording supports for the other parts, herein-after described.

E, Fig. 2, represents strong metal pendants, which are secured to the under side of the bars A, by means of set-screws or nuts, in such a manner that they can be adjusted laterally, as may be desired. To these pendants E the drag bars or beams F are pivoted, as shown in Fig. 2, and to the rear end of these latter the plows are secured by a bolt which passes through the standard G and the flange H at *o*, Fig. 2. The flange H, which consists of two pieces having the standard G inserted between them, is provided with a series of holes, as shown, in rear of the standard, into either of which a wooden pin may be inserted at pleasure for bracing and setting the plows as desired.

A seat, I, is secured upon the support J, directly in the rear of the tongue, as shown, and to the longitudinal bars C on each side of the

tongue, and in front of the axle D, is located a lever or handle, *a*, the lower end of which is firmly secured to the elbow-lever *b*, which latter is pivoted at *n*. From the rear end of *b* a link or rod, *c*, extends downward, and is pivoted, as shown in Fig. 2, to the diagonal cross-bar *d*, which serves to connect the rear ends of the pair of drag-bars or plow-beams F. At the front end of the bars C, on each side, is pivoted another bar, *f*, the rear end of which passes loosely through a staple or loop, *h*, secured to the side of handle *a*, the loop being shown in Fig. 1. On the under side of the lever or bar *f* is a metallic projection or catch, *e*, so formed that as the lever *a* is thrown forward, as shown in red, the loop will pass over the hook *e*, which then engaging with the staple *h* will hold the lever *a* in that position, and consequently keep the plows raised from the ground until the lever *a* is released.

By making the frame in the manner shown I am enabled to use drag-bars of uniform length, and at the same time throw one plow to the rear of its fellow, as is necessary, especially when the style of plow here shown is used.

The pendants E may be made of any desired length, and should be provided with a plate having flanges on its upper face at the edges for securing it firmly to the bar A.

Having thus fully described my invention, what I claim is—

1. The frame consisting of the diagonal slotted bars A A, tongue B, and axle D, arranged as shown and described.

2. The elbow-lever *b*, connected to the plows by rod *c*, or its equivalent, in combination with the handle *a* and bar *f*, provided with the hook *e*, when arranged to operate as and for the purpose set forth.

3. The combination and arrangement of slotted bars A, pendants E, drag-bars F, and bar C, as shown and described.

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