A. HUNT.

CULTIVATOR.

No. 184,042. Patented Nov. 7, 1876.

Fig. 2.

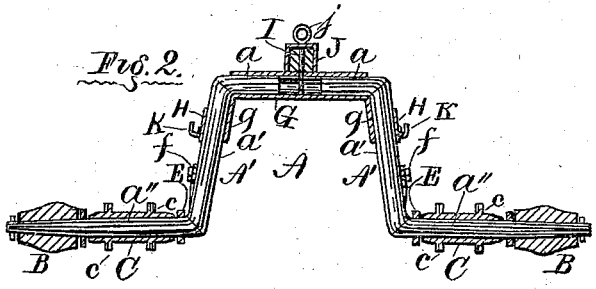


Fig. 3.

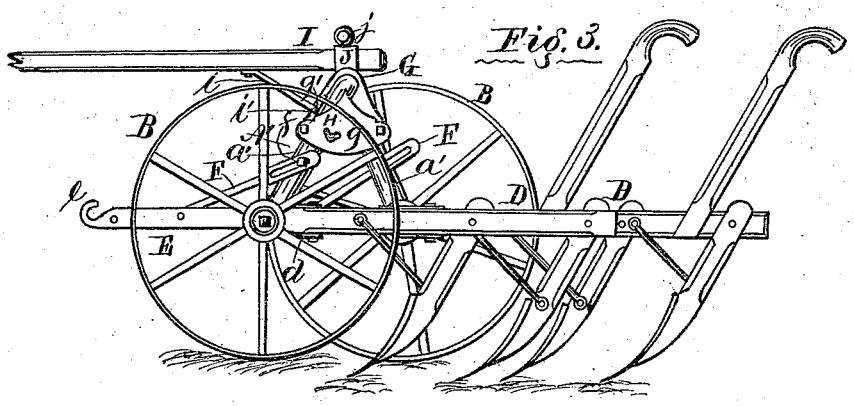
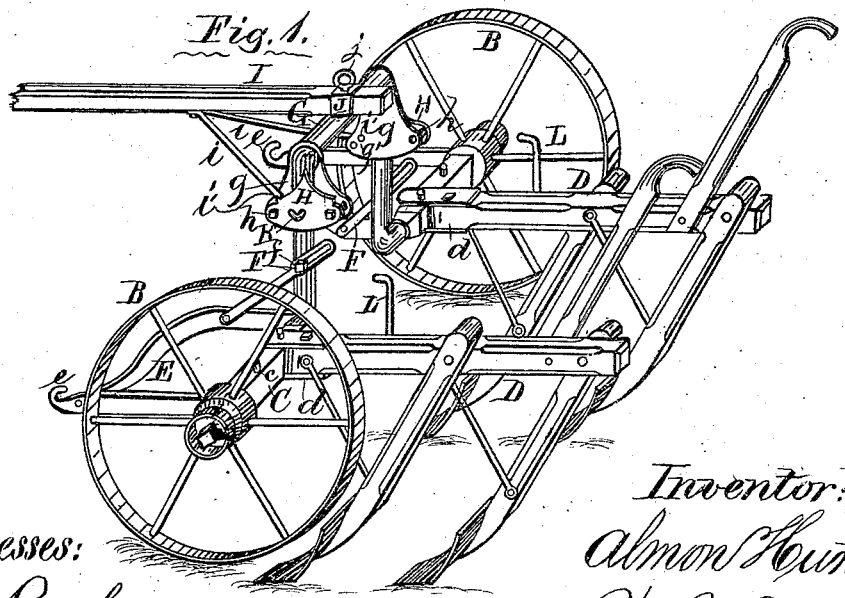


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALMON HUNT, OF MACOMB, ASSIGNOR TO SMITH C. FERGUSON, OF KEWANEE, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **184,042**, dated November 7, 1876; application filed March 8, 1876.

To all whom it may concern:

Be it known that I, ALMON HUNT, of Macomb, county of McDonough and State of Illinois, have invented certain Improvements in Cultivators; and I hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, making part of this specification, and in which—

Figure 1 is a perspective view of a cultivator embodying my invention. Fig. 2 is a rear elevation of the axle, and sectional view through the axle-section-connecting sleeve, and through the sleeves to which the plow-beams are coupled. Fig. 3 is a side elevation—near wheel removed.

This invention relates to improvements in that class of cultivators known as "tongueless cultivators;" and the invention consists, first, in mounting upon the axle a plate, to which a forwardly-projecting supporting-pole for the axle may be attached, for sustaining the axle in an elevated position when the plows are hooked up thereon for transportation upon their own wheels; second, in constructing said plate with stops, and in so attaching the supporting-pole thereto as to limit the inclination of the axle from a vertical position, when the rear ends of the plow-beams are elevated thereon; third, in constructing aforesaid plate in the form of a sleeve, with its ends so constructed that they will act as stops to limit the oscillations of the axle-sections in relation to each other, and the consequent relative advanced and receded positions of the plows, each to the other.

Referring to the parts by letters, A represents the axle, made in two sections, A′ A′, each section crank-shaped, and formed of an upper part or journal, *a*, an elevating or side part, *a′*, and a horizontal part, *a″*. The supporting-wheels B are journaled on the outer ends of the parts *a″*, and sleeves C are also journaled on the parts *a″*, between the wheels B and the angle from which springs the side *a′*. The sleeves C have series of projecting lugs *c*, to which the ordinary cultivator-plows D are attached by their beam-plates *d*, as plainly shown in the drawings. E E are the draft-bars, each having its forward end formed into a hook, *e*, for the attachment of the single-tree, and the connection thereto of the draft animal, and its rear end bifurcated and journaled, an arm at each end of a sleeve, C, and on the part *a″* of the axle. F is a link, its lower end pivoted to the draft-bar E, and its upper end slotted, as shown in the drawings. *f* is a guide-bolt projecting from the part *a′* of the axle, through the slotted links E, and provided with a head on its outer end. G is a tubular sleeve, receiving the ends *a* of the axle, and provided at each end with downwardly enlarged and projecting plates *g* in close proximity to the parts *a′* of the axle on their inner sides. H is a plate, connected one to each plate *g* by means of studs *h*, of such length as to bring the plates *g* H snug to the sides of the arm *a′*, but still to allow it to slide between them, and of such distance apart as to act as stops to limit the inclination of the axle when the plows are suspended thereon, and to properly limit the advance of each plow relatively to its fellow. I is a supporting-pole, and has two braces, *i*, pivoted at one of their ends to near its rear end, and their other ends formed into hooks *i′*. J is a loop or eye attached to one side of the sleeve-coupling G, and perforated to receive an eyebolt, *j*.

The pole I may be readily put in place by inserting its rear end in the eye J and inserting the eyebolt *j*, and engaging the hooks *i′* in holes *g′* in the plates *g*, and may be as readily and easily removed.

K K are studs projecting from the plates G, and over which the hooks L, attached to the plow-beams, may be hooked to suspend the plows.

In operation in the field the pole I is removed, and the draft-animals attached to the draft-bars E. As either animal advances ahead of its fellow the wheels B are retained in the line of progression by means of the sections A′ of the axle oscillating in the sleeve-coupling G and changing positions, as shown at Fig. 3, where the near section A′ is shown with its attached plow advanced, and the other section receded, and the extent of movement of this kind is also shown, the stops *h* striking the arms *a′*, and thereby limiting the

same. The slotted arms or braces F, it will be seen from Fig. 3, allow the draft-plates E to retain their position while the vertical angle of the sides a' of the axle are changing, and while the positions of the arms a' are fixed they allow the forward ends of the draft-plates E to be raised or lowered in the obvious manner, and the rear ends of the slots striking the bolts f will retain the bars E from dropping much below a horizontal position.

The lateral and vertical movements of the rear ends of the plow-beams, independently of each other, are obtained in a usual manner by movement on the lugs c, and movement of the sleeves C on the axle a'', respectively.

For the purpose of transporting the machine on its own wheels B, the supporting-pole I is put in place, and by means of an ordinary neck-yoke connected to the necks of the draft-animals. The rear ends of the plows being then elevated, the hooks L may be hooked over the studs K, and both sections A′ A′ of the axle will assume the position shown by the near section at Fig. 3, at which position the stops h engage the arms a' of the axle, and limit further movement without raising the forward end of the pole I. When the pole I is removed the forward ends of the slots in the links F will strike the bolts f and prevent the axle A dropping too far forward, and their rear ends prevent it falling backward.

What I claim as new, and desire to secure by Letters Patent, is—

1. The sleeve G, operating as a connecting-plate between the detachable pole I and the plows D, when the latter are suspended, as set forth.

2. The sleeve G, having plate g H on its ends, and stops h operating, in combination with the detachable pole I, axle A, and plows D, having hooks L for engaging studs K, substantially as and for the purpose specified.

3. The sleeve G, having plates g H, and stops h between the plates, operating in combination with the sections A′ A′ of a divided axle to hold them in place and limit their motion, substantially as and for the purpose specified.

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Witnesses:
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