

O. OLSON.
Cultivator.

No. 218,561.

Patented Aug. 12, 1879.

Fig. 1.

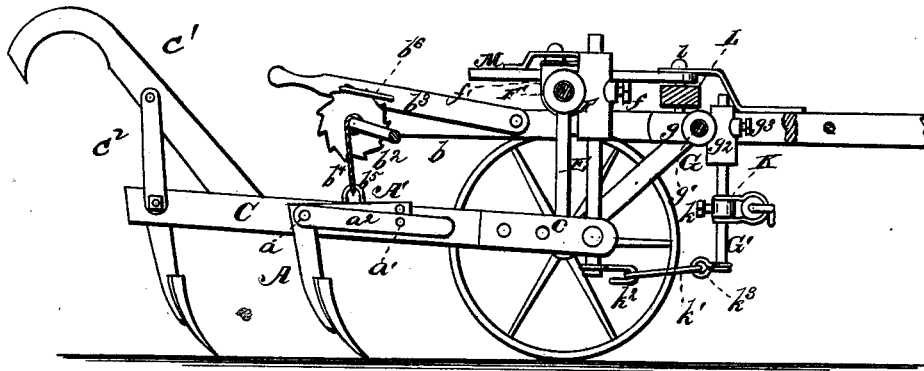
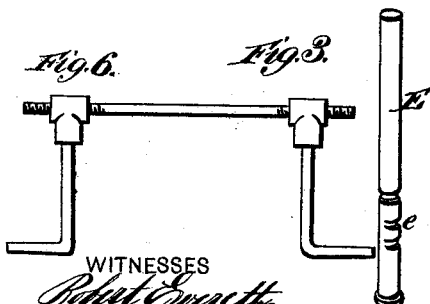
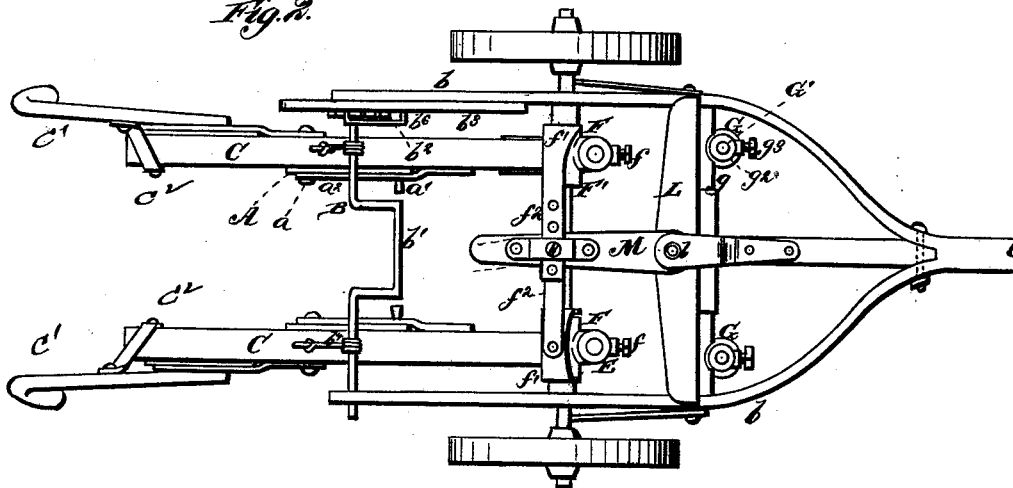


Fig. 2.



WITNESSES

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INVENTOR

Olaf Olson
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UNITED STATES PATENT OFFICE.

OLOF OLSON, OF RED OAK JUNCTION, IOWA, ASSIGNOR OF ONE-HALF HIS
RIGHT TO LOUIS W. JOSEPH, OF SAME PLACE.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **218,561**, dated August 12, 1879; application filed
June 21, 1879.

To all whom it may concern:

Be it known that I, OLOF OLSON, of Red Oak Junction, in the county of Montgomery and State of Iowa, have invented certain new and useful Improvements in Corn-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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of my cultivator. Fig. 2 is a plan view, and Figs. 3, 4, 5, and 6 are detail views.

Identical parts in the drawings are designated and referred to by the same letters.

This invention has relation to cultivators; and consists in the improvements in the construction of the same hereinafter fully described, and particularly pointed out in the claims.

A is the standard of the cultivator, and it is attached to the beam by the pivot-bolt *a*. A' is an arm of the standard, which extends along the side of the beam, and is provided with holes suitable to receive the wooden pin *a*¹, which passes through the metal plate *a*² and into the cultivator-beam. By passing this pin through either of the holes in the series the angle of the standard may be changed at will.

B is a shaft, which is journaled in the side pieces of the frame *b*, which extends rearward from the axle, and is provided with the hand-crank *b*¹ and the ratchet *b*². The pivoted arm *b*³ has a staple, *b*⁶, which is suitably constructed and located to engage the ratchet and prevent it from revolving; and *b*⁴ are cords or chains, which are wound upon the shaft, and connected to the cultivator-beams by the staples *b*⁵, near the cultivators. Upon the vertical sides of the four ends of the cultivator-beams C are the plates *c*, rigidly attached, and provided with suitable holes to receive the trunnions *d* of the sliding blocks D. The set-screws *d*¹ engage suitable threads in the trunnions, and their inner ends enter into annular grooves *e* in the sliding shafts E.

F are two-way sliding blocks, suitably constructed to be placed upon the horizontal por-

tion F' of the axle and work freely thereon. The sliding shaft E works vertically in the outer or right-angled hole in the block F, and is held in any desired position by means of the set-screw *f*, which is threaded in the block, and its inner end engages the sliding shaft E, and retains it at any desired position.

G G are two-way thimbles, cast in one piece, with their barrels at right angles with each other. The horizontal barrel or tube *g*¹ is placed on the rod *g*¹ of the frame of the cultivator and swings freely on the same. The vertical barrel or tube *g*² receives the shaft G'. These vertical shafts are held in any desired position by means of the set-screws *g*³.

K are collars placed upon the shafts G', and held in any desired position by means of the set-screws *k*. These collars are for holding the whiffletrees in any desired position upon the shafts G'. There are links *k*¹, which connect the ring-hooks *k*² and *k*³, which are freely secured to the lower ends of the shafts E and G'.

The operation of this portion of my invention is that by means of placing the set-screws *d*¹ in either of the annular grooves *e* of the sliding shafts E the fore end of the cultivator-beam may be vertically adjusted. The vertical adjustment of the beams may also be accomplished to any limited amount by means of the set-screw *f*, which will retain the shaft in any desired position. By means of these two adjusting devices I am enabled to raise or lower the cultivator-beam the least practicable or greatest required distance; and by means of the set-screws *k*, for adjusting the position of the collar K, and the set-screw *g*³, which holds the shaft G' in any desired position, I am enabled to adjust the height of the draft to suit the height of the cultivator and preserve a horizontal position for the draft-links *k*¹, which connect the draft-shaft G' and the cultivator-shaft E.

L is an evener or double-tree centrally pivoted to the top of the frame by the bolt *l*, and provided with metallic facings, against which the upper portion of the vertical part of the thimble of the shaft G' rests when the draft of the team is applied to the lower portion of the shaft G'.

M is a lever pivoted by the bolt *l*, and ex-

tending rearward suitably to enable the operator to control it. The shackles f^1 embrace the F' portion of the axle and the horizontal portion of the sliding two-way blocks F . These shackles are connected by the bars f^2 , which are perforated by a series of holes by which to adjust the distance between the shafts E . The operation of this feature of my invention is that the operator can at will change the horizontal position of the cultivators in relation to the carriage while the cultivator is in operation without stopping or delay, which I find to be a valuable feature.

By means of the shaft B , provided with the crank b^1 and ratchet b^2 , and the cords or chains b^4 , I can at will raise the cultivators clear of the ground or set them at any required depth in the ground for work. The handles c^1 are braced by the bars c^2 .

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

1. In a cultivator, the two-way sliding blocks

F , provided with the set-screws f , in combination with the portion of the cultivator-axle F' and the shaft E , as and for the purposes substantially as set forth.

2. In a cultivator, the two-way thimbles G G , provided with the set-screws g^3 , in combination with shafts G' G' , the collars K , provided with set-screws k , the double-tree L , and the link k^1 , ring-hooks k^2 , and shafts E , as and for the purposes substantially as set forth.

3. In a cultivator, the lever M , in combination with the bars f^2 , provided with a series of adjusting-holes and the shackles f^1 , and the sliding two-way blocks F , as and for the purposes substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses at Red Oak, Iowa.

OLOF OLSON.

Witnesses:

M. D. CEMBERLIN,

THOS. GRIFFITH.