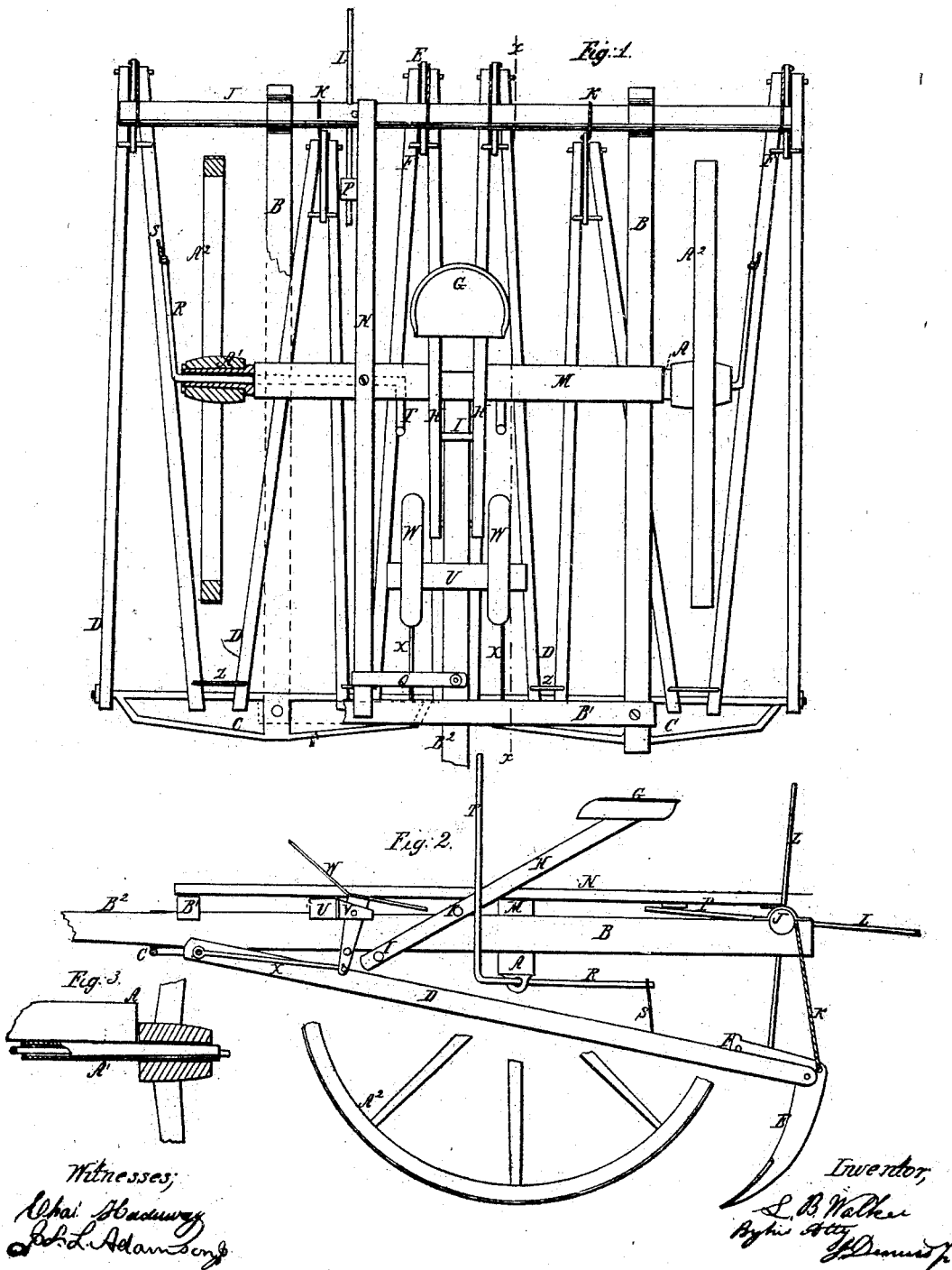


L. B. WALKER.
CULTIVATOR.

No. 49,938.

Patented Sept. 12, 1865.



UNITED STATES PATENT OFFICE.

LONDUS B. WALKER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 49,938, dated September 12, 1865.

To all whom it may concern.

Be it known that I, LONDUS B. WALKER, of Chicago, Cook county, State of Illinois, have invented certain new and useful Improvements in Cultivators for Corn and other Crops; and I do hereby declare that the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

The nature of my invention and improvements in cultivators consists in the new combination and arrangement of devices herein-after described, and claimed in the following description.

Figure 1 is a plan or top view of my improved machine. Some parts are shown in section, and some broken off to show others more clearly. Fig. 2 is a section showing the machine cut on the line *xx* of Fig. 1. Fig. 3 is the end of the axle, the pivot and the hub of the wheel in section.

In these drawings, A is the axle, which consists of a bar of wood with two metal tubes, A' A', fastened to it, forming hollow pivots for the wheels A² A² to turn on.

B B are the side rails of the frame, fastened to the axle A and to the front bar, B'.

B² is the pole, fastened to the axle and to the front bar, B'. To this pole the animals may be harnessed to draw the cultivator.

The vibrating bars C C are pivoted to the under side of the front ends of the rails B to carry the fore ends of the beams or bars D D, the bars C C being arranged to vibrate horizontally, while the bars D D vibrate perpendicularly, upon them, (the bars C C.)

The cultivator shown in the drawings has six teeth; but my improvements are adapted to cultivators of a greater or less number of teeth.

Each tooth E is hung between the rear ends of two of the bars D D by a pin or bolt passing through the bars and tooth, on which pin the tooth is arranged to vibrate, so that when the cultivator is run backward the teeth will vibrate forward and drag on the ground without breaking any part of the machine.

The cultivator-teeth are made in the form shown in the drawings, the upper part of the shank projecting forward and made wide enough for a series of holes one above another, so as to vary the angle of the tooth by changing the pins F F, which lie on the bars D D and hold the tooth in its working position.

The pins F F may be made of wood, and the driver can carry a supply, so that if the teeth catch roots, stones, or other obstructions and break the wooden pins he can supply a new one without loss of time or delaying the machine longer than is necessary to put a pin in the place of the broken one. Besides, the use of wooden pins may save the machine from being broken in some other part or place.

The driver's seat G is arranged on two bars, H H, which pass down diagonally on each side of the rear end of the pole B², and one bolt, I, is put through these bars H H above the pole and another below it, so that the seat may be moved forward or backward to balance or adjust his weight on the machine, as may be required.

To raise the teeth from the ground in traveling from one field to another, I arrange the roller J to turn in scores on the rear ends of the rails B, and connect the cultivator-teeth E to it by chains or ropes K, and put some rods, L, through the roller J within reach of the driver, so that he can turn the roller and wind the rope to raise the teeth when required.

The bar M is fastened on the tops of the rails B, right over the axle, and the locking-lever N vibrates on a screw in the bar M, and has the catch P fastened to it, to catch over the rods or arms L to hold the roller J from turning back and hold up the teeth until it is time to drop them, when the driver can touch the lever with his foot and release the roller and drop the teeth. The spring Q holds the catch over the rods L and allows it to yield as the rods pass down.

To raise the outside teeth, I make some rock or crank shafts to work in the tubular pivots of the axle, with a horizontal arm, R, extending backward and connected to one of the bars D of the outside teeth by the rope S. The inner ends of these rock-shafts are bent forward

and turned upright each side of the driver's seat, as shown in the drawings at T, so that the driver can depress them with his hands or feet to raise the outside teeth in turning the machine, or at other times.

To enable the driver to vibrate the bars C C and vary the path of the cultivating-teeth, the bar U is fastened to the pole B² and provided with brackets V to support the three-armed levers W, which vibrate in them, having their lower arms connected to the bars C by the links X, so that the driver by applying his feet to either of the arms of the levers W can vibrate the bars C in either direction and vary the paths of the cultivating-teeth and adapt them to the crops being worked by the machine.

The front ends of the bars D D may be connected by the links Z Z, as shown in the drawings.

My improvements enable the driver to vary the paths of the cultivating-teeth with his feet to the right or left, to suit the rows of crops being cultivated.

The rock-shafts working in the tubes A' may

have additional horizontal arms to raise the other cultivating-teeth, so as to dispense with the roller J, if preferred that way.

I claim—

1. The combination and arrangement of the vibrating bars C C with the bars D D which draw the cultivating-teeth.

2. In combination with the vibrating bars C C, the levers W W, and links Z Z, arranged to operate them, substantially as described, for the purpose set forth.

3. Making the foot-levers W W with three arms and hanging them so that the driver by applying his foot to either of the upper arms can work the levers and vibrate the bars C C in either direction.

4. Making the axle or pivots of the wheels hollow, in combination with the rock-shaft and levers working through them to raise the cultivating-teeth.

LONDUS B. WALKER.

Witnesses:

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