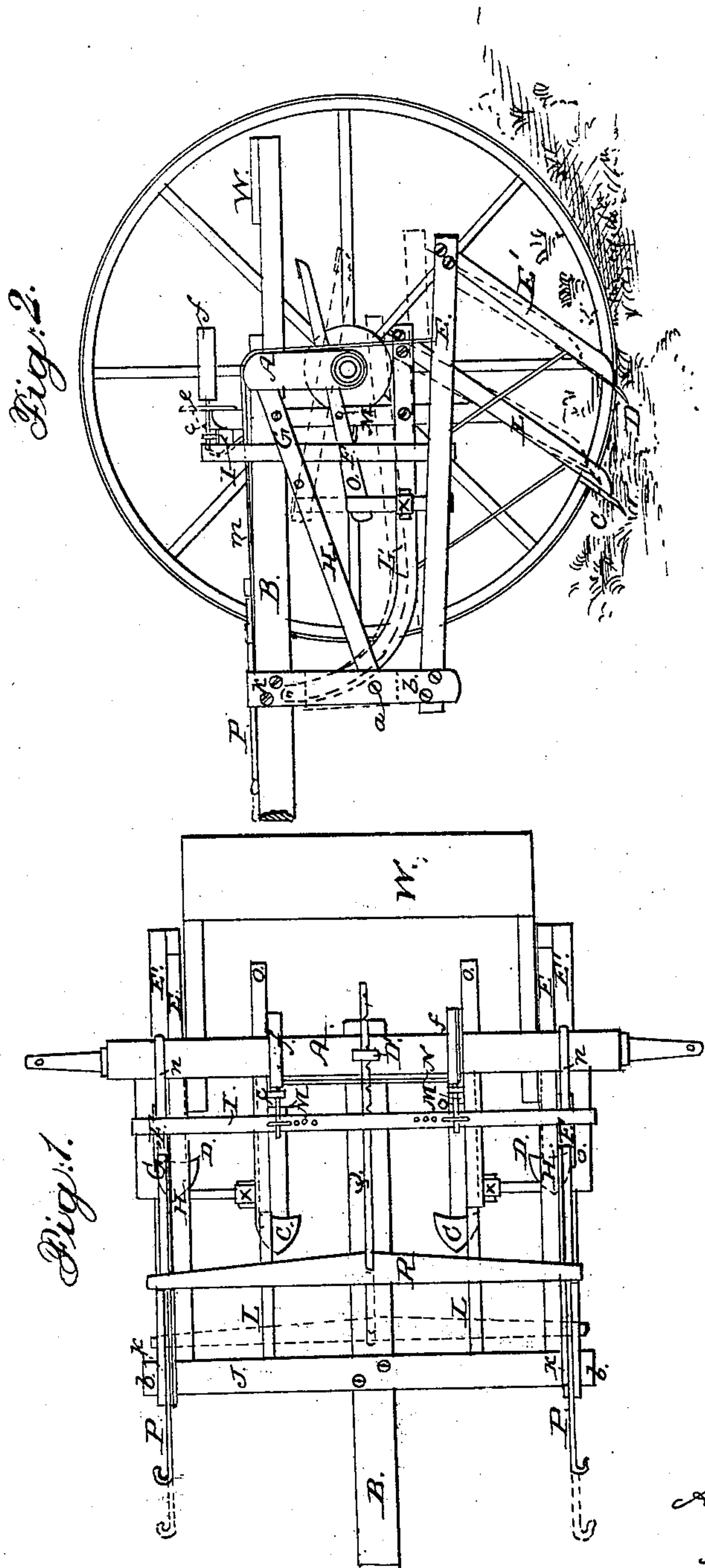


A. P. DURANT.
Wheel-Cultivator.

No. 42,932.

Patented May 31, 1864.



WITNESSES:

Ed. Bartlett
Wm. E. Green

INVENTOR:

A. P. Durant
By his Atty
Amos Woodman

UNITED STATES PATENT OFFICE.

A. P. DURANT, OF ATLANTA, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 42,932, dated May 31, 1864.

To all whom it may concern:

Be it known that I, A. P. DURANT, of Atlanta, Logan county, Illinois, have invented certain new and useful Improvements in Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a top view or plan of my said cultivator without the wheels, and Fig. 2 is a side elevation of the same with one wheel shown.

The object of my invention is to improve that class of agricultural implements known as the "wheel or sulky cultivator," which object I propose to accomplish by a novel construction and arrangement of its various parts, whereby the machine as a whole will be more completely under the control of the attendant, and by which it may be operated more efficiently.

To enable any one skilled in the arts to which my invention appertains to make and use the same, I will proceed to describe the construction and operation thereof.

Similar letters of reference represent corresponding parts of the different figures in the annexed drawings.

The main axle is represented in the drawings by A and the tongue-piece by B, which tongue-piece is joined to the axle-tree in the center thereof, as shown. Said axle is raised above the center of the wheels by arms made on the ends thereof, which reach down and carry the centers about which the wheels revolve. Across the forward part of the tongue-piece B a beam, J, is laid and secured, and on each end of said beam an arm, K, is made, which is supported and stayed by the braces H H, leading from the main axle to the lower end of said arms. These pieces—viz., the axle A, tongue-piece B, cross-piece J, and braces H H—constitute the main frame of the machine, and on them all the other parts are either hung or mounted.

This machine has four cultivating-shares, represented by C C and D D. The last-mentioned shares are susceptible of a vertical movement only. They are fixed to and governed by loose frames consisting of the pieces E E. The front ends of these frames are pivoted at

a to the arm K of the main frame through the agency of the arm b, which is used to stiffen the junction of the two frames and prevent any undue lateral movement of the frames E E'. The vertical movement of these share-frames are guided by the standards F, which work through mortises G G made in the brace-pieces H H. The upper ends of the standards F are united by a bar, I, which reaches from the top of one of the said standards to the top of the other. The two shares C C are fixed to loose frames L L', the front ends whereof are pivoted to the under side of the cross-piece J, as shown by dotted lines in Fig. 2. These two frames, and consequently the shares, are governed by the attendant through the agency of the standard M, the lower ends whereof are united to the said share-frames, and the upper ends of which reach up and connect loosely on the cross-bar I by means of spanners c c, which are made to reach over said bar in the manner shown and pass through small metal lugs e e on the upper ends of the standards M, handles f being made on the ends of said spanners for the attendant to lay hold of.

The standards M are connected to each other by means of a bow connecting-piece, N, to the ends whereof the respective standards are pivoted about midway, leaving them to swing on the pivots as centers.

To the standards M there are also levers O O, pivoted to the front ends of which leather or other flexible straps are attached, leading from the frame E E' over a pulley, x, fixed on the side of the frame L, so that the driver, by putting his foot on the rear end of the lever, can draw the shares C toward the share D, while with his hands he presses the top of the standard M in the opposite direction. The tongue of this machine is used only to guide it, power to draw it being applied to the hooks P, fixed in the ends of the double-tree R, which is attached to the main axle-tree by means of a bar, Q, reaching back and catching on a staple, p', driven in the axle in the manner shown. The said double-tree is secured to the tongue-piece by means of a bolt, which passes through a slot, b, cut therein, by which the said double-tree is allowed to slide forward on the tongue when the bar Q is released from its hold on the axle-tree. Now, as the out ends of the double-tree are united to the rear ends of the

share-frames E E' by means of a strap, *n*, the said frames will be raised up and the shares lifted out of the ground, as shown in red, whenever the bar Q is released from the staple *p'*, so as to let the double-tree slide forward, the said bar Q being made to reach back well through the staple, and with notches cut in it, by which the double-tree is allowed to take different places on the tongue, and thus regulate the dip of the shares in the ground.

It will be seen that inasmuch as the frames of the shares C C are connected to the bar I, which unites the tops of the share-frames E E', the shares C C will be raised out of the ground by the forward motion of the double-tree at the same time the shares D D are, and by the same cause; but it must be remembered that by the loose connection between the bar I and the standards M the shares C C can be raised up by the handles *f* without molesting the shares D D.

I do not propose to accomplish anything by

the use of this machine that has not been attempted by others by machines differently constructed, nor do I mean to lay claim to any new principle, nor to the accomplishment of any new object in cultivating; and I am aware that the different devices comprising my machine, considered by themselves, are not new, nor do I lay any claim to them; but

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

The two share-frames E E', when constructed, combined, and arranged in respect to each other and the axle-tree A as described, and when raised and lowered by the forward and backward motion of the draft-power applied to the double-tree R, substantially as shown and described.

A. P. DURANT.

Witnesses:

M. M. MIGGS,
JOSEPH H. JANNY.