

B. M. ROOT.
Cultivator

No. 223,954.

Patented Jan. 27, 1880.

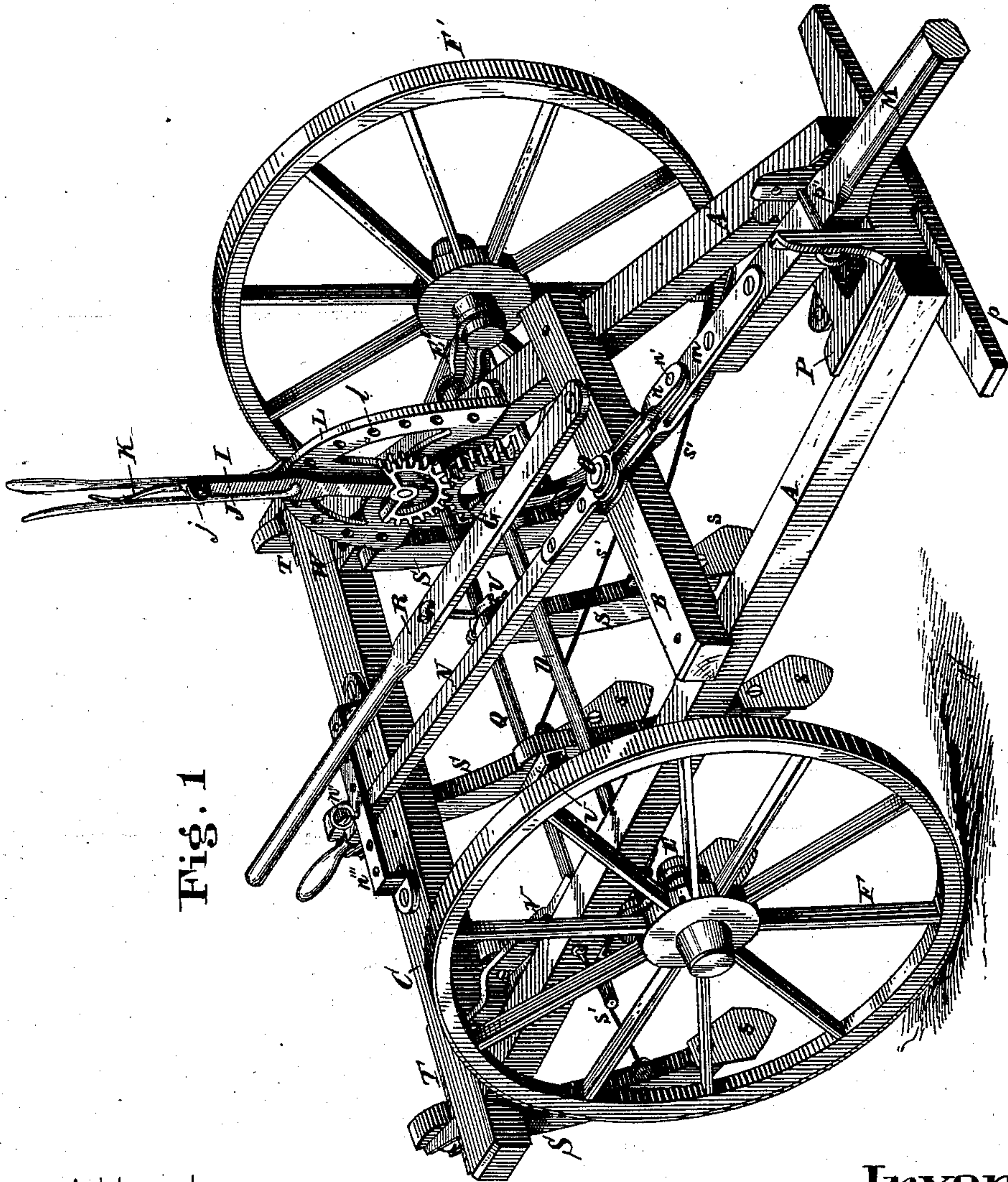


Fig. 1

Attests.

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CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 223,954, dated January 27, 1880.

Application filed March 25, 1879.

To all whom it may concern:

Be it known that I, BENJAMIN M. ROOT, of Mount Joy, in the county of Lancaster, in the State of Pennsylvania, have made certain new and useful Improvements in Cultivators, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, making part hereof.

My invention relates to that class of cultivators in which the frame is supported by two wheels and crank-axle, and from the frame of which hang a number of shovels, the whole being drawn by two horses.

This machine is used for preparing the ground for seeding, as a marker, and for cultivating corn, tobacco, &c.; and it consists in improvements fully described in the following specification and set forth in the appended claims.

In the drawings, Figure 1 represents a perspective view of a cultivator embodying my improvements. Fig. 2 is a section showing the mechanism for raising and lowering the frame and the spades. Fig. 3 is a perspective view of the support for the rear spades. Fig. 4 is a perspective view of the support for the front spades. Fig. 5 is a perspective view of the casting which guides and supports the pole, and from which is suspended the double-tree.

Like letters of reference correspond to like parts.

A A' are the side timbers of the frame, which are secured together by the casting P and timbers B and C. Immediately under the frame is supported the shaft D in bearings. To either end of this shaft D are cranks E E', the crank-pins being the axes of the wheels F F'. Upon shaft D is secured the segmental gear G. Directly above the gear G is another segmental gear, H, which has a bearing in the locking-arc casting L and a lever, I. This lever is supplied with a lever, J, whose fulcrum is at j, and whose upper part is thrust from lever I by spring K, while the lower end is curved and passes through a hole in lever I and enters the holes l in the locking-arc L. By pressing the upper parts of levers J and I together the pin is withdrawn from the hole l in arc L and the lever I is free to move upon its axis, rotating gears H and G and lifting or lowering the frame of the cultivator.

When the cultivator is being drawn to the field, or in turning at headlands, the lever I is pushed back, thereby causing the frame and spades to be lifted, so that all shall be clear of the ground but the wheels.

If the machine is to be used as a marker, the lever I is brought to such a position as to regulate the depth of the furrow; but when used as a cultivator the lever I is brought forward, which action sinks the spades below the wheels.

The pole M is held between two uprights, p' p', projecting upward from the casting P, and is kept down by pin p''. To the end of the pole is attached a plate, m. Plate m is hinged to a plate, n, by pin n'. Plate n forms a portion of the lever N, whose fulcrum is at O. The end of lever N plays between a plate, n'', and timber C, and is locked in any position by pin n'', which passes through holes in plate n'' and lever N. By moving the lever N the direction of the pole M is also changed for the purpose previously given.

The cultivator is supplied with a series of spades, S s. The back or rear spades are hinged to castings T, Fig. 3. These castings are composed of a plate, T, having slots t t in it, through which pass set-bolts t' t' and a projection, T', which supports the spade-standard S by bolt t''. The spades next in front of these are hung from the brace-castings V and W, which carry shaft Q. The brace W also supports the locking-arc L. The front spades are hung from castings U by bolt u, (shown in Fig. 4,) and which are secured upon shaft Q by set-screws q. From one of these castings there is a projection which connects with lever R. By moving this lever the shaft Q slides laterally in its bearings, carrying with it the spades. All of the spades are braced forward by rods s' s'. The casting which supports and guides the pole M is composed of two uprights, p' p', the base being somewhat of a box shape, provided on the sides with holes p⁵ p⁵, through which bolts pass to secure it to the frame-timbers A A'. From the bottom there is a projection, p³, to which is bolted a bent piece, p⁴, upon which rests the double-tree p, and which is held there by a bolt, p⁶, which passes through plate p⁴ and bottom of box. This is shown in Fig. 5.

Having thus described my invention, what

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

1. In a cultivator, a metallic box-casting, P, secured to the ends of the timbers A A', substantially as shown, and having two uprights, p' , which are provided with holes and pin p'' , between which the pole M rests, and a piece, p^1 , between which and the box-casting P the double-tree is placed and secured by bolt p^6 , in combination with the pole M and double-tree p , all constructed as shown and described.

2. A box-casting, P, of the peculiar shape shown and described, having two uprights, p' , and a projection, p^3 , cast upon it, in combination with a metallic bar, p^4 , for the purpose of supporting the cross-tree p , so that the cultivator is guided by the pole which rests between the uprights p , and pulled by the cross-

tree which rests upon the bar p^4 , and is secured to the box-casting and said bar, substantially in the manner and for the purpose set forth.

3. A metallic casting, P, constructed as described, in combination with the frame of a cultivator carrying a number of spades, substantially as and for the purpose specified.

4. In a cultivator, the combination of the described box-casting P, pole M, bar p^4 , and double-tree p , with the frame of the machine which carries the spades, substantially as shown and described.

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Witnesses:

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