J. M. CONRAD.

MACHINE FOR REMOVING BUGS FROM POTATO-VINES.

No. 191,936. Patented June 12, 1877.

Fig. 1.

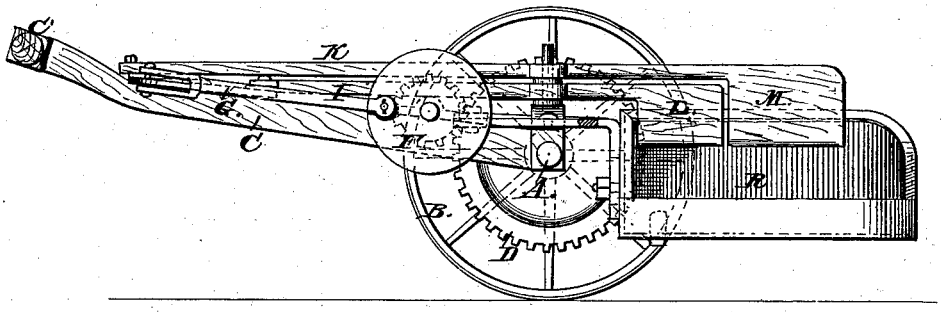


Fig. 2.

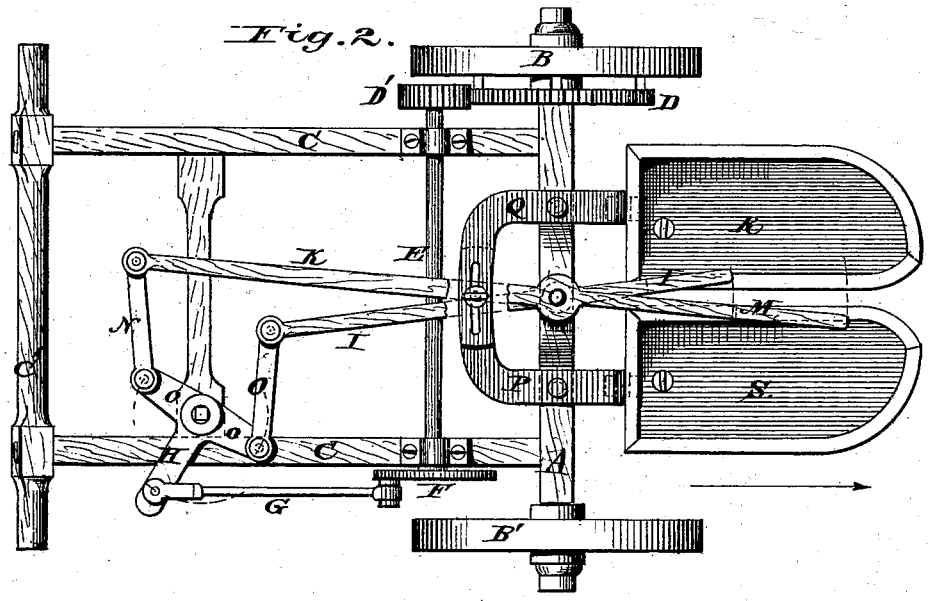
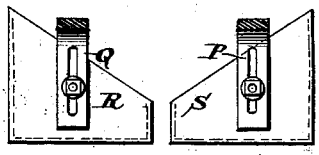


Fig. 3.



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IMPROVEMENT IN MACHINES FOR REMOVING BUGS FROM POTATO-VINES.

Specification forming part of Letters Patent No. **191,936**, dated June 12, 1877; application filed April 17, 1877.

To all whom it may concern:

Be it known that I, JAMES M. CONRAD, of Cuba, Allegany county, New York, have invented an Improvement in Machines for Removing Bugs from Potato-Vines; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side view with one wheel and one pan broken away. Fig. 2 is a top view of my invention, and Fig. 3 a rear end view of the pans.

The object of my invention is to produce a device which will effectually remove bugs from potato-vines; and my invention consists in providing a carriage that may be pushed between the vines of potatoes, with beaters which operate in reverse directions, by means of gear attached to the wheels of the carriage, over a pair of pans, striking the bugs from the vines into the pans, where they may be destroyed, all of which will be hereinafter more fully described.

In the drawings, A represents the axle of a suitable carriage, and B B′ the wheels, said wheels being at a distance apart suitable to straddle a row of potatoes. C is a frame extending backward with the cross-piece C′, which is used as a handle in pushing the apparatus along over the potatoes. Attached to the wheel B is a cog-wheel, D, meshing in the pinion D′ upon a shaft, E, revolving in bearings upon the frame C. Upon the opposite end of the shaft E is a crank-disk, F, carrying a crank-pin, and operating the pitman G, which operates the T-lever H. Pivoted to the center of the axle are the two levers I K, one above another, the lever I being shorter than the lever K. Dropping down from the forward ends of the levers I K are the beaters L M, and attached to the rear ends of the levers I K are the links N O, connecting each lever to an end of the T-lever H. Pivoted to either side of the axle A are the arms P and Q, having their rear ends slotted and secured together by a thumb-screw, and the forward ends are also slotted, and adjustably bear two pans, R S, said pans being made adjustable vertically by means of set-screws operating in the slots in the ends of the arms P and Q.

The pans R and S are constructed sharpened at their forward ends, and with beveled tops, as seen in Fig. 3. The upper rims of the pans R and S are provided with a flange projecting inward and downward, so that bugs will be prevented from escaping when once lodged therein, and the opening in the bottom will allow their removal.

The operation of my device is as follows: The pans having been adjusted to a proper height by the set-screws in their ends, and to a proper distance apart by the set-screws in the ends of the arms P and Q, the apparatus is pushed over a row of potatoes, the wheels B and B′ running between the rows, and the potato-vines passing between the pans R and S. As the vines are in this position the beaters L and M, actuated by the gearing upon wheel B, operating the levers I and K by means of the rocking T-lever H, vibrate alternately to and fro, knocking the bugs in either pan, from which they cannot escape.

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

1. The combination of beaters M and L with pans R and S, substantially as described, whereby the beaters are adapted to vibrate in opposite directions, and over the pans alternately.

2. In a machine for destroying potato-bugs, the levers I and K carrying beaters, in combination with the T-lever H and connecting-links and rods, with the crank-shaft E, operating-wheel D, and adjustable pans, substantially as described.

3. The pans R and S, in combination with the slotted arms P and Q, pivoted upon the axle, as described, for the purpose set forth.

The above specification of my said invention signed and witnessed, at Cuba, this 11th day of April, A. D. 1877.

JAMES M. CONRAD.

Witnesses:

SAMUEL M. RUSSELL,

HOMER D. BLISS.