C. E. MATHEWSON & H. T. MILLS.

Machine for Catching and Destroying Potato-Bugs.

No. 165,243. Patented July 6, 1875.

Fig. 1

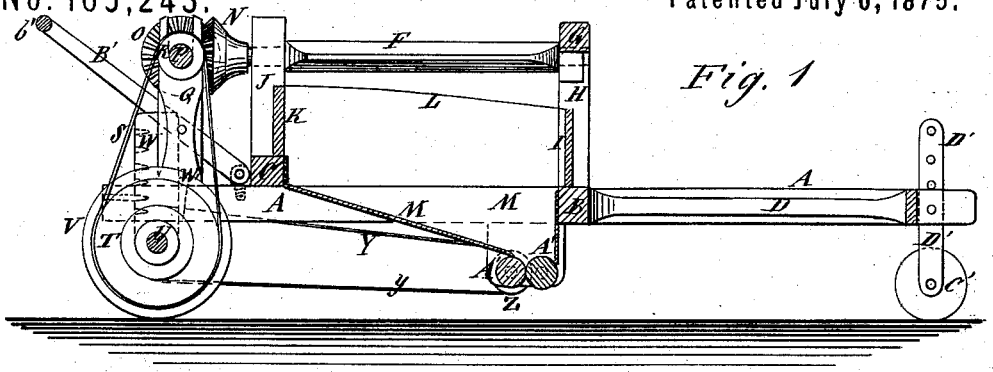


Fig. 2

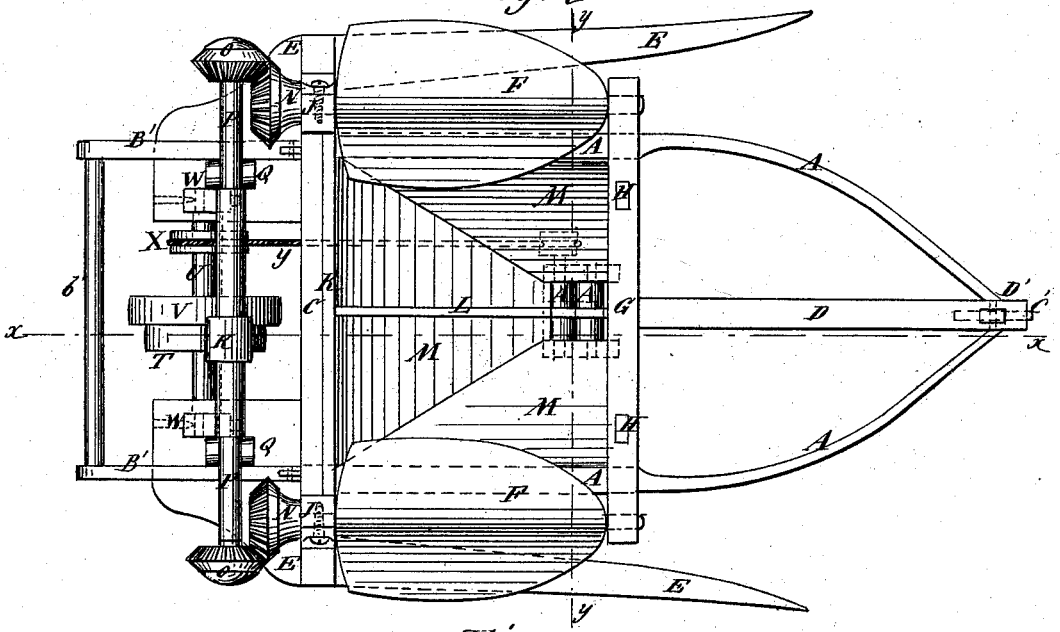
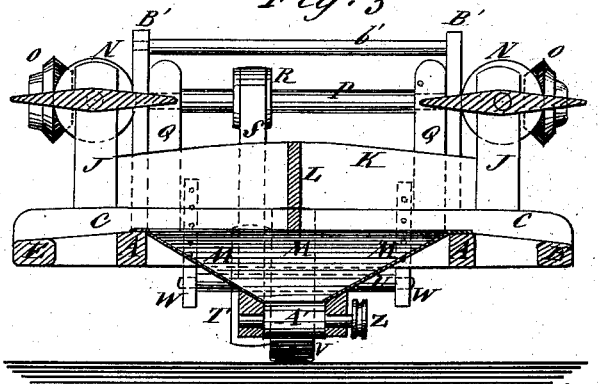


Fig. 3



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UNITED STATES PATENT OFFICE.

CEYLON E. MATHEWSON AND HARVEY T. MILLS, OF FRANKLIN CORNERS, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR CATCHING AND DESTROYING POTATO-BUGS.

Specification forming part of Letters Patent No. **165,243**, dated July 6, 1875; application filed May 1, 1875.

To all whom it may concern:

Be it known that we, CEYLON E. MATHEWSON and HARVEY T. MILLS, of Franklin Corners, in the county of Erie and State of Pennsylvania, have invented a new and useful Improvement in Machines for Catching and Destroying Potato-Bugs, of which the following is a specification:

Figure 1 is a vertical longitudinal section of our improved machine, taken through the line *x x*, Fig. 2. Fig. 2 is a top view of the same. Fig. 3 is a vertical cross-section of the same, taken through the line *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A are two bars, which are connected at their middle parts by a cross-bar, B, and to the upper sides of which, a little in front of their rear ends, is attached a cross-bar, C. The forward parts of the side bars A are inclined inward, and their ends are attached to the opposite sides of the central longitudinal bar D at or near its forward end. The rear end of the central bar D is secured to the center of cross-bar B. To the outer sides of the rear ends of the side bars A, and to the projecting ends of the cross-bar C, are attached the rear ends of the guards or fingers E, which project forward at a little distance from the side bars A, and incline slightly outward, so that the fingers E and the forward parts of the side bars A may guide the potato-vines into the space between the said side bars and fingers, when the said vines are struck by the wings F, and the bugs are knocked off and fall upon the bottom of the machine. The forward journals of the wings F revolve in bearings attached to the ends of the cross-bar G, which is attached to the upper ends of two posts, H. The lower ends of the posts H are attached to the cross-bar B at a little distance from its ends, so that they may not obstruct the vines as they slide into the space between the side bars A and the fingers E. The space between the posts H is closed by the board I, attached to the said posts. The rear journals of the wings F revolve in bearings attached to the upper ends of two posts, J. The lower ends of the posts J are attached to the cross-bar C a little beyond the side bars A, so that the wings F may be over the spaces between the side bars A and wings F. The space between the posts J is closed by a board, K, attached to said posts J. L is a partition-board, the ends of which are attached to the centers of the boards I K, so that as the bugs are knocked from the vines by the wings F they may strike against the partition-board L and fall upon the bottom M of the machine, and slide down it to the discharge-opening. The bottom M inclines from its sides and rear end to the middle part of the forward end, where is formed an opening, through which the bugs pass out. To the ends of the rear journals of the wings F are attached bevel-gear wheels N, into the teeth of which mesh the teeth of the bevel-gear wheels O, attached to the ends of the shaft P. The shaft P revolves in slots in the upper ends of the standards Q, the lower ends of which are attached to the widened rear ends of the side bars A. To the shaft P is attached a pulley, R, around which passes an endless band, S. The band S also passes around a pulley, T, attached to the shaft U, to the center of which is attached the wheel V, that supports the rear part of the machine, and acts as a drive-wheel for the operating parts. The shaft U revolves in bearings in the lower ends of two standards, W, which pass up through slots in the widened rear ends of the side bars A. In the rear ends of the slots, in the widened rear ends of the side bars A, are placed inwardly-projecting pins, which enter holes in the rear edges of the standard W, to prevent the said standards from slipping down. The standards W are forced into the rear ends of their slots, and thus locked in place by wedges *w'*, driven into the forward ends of their slots along the forward edges of the said standards. This construction enables the standard W to be readily raised and lowered by detaching the wedges *w'*. To the shaft U is also attached a pulley, X, around which passes an endless band, Y, which also passes around a pulley, Z, attached to one of the journals of one of the rollers A'. The rollers A' are placed side by side beneath

the discharge-opening of the bottom M, and their journals revolve in bearings attached to said bottom. One of the rollers A′ is revolved by the band Y, and the other is revolved by friction. B′ are the handles, which are attached to the rear parts of the side bars A and to the standards Q, and their rear ends are connected by a round, *b′*. The forward end of the machine is supported by a small wheel, C′, pivoted in the slotted lower end of the standard D′, the upper end of which passes up through a mortise in the forward end of the middle bar D, where it is secured by a pin passing through the said bar D and the said standard D′. Several holes are formed in the standard D′ to receive the fastening-pin, so that the forward end of the machine may be readily adjusted at any desired height above the ground.

By this construction, as the machine is drawn forward between two rows of potatoes, the vines will be drawn into the spaces between the guards E and the side bars A, where they will be struck by the wings F. The blows of the wings F will knock the bugs against the partition L, from which they will fall upon the bottom M, slide down it, and pass out through the discharge-opening, where they will be crushed by the rollers A′.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In an insect-destroyer, the combination of the inclined side bars A and the guards or fingers E with the frame-work B C D G H J of the machine, substantially as herein shown and described.

2. In an insect-destroyer, the combination of the wings F with the guards or fingers E, the side bars A, and the frame-work B C D G H J of the machine, substantially as herein shown and described.

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Witnesses:
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