(No Model.)

J. DONOVAN.

POTATO BUG CATCHER.

No. 535,055. Patented Mar. 5, 1895.

Fig. 1.

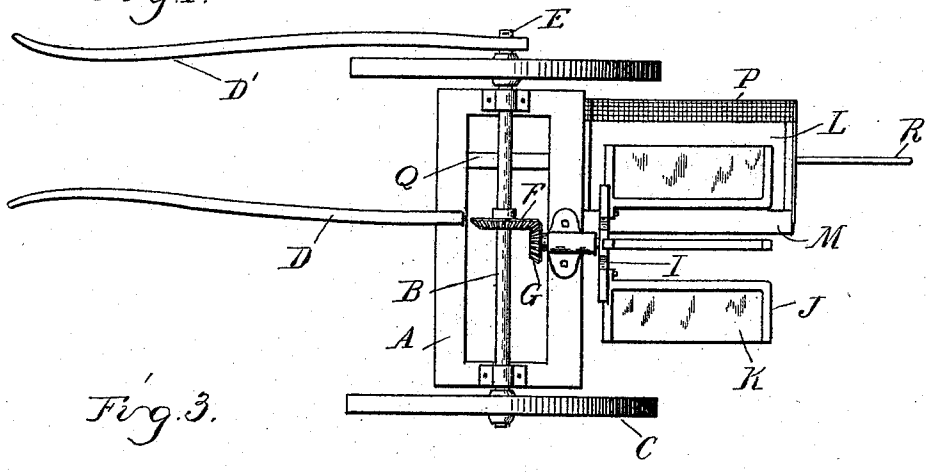


Fig. 3.

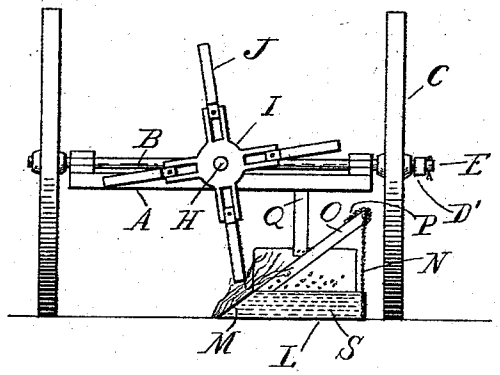
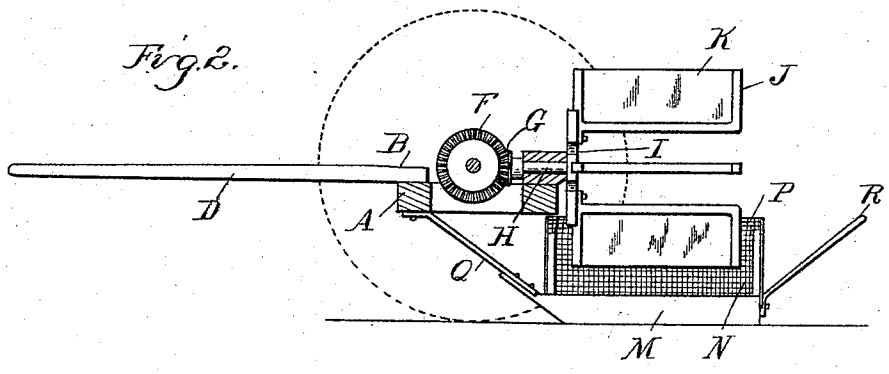


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES DONOVAN, OF THREE RIVERS, MICHIGAN, ASSIGNOR TO THE ROBERTS, THROP & COMPANY, OF SAME PLACE.

POTATO-BUG CATCHER.

SPECIFICATION forming part of Letters Patent No. 535,055, dated March 5, 1895.

Application filed July 10, 1894. Serial No. 517,049. (No model.)

To all whom it may concern:

Be it known that I, JAMES DONOVAN, a citizen of the United States, residing at Three Rivers, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Potato-Bug Collectors, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction of a machine embodying a wheeled frame, a beater driven from the ground wheels and adapted to strike the vines, and a receptacle below and beside the beater for catching the bugs which are dislodged by the beater.

The invention further consists in the peculiar construction of the beater frame and the peculiar construction of the receptacle and in the construction, arrangement and combination of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is a top plan view of a machine embodying my invention. Fig. 2 is a vertical, central, longitudinal section therethrough. Fig. 3 is a rear elevation of the machine showing the receptacle in section.

A is a frame. B is an axle journaled therein, and C are the wheels secured to the end of the axle and turning the same.

D D′ are the shafts one being secured centrally of the frame and the other secured to an extension E of the axle at one side, so that the horse for drawing the machine may be in front of one of the wheels at one side of the center of the machine.

Centrally of the drive axle B is the beveled gear wheel F, which meshes with the beveled pinion G on the stub shaft H journaled in bearings, centrally of the frame. At the rear end of the stub shaft is a spider I having radial arms provided with longitudinal slots or grooves, and in these slots are adjustably secured in any suitable manner the U shaped frames J having the opening presented outwardly. Across these frames is a fabric blade or covering K preferably of canvas, duck or some similar material, and stretched tight over the frame, as plainly shown in Fig. 2, forming a beater blade.

L is a pan or receptacle having the inclined inner side M and an outer wall, being provided with an extension N which may be of wire screen, as shown in the drawings. The upper end of this extension is supported by means of the diagonal braces O extending from the inner side of the receptacle to the top of the extension of the outer wall.

P is a strip of covering, which may be of wire cloth, as shown, forming a downward continuation or top at the outer edge of the receptacle. At the forward end this receptacle is provided with a forwardly and upwardly extending arm, Q, which is pivoted to the frame A in any suitable manner preferably by means of a bolt *a* passing through the arm and frame, as shown in Fig. 2. At the rear end the receptacle is provided with a steering handle R by means of which it may be swung laterally upon its pivotal point. In the receptacle is placed a fluid, as shown at S into which the bugs will fall to prevent their climbing out of the receptacle after being shaken therein by the beater blades.

In the operation of the device the driver walking behind the machine guides the horse between the rows of potato vines with the receptacle at one side. The beater blade working on the opposite side will strike against the vines, inclining them over the receptacle, and by the continued blows in the slow forward movement of the machine will shake off the bugs thereon into the receptacle, as shown in Fig. 3. The operator may steer the receptacle to and from the rows of potato vines, so as to clear the same and prevent injury thereto.

By arranging the beater blades rotatorily adjustable upon the spider, I may adjust them for different heights of potato vines.

By using the cloth blades I find that I get all necessary strength and at the same time prevent damage to the vines.

In the receptacle such a fluid may be used as will not only prevent the bugs from climbing out but will kill them.

Such a machine is much more economical in use than a spraying machine and is much more effective besides obviating all danger of killing the potatoes by the poison which is used for the spraying ordinarily.

What I claim is—

1. In a potato bug collector, the combination with a frame, and receptacle, of beater blades consisting of U-shaped frames, fabric stretched across the frames, and means for actuating the blades, substantially as described.

2. The combination of a wheeled frame, a longitudinal shaft driven from the ground wheels, and arranged in rear thereof, a receptacle, an arm pivoted to the frame beside the longitudinal shaft to which said receptacle is secured, and a handle at the rear of the receptacle for swinging it laterally, substantially as described.

3. The combination of a wheeled frame, the driven axle, a central gear wheel on the axle, a longitudinal stub shaft having a pinion meshing with the gear wheel, a spider on the stub shaft having slots therein radially adjustable U-shaped frames in the slots in the spider, a fabric stretched across the frames and forming the body of the beater blade, and a receptacle beside and below the beater, substantially as described.

4. In a potato bug collector, the combination with a frame, beaters on the frame and means for actuating the beaters, of a liquid holding receptacle pivotally connected with the frame at its forward end and having guiding means at its rear end, an inclined wall on the front side of the receptacle, a vertical extension on the rear wall, and inclined braces extending from the receptacle for supporting the extension, substantially as described.

5. In a potato bug collector, the combination with a wheeled frame, of a receptacle below the frame, a longitudinally arranged beater frame secured on the wheeled frame and driven by the wheels, and a series of flexible beaters on the beater frame, substantially as described.

6. In a potato bug collector, the combination with a wheeled frame, of a beater driven by the wheels and arranged longitudinally on the frame, a collecting receptacle extending below the beater and having a flexible connection at its forward end only with the wheeled frame, and means at the rear of the receptacle for laterally adjusting the same, substantially as described.

7. In a potato bug collector, the combination with a wheeled frame, and a revolving beater mounted on the frame, of a collecting receptacle below the beater, a flexible connection between the receptacle and frame, and means whereby the receptacle may be moved laterally, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES DONOVAN.

Witnesses:
JAMES E. BUNN,
GEORGE A. ROBERTS.