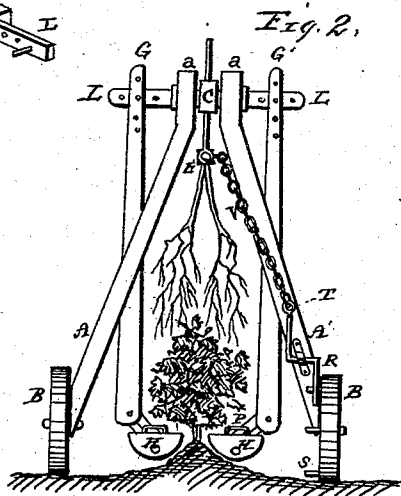
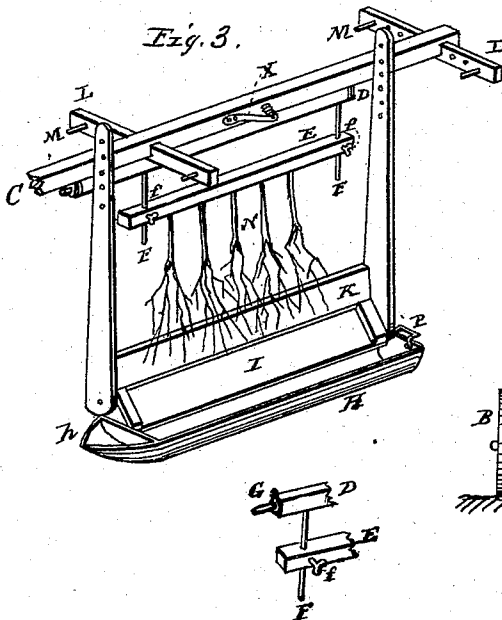
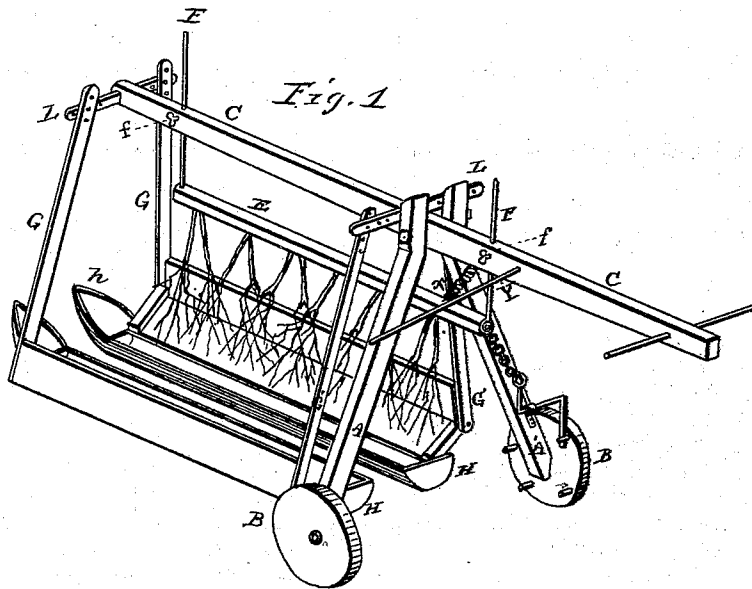


MACHINE FOR DESTROYING POTATO BEETLES.

Patented Feb. 22, 1876.



WITNESSES.

Ina. No. Amusey
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INVENTOR.

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ANTHONY ISKE, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR DESTROYING POTATO-BEETLES.

Specification forming part of Letters Patent No. **173,728**, dated February 22, 1876; application filed July 1, 1875.

To all whom it may concern:

Be it known that I, ANTHONY ISKE, of the city of Lancaster, and county of Lancaster and State of Pennsylvania, have invented certain Improvements in Machines for Catching and Destroying Potato-Beetles, of which the following is a specification:

This improvement relates to the construction and operation of a pair of suspended swinging trays or traps, with an intermediate pendent oscillating beam, and a series of whisks, for brushing off the potato-beetles or their larvæ, or other insects infesting the vines, so as to dislodge and precipitate them into said traps, from which they cannot escape until discharged and destroyed.

The accompanying drawing, with the letters of reference marked thereon, and a brief explanation, will enable those skilled in the art to make and use the same, in which—

Figure 1 shows a perspective view of the entire machine. Fig. 2 is an end elevation of the same. Fig. 3 illustrates a modification in the oscillating whisk-shaft.

There is a central beam or pole, *c*, supported at top between two inclined uprights, *A A'*, and to which it is firmly secured at *a a*. The lower ends of said uprights or inclined legs *A* are provided with wheels *B'*, one of said wheels, *B'* having a series of pins, *S*, on its inner face. In a suitable bearing on leg *A'* there is double-elbowed lever *T R*, the lower end of which is actuated by the pins *S* on the wheel, the upper end being provided with an eye, by which it is connected, by a chain or slotted coupling, with the oscillating whisk or switch beam *D* or *E*. This central beam *C* projects, too, for a handle, and is provided with two cross-pieces, *L*, framed into it. The projections may be perforated with a series of holes, for receiving and adjusting the arms *G*, which arms are also pierced for a pivot-bolt, *M*, for elevating or lowering them, as well as to bring them nearer or farther apart. These vertical swinging arms *G* support the trays or traps *H*, which are canoe-shaped, conic in front at *h*. There is a smooth and inclined shelf, *I*, which dips into the tray, and has a vertical back-board, *K*, to prevent any of the insects from being beaten beyond the shelf *I* on which they fall, and are precipitated

into the trays by the motion of the machine. These trays swing freely on their hangers or arms *G* connected with them at each end. In Fig. 1 I show a central beam, *E*, held on pivots in the eye of suspended rods *F*, and adjusted by set-screws *f* through the central beam *C*, and one side connected with the lever *T*, actuated by the pins *S* on the wheel aforesaid, with a spring to react, which gives this beam a quarter-turn, and it is provided with one or two series of whisks of broom-corn or their equivalent, which beat the tops and sides of the vines, as the machine is pushed or drawn along straddling the rows, and effectually dislodges all insects, and causes them to fall into the trays or traps.

Practically, I find it better to introduce an oscillating fixed beam directly under the central beam *C*, Fig. 3, (shown by *D*), and in which the rods *F* are secured, passing through the whisk-beam *E* with the set-screws *f* in the latter, so that I can raise or lower the same without altering the coupling in its attachment to the oscillating beam *D*, which imparts the motion to the whisk-beam *E* by means of the rods *F*. In order to empty the trays or traps *H* I make an opening at the hind end with a sliding door, *P*, Fig. 2, so that it is only necessary to open the door and elevate one end of the machine, when all can be emptied into a receptacle provided to destroy them. If filled with lime-paste it not only kills the bugs, but will aid in making compost for fertilizing purposes.

The operation of this machine is readily understood. The swinging trays are light, and, by their gravitating force and adjustment, slide along, one on each side of the row of plants, close to their base, while the whisks of broomcorn, or their equivalent, gently, yet effectually, beat the bushes, sweeping or knocking off the beetles, whether the *Doryphora decemlineata*—the well-known Colorado potato-bug—or any other bug or larvæ, so as to lodge them snugly into the traps or trays, as amply tested. The vibrating force and speed can be regulated by the strength of the springs and length of leverage; so also the position of the several parts can be adjusted vertically and laterally to adapt them to the size of the plants.

I am aware that Patent No. 116,894, July 11, 1871, has side traps and horizontal beaters moving on wheels, which, however, must be sufficiently high to allow the apparatus to be suspended from the axle, and the whisks or wires are operated by ratchets, and differ in construction and operation, substantially and in a manner to which I lay no claim.

What I claim in a machine for dislodging and catching insects is—

1. In a machine for catching potato-beetles, I claim the horizontal beam or pole C in line with the potato-rows, the two diverging up-rights A A', pulley-wheel B, one of said

wheels being provided with pins S, crank-lever R T, vibrating beam E, provided with a longitudinal series of whisks, N, the whole constructed and arranged as and for the purpose shown and specified.

2. In combination with the pole or beam C, I claim the perforated cross-arms L, vertical perforated arms G, and swinging tray or pans H, the whole constructed as and for the purpose set forth.

ANTHONY ISKE.

Witnesses:

JNO. M. AMWEG,
JACOB STAUFFER.