2 Sheets—Sheet 1.

M. W. KNOX.

Potato Digger

No. 108,490. Patented Oct. 18, 1870.

Fig. 1.

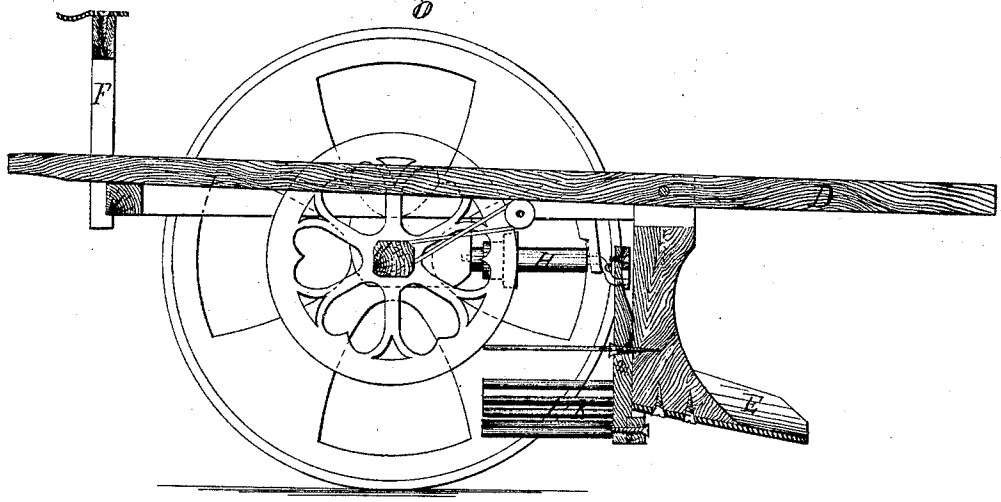
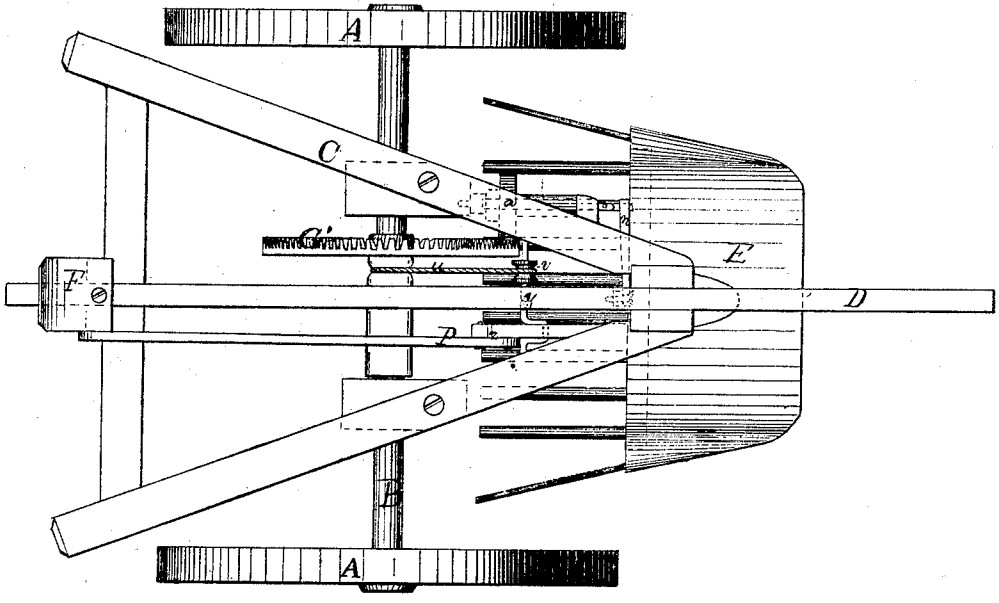


Fig. 2.



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2 Sheets—Sheet 2.

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No. 108,490. Patented Oct. 18, 1870.

Fig. 3.

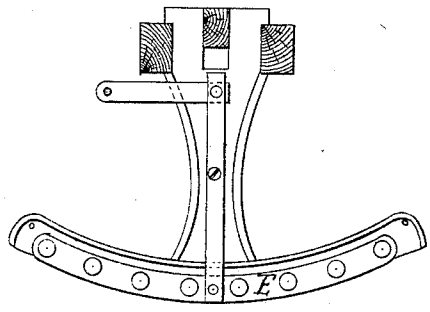
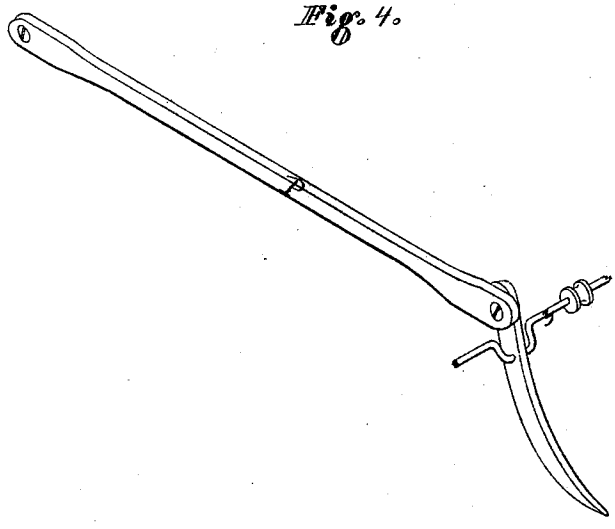


Fig. 4.



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MELVIN W. KNOX, OF SHERIDAN, NEW YORK.

Letters Patent No. 108,490, dated October 18, 1870.

IMPROVEMENT IN POTATO-DIGGERS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, MELVIN W. KNOX, of Sheridan, in the county of Chautauqua and State of New York, have invented a new and valuable Improvement in Potato-Diggers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a central vertical longitudinal section of my invention.

Figure 2 is a top view of the same.

Figures 3 and 4 are details.

My invention relates to potato-diggers, and consists in a novel construction and arrangement of devices intended to serve as an efficient apparatus for the purpose mentioned.

A A of the drawing represents the wheels of my carriage firmly attached to the axle B, and rotating therewith.

C represents a triangular frame arranged upon the axle B, in the manner shown.

D represents the carriage map pivoted in the slotted standard of the scoop E, and between the front ends of the side pieces of the frame, as shown, while its rear end passes to the rear of the frame, and serves as a lever to regulate the depth of the scoop-furrow, as mentioned hereafter.

I arrange a standard, F, upon the rear cross-bar of the frame, which serves as the driver's seat, and, being slotted, as shown on fig. 1, serves also as a guide and support for the rear end of the map D.

G represents a large cogged wheel firmly attached to the carriage axle.

The letter *a* represents a pinion working upon and with the shaft H, and engaging with the cogs of wheel G.

Immediately forward of the front bearing of shaft H I attach to the end of said shaft a crank, marked *c* on the drawing.

To this crank I attach a pitman, *n*, which passes therefrom to the top of the pivoted lever *m*.

This lever *m*, being pivoted at the point *s*, and united at its lower end with the shaker K in the rear of the scoop, serves to produce a vibrating movement in said shaker whenever the carriage is moved sufficiently to rotate the axle.

The letter *u* represents a band or cord passing over a suitable drum or groove in the axle, and also over a pully, *v*, upon the transverse shaft *y*.

P represents an elbow-lever pivoted, as shown, to standard F, while the two sections of the arms are pivoted together at the point *z*.

The transverse shaft *y* is extended to the right of its pulley or drum, and has its right-hand bearing in the right side piece of the frame; I mean to the right hand of the driver's seat when I use that term.

Between the drum on said shaft *y* and its right-hand bearing, I form said shaft in the shape of a crank, the pin of which passes through the forearm of the elbow-lever P, and, as the shaft rotates, forces said forearm to perform a circuitous movement, so as to bring the lower end thereof down near the surface of the shaker and scoop, and toss the potato-tops and other vines forward from said shaker and out of the way.

My machine is operated as follows, namely:

The team is attached to the map, and the carriage set in motion. The scoop is passed under the potato-hill, and the potatoes, with the earth, are carried to the rear of the scoop and upon the shaker. As the forward movement of the carriage necessarily places all the machinery in motion, the lever *m* imparts to the shaker a quick vibratory movement, thereby shaking the earth through its fingers to the ground, and leaving the potatoes freed from dirt upon the surface of the soil.

In the meantime, the forearm of the elbow-lever P is constantly at work tossing off the vines and aiding in the labor of separating the potatoes from the earth.

The operator regulates the depth of the furrows by raising the rear end of the map up or down, at will.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The pvioted and extended map D, when constructed and arranged to operate substantially as and for the purpose specified.

2. The pivoted forearm of the elbow-lever P, in combination with the shaft and crank *y*, when constructed and arranged in a potato-digger, substantially as and for the purpose described.

3. In combination with the shaft H, crank *c*, and pitman *n*, the pivoted lever *m*, to operate the shaker of a potato-digger, when constructed and arranged substantially as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

MELVIN W. KNOX.

Witnesses:

W. T. COLMAN,

T. R. COLMAN.