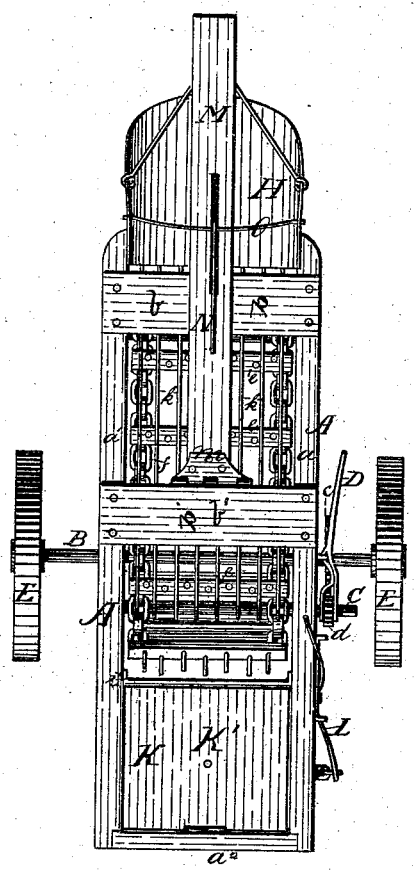
2 Sheets—Sheet 1.

A. J. ROBERTSON.

POTATO-DIGGER.

No. 192,013. Patented June 12, 1877.

Fig. 1.



Attest:
E. E. Court
Jno. P. Brooks

Inventor:
Albert J. Robertson,
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Attys.

2 Sheets—Sheet 2.

A. J. ROBERTSON.

POTATO-DIGGER.

No. 192,013. Patented June 12, 1877.

Fig. 2.

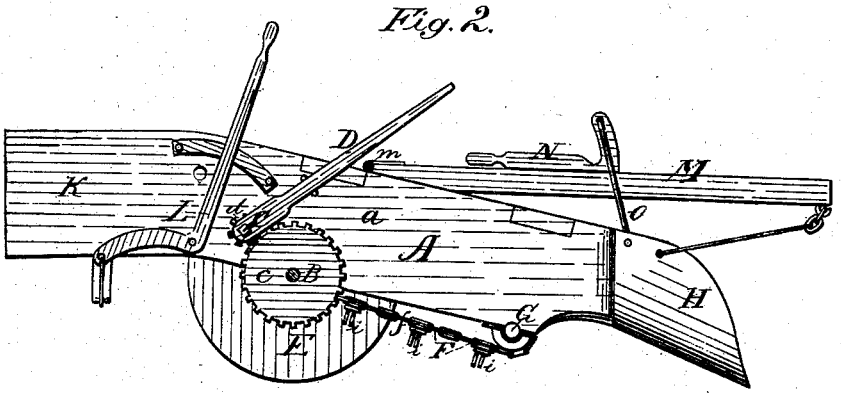
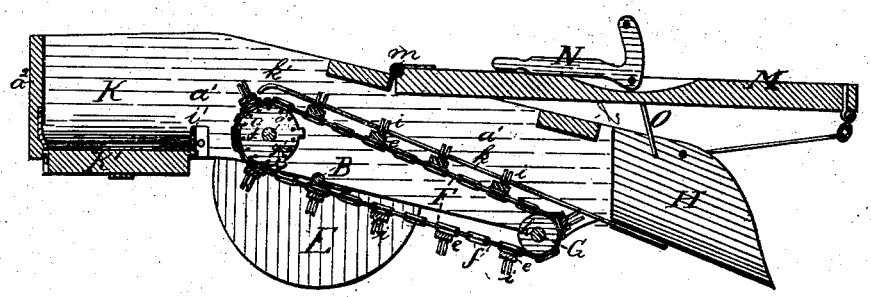


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT J. ROBERTSON, OF MONROE, MAINE.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. **192,013**, dated June 12, 1877; application filed April 14, 1877.

To all whom it may concern:

Be it known that I, ALBERT J. ROBERTSON, of Monroe, in the county of Waldo and State of Maine, have invented certain new and useful Improvements in Potato-Diggers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which is appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a top-plan view. Fig. 2 is a side view, the wheel being removed; and Fig. 3 is a longitudinal vertical section.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to certain improvements in potato-diggers; and it consists in the construction and arrangement of parts hereinafter more fully shown and described.

In the drawing, A is the frame of my machine, which consists of side piece *a* a^1 and cross-braces *b* *b'*. Frame A is supported on an axle, B, having its bearings in boxes on the under side of side pieces *a* a^1, and having solid wheels E E, which may be of any suitable construction. To the axle B is keyed a gear-wheel, *c*. C is a shaft, having its bearings in side pieces *a* a^1 behind axle B, having on its square end, which projects beyond frame-piece *a*, a sliding pinion, *d*, operated by a lever, D, by which it may, at any time, be thrown into gear with the wheel *c* on axle B. G is a shaft, having its bearings in side pieces *a* a^1 at the front end of frame A. F is the elevator. This consists of belts or chains *f* *f*, running upon disks or wheels *g* *h* keyed upon shafts C G, and united by cross-pieces *e* *e*, having fingers *i* *i*.

H is a scoop attached to the front end of frame A. To the rear under side of this scoop are secured, by set-screws, or in any other suitable manner, long metal rods or bars *k* *k*, the ends of which (which should reach beyond shaft C in the rear part of the frame) are curved in a downward direction, as shown at *k'*. The bars *k* *k* form a perfect sieve or screen, through which the dirt is sifted out as the potatoes are being carried by the elevator F to the box K, the sides and end of which are formed by the side pieces *a* a^1 and end piece a^2 of frame A.

The bottom of the box K' is pivoted between the end piece a^2 and a cross-brace, *i'*, and is operated by a suitably-arranged lever, L, by which it may be tipped to either side, so as to deposit its contents on either side of the machine.

M is the tongue. This is hinged at *m* to the rear cross-brace *b'* of frame A, and it has a bent lever, N, connected to a bail, O, the ends of which are pivoted in the sides of scoop H. By operating lever N the front end of the machine, with the scoop, may be raised or lowered, and the depth at which the scoop is to dig is in this manner gaged.

The disks *g* *g* upon shaft C are connected by metal rods *g'* *g'*, thus forming a perfect cylindrical screen, which, as the potatoes are being carried by the elevator off the bars *k* and into the box, prevents them from dropping on the ground.

The operation of my improved potato-digger is as follows:

The scoop H being set or gaged by the lever N, the machine is dragged over the field, one of the wheels E running on each side of the row. The potatoes, dirt, &c., slide up upon the scoop until caught by the fingers *i* of the elevator-bars *e*, (the elevator being operated by the pinion *d* upon shaft C, gearing with the cog-wheel *c* upon axle B.) The fingers *i* slide between the bars *k* of the screen, thus carrying the potatoes up, while the dirt and sand escape between bars *k*. Each time one of the cross-bars *e* passes under the curved ends of bars *k* it raises these, which, when released, acquire a trembling or vibrating motion, thus shaking and screening the potatoes and dirt upon the elevator. When the box K is full its bottom is tipped in the manner described, thus depositing its contents upon the ground.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a potato-digger, the combination of the screen-bars *k k*, attached to the rear end of the scoop H, and having downwardly-curved free rear ends, in combination with the elevator F arranged underneath, and having cross-bars *e e*, which, by striking against the rear ends of the screen-bars *k k*, impart to these a trembling or vibrating motion, substantially as described, for the purpose shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ALBERT J. ROBERTSON.

Witnesses:
J. H. ROBERTSON,
E. W. DOW.