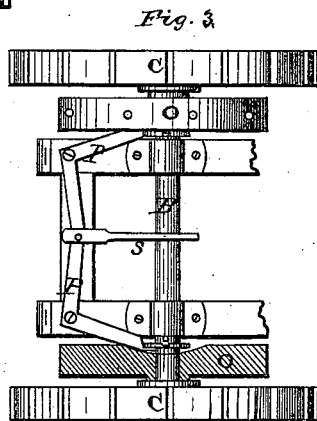
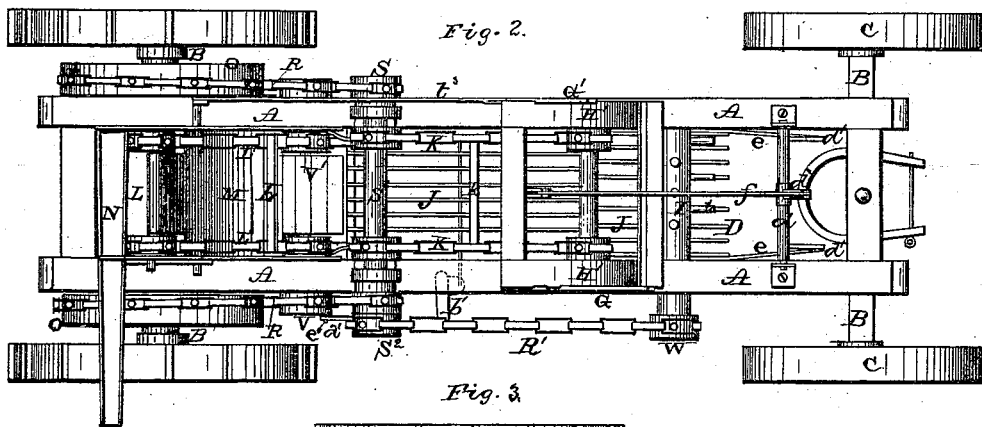
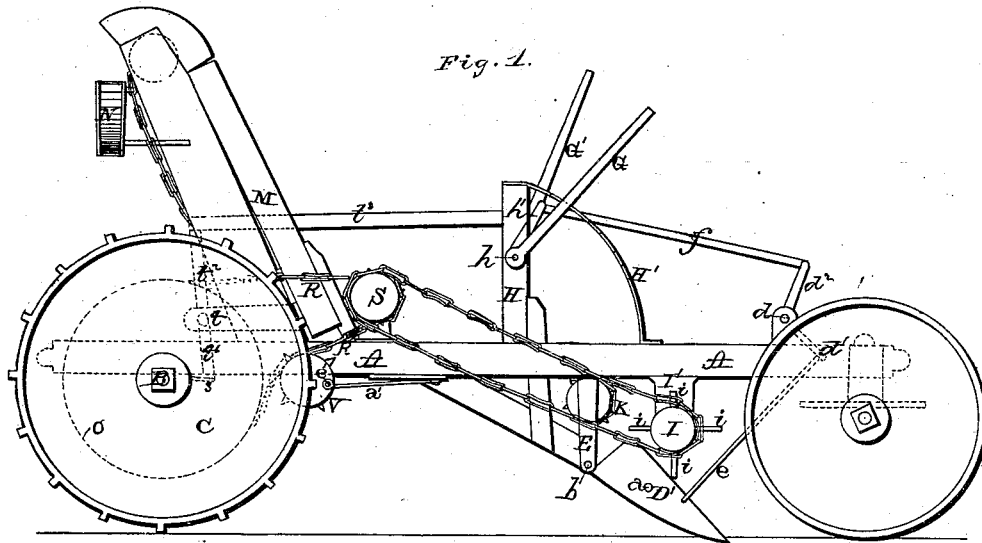


M. DARGITZ.
 POTATO-DIGGER.

No. 191,409.

Patented May 29, 1877.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MARION DARGITZ, OF CRESTON, IOWA.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. **191,409**, dated May 29, 1877; application filed April 7, 1877.

To all whom it may concern:

Be it known that I, MARION DARGITZ, of Creston, in the county of Union and State of Iowa, have invented certain new and useful Improvements in Potato-Digger; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a potato-digger, as will be hereinafter more fully set forth.

The annexed drawings fully illustrate my invention.

The frame of my machine is composed of two parallel beams, A A, connected at or near their ends by suitable cross-bars, and supported upon the axles B B, having the wheels C C mounted on their ends.

The plow of the potato-digger is composed of a series of curved flat bars, D, pointed at their front ends, and placed at suitable distances apart on a rod, *a*, which passes through them at about the middle of their length, and to which said bars or elongated teeth are secured. To each end of this rod is also attached a side piece, D'. The teeth or blades D and side pieces D' are, at their larger rear ends, secured to a bar, *b*, which is journaled in hangers E, attached to the under sides of the beams A A, so that the front end of the plow can be raised and lowered as required.

Each side piece of the plow is, by a rod, *e*, connected with an arm, *d*¹, projecting from a shaft, *d*, which has its bearings in boxes on top of the beams A, near their front ends. This shaft has a center arm, *d*², connected by a rod, *f*, with an arm, *h*, projecting from a shaft, *h*, which has its bearings in the standards H, which support the driver's seat. To one end of this shaft *h* is secured a lever, G, by the use of which the driver from his seat can easily raise and lower the plow as required, it being held in position by the lever entering notches in one of the braces H' to the standards H.

The plow, thus constructed and operated, digs up the potatoes, which are thrown up-

ward and backward by means of a number of radial arms or beaters, *i i*, projecting from a roller, I, hung in hangers I', under the beams A A, above and crosswise of the center of the plow. The arms or beaters *i* also beat and pulverize all clods, so that the earth will fall down between the blades of the plow, while the potatoes are carried upward over an inclined grating, J, by means of a series of rakes, *k*, attached to and connecting two rotating endless chains, K K. The inclined grating J is composed of a series of longitudinal rods, connected by cross-bars to parallel side pieces, and flexibly suspended from the beams A A, or from standards connected thereto.

As the potatoes pass upward over the incline J, all the loose dirt is separated from them and falls down through the grating, while the potatoes are, at the upper end of said inclined grating, received by an elevator and carried upward to the top of the elevator-frame M, where they are dropped into a spout, N, and by it conducted to the side, into a wagon for receiving the same.

This elevator is composed of a series of troughs, L, attached to and connecting two endless revolving chains, L' L'.

It will thus be seen that this machine digs the potatoes, beats the earth from them, separates them from the dirt, carries them upward, and loads them on a wagon, all automatically, without aid or assistance from the driver or other persons.

The means for operating the revolving parts of the machine are as follows: On each end of the hind axle B, between the beam A and wheel C, is placed loosely a large chain-wheel, O, provided on its hub with a suitable clutch, to be thrown in and out of gear with the said hind axle B. The two chain-wheels O O are moved laterally on the axle for that purpose by means of two elbow-levers, P P, pivoted at the rear end to the under sides of the beams A A. The inner ends of the two elbow-levers P P are, by a bent rod, *s*, connected with an arm, *t*¹, projecting from a shaft, *t*, having its bearings in arms extended rearward from the elevator-frame M. This shaft has another arm, *t*², connected by a rod, *t*³, with a lever, G', pivoted to the standard H on the opposite side of the driver's seat from the lever G,

and said lever G' is in like manner held in notches on the brace H'.

The driver can thus from his seat not only raise and lower the plow, but also throw the machine in and out of gear when desired.

Around the chain-wheels O O are passed chains R R, which also pass around pulleys S S on a shaft, S¹, and over pulleys V V on a shaft, V', for rotating said shafts. The shaft V' is the lower shaft of the elevator L L', and has suitable pulleys, around which the chains L' pass, so that thereby said elevator obtains the required motion.

The shaft S¹ is the upper shaft of the carrier K k, and has suitable pulleys, over which the chains K pass, so that thereby the rakes k obtain their required motion for carrying the potatoes up the inclined grating J.

On one end of the shaft S¹ is another pulley, S², connected by a chain, R', with a pulley, W, on the journal of the beater i I, whereby the same obtains its required rotary motion.

The inclined grating J has a shaking or vibrating side motion imparted to it by a rod, a', pivoted on a wrist-pin, e', projecting from the face of one of the pulleys V, and this rod connecting with one arm of a pivoted elbow-lever, b', the other arm of said lever being connected to the grating.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a potato-digger, a plow consisting of a series of wide, curved, pointed flat bars, D, connected by a rod, a, side pieces D', that serve as side guards, and which are secured to the head b, journaled in hangers E, in combination with the operating-levers, that extend back to the driver's seat, by means of which the plow is operated up and down, substantially as shown.

2. The arrangement, with the carrier I i and elevator L L', of the chain-wheels O O, chains R R, shaft S¹, with pulleys S S², and shaft V', with pulleys V V, all as shown and described, whereby the carrier and elevator are operated directly from the chain-wheels by the same chains, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of March, 1877.

MARION DARGITZ.

Witnesses:

A. S. McDUGGLE,
D. W. HIGLEN.