

J. H. LOUCH.
 Potato-Digger.

No. 165,342.

Patented July 6, 1875.

Fig. 1.

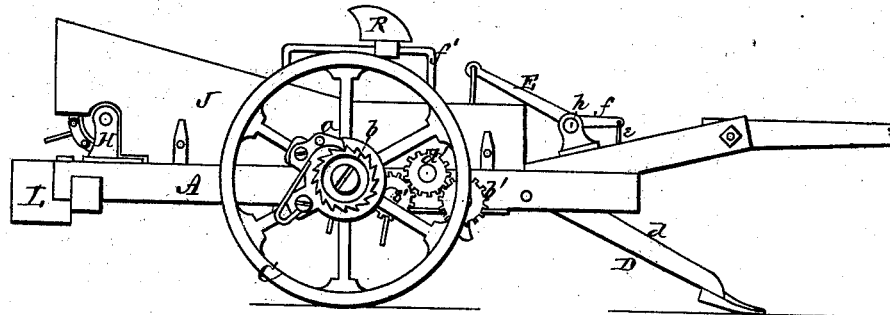


Fig. 2.

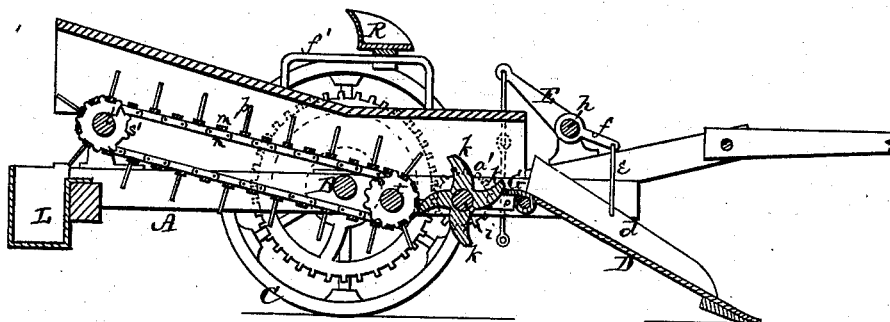


Fig. 3.

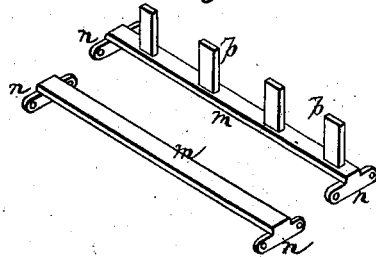
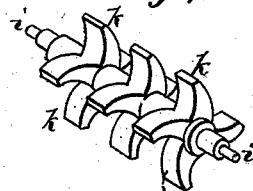


Fig. 4.



WITNESSES

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JOHN HENRY LOUCH, OF ROME, INDIANA.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. 165,342, dated July 6, 1875; application filed April 23, 1875.

To all whom it may concern:

Be it known that I, JOHN H. LOUCH, of Rome, in the county of Perry and in the State of Indiana, have invented certain new and useful Improvements in Potato-Diggers and Separators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a 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.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of my potato-digger. Fig. 2 is a longitudinal vertical section of the same. Figs. 3 and 4 are detached views of certain parts thereof.

A represents the frame of my machine provided with suitable boxes through which the axle B passes. On each end of the axle B is placed a driving-wheel, C, connected with the axle by an ordinary spring-pawl, *a*, and ratchet-wheel *b*. This ratchet device is located on the outside of the driving-wheel, as shown.

In the front part of the frame A is hinged the plow D, constructed with side flanges *d d* to form guides for the potatoes and dirt as they are being taken up by the front end of the plow. These flanges are by links *e e* connected with arms *f f* projecting from a shaft, *h*, on top. On one end of the shaft *h* is secured a lever, E, provided with suitable rods or links for the driver to take hold of for raising the plow out of the ground in turning.

From the back or hinged end of the plow extends a slatted platform or grating, G, to a shaft, *i*, back of and parallel with the rod that pivots the plow and holds the platform. The platform is at its ends provided with flanges through which the pins pass into the frame A, to hold the platform in place.

On the shaft *i* are secured a series of four armed wheels or collars, *k k*, the arms of which are curved backward, and the shaft is made to revolve backward, so that the curved arms

will work through the slots in the platform G, and take the potatoes, vines and all, and deliver the same on the endless carrier, which conveys them upward, the dirt falling through the carrier and the potatoes being deposited in a box, L, at the tail end of the machine. This curved-arm wheel *i k* is interposed between the hinged plowshare and endless belt, and the share can be adjusted up or down without changing the position of said wheel.

The endless carrier consists of a series of bars, *m m*, having short transverse bars or plates *n n* formed at their ends, which plates or bars are united together by rivets, so as to turn freely, thus forming a flexible endless chain. Every alternate bar *m* is provided with a series of outward-projecting teeth or plates, *p p*. The endless-carrier thus constructed is placed over chain-wheels *s s* and *s' s'*, secured respectively upon shafts *t* and *t'*. The shaft *t'* has its bearings in elevated standards H H, on the rear end of the frame A, which standards are made adjustable on the frame so as to keep the endless-carrier tight.

On the axle B, on one side of the machine, is secured a cog-wheel, I, which gears with a pinion, *a'*, on one end of the shaft *i*, to revolve the arms *k k* thereon. On the other end of the shaft *i* is a pinion, *b'*, which communicates motion through an intermediate pinion, *d'*, to a pinion, *e'*, on the end of the shaft *s*, and thereby gives proper motion to the endless carrier.

The endless carrier and revolving arms are covered by a box or casing, J, upon which are two railings, *f' f'*, supporting the driver's seat K, and said seat can be adjusted back and forth on said railings to regulate the balance of the machine.

I am aware that a potato-digger having an endless-carrier belt and a plow in front thereof is not new. I am further aware that a revolving shaft with arms has been known and used in potato-diggers to carry the potatoes from the plow to the carrier; but, with my invention, the endless belt is of such formation that no bands are used for connecting the bars of the carrier, as in my case the said bars are connected direct one to the other. The endless carrier in my case is stationary with the frame, and the shaft with its curved arms is

also stationary with the frame. The plow is hinged to the frame and can be raised or lowered to enter the earth at any required depth, without disturbing the shaft and its curved arms, or the endless carrier. No matter what inclination is given to the plow, the curved-arm wheel and carrier remain and operate the same.

The curved-arm wheel interposed between the hinged plow and slotted platform on one side, and the carrier on the other side, is very essential, as it takes the potatoes and vines as they are brought up by the plow onto the platform and delivers the same to the carrier as fast as the same are forced up the inclined plow-face.

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

1. In a potato-digger, the endless carrier consisting of a series of bars, *m m*, provided at their ends with downwardly-projecting cross-plates *n n*, pivoted together, and every alternate bar provided with projecting teeth or arms *p p*, substantially as and for the purposes herein set forth.

2. The combination in the potato-digger of the adjustable plow *d*, curved rotating arms *k k*, slotted platform *G*, and endless carrier *m n p*, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 10th day of April, 1875.

JOHN HENRY LOUCH.

Witnesses:

ADAM ACKARMAN,
JOSEPH VASAR.