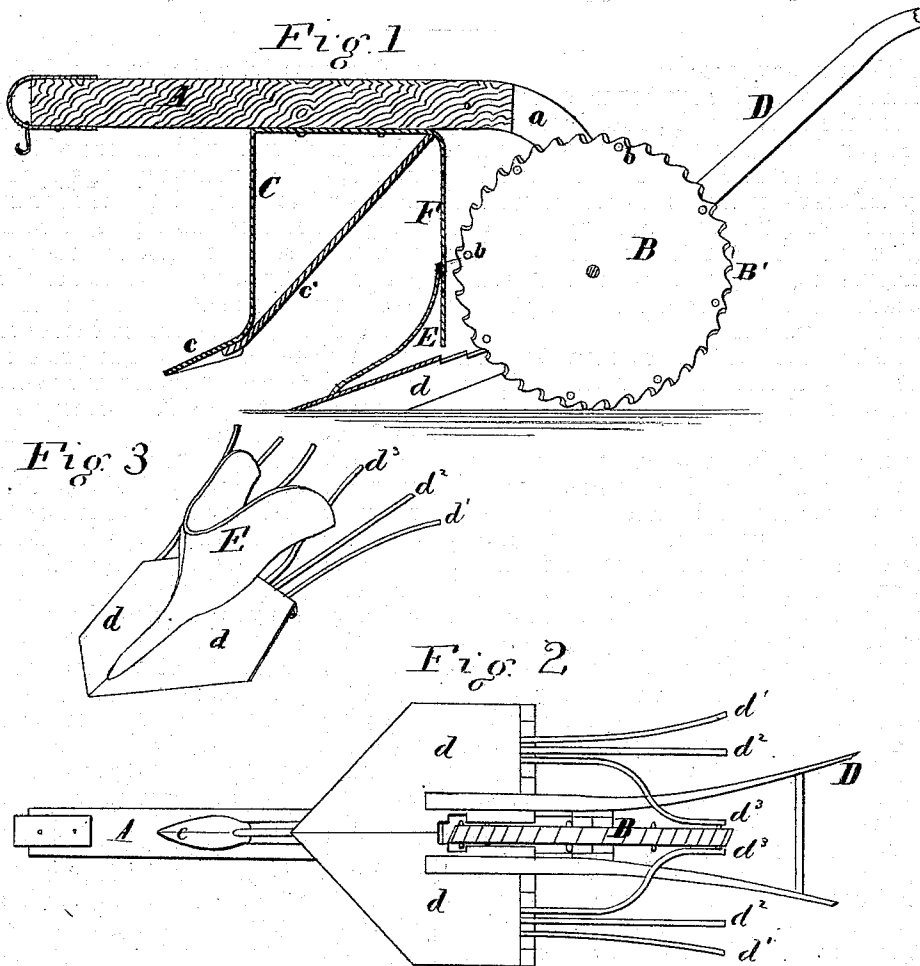


MOSES JOHNSON.

Improvement in Potato Diggers.

No. 125,303.

Patented April 2, 1872.



Witnesses

J. A. Bonnelly

E. H. Bates

Inventor

Moses Johnson
 Chipman, Foster & Co
 Attys.

UNITED STATES PATENT OFFICE.

MOSES JOHNSON, OF THREE RIVERS, MICHIGAN, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES A. ESSLINGER, OF SAME PLACE.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. 125,303, dated April 2, 1872.

To all whom it may concern:

Be it known that I, MOSES JOHNSON, of Three Rivers, in the county of St. Joseph and State of Michigan, 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. Fig. 2 is a top view. Fig 3 is a detail.

This invention has relation to potato-diggers; and consists in the construction and novel arrangement of devices, comprising a hill-opener, spreader, vine-fender, vibrating fingers for separating the potatoes from the earth, and toothed roller adapted to operate said fingers, said devices being designed to facilitate the actual work of digging potatoes. This invention also consists in the construction of the aforesaid toothed roller, whereby it is adapted to work with less draft, and with better effect as a means of vibrating the separating fingers. This invention, furthermore, consists in the construction and arrangement of the draft-beam and the plow-handles, by which the implement is rendered compact and strong.

In the accompanying drawing, illustrating my invention, A designates the draft-beam, having attached to its rear end the curved arms *a*, which support at their lower ends the shaft of a wheel, B. C represents a vertical standard, provided with a shovel, *c*, for opening the potato-hills. The standard C is made broad in order that the vines may be cast off to either side, and it is strengthened by a diagonal brace, *c'*. D denotes handles, through the lower parts of which passes the shaft of the wheel B. Secured to the lower ends of the handles are the wings *d d* of a plow. These wings are inclined toward either side and taper to a point, which enters the hill opened by the shovel *c*. The wings are also inclined from

their rear ends to the point of the plow. The object of the plow is to carry the contents of the potato-hills to certain vibrating fingers, by which the earth and potatoes will be well separated. These vibrating fingers are marked *d¹ d² d³*, and are hinged to the rear ends of the wings *d d* in sets, the fingers of each set being connected so as to work together. These fingers are located on either side of the wheel B. The inner fingers *d³* are bent so that their extreme ends shall be brought close to the sides of the wheel B, from which project the studs *b*. As the wheel turns the studs *b* come in contact with the fingers *d³*. The latter falling from stud to stud have, together with the fingers *d¹ d²*, a vibratory motion. The earth which is carried over the wings *d* falls on the vibrating fingers, and is by them so shaken as to separate the potatoes and deposit them on the surface. The fingers may be spread apart at their rear ends, so as to let the potatoes fall through. E designates wings attached to the upper surface of the wings *d d*. The wings E meet at a concave edge, which gradually inclines toward the point of the plow. From said edge the wings are spread out on either side of the wheel. A standard, F, depending from the beam A, supports and strengthens the wings E, and through them the wings *d*. The wings E and the standard F serve to protect the wheel B from the potato-vines. The wings also assist in throwing the earth toward the sides of the implement. The periphery of the wheel B is provided with hook-shaped teeth B', having sharp edges cut obliquely, as shown. This form gives to each tooth a point, which as the wheel moves enters the earth first and gains a purchase. The oblique arrangement renders the edges of the teeth wider and allows them to set firmly. The draft is lessened at the same time, on account of the ease with which the teeth enter and leave the soil. By bearing down on the handles D so as to raise the plow, the wheel B may be used as an aid in moving the implement to and from work.

I claim as my invention—

1. The fender-wings E, in combination with the plow-wings *d d*, vibrating fingers *d¹ d² d³*,

and studded roller B, as and for the purpose specified.

2. The handles D secured to the plow-wings *d*, and holding the shaft of the roller B, in combination with the arms *a* projecting from the draft-beam A, and arranged as bearings for the shaft of the wheel B, substantially as described.

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

MOSES JOHNSON.

Witnesses:

CLARENCE E. WILBUR,
E. L. BROWNE.