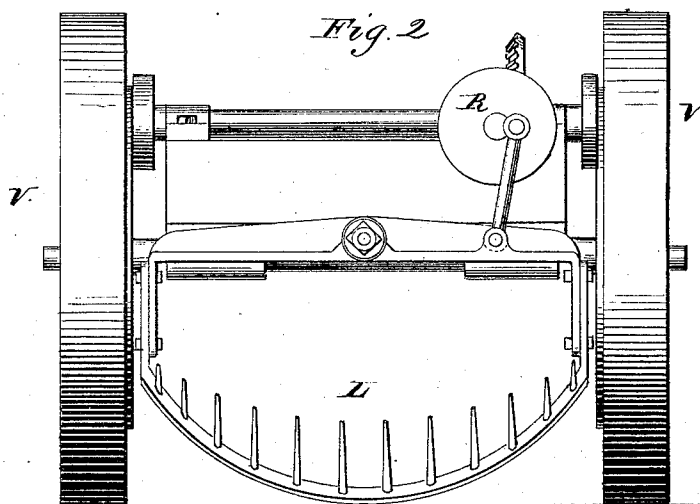
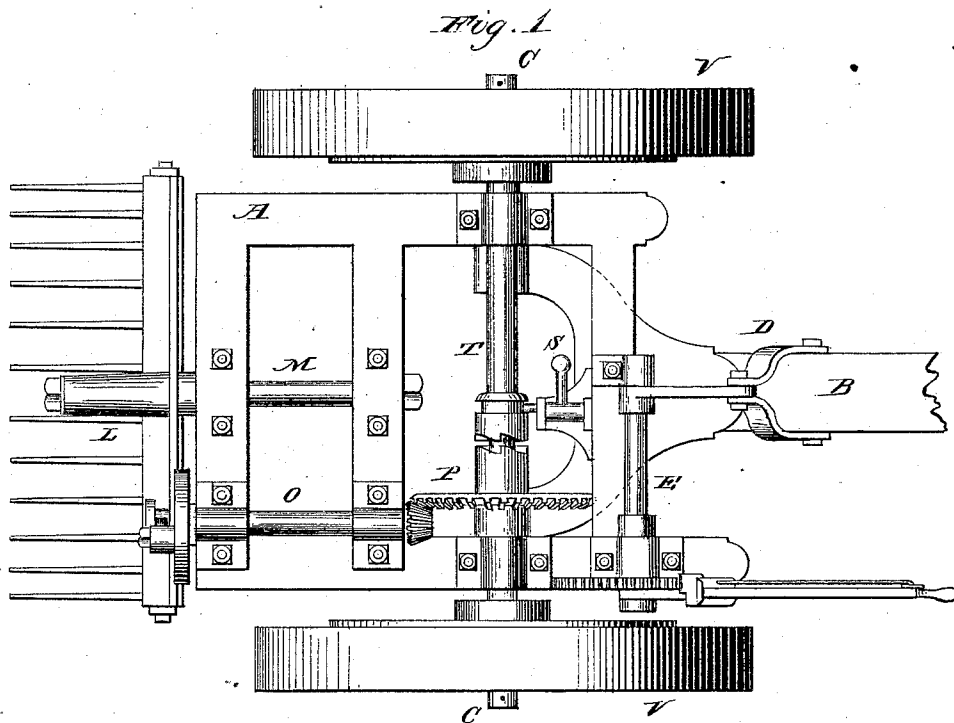


H. D. HERRINGTON.
Potato-Diggers.

No. 157,991.

Patented Dec. 22, 1874.



Witnesses:

N. Davenport
Irving Browne

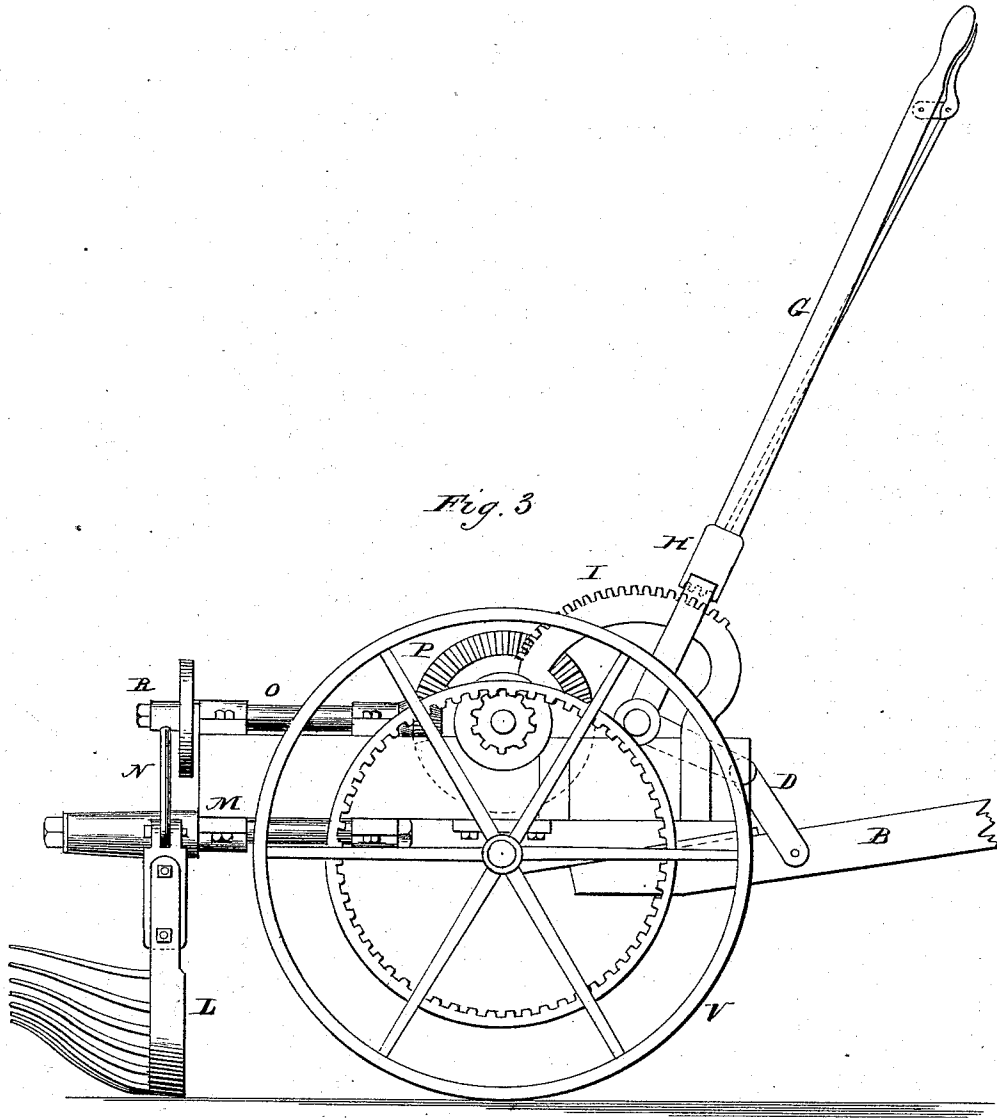
Inventor

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Stumpson
Irving Browne

Inventor:
Henry D Herrington

UNITED STATES PATENT OFFICE.

HENRY D. HERRINGTON, OF HOOSICK, NEW YORK.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. **157,991**, dated December 22, 1874; application filed June 27, 1874.

To all whom it may concern:

Be it known that I, HENRY D. HERRINGTON, of Hoosick, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Potato-Diggers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain improvements in machines for digging potatoes; and it consists in constructing or uniting together the cutter and the separating-fingers, so that the same will oscillate or vibrate on a horizontal axis as a single device, said parts being operated by a suitable cam or crank gear in such a manner as to impart to said device the requisite cutting and separating motion.

In the drawings, Figure 1 is a plan of my machine; Fig. 2, a sectional elevation, showing the digger; Fig. 3, a side elevation, showing the digger, and lever, and tongue.

A is a substantial frame, carried upon driving-wheels V V, arranged substantially like the ordinary driving-wheels of mowing-machines, and being far enough apart to run in adjoining furrows, thus bringing the center of the frame over the row of potatoes to be dug. B is the tongue, connected with the axle C by sleeves or hinges, in such manner as to move easily upon it. D is a jointed clevis-arm, connecting the tongue to the shaft E, which is secured to the frame, and on the outer end of which is attached the lever G. Upon this lever works the spring-pawl H, and into the ratchet I, secured on the side of the frame. By means of this lever the digger L may be easily and readily depressed to the proper point beneath the potatoes, and will there remain until moved by the lever, and may also be easily and quickly elevated in case of meeting with any obstruction or when not in use.

By such location and construction of this lever and its connecting parts, the digger is within the control of the driver, whether he is riding on the machine or walking behind it. A seat for the driver may be secured to the top of the frame, and handles projecting over the rear of the frame may be also secured to it, so that

the driver may ride or walk while operating the machine.

At the rear of the frame A, and upon the shaft M, projecting from and secured to the frame, is hung the digger by a sleeve, which works easily upon this shaft, and is held steadily and securely by it.

When the digger is in operation it has a vibratory or oscillatory motion, produced by the arm N, worked by the crank or eccentric R, which is on the outer end of the shaft O, located on the top of the frame. This shaft is geared into the cog-wheel P, which runs upon the driving-shaft T, and is of sufficient diameter to produce the required motion, which is similar to the motion in ordinary mowing-machines. This shaft T is secured across the top of the frame, and geared in the usual manner at each end into the driving-wheels. The cog-wheel P runs loose upon the driving-shaft T when out of gear, and may be thrown in or out of gear with its shaft by a clutch and the small lever S, secured at the top and near the front of the frame, and within the reach and control of the driver.

When the machine is in motion and the wheel P in gear with the shaft T, a vibratory or oscillatory motion is given to the digger by the crank or eccentric R.

It is obvious that a cam or other device may be used in place of the crank or eccentric herein described, and I do not, therefore, intend to limit my claim to the particular device described for producing the vibratory or oscillatory motion of the digger, but claim any equivalent device by which this peculiar motion may be imparted to the digger, although the one described is, in my judgment, preferable.

By locating the digger in rear of the frame and driving-wheels instead of in front or beneath, the downward draft upon the driving-wheels increases with the immobility of the soil worked in, thereby more certainly insuring the revolution of the driving-wheels, and constant and equal motion of the digger.

When the machine is working, the digger-blade cuts beneath the potato-hills, carrying the potatoes over the blade and over the outer

ends of the fingers, which are secured to the blade projecting outward and backward from it, and depositing them free from dirt, which has been shaken out by the motion of the digger.

I am aware that some machines have been made and some patented having riddlers or sifters with oscillatory movements, for separating the potatoes from the earth after the potatoes and earth have been lifted or scooped out of the ground; but in my device an oscillatory motion is given to the digger itself, and not merely to a riddler or sifter after the potatoes have been dug and thrown onto the riddler or sifter. By this improvement the draft is materially diminished, because the oscillations of the digger facilitates the working of the digger-blade into the soil, and also because there is no weight of earth to be carried and to be shaken out by separate riddlers or sifters, as the potatoes are quite thoroughly separated from the dirt when they are lifted out of the hills. This motion of the digger not only materially diminishes the draft, but more thoroughly pulverizes the soil, keeps the digger-blade free from vines and obstructions,

and renders unnecessary any separate shaker, sifter, or riddler, with its machinery, the motion of the digger and its attached fingers being all that are required for thorough work, which very materially simplifies and improves the potato-digging machine.

I make the digger-blade quite narrow, and with a fair cutting-edge, and so attach it to the digger-frame that it may be easily and readily removed for sharpening or repairing, and also make it in a curved form, for the reason that, in my judgment, it is the better form for the work; still it is obvious there are other forms which may serve well.

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

In a potato-digger, a cutter and separating-fingers, united and oscillating or vibrating on a horizontal axis, in combination with a cam or crank for imparting the requisite cutting and separating motion, substantially as described, for the purpose specified.

HENRY D. HERRINGTON.

Witnesses:

N. DAVENPORT,

IRVING BROWNE.