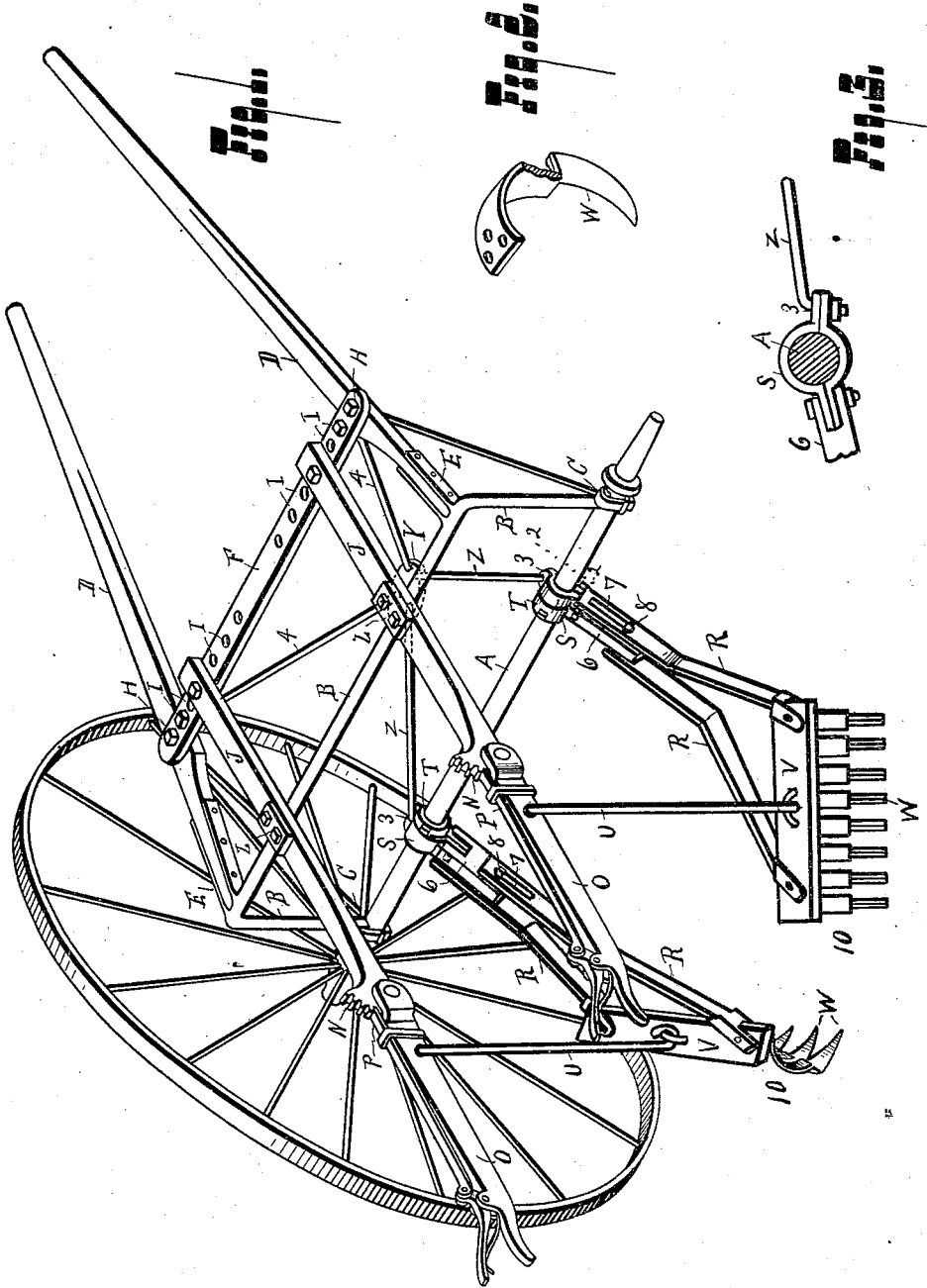


(No Model.)

L. FETCH.
POTATO DIGGER.

No. 543,859.

Patented Aug. 6, 1895.



WITNESSES
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UNITED STATES PATENT OFFICE.

LEWIS FETCH, OF VAN BUREN, INDIANA.

POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 543,859, dated August 6, 1895.

Application filed March 4, 1895. Serial No. 540,551. (No model.)

To all whom it may concern:

Be it known that I, LEWIS FETCH, a citizen of the United States, residing at Van Buren, in the county of Lagrange, State of Indiana, have invented a new and useful Potato-Digger, of which the following is a specification.

The object of this invention is to produce an improved machine for digging potatoes, two rows being operated upon at once by raking them out of the hills and raking them free from the dirt and depositing them in a line between said rows, and the construction embodying the invention is particularly described and claimed below.

In the drawings forming a part of this specification, Figure 1 is a perspective view; Fig. 2, a perspective view of the digger-tooth, enlarged from Fig. 1; and Fig. 3 is a section on dotted line 2 2 in Fig. 1, enlarged, looking from a point at the right.

Referring to the lettered parts of the drawings, A is a two-wheeled axle, and B an inverted-U bar elongated laterally, the ends being rigidly attached at C C to the ends of the axle A near the wheels. To this laterally-elongated inverted-U bar B the thills H H are rigidly attached at E E.

A transverse bar F is rigidly attached at each end to the thills H H at a point well in front of the inverted-U bar B. This transverse bar F is provided with a series of adjusting-holes I I.

Longitudinal ratchet-bars J J are attached at the front ends in a laterally-adjustable manner by detachably bolting in one of the holes I I of the transverse bar F. These longitudinal ratchet-bars J J, one being on each side of the machine, extend back across the upper portion of the inverted-U bar B, to which they are attached at L L in a manner to be laterally adjustable. The rear ends of the bars J J are provided with ratchets N N, to which ratchets are pivoted the forward end of lifting-levers O O, and these lifting-levers are provided with lock-pawls P P for engaging the ratchets N N to hold the levers in the desired position.

At R R are shown rearwardly-extending draw-bars pivotally attached at their front end to the axle A by means of hinges S S, and are held apart and in proper position by collars T T, which collars are held on the axle

by set-screws, and, like the pivoted ends of the draw-bars R R, are laterally adjustable. There are two sets of these draw-bars R R, and they are beneath the ratchet-bars O O and parallel therewith.

The hinges S S are made in two parts like a bearing-box, and loosely confine the axle A, Fig. 3, so as to turn thereon when the lifting-levers O O are raised and lowered to raise and lower the digger-rakes 10.

Bolted to the rear of the hinges S S are blocks 6 6, and to the sides of these blocks are adjustably attached by bolts 8 8 the draw-bars R R of each set, said bars being provided with an elongated slot 7 at the front end for the purpose stated below.

The heads V V of the digger-rakes 10 10 are pivotally attached at each end to the rear end of the draw-bars R R, as in Fig. 1, and are at oblique angles to each other and to the rows of potatoes, so that the potatoes raked out of the hills will be raked free of the dirt and left in a row between the two rows of potatoes operated upon by the digger-rakes. These digger-rakes are raised and lowered and held down to work by rods U U, which rods are jointly attached at the ends to the lifting-levers and digger-rakes, Fig. 1.

The particular angle and position of the digger-rakes are fixed by adjusting the draw-bars R R as follows: By loosening the bolt 8 both bars of a set can be moved farther forward or back to bring the digger-rakes nearer to or farther from the axle A, as desired. In Fig. 1 the rear end of the slot 7 of the outside draw-bars R fits against the bolt 8, and the forward end of said slot of the inside draw-bars fits against said bolts, thus setting the digger-rakes at a given oblique angle to each other and to the rows of potatoes. (Not shown.) By moving the outside draw-bars a little to the rear the degree of the angle of the digger-rakes will be changed, and by moving the inside draw-bars forward at the same time the angle and position are both changed.

The heads V V of the digger-rakes 10 10 are provided with bowed elastic metal teeth W, the upper portion of said teeth being flatwise to the line of draft and rigidly attached to the rake-heads V V, from thence curving rearwardly, downwardly, and forwardly.

At a point about vertically central the sides

of the teeth are gashed in and bent back upon themselves, as in Fig. 2, thus making the lower portion of the teeth perfectly flat and set edgewise as they enter the soil. Since
 5 these teeth W thus enter the soil edgewise, and being slightly hooked forward and set at such a distance apart as will preclude the potatoes from passing between them, but will
 10 allow the dirt to pass, they easily enter the hill and rake the potatoes out free from dirt and deposit them between the rows, as stated.

The horse for drawing the machine is hitched to the link Y. This link is attached to the front end of rods Z Z in a jointed manner, the other ends of said rods being jointly
 15 attached at 3 3 in a hole in a forward projection of the hinging-castings of the draw-bars R R. These rods Z Z and their link Y are sustained in a horizontal position by rods
 20 4 4, the lower ends of which rods are jointly attached to the link Y, and thence the rods extend upward and diverge laterally to the ends of the transverse bar F, where they are adjustably attached in one of the holes I
 25 of bar F.

The several adjustable features referred to are explained as follows: Since the distance the rows of potatoes are apart varies it is necessary to adjust the digging-rakes nearer to
 30 each other or farther apart laterally the proper distance. To this end the fastenings of the ratchet-bars J J are loosened at L L, and their bolt attachment in holes I and also the collars T T and the attachment of the rods 4 4 in
 35 holes of the bar F, and then the ratchet-bars and tooth-bars are moved laterally in the desired direction, and the several adjustable fastenings are secured again. By this means
 40 all parts preserve the same relation to each other and the draft-power at all times, and the rods 4 4 Z Z lengthen and shorten in conformity to the adjustment.

The digger-rakes are held to any desired depth of work by the ratchet-levers O O, and
 45 by these levers they can be held out of engagement with the soil and raised to pass obstructions.

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

1. A potato digging machine, comprising a wheeled axle, the elongated inverted U-bar attached to and over said axle, the thills at-

tached to said bar, a transverse bar on said thills provided with a series of adjusting holes
 55 at the ends, the longitudinal ratchet-bars adjustably attached to the inverted U-bar and to the transverse bar, and provided with the ratchets at the ends, the lifting-levers, the tooth-bars pivoted to, and laterally adjustable
 60 on the axle, and provided with the digging-rakes at the ends, and the rods jointly connecting the lifting-levers and digger-rakes, substantially as set forth.

2. A potato digging machine, comprising a
 65 wheeled-axle, the elongated U-bar attached to and over said axle the thills attached to said bar, a transverse bar on said thills provided with a series of adjusting holes at the ends, the longitudinal ratchet-bars adjustably
 70 attached to the inverted U-bar and to the transverse bar and provided with the ratchet at the ends, the lifting-levers, the tooth-bars pivoted to, and laterally adjustable on said axle, and provided with digger-rakes at the
 75 ends, rods jointly connecting the lifting-levers and digger-rakes, the draft link, rods jointly attaching said link and axle, and rods jointly attached to said link and to the adjusting holes of the transverse bar, sub-
 80 stantially as set forth.

3. In a potato-digger, the digger-rakes and two draw-bars for each, the rear ends of which draw-bars are pivotally attached one to each
 85 end of the digger-rakes, and their forward ends being attached to the machine so as to be adjusted longitudinally either independently or in unison to change the angle or position, or both the angle and position, of the
 90 digger-rakes, substantially as set forth.

4. The combination of a wheeled axle, digger-rakes, draw-bars attaching said digger-rakes to the axle, the ratchet-bars and their
 95 lifting-levers pivoted thereto, and rods jointly connecting the lifting-levers and digger-rakes, said draw-bars and ratchet-bars with their lifting-levers being laterally adjustable, substantially as set forth.

In testimony of the foregoing I have hereunto set my hand in the presence of two wit-
 100 nesses.

LEWIS FETCH.

Witnesses:

THOMAS W. STEWART,
 EUGENE SCOTT.