

No. 834,315.

PATENTED OCT. 30, 1906.

J. MOREAU.
POTATO DIGGER.

APPLICATION FILED DEC. 7, 1905.

3 SHEETS—SHEET 1.

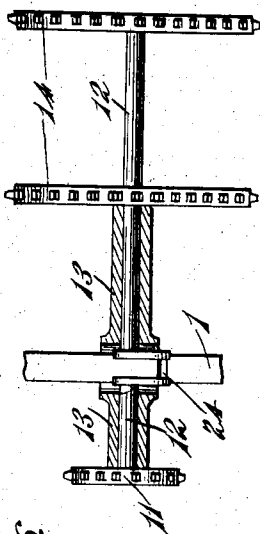


Fig. 6.

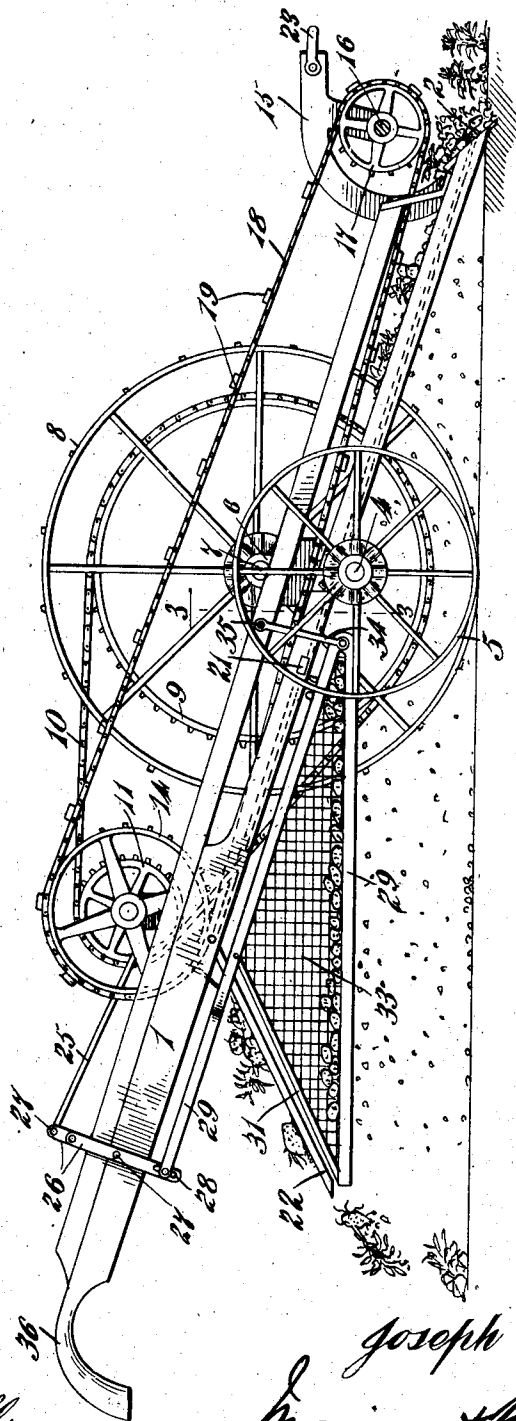


Fig. 1.

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3 SHEETS—SHEET 2.

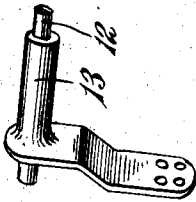


Fig. 8.

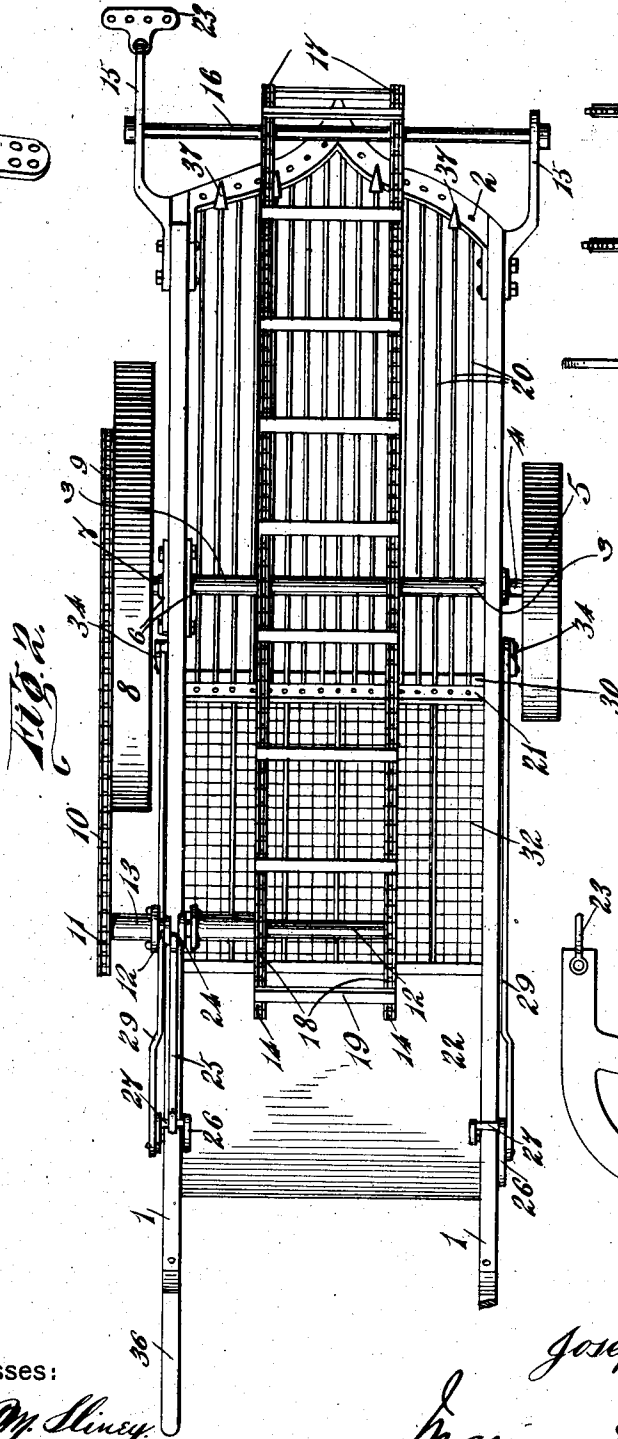


Fig. 2.

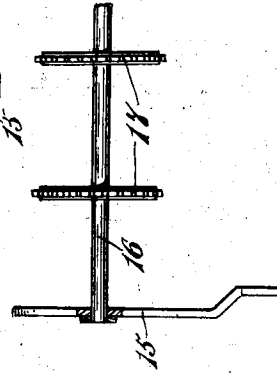


Fig. 4.

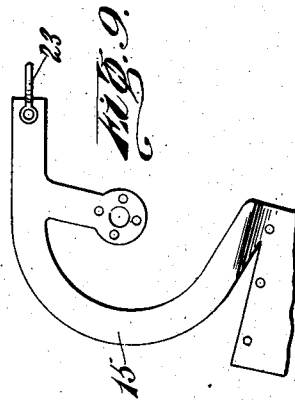


Fig. 9.

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3 SHEETS—SHEET 3.

Fig. 3.

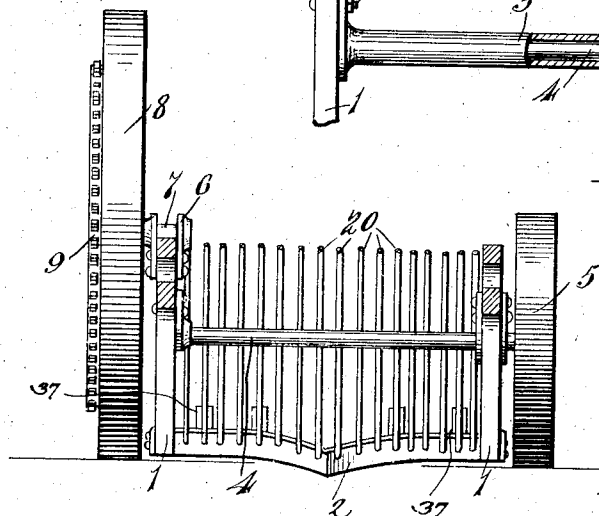


Fig. 10.

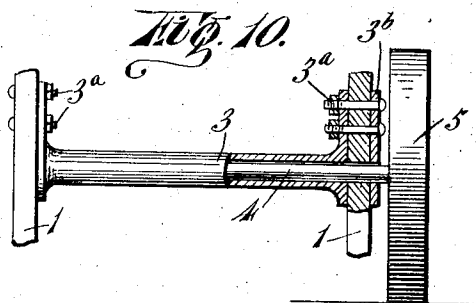


Fig. 4.

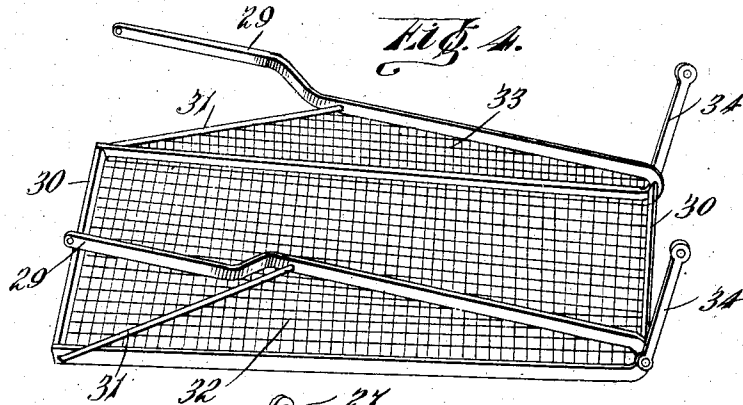
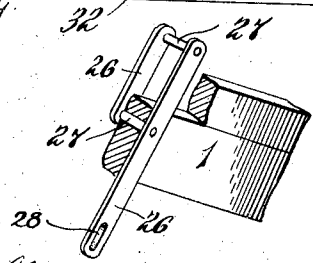


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH MOREAU, OF ST. GERMAIN DE GRANTHAM, QUEBEC, CANADA.

POTATO-DIGGER.

No. 834,315.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed December 7, 1905. Serial No. 290,826.

To all whom it may concern:

Be it known that I, JOSEPH MOREAU, a subject of the King of Great Britain, residing at St. Germain de Grantham, county of Drummond, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Potato-Diggers; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to potato-diggers.

The object of my invention is to provide a simply-constructed apparatus adapted to dig potatoes and separate the soil and herbage therefrom.

A further object of my invention is to provide an apparatus the depth of the cut of which may be easily regulated without the use of special mechanism.

A further object of my invention is to provide in a potato-digger a horizontally reciprocable separating-basket and to provide means for reciprocating the same; and my invention consists of the construction, combination, and arrangement of parts as herein illustrated, described, and claimed.

In the accompanying drawings, forming part of this application, I have illustrated one form of embodiment of my invention, in which drawings similar reference characters designate corresponding parts, and in which—

Figure 1 is a side elevation, partly in section. Fig. 2 is a plan view. Fig. 3 is a vertical section on line 3-3 of Fig. 1 looking in the direction indicated by the arrow. Fig. 4 is a perspective view of the separating-basket detached from the apparatus. Fig. 5 is a perspective view, partly in section, showing the connection between the frame of the apparatus and one of the hangers adapted to support one end of the separating-basket. Fig. 6 is a plan view, partly in section, of the rear shaft of the apparatus. Fig. 7 is a plan view, partly in section, of a portion of the front shaft of the apparatus and its supporting-bearings. Fig. 8 is a perspective view of one of the supporting-collars for the rear shaft of the apparatus. Fig. 9 is a side elevation of one of the bearings for the front shaft of the machine, showing the connection for the draft apparatus; and Fig. 10 is a rear elevation, partly in section, showing the construction of a bearing for the supporting-shaft of the apparatus.

Referring to the drawings, 1 designates a pair of longitudinal parallel frame members. The forward ends of these members are connected by means of a curved digging member 2, adapted to enter the soil beneath the potatoes. Secured to one of the side members 1 is a sleeve 3, which extends to and is secured to the other side member 1 by means of the bolts 3^a and plate 3^b, Fig. 10.

Disposed in the sleeve 3 is a shaft 4, carrying on its outer end the small supporting-wheel 5. Secured on the frame member 1 on the side opposite to the wheel 5 is a bearing 6, carrying a stub-shaft 7, which stub-shaft carries the large wheel 8. The wheels 5 and 8 form the support for the frame members, and the sleeve 3 serves to connect the frame members 1.

Secured to or formed integral with the wheel 8 is a sprocket-wheel 9, over which is passed the chain 10, running over a sprocket-wheel 11 on a shaft 12, disposed transversely of the frame members 1 and extending approximately two-thirds of the distance between said members. The shaft 12 is supported by the sleeves 13, one of which is placed on each side of one of the frame members 1, preferably the left-hand frame member looking from the rear end of the apparatus.

Disposed on the shaft 12 are sprocket-wheels 14. Disposed on the forward ends of the frame members 1 are the upwardly-curved bearings 15, adapted to support a transverse shaft 16. Disposed on the shaft 16 are sprocket-wheels 17, in alignment with the sprocket-wheels 14. Connecting the sprocket-wheels 14 and 17 in pairs are chains 18, and connecting the chains are transverse slats 19.

Extending from the digging member 2 upwardly and rearwardly are rods 20, the rear ends of which are connected to a cross-bar 21, carried by the frame members 1. As best shown in Fig. 2, some of these rods 20 extend to the rear of the cross-bar 21 and are connected to the upper edge of a rearwardly-inclined apron 22, which is carried by the frame members 1. One of the bearings 15 is extended forward of the other bearing to permit the attachment of the draft-attaching means 23.

The shaft 12 adjacent one end is provided with a cranked portion 24, to which is connected a rod 25. Adjacent the end of the rod 25 there is disposed on the opposite sides of

the frame member 1 plates 26, connected by rods 27, one of which rods 27 forms a pivotal support for the plates 26. A similar construction is observed at the corresponding point on the other frame member 1. One end of the rod 25 is connected to one of the connecting-rods 27, so that the plate 26, to which it is connected, is given a reciprocatory movement.

The lower ends of one of the plates 26 are provided with slots 28 to provide for a connection with the side members 29 of a separating-basket.

The side members 29 and the basket are connected by the front end members 30, and the rear end of the basket is connected to the side members by means of the braces 31. The bottom of the basket is formed of rods 32 or foraminous material, as is also the side 33 of the basket, to permit the soil to pass therethrough and to retain the potatoes therein. Pivottally connected to the forward end of the basket are links 34, the upper ends of which are pivottally connected, as at 35, to the frame members 1. The rear ends of the frame members are curved downwardly to form handles 36, and adjacent the front end of the apparatus are provided vertical cutting-blades 37, adapted to separate the soil as it is thrown up by the digging member 2.

In the operation of my invention the apparatus is drawn forward by any suitable means, and by means of the handles 36 the forward end of the apparatus may be raised or lowered, the apparatus being balanced on the shafts 4 and 7. As the soil and potatoes are raised by the digging member 2 they will be carried upward and backward by the slats 19, carried on the chains 18, which chains will be caused to travel by means of the sprocket-wheels 14, carried on the shaft 12, which shaft is actuated by means of the sprocket-wheels 9 and 11, the former of which is secured to the large wheel 8. The smaller clods of soil will fall between the rods 20, and the potatoes will be retained until they are elevated past the cross-bar 21, where they will fall between the rods 20 into the basket-bot-

tom 32. The herbage and large clods will be retained by the rods 20, extending to the rear of the cross-bar 21, and finally will be thrown upon the apron 22 and will fall to the rear of the apparatus.

As the shaft 12 is rotated, as hereinbefore described, its cranked portion 24 will cause reciprocation of the rod 25 and the consequent rocking of the plates 26. This rocking motion of the plates 26 will be communicated to the side members 29 of the basket, which will be rocked on the links 34, thereby freeing the potatoes from any adhering soil.

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 combination comprising wheeled frame members, a conveyer, a cranked shaft carried by the frame members, means for driving the cranked shaft, a plurality of plates disposed on opposite sides of one of the frame members, rods connecting said plates, one of said rods being adapted to serve as a pivot for said plates, a rod connecting the cranked portion of said shaft with one of the connecting-rods of said plates, a separating-basket disposed beneath the frame members, links connecting one end of the basket to the said frame members, and a pivotal connection between one end of the separating-basket and said plates.

2. In a potato-digger the combination comprising a wheeled supporting-frame, a digging member carried by the frame, a conveyer carried by the frame, means for actuating the conveyer, a basket carried by the frame comprising side members, end members, braces connecting the end members and the side members, and sides and a bottom of foraminous construction, and means for reciprocating the basket.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOSEPH MOREAU.

Witnesses:

I. MYNARD,
Jos. J. B. CHARBONNEAU.