No. 880,861. PATENTED MAR. 3, 1908.

J. N. CHAMPAGNE.

POTATO DIGGER.

APPLICATION FILED MAR. 15, 1906.

3 SHEETS—SHEET 1.

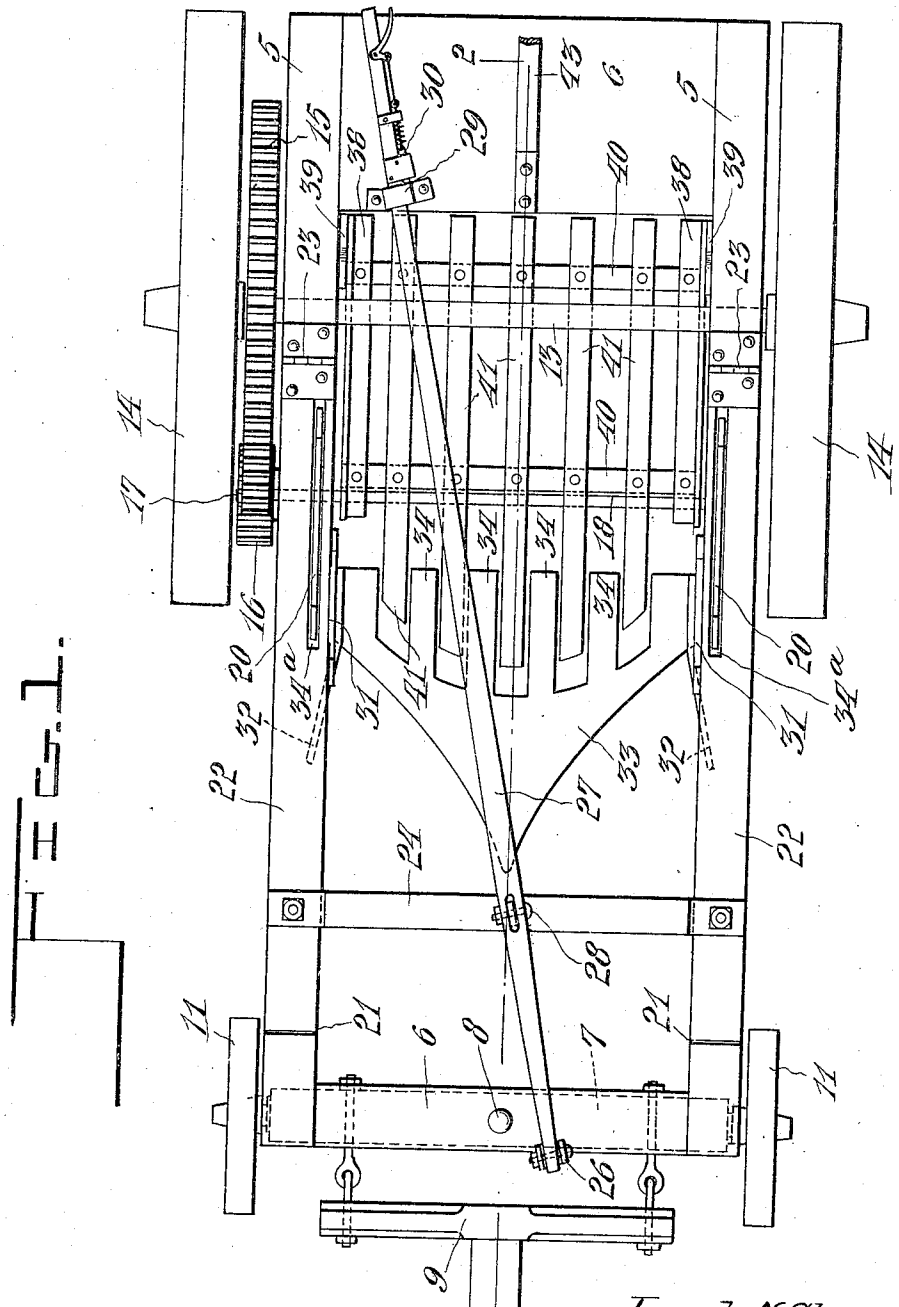


Fig. 1.

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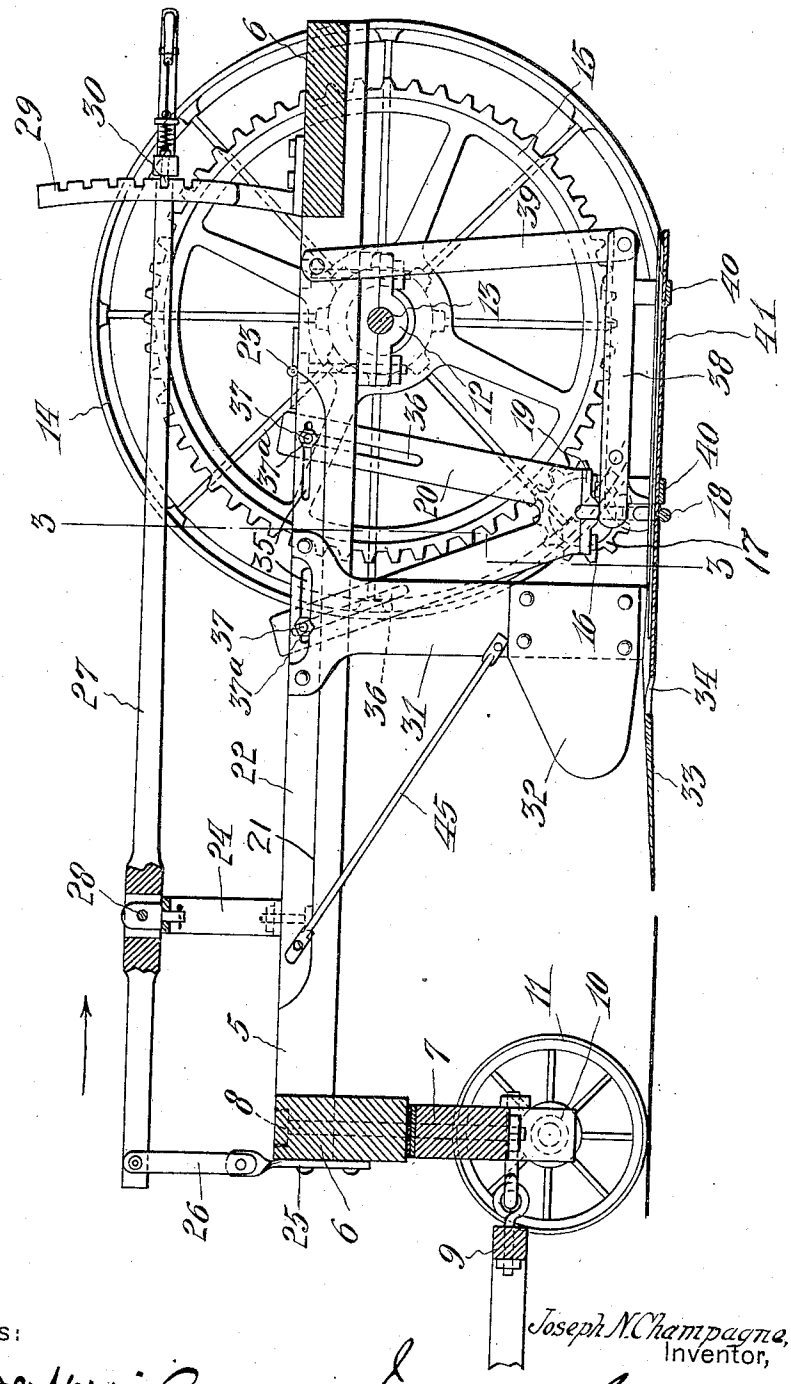
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3 SHEETS—SHEET 2.

FIG. 2.



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3 SHEETS—SHEET 3.

FIG. 4.

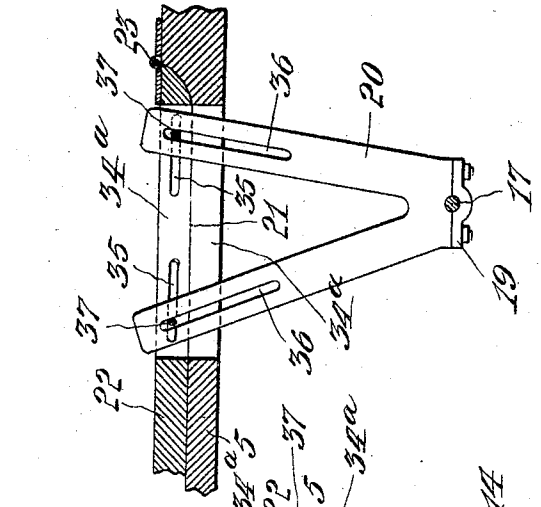
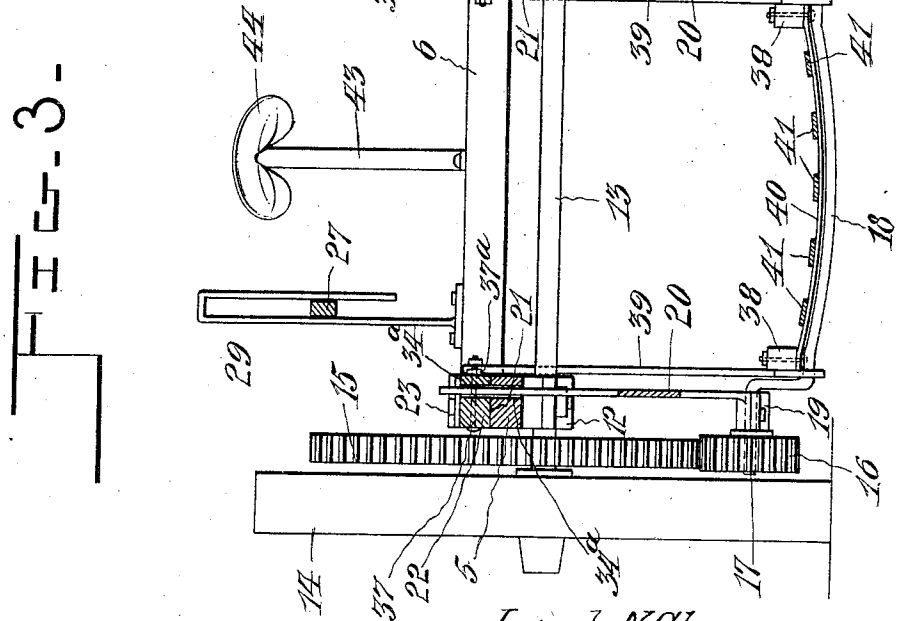


FIG. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH NORBERT CHAMPAGNE, OF STE. CLOTHILDE, QUEBEC, CANADA, ASSIGNOR OF ONE-THIRD TO ADELARD GAGNER, OF MANCHESTER, NEW HAMPSHIRE, AND ONE-THIRD TO ORIGENE CHARLAND, OF STE. PHILOMENE, CANADA.

POTATO-DIGGER.

No. 880,861. Specification of Letters Patent. Patented March 3, 1908.

Application filed March 15, 1906. Serial No. 306,167.

To all whom it may concern:

Be it known that I, JOSEPH NORBERT CHAMPAGNE, a subject of the King of Great Britain, residing at Ste. Clothilde, county of Arthabaska, 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 an apparatus of that character which is simple in construction and easily operated; and, my invention consists in 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 plan; Fig. 2 is a longitudinal vertical section taken on line 2—2 of Fig. 1; Fig. 3 is a transverse vertical section taken on line 3—3 of Fig. 2 looking in the direction of the arrow, and Fig. 4 is a fragmentary detail of the adjusting means, shown partly in elevation and partly in section.

Referring to the drawings, 5, 5 are longitudinal frame members, connected at their ends by the cross members 6, 6. Disposed under the forward cross members 6 is a bolster 7, connected to the cross member as by a king bolt 8. Secured in any suitable way to the bolster 7 is a draft attaching means 9, and secured on the bolster is an axle 10, provided with the usual wheels 11. Secured adjacent the rear ends of the longitudinal members 5, are journal bearings 12, in which is rotatably disposed the rear axle 13, on which are fixed the wheels 14.

Secured to the inner face of one of the wheels is a gear 15, meshing with a pinion 16 carried on one end of the shaft 17, which shaft is provided with a cranked portion 18, the central part of said cranked portion being slightly bowed. The ends of the shaft 17 are disposed in journal bearings 19, carried by hangers 20.

The longitudinal members 5 are each provided with a cut away portion 21, in which are disposed the members 22, one end of the members 22 being secured to the members 5, as by the hinge 23. The members 22 are secured together as by means of the yoke 24. Secured to the forward cross members 6 s a plate 25, to the upper end of which is connected a link 26. Pivotally connected to the link 26 is a lever 27, pivoted at 28 on the yoke 24 and extending to a rack 29 secured on the rear cross member 6. The rear end of the lever 27 is provided with a pawl 30 of ordinary construction adapted to engage the rack 29 and lock the lever in position. Intermediate of their ends, the members 22 each carry a downwardly extending standard 31. Secured to the lower end of each of the standards is an outwardly flaring shield 32. Secured to the lower ends of the standards 31 is a digging member or plow 33, the rear portion of which is formed with spaced tongues 34. The members 5 and 22 are provided with vertical slots 34^a, and the members 22 are provided with horizontal slots 35. The upper ends of the hangers 20 are disposed in the slots 34^a, and are themselves provided with slots 36. Disposed through the slots 35 and 36, are bolts 37, on which are disposed nuts 37^a, whereby the hangers 20 may be adjusted vertically and horizontally.

Disposed to the rear of and adjacent the plow 33 on each side of the frame, are longitudinal members 38. The front ends of these members are disposed on the crank portion 18 of the shaft 17. The rear ends of the members 38 are pivotally supported by the pivoted hangers 39, the upper ends of which are pivoted to the members 5. The members 38 are connected by the cross pieces 40, and on the cross pieces 40 are disposed the fingers 41, which are adapted to extend between the spaced tongues 34 of the digging member 33.

As the apparatus is moved forward, the gear 15 causes rotation of the pinion 16 fixed on the shaft 17. This movement of the shaft causes a circular motion to be given to the fingers 41. The digging member 33 raises the soil, and the potatoes are thrown back upon the spaced tongues 34. The circular reciprocatory movement of the fingers 41 shakes the soil loose from the potatoes, which are thrown to the rear of the apparatus as it passes forward. The lower end of the hang-

ers 39 acts as a fixed pivot for the fingers 41, so that only the forward ends of the fingers are raised from the horizontal plane, allowing the potatoes to roll to the rear of the apparatus. The shields 32 prevent the potatoes from rolling to the sides of the apparatus beyond the reach of the fingers 41.

Disposed on the rear cross member 6 is a seat post 43, carrying a seat 44 of ordinary construction. Connecting the standards 31 and the members 22, is a brace 45, adapted to prevent displacement of the standards, the shields 32 and the plow 33.

In order to render the digging apparatus and the fingers 41 inoperative, the members 22 may be actuated upwardly, on their pivot connections 23 by means of the lever 27, which may be locked in position by means of the rack 29. By carrying the members 22 upwardly, the pinion 16 is actuated out of engagement with the gear 15.

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

1. In an implement of the character described, the combination comprising a wheeled supporting frame, a digging member carried by the frame, a separating member comprising a plurality of fingers, and a bowed cranked axle adapted to reciprocate said fingers.

2. In an implement of the character described, the combination comprising a wheeled supporting frame, a digging member carried by the frame, shaft hangers carried by said frame, a separating member comprising a plurality of fingers, a bowed crank shaft journaled in said hangers, connections between said crank shaft and said separating member, whereby said separating member is actuated by said shaft, means for driving said shaft and means for simultaneously raising said shaft and separator and disengaging the driving means from said shaft.

3. In an implement of the character described, the combination comprising a wheeled supporting frame, a digging member on the frame, a shaft supporting hanger carried by the frame, a bowed crank shaft carried by the hangers, a separating member having its front end connected with the bowed portion of the crank shaft, and its rear end mounted on fixed pivots, means for rotating said crank shaft, and means for moving the aforesaid hangers and crank shaft mounted thereon into operative position relatively to the aforesaid crank shaft rotating means.

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

JOSEPH NORBERT CHAMPAGNE.

Witnesses:
C. J. BELANGER,
WM. J. BENOIT.