I. B. CASEY.

POTATO DIGGER.

APPLICATION FILED AUG. 21, 1911.

1,049,670.

Patented Jan. 7, 1913.

4 SHEETS—SHEET 1.

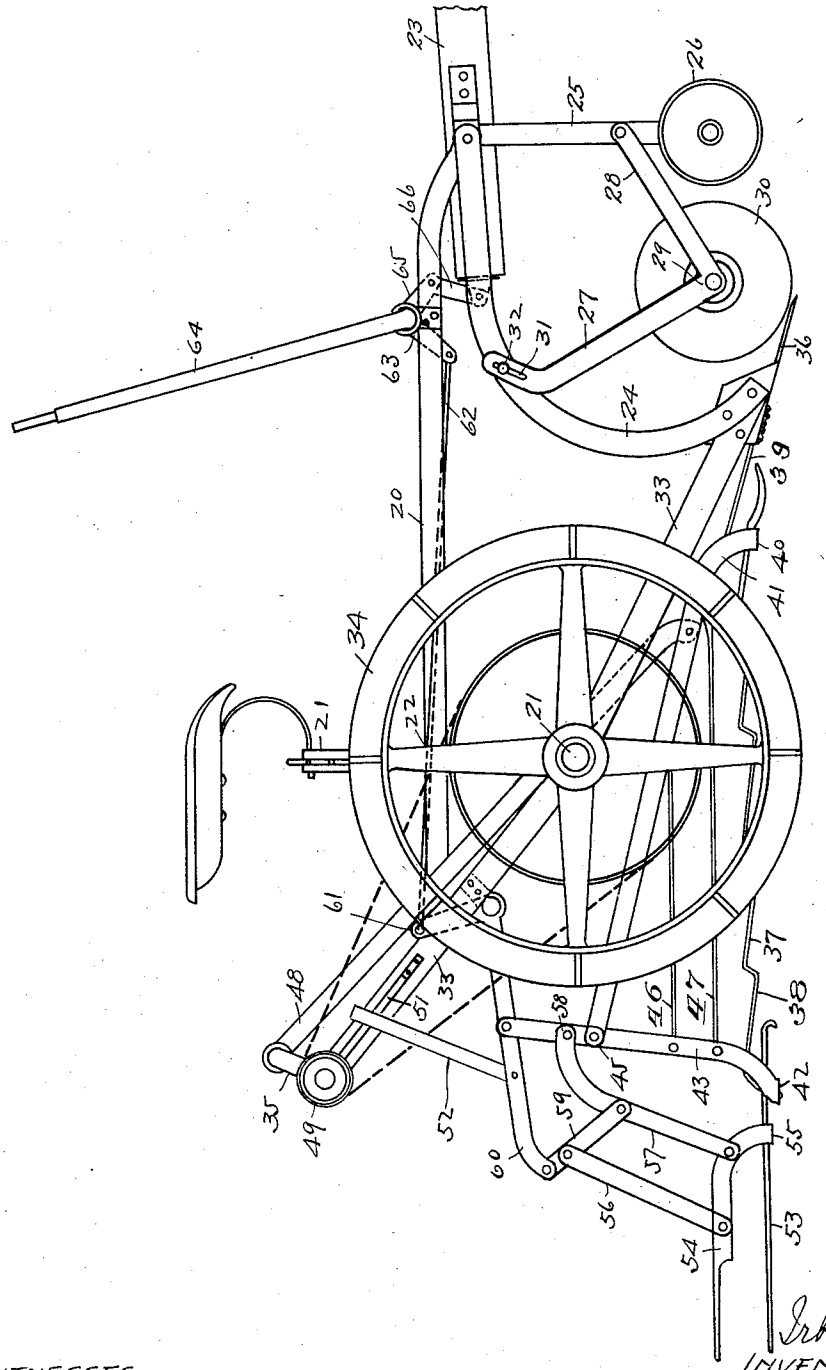

Fig. 1.

WITNESSES

J. M. S. Snoder Jr.

N. L. Meem.

Irby B. Casey,

INVENTOR

By Mason Fenwick & Lawrence

ATTORNEYS

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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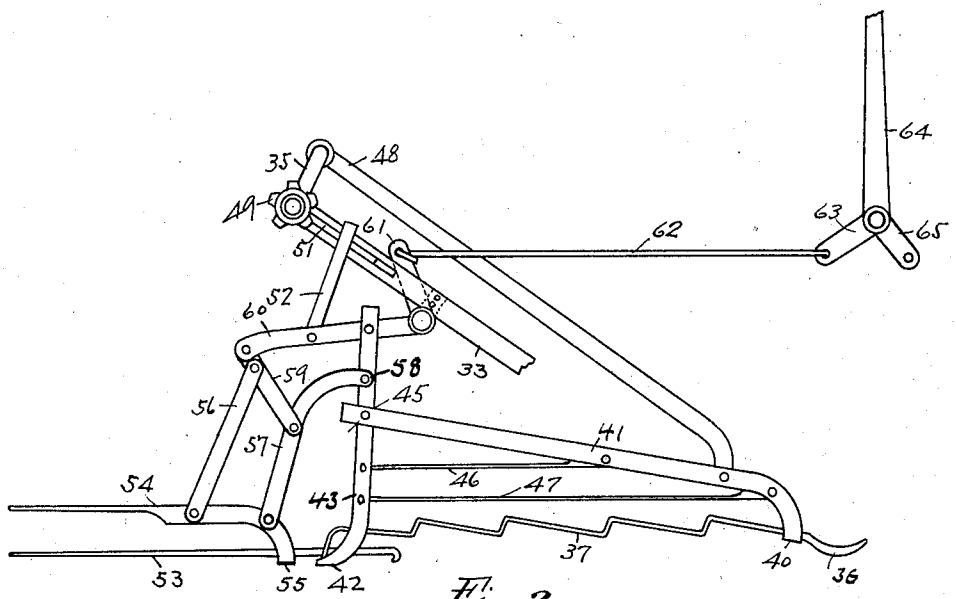

Fig. 2.

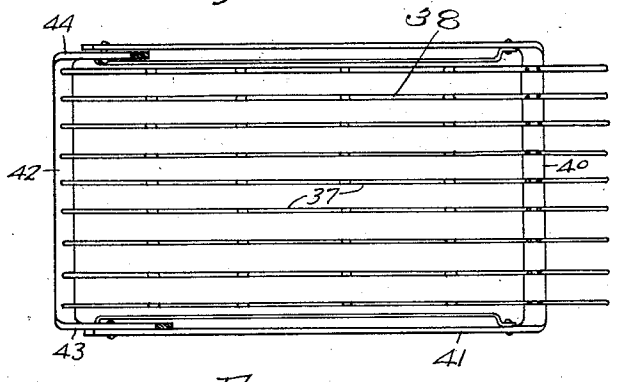

Fig. 3

Witnesses
J. M. Fowler Jr.
N. L. Meem.

Inventor
Irby B. Casey,
By
Mason Fenwick & Lawrence,
Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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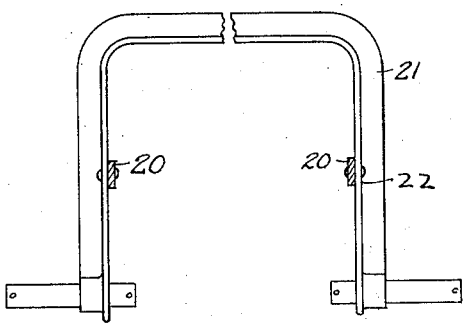


Fig. 7

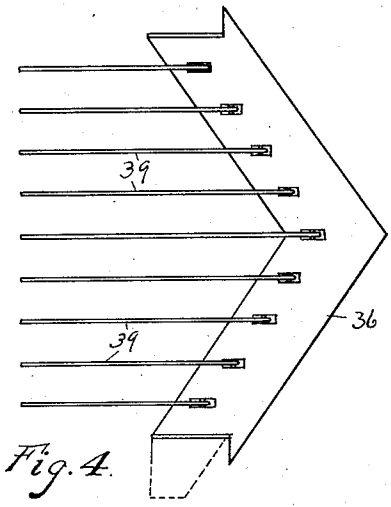


Fig. 4.

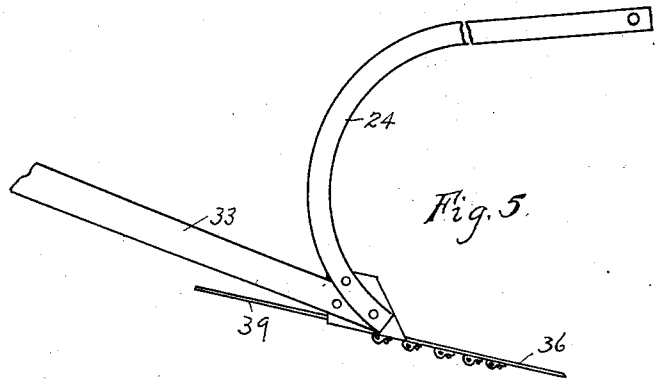


Fig. 5.

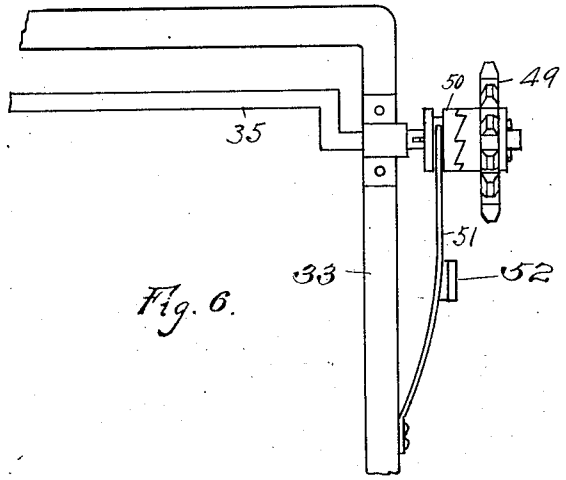
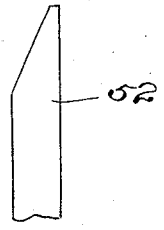


Fig. 6.

Fig. 6a



WITNESSES

J. M. Fowler Jr.

N. L. Means.

Inventor

Isby B. Casey,

By

Mason Fenwick & Lawrence

ATTORNEYS.

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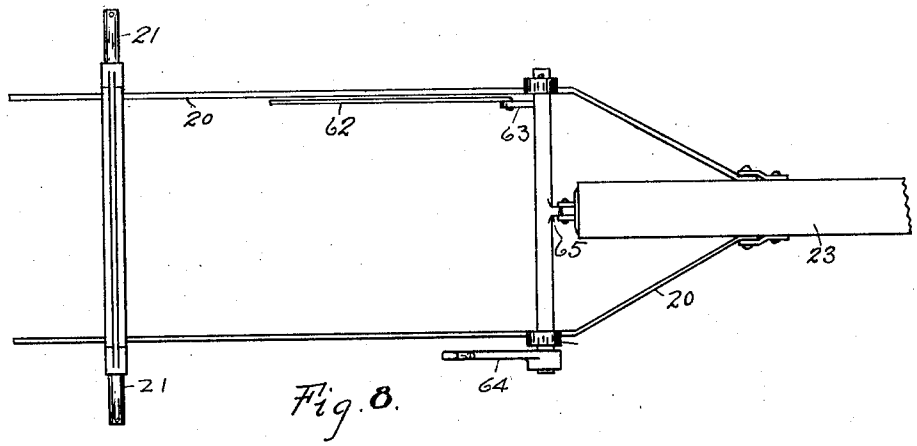

Fig. 8.

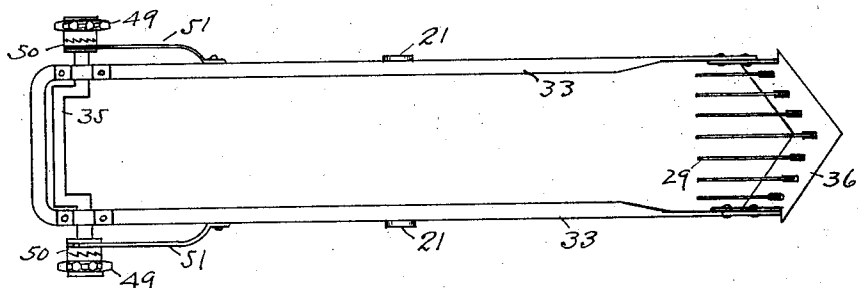

Fig. 9.

WITNESSES

J. M. Fowler Jr.

N. L. Meem.

Irby B. Casey,

INVENTOR

Mason Fenwick & Lawrence.

ATTORNEYS

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

IRBY B. CASEY, OF KIESLING STATION, WASHINGTON.

POTATO-DIGGER.

1,049,670. Specification of Letters Patent. Patented Jan. 7, 1913.

Application filed August 21, 1911. Serial No. 645,081.

To all whom it may concern:

Be it known that I, IRBY B. CASEY, a citizen of the United States, residing at Kiesling Station, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Potato-Diggers; and I do hereby declare the following to be 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.

This invention relates to potato diggers, and it consists in the novel construction hereinafter described and claimed.

In the accompanying drawings forming part of this application, Figure 1 is a side elevation of the machine. Fig. 2 is a similar view of the mechanism for lifting the racks. Fig. 3 is a top plan view of the forward rack. Fig. 4 is a plan view of the shovel. Fig. 5 is a side view thereof. Fig. 6 shows the clutch and associated parts. Fig. 6[a] is a detail of bar 52. Fig. 7 is an elevation of the arched axle. Figs. 8 and 9 are plan views of the frames of the machine.

In carrying out my invention, I make use of a main frame 20, connected with an arched axle 21 at the points 22, and connected at the forward end with a tongue 23. A curved draft member 24 is connected with tongue 23, as is also a substantially vertical bar 25 carrying wheel 26, and arranged between members 24 and 25 are arms 27 and 28 located at substantially right angles with each other and supporting at the point 29 the axle of disks 30. Arm 27 is slotted at 31 and the slot is engaged by a pin 32 passing through member 24. A frame 33 is carried by axle 21 and the latter is supported by main wheels 34, one end of frame 33 carrying a transverse crank shaft 35, for the purpose stated below. The lower end of frame 33 is connected with the lower end of frame 24, and at the point of connection the shovel 36 is suitably secured. A rack 37 is supported beneath the main axle, the tines 38 of this rack being stepped as shown in Fig. 2, whereby the potatoes and any clods of earth received from the tines 39 of the shovel, are passed rapidly to the rear. The forward end of rack 37 is supported by transverse bar 40 of frame 41, and the rear end of said rack is supported by transverse bar 42 of a U-shaped frame the side members of which are shown at 43 and 44 in Fig. 3. The side members of frame 41 are connected with members 43 and 44 at the points 45, and tie rods 46 and 47 serve to brace the structure. A vibratory motion is imparted to frame 41, and therefore to rack 37 by means of bars 48 connected with crank shaft 35, one end of which is provided with a sprocket 49 driven from main wheel 34. Fig. 6 shows a clutch on crank shaft 35, one of the members 50 of the clutch being held by spring 51. The spring is engaged by a bar 52 for the purpose of disconnecting the power when the devices described below are operated for lifting the racks from the ground. A rear rack 53 is supported by a U-shaped frame 54, the transverse member 55 of which extends beneath the tines of the rack, and frame 54 is supported by pivoted bars or arms 56 and 57, the latter being curved and connected at 58 with members 43 and 44. Arm 57 constitutes a lever. Link 59 has pivotal connection with bars 56 and 57 and with lever 60 operated by arm 61, the latter being in turn operated by rod 62, arm 63 and lever 64. By means of the construction described perfect control of racks 37 and 53 may be had. Lever 64 also controls the point of the shovel through the medium of arm 65 and link 66 connected with member 24. Bar 52 above mentioned is carried by lever 60. Wheel 26 is designed to gage the depth at which the shovel enters the ground. Disks 30 on each side of the shovel loosen the soil and cause less strain upon the shovel.

The potatoes when received on the shovel pass along the tines 39 thereof on account of the projecting ends of the tines of rack 37, which rack vibrates continuously, removing the dirt, and after being carried the length of rack 37 are deposited on rack 53, from which they are discharged.

What I claim is:

1. In a device of the class described, a rack, means for vibrating the same, a shovel mounted in front of the rack, a receiving device located in the rear of the rack, a lever for lifting the shovel, a second lever controlled by the lever first mentioned, and devices connected with the second lever for lifting, simultaneously with the shovel, the rack and the receiving device and discontinuing the vibration of the rack.

2. In a device of the class described, a vibrating rack, a receiving and discharging

device located in the rear thereof, a frame for supporting the latter, a pivotally mounted lever, a link connected thereto, a second frame connected with the rack, an arm connected with the second frame, with the link and with the frame first mentioned, and means for operating the lever.

3. In a device of the class described, a vibrating frame, a receiving and discharging device located adjacent thereto, a pivotally mounted lever, means including a plurality of arms, one of which constitutes a lever, connecting the lever first mentioned with the receiving device, for lifting the same, the said plurality of arms constituting a parallel bar connection, and means connecting the lever first mentioned with the vibrating frame and with the other lever.

4. In a device of the class described, a supporting frame, a crank shaft carried thereby, driving means for the shaft, a device for disconnecting the driving means, a rack, a receiving device adjacent thereto, and means for lifting the latter and simultaneously operating the disconnecting device, said means last mentioned comprising a plurality of arms, a link connecting the arms, a lever extending at an angle to the plurality of arms and pivotally connected with the link, and an arm extending from the lever and arranged to effect the aforesaid disconnection of the driving means.

In testimony whereof I affix my signature in presence of two witnesses.

IRBY B. CASEY.

Witnesses:
H. E. SMITH,
NETTIE KING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."