

No. 894,675.

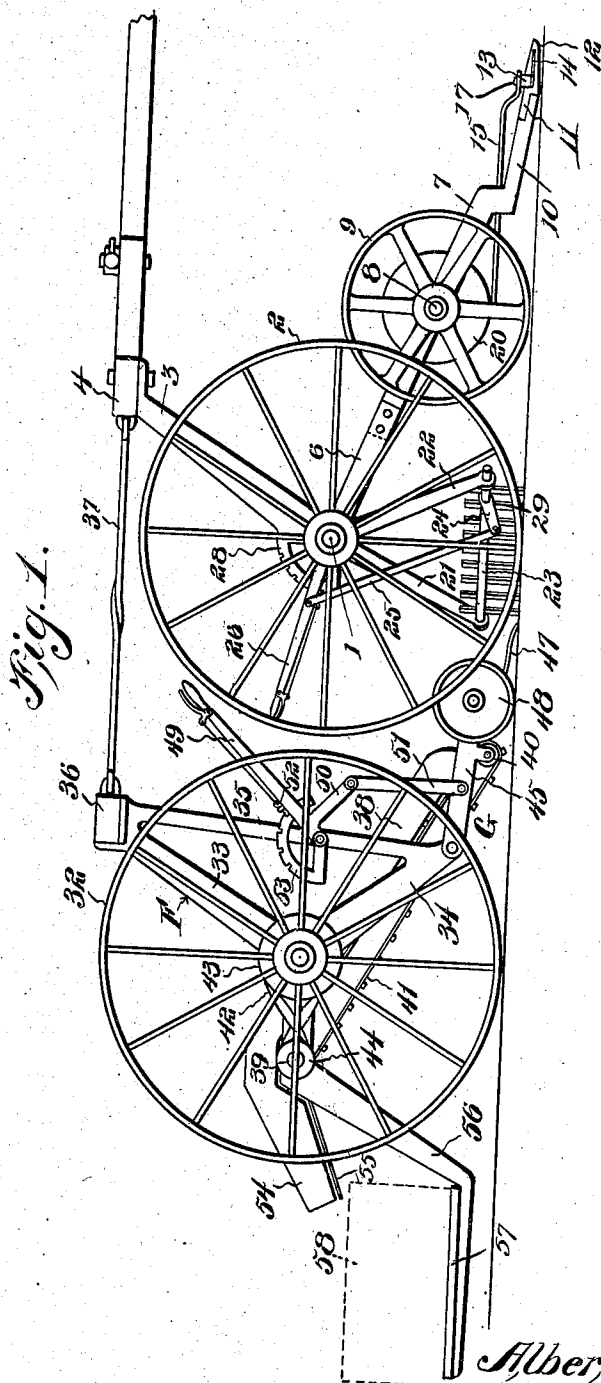
A. E. LUNDY.

PATENTED JULY 28, 1908.

MACHINE FOR GATHERING AND TOPPING ONIONS.

APPLICATION FILED MAY 25, 1907.

3 SHEETS—SHEET 1.



Inventor
Albert E. Lundy

Witnesses

Louis R. Heinrichs
Wm. Bagger

By *Victor J. Evans*
Attorney

No. 894,675.

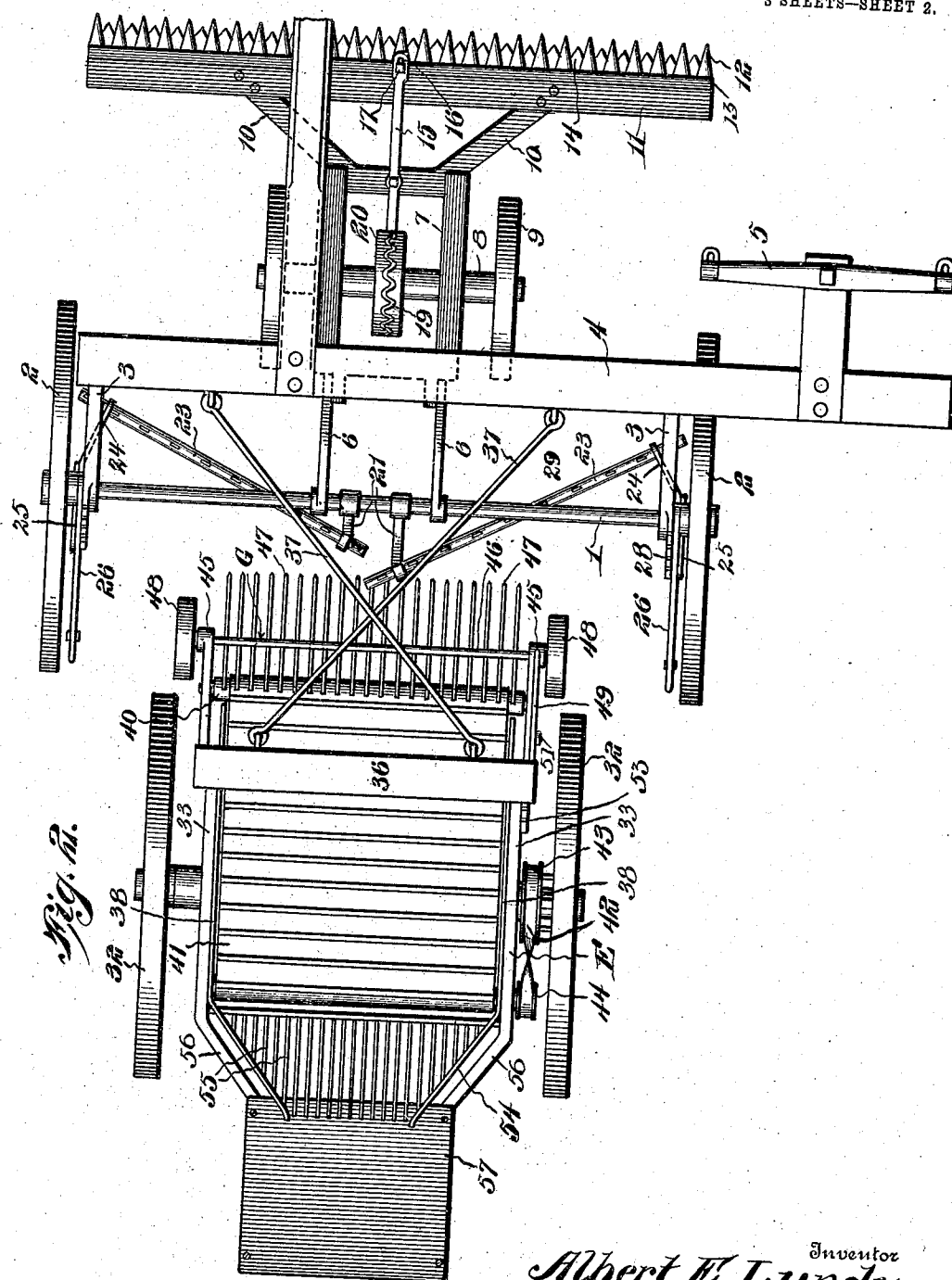
A. E. LUNDY.

PATENTED JULY 28, 1908.

MACHINE FOR GATHERING AND TOPPING ONIONS.

APPLICATION FILED MAY 25, 1907.

3 SHEETS—SHEET 2.



Albert E. Lundy Inventor

Witnesses

Louis R. Heinrichs
Wm. Bagger

By *Victor J. Evans* Attorney

No. 894,675.

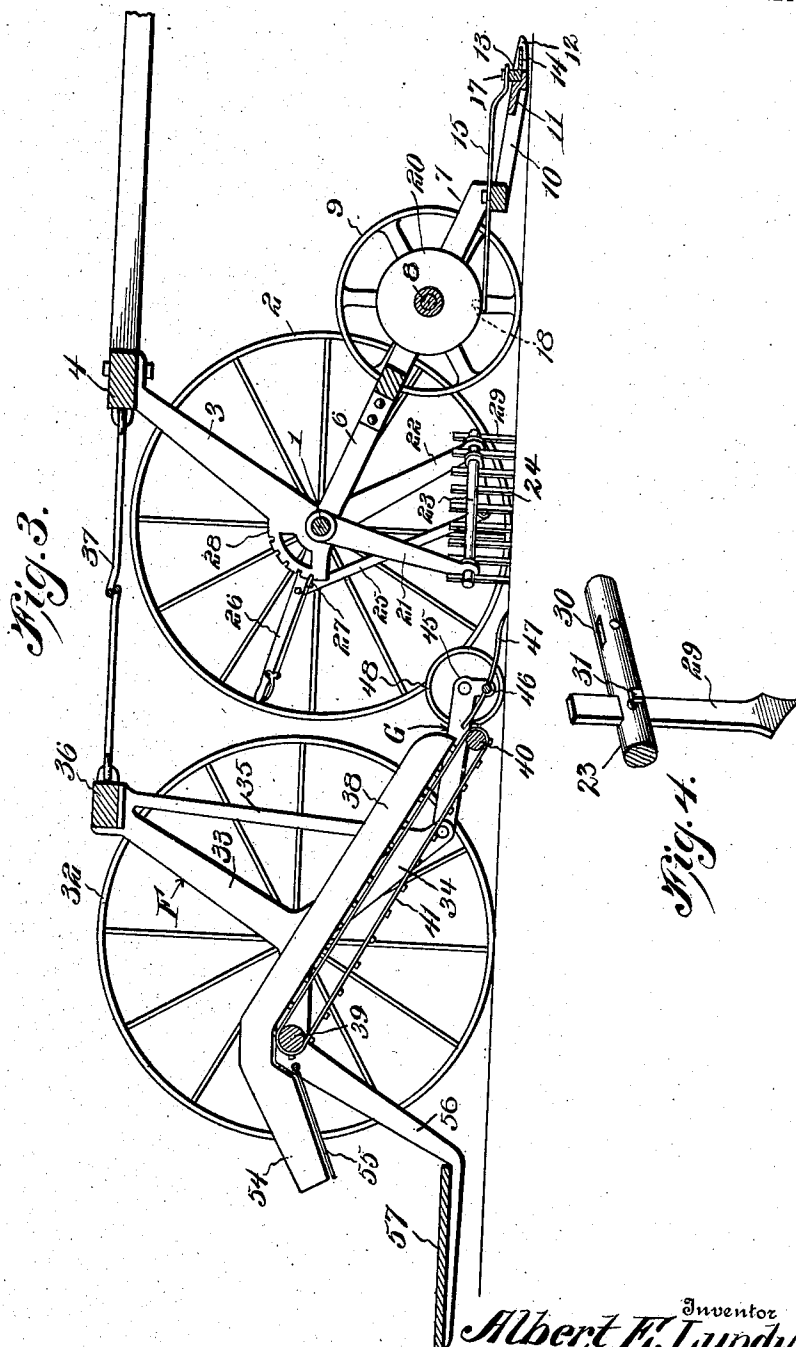
A. E. LUNDY.

PATENTED JULY 28, 1908.

MACHINE FOR GATHERING AND TOPPING ONIONS.

APPLICATION FILED MAY 25, 1907.

3 SHEETS—SHEET 3.



Witnesses

Louis R. Heinrichs
Wm. Bagger

384

Victor J. Evans

Attorney

Albert E. Lundy
Inventor

UNITED STATES PATENT OFFICE.

ALBERT E. LUNDY, OF NEWARK, NEW YORK.

MACHINE FOR GATHERING AND TOPPING ONIONS.

No. 894,675.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed May 25, 1907. Serial No. 375,655.

To all whom it may concern:

Be it known that I, ALBERT E. LUNDY, a citizen of the United States, residing at Newark, in the county of Wayne and State of New York, have invented new and useful Improvements in Machines for Topping and Gathering Onions, of which the following is a specification.

This invention relates to machines for topping and gathering onions; and it has for its object to provide an improved machine of this class by the use of which onions may be topped, pulled or dug from the ground, thrown into a row or ridge, and gathered in an efficient, expeditious and inexpensive manner.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings, Figure 1 is a side elevation of a machine constructed in accordance with the principles of the invention. Fig. 2 is a top plan view of the same. Fig. 3 is a longitudinal vertical sectional view. Fig. 4 is a perspective detail view of one of the shafts or bars carrying the excavating teeth.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved machine includes an axle 1 supported upon a pair of transporting wheels 2—2 and having upwardly extending arms or brackets 3—3 supporting a transverse frame bar 4 which extends laterally at one side of the machine for the attachment of the draft through the medium of a whiffletree 5 so that the draft animal will walk at one side of the machine. The shaft or axle 1 is provided with forwardly extending arms or brackets 6—6 connected at their forward ends with a frame 7, the side members of which are provided with bearings for the shaft or axle 8 having earth engaging wheels 9 which are connected for rotation with the

shaft or axle 8, which latter is revoluble in its bearings. The frame 7 is provided with forwardly extending divergent arms 10 carrying a finger bar 11 having guard fingers 12, and supporting a reciprocatory cutter bar 13 having teeth or cutters 14 which coöperate with the guard fingers 12 in the usual manner to constitute a cutting apparatus; the reciprocatory cutter bar is actuated by means of a lever 15 fulcrumed upon the front end of the frame 7 and having at its forward end a slot 16 engaging a pin 17 upon the cutter bar; the rear end of the lever 15 is provided with a pin or roller 18 engaging a serpentine groove 19 formed in a wheel or disk 20 that is mounted upon the revoluble axle 8 so that, as the latter rotates in its bearings, the lever 15 will be rapidly vibrated, a reciprocatory movement will be imparted to the cutter bar.

The shaft or axle 1 is provided with arms or brackets 21 and 22 supporting respectively the inner and the outer ends of a pair of obliquely disposed rock shafts or bars 23, each of which is provided with a crank 24 which is connected by a link 25 with an adjusting lever 26 having a stop member 27 engaging a segment rack 28; the adjusting levers 26 may thus be securely retained at various adjustments, and said levers serve for the purpose of rocking or adjusting the shafts 23 in their bearings. The shafts 23, as hereinbefore stated, are obliquely disposed in the frame of the machine; and the inner ends of said shafts are spaced apart, one in front of the other, and the forward shaft is overlapped by the rear shaft, as will be clearly seen in Fig. 2 of the drawings. The shafts 23 carry the excavating teeth or diggers 29 which are vertically adjustable in slots or sockets 30 in said shafts, and capable of being secured at various adjustments by means of set screws 31; the teeth or diggers 29 are shaped like ordinary cultivator teeth; they will be so adjusted and supported as to penetrate into the soil to the requisite depth to operate efficiently upon the rows of onions for the purpose of dislodging the latter from the soil; after being dislodged and brought to the surface, the onions, owing to the oblique position of the tooth carrying shafts or bars, will be rolled or conveyed toward the center of the machine and will escape laterally through the space between the inner or rear ends of the teeth carrying bars, being finally deposited upon the ground in a row

or ridge, as will be readily understood. By means of the levers 26, the tooth carrying rock shafts or bars may be tilted or adjusted in their bearings, so as to present the teeth or diggers at any desired inclination with relation to the surface of the soil; the depth of penetration into the soil may also be to some extent regulated by thus tilting or adjusting the rock shafts or bars.

10 The gathering apparatus for the improved machine includes a frame F having transporting wheels 32 mounted for rotation; said frame being provided with upwardly extending arms 33 and downwardly extending arms 34, which latter are connected with the arms 33 by braces 35; the arms 33 at the two sides of the frame are connected by a transverse frame bar 36, which latter is connected with the frame bar 4 by means of links 37, thus coupling the gathering device with the body of the machine. The frame F supports an inclined carrier trough 38 adjacent to the upper and lower ends of which shafts 39 and 40 are supported for rotation, said shafts serving to support an endless carrier 41 of the ordinary or any suitable construction; the shaft 39 is driven from one of the transporting wheels 32 by means of a twisted belt or band 42 passing over suitable band wheels or pulleys 43 and 44, the former of which is connected for rotation with the transporting wheel 32 while the latter is suitably mounted upon the shaft 39; movement in the proper direction will thus be imparted to the endless carrier.

Pivottally connected with the lower end of the arms 34 of the frame F are the side members 45 of a gathering frame G which, in addition to said side members, includes a cross-bar 46 connecting said side members and equipped with a plurality of gathering fingers 47, the forward ends of which are adapted for engagement with the surface of the ground while the rear ends of said gathering fingers overlap the lower end of the endless carrier 41. The side members 45 of the gathering frame are provided with earth engaging supporting wheels 48; and the forward end of said gathering frame is capable of vertical adjustment by means of a lever 49 having a crank arm 50 which is connected with said gathering frame by means of a link 51; the adjusting lever 49 being provided with a stop member 52 engaging a segment rack 53 whereby said lever and the parts connected therewith may be retained at various adjustments.

The carrier trough 38 is provided at its upper rear end with a discharge chute 54, the bottom of which is formed of a plurality of spaced fingers 55; a pair of arms or brackets 56 connected with and forming a part of the frame F serve to support a platform 57 upon which a plate or receptacle may be placed, as shown at 58 in dotted lines in Fig.

1 of the drawings, for the purpose of receiving the onions discharged from the chute 54.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood. The machine may be readily propelled over the ground by one horse and it may, of course, be proportioned to cut a swathe of any desired width. The cutting apparatus at the front end of the machine will serve to sever the tops of the onions, and the latter are dislodged from the ground by the teeth or diggers 29 carried by the rock shafts 23, and the onions will be rolled to the center of the machine and be left in a row or ridge, to be subsequently engaged by the gathering fingers 47 through which the onions are discharged onto the endless carrier 41 whereby they are conveyed to the discharge chute 54. In passing over the latter, the onions will be screened or sifted and all particles of dirt, gravel and the like will be discharged between the fingers 55 constituting the bottom of the discharge chute. The onions finally pass into the plate or receptacle supported upon the platform 57 and which, when filled, may be readily removed and an empty one substituted.

Onions have heretofore been usually gathered by hand; an operation involving much labor of strenuous character. By this invention, the operation of topping and gathering the onions may be very quickly and efficiently performed, at a comparatively slight expense for labor.

Having thus fully described the invention, what I claim as new is:—

1. In a machine of the character described including cutting mechanism, rock shafts supported in rear thereof, diggers connected adjustably with the rock shafts, and means for tilting the latter and for securing them in various positions.

2. In a machine of the class described, a wheel supported axle, brackets connected therewith, rock shafts supported in said brackets, and earth engaging teeth adjustably connected with the rock shafts.

3. In a machine of the character described, a wheel supported axle, brackets connected therewith, rock shafts supported in said brackets with their inner ends spaced apart and one overlapping the other, earth engaging teeth connected adjustably with the rock shafts, and means for tilting the latter and for securing them at various adjustments.

4. In a machine of the character described, a wheel supported axle, a transverse frame bar connected therewith and extended laterally at one end for the attachment of draft, depending brackets connected with the axle, rock shafts supported in said brackets with their inner ends spaced apart and one overlapping the other, earth engaging teeth con-

nected adjustably with the rock shafts, and means for tilting the rock shafts and for securing them at various adjustments.

5 5. In a machine of the class described, a wheel supported axle, draft means connected therewith, brackets depending from the axle, rock shafts supported in the brackets with their inner ends spaced apart and one overlapping the other, earth engaging teeth connected adjustably with the rock shafts, 10 brackets extending forwardly from the axle, a frame connected with said brackets, and cutting apparatus supported by said frame.

15 6. In a machine of the character described, a wheel supported axle, brackets connected therewith, tooth carrying rock shafts supported in said brackets, a trailing frame having an endless carrier and a discharge chute, and a gathering frame pivotally connected

with the trailing frame and having gathering 20 fingers overlapping the receiving end of the endless carrier.

7. In a machine of the character described, a wheel supported axle, tooth carrying rock shafts connected therewith, a trailing frame 25 having an endless carrier and a discharge chute, a gathering frame pivotally connected with the trailing frame and having gathering fingers overlapping the receiving end of the endless carrier, and rotary supporting means 30 for the gathering frame.

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

ALBERT E. LUNDY.

Witnesses:

WILLIAM J. RANSLEY,
EDW. U. QUINN.