L. E. MEADOR.

PEANUT HARVESTER.

APPLICATION FILED MAY 5, 1917.

1,249,445.

Patented Dec. 11, 1917.

3 SHEETS—SHEET 1.

Fig. 1.

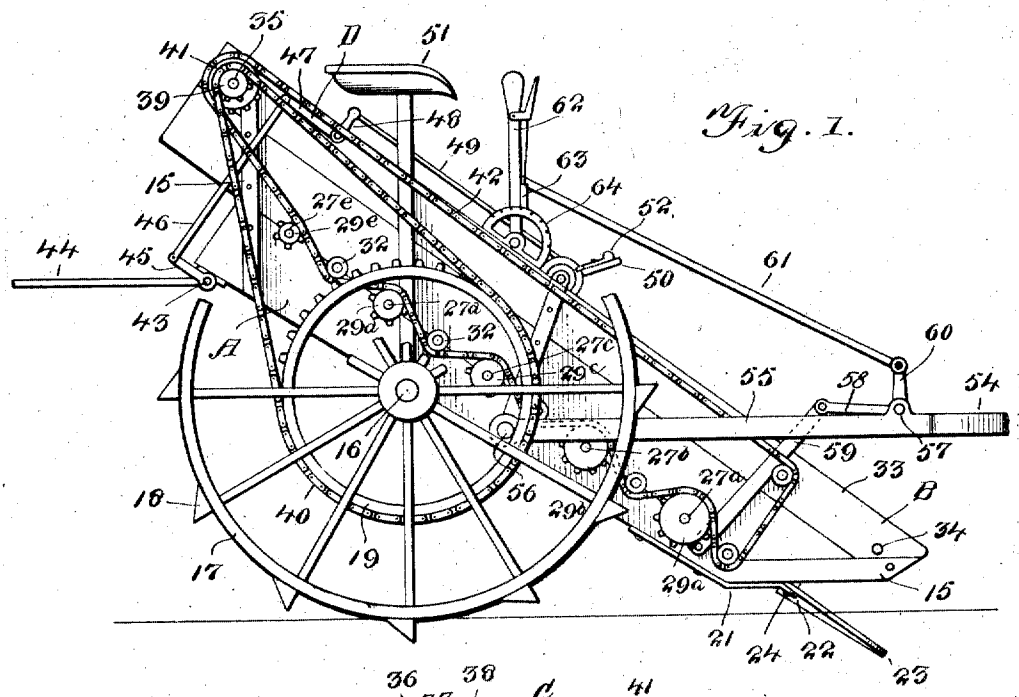
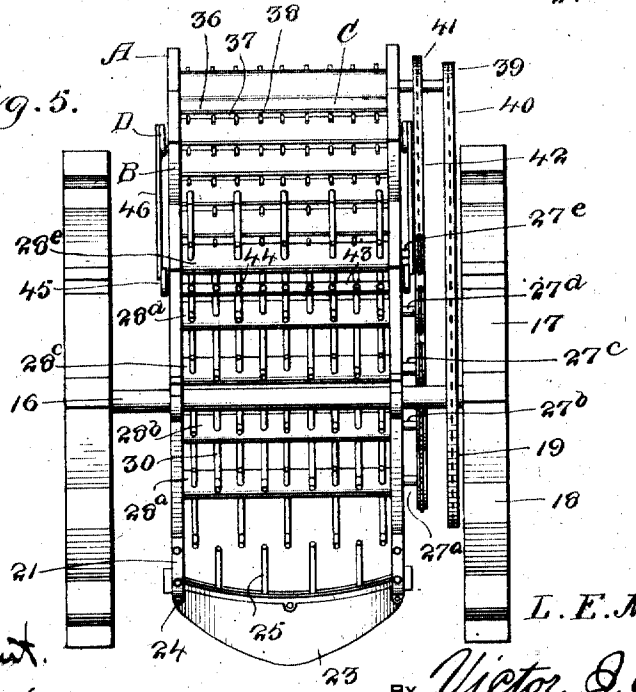


Fig. 5.



WITNESSES

E. G. Pulsifer.

E. C. Young.

INVENTOR

L. E. Meador

BY Victor J. Evans

ATTORNEY

L. E. MEADOR.

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3 SHEETS—SHEET 2.

Fig. 2.

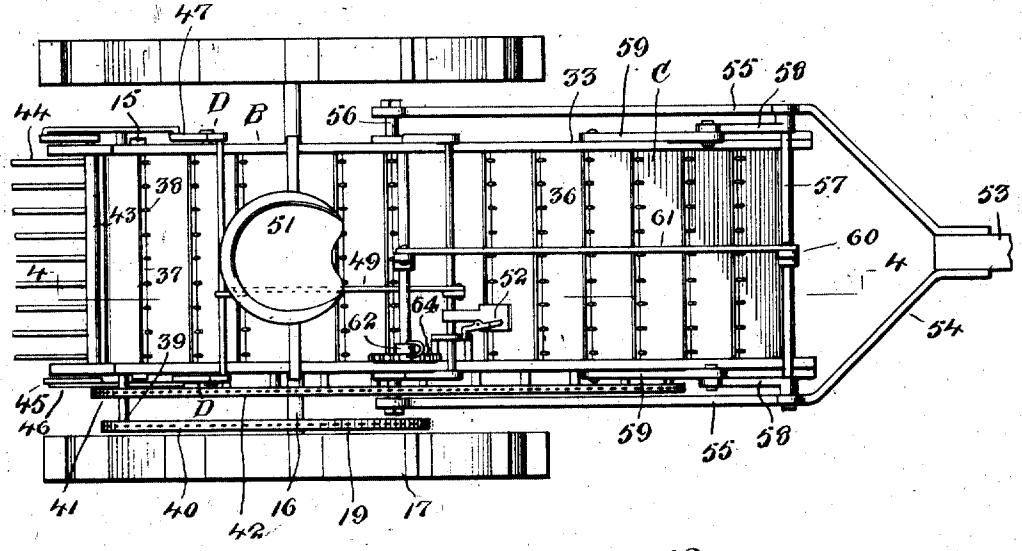
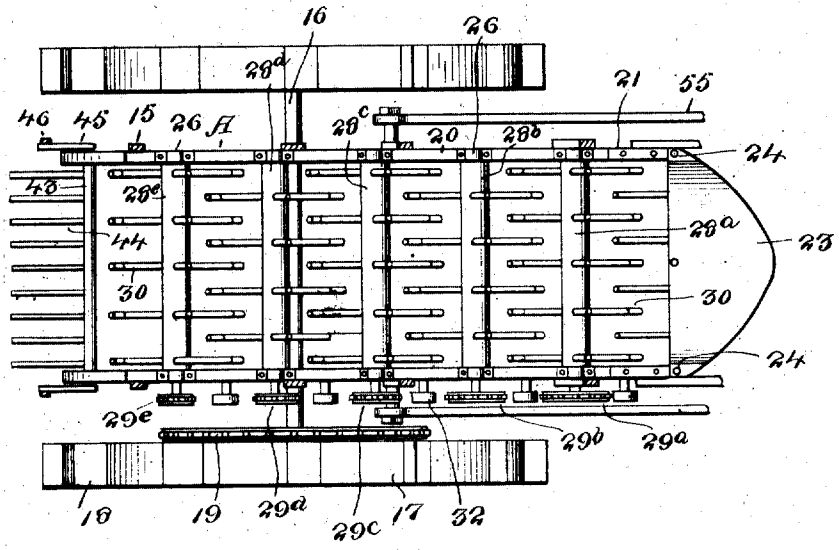


Fig. 3.



INVENTOR

L. E. Meador

BY Victor J. Evans

ATTORNEY

WITNESSES

E. Q. Ruhlpart

E. E. Young.

L. E. MEADOR.

PEANUT HARVESTER.

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3 SHEETS—SHEET 3.

Fig. 4.

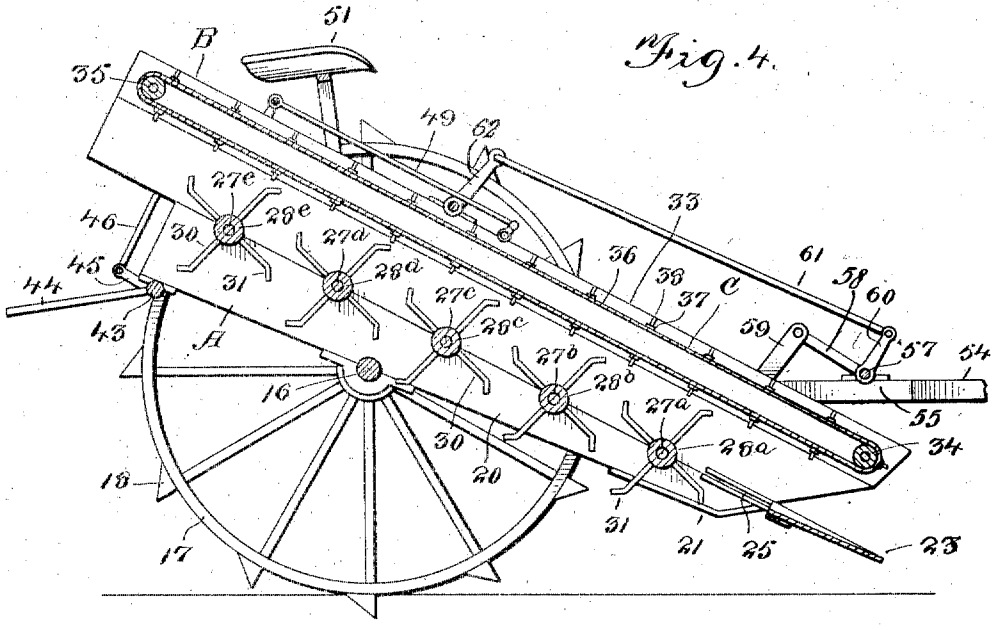
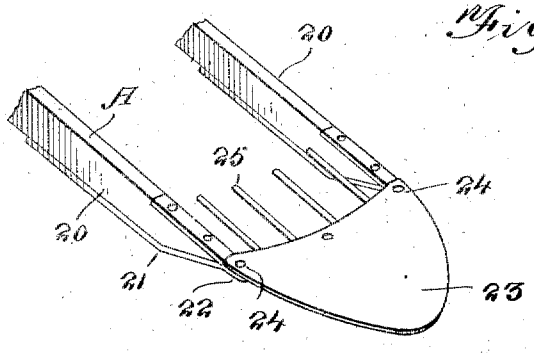


Fig. 6.



WITNESSES

E. R. Ruhlprint.

E. E. Young.

INVENTOR

L. E. Meador

BY Victor J. Evans

ATTORNEY

UNITED STATES PATENT OFFICE.

LENERD E. MEADOR, OF VINEYARD, TEXAS.

PEANUT-HARVESTER.

1,249,445. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed May 5, 1917. Serial No. 166,683.

To all whom it may concern:

Be it known that I, LENERD E. MEADOR, a citizen of the United States, residing at Vineyard, in the county of Jack and State of Texas, have invented new and useful Improvements in Peanut-Harvesters, of which the following is a specification.

This invention relates to peanut harvesting machines and it has for its object to produce an organized machine of simple and improved construction by the use of which peanut vines may be dug from the ground, and thoroughly shaken and agitated so as to separate dirt and sand from the vines and nuts, the vines and nuts being bunched and deposited on the ground in piles or heaps for subsequent gathering.

A further object of the invention is to simplify and improve the construction and operation of the mechanism whereby the vines and the nuts adhering thereto will be subjected to a thorough beating and agitating operation while being carried lengthwise of the machine frame to the buncher or carrier at the tail end of the machine.

Further objects of the invention are to simplify and improve the construction, assemblage and operation of the detailed parts of the machine.

With these and other objects 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 claims may be resorted to when desired.

In the drawings,

Figure 1 is a side elevation showing the machine in position for operation.

Fig. 2 is a top plan view.

Fig. 3 is a top plan view with the elevator and top frame removed.

Fig. 4 is a vertical longitudinal sectional view taken on the line 4—4 in Fig. 2 and showing the machine in position for transportation.

Fig. 5 is a rear elevation.

Fig. 6 is a perspective detail view of the plow and the supports for the same.

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

The frame structure of the improved machine includes a bottom frame or main frame A and a top frame B, the latter being supported above and in spaced relation to the main frame by braces or supports 15. The main frame A is supported on an axle 16 having carrying wheels 17 which have been shown as being equipped with triangular ground engaging spikes or grouts 18 of large size to insure rotation and prevent slipping of the wheels when the machine is in operation. Connected with one of the wheels 17 for rotation therewith is a sprocket wheel 19 of large size from which motion will be transmitted, as hereinafter described, to the various moving parts of the machine.

The side members 20 of the frame A are provided at their forward ends with metallic brackets or reinforcements 21 each having a forwardly extending nose 22, said noses affording supports for the plow 23, the latter consisting of an approximately V-shaped blade or digger which is mounted securely by means of bolts 24 on the noses 22. The digger, it will be observed, constitutes an inclined plane over which the vines that are dug from the ground will slide in an upward direction, said digger being provided at the rear edge thereof with rearwardly extending fingers 25 over which the vines will be moved and guided by means yet to be described, said fingers being preferably of a resilient nature so that they will be readily vibrated, setting up a shaking action which constitutes the first step in effecting the separation of the dirt from the vines, the word vines being understood to include the nuts adhering thereto. The side members 20 are provided with boxes 26 affording bearings for a plurality of roller carrying shafts of which in the accompanying drawings five have been shown, it being understood that the number may be varied at

will. In the accompanying illustrations the roller carrying shafts from the front to rear have been designated by 27^a, 27^b, 27^c, 27^d and 27^e, the rollers on said shafts being designated by 28^a, 28^b, 28^c, 28^d and 28^e. The shafts from front to rear are equipped with sprocket wheels 29^a, 29^b, 29^c, 29^d and 29^e and it will here be observed that while the shafts and the rollers carried thereby are of substantially the same dimensions, the sprocket wheels carried by said shafts are of decreasing diameter from front to rear, the sprocket wheel 29^a being the largest and the sprocket wheel 29^e being the smallest of the five. Each roller is provided with radially extending arms or beaters 30 formed preferably of resilient rods or wires, said arms being slightly bent at their outer extremities as shown at 31. The first, third and fifth rollers counting from the front end of the machine have been shown as being equipped with four longitudinal series of five beaters each, the said beaters engaging the interspaces between the beaters of the second and fourth rollers, each of which has been shown as being provided with four longitudinal series of four beaters each. It will be understood that the number of series as well as the number of beaters in each series may be varied at will it being only necessary that the beaters of alternate rollers shall engage the interspaces between the beaters of the rollers located intermediate such alternate rollers, the beaters being of such length that the beaters of proximate rollers will overlap as most clearly seen in Fig. 4 of the drawings. The beaters of the foremost roller 28^a are also arranged to engage the interspaces between the fingers 25 that extend rearwardly from the plow or digger. Idler sprockets 32 are supported for rotation on one of the frame members 20 intermediate the roller carrying shafts.

The top frame B of the machine includes side members 33 at the front and rear ends of which are provided bearings for shafts 34 and 35, said shafts serving to support an endless conveyer C including an apron 36 having slats 37 provided with spikes 38. The rear shaft 35 is provided with sprocket wheels one of which 39 is connected with the sprocket wheel 19 by means of a chain or link belt 40. The other sprocket wheel 41 of the shaft 35 is used for the transmission of power to the roller carrying shafts 27^a, 27^b, 27^c, 27^d and 27^e, a chain 42 being trained over the said sprocket wheel 41 and over the sprocket wheels on the respective shafts, and also over the intermediate idlers 32 which serve as chain tighteners whereby the transmission chain will be held snugly in engagement with the sprocket wheels of the respective roller carrying shafts. It will be here noted that due to the difference in the size of the sprocket wheels of the respective roller carrying shafts, the said shafts will be rotated at different speeds, the foremost shaft 27^a developing the lowest speed and the rearmost shaft 27^e developing the highest speed.

Journaled in bearings at the rearward ends of the side members 20 of the main frame A is a rock shaft 43 having rearwardly extending arms 44 which combine to form a supporting platform or buncher for the vines discharged thereon over the rearmost roller carrying shaft 27^e. The rock shaft 43 has a crank 45 which is connected by a link rod 46 with one arm 47 of a bell crank D the other arm of which 48 is connected by a link rod 49 with a foot lever 50 which is supported in front of the seat 51 provided for the driver or operator of the machine. A latch 52 operable by the toe of the driver's foot may be provided to latch the foot lever in position to support the arms 44 of the buncher in a raised position to receive the vines. By releasing the latch 52 the buncher will be tilted, by the weight of the vines, to a discharging position from which it may be restored to a receiving position by means of the foot lever 50. 53 is a draft tongue which is provided with rearwardly divergent hounds 54 from which the side members 55 of the tongue frame extend rearwardly in substantially parallel relation, the term "tongue frame" being understood to include the hounds 54 and the side members 55. The rearward ends of the side members 55 are pivoted on spindles 56 secured on the side members 20 of the frame A which, as well as the side members 33 of the frame B, are included between the side members of the tongue frame. The tongue frame supports a rock shaft 57 having terminal cranks 58 which are connected by links 59 with the side members 20 of the frame A at points well in advance of the spindles 56, it being evident that by the manipulation of the rock shaft 57 the forward end of the frame of the machine may be raised or lowered thereby moving the plow from an earth-engaging position as seen in Fig. 1 to a position for transportation as seen in Fig. 4, or vice versa. For the purpose of operating the rock shaft 57 said shaft is provided with a crank 60, the same being connected by a link rod 61 with a hand lever 62 supported in a convenient position adjacent to the driver's seat, said hand lever being equipped with a stop member 63 engaging a rack segment 64 whereby the parts will be secured in adjusted position.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this

machine will be readily understood by those skilled in the art to which it appertains. The vines will be dug from the ground by the plow or digger over the inclined plane of which they will slide in an upward direction until, about the time when the fingers 25 are reached, the vines will be thrown upwardly by the beaters associated with the foremost roller carrying shaft. The vines, being thus thrown upwardly, will be engaged by the toothed slats of the conveyer C, being thereby dragged upwardly and rearwardly, being at the same time permitted to sag somewhat between the beaters of the first and second roller carrying shafts until again thrown upwardly in the direction of the conveyer by the beaters of the second roller carrying shaft. It will also be noted that the second roller carrying shaft 27^b operating at greater speed than the first roller carrying shaft 27^a, the tendency of the beaters associated with the second roller carrying shaft will be to tear the vines forcibly from engagement with the beaters associated with the first roller carrying shaft, the operation being repeated by each of the roller carrying shafts as the material progresses toward the tail end of the machine. The vines will thus not only be carried through the machine by the combined action of the beaters and the conveyer, but they will be subjected to successive beating and pulling or disintegrating operations by the beaters associated with the successive roller carrying shafts, the dirt and sand being permitted to drop to the ground while the vines are finally discharged over the rearmost roller carrying shaft 27^e upon the buncher where they are permitted to accumulate until a pile of proper dimensions has been formed which may then be discharged on the ground by manipulation of the foot lever 50 and the latch associated therewith. The peanuts will thus be harvested and cleaned from adhering dirt in a rapid, efficient and labor saving manner.

Having thus described the invention, what is claimed as new is:

1. In a peanut harvester, a wheel supported main frame, an auxiliary frame supported above and in spaced relation to the main frame, rotary beaters carried by the main frame, an endless conveyer carried by the auxiliary frame, and means for actuating the rotary beaters and the endless conveyer.

2. In a machine of the class described, a wheel supported main frame, a digger carried thereby, an auxiliary frame supported above and in spaced relation to the main frame, a plurality of rotary beating elements carried by the main frame, a driven endless conveyer carried by the auxiliary frame, and means for transmitting motion from the endless conveyer to the rotary beating elements.

3. In a machine of the class described, a wheel supported main frame, a digger carried thereby and having rearwardly extending fingers, an auxiliary frame supported above and in spaced relation to the main frame, a plurality of shafts carried by the main frame, said shafts having rollers equipped with radial beaters, an endless conveyer carried by the auxiliary frame, means for driving the conveyer, and means for transmitting motion from the conveyer to the shafts carried by the main frame.

4. In a machine of the class described, a wheel supported main frame, a plurality of shafts carried thereby and arranged in longitudinal series, each shaft carrying a roller provided with radial beaters, an auxiliary frame supported above and in spaced relation to the main frame, an endless conveyer carried by the auxiliary frame, said conveyer including an apron and toothed slats, means for driving the endless conveyer, and means for driving the beater carrying shafts at various speeds, the foremost one at low speed and the succeeding ones at progressively higher speeds.

5. In a machine of the class described, a wheel supported main frame, a plurality of shafts carried thereby and arranged in longitudinal series, each shaft carrying a roller provided with radial beaters, an auxiliary frame supported above and in spaced relation to the main frame, an endless conveyer carried by the auxiliary frame, said conveyer including an apron and toothed slats, means for driving the endless conveyer, and means for driving the beater carrying shafts at various speeds, the foremost one at low speed and the succeeding ones at progressively higher speeds, the beaters carried by the respective shafts being proportioned to overlap the beaters carried by proximate shafts and to engage the interspaces therebetween.

6. In a machine of the class described, a wheel supported main frame, a plurality of shafts carried thereby, said shafts being arranged in longitudinal series and each carrying a roller having beaters radiating therefrom, means for driving the shafts, the foremost one at low speed and the succeeding ones at progressively higher speeds, an auxiliary frame supported above and in spaced relation to the main frame, a driven endless conveyer guided on said frame, and means for digging material and for presenting such material to the beaters of the foremost shaft to be thereby thrown upwardly in engagement with the bottom lead of the endless conveyer.

7. In a machine of the class described, a wheel supported main frame, a plurality of shafts carried thereby, said shafts being arranged in longitudinal series and each carry-

ing a roller having beaters radiating therefrom, means for driving the shafts, the foremost one at low speed and the succeeding ones at progressively higher speeds, an auxiliary frame supported above and in spaced relation to the main frame, a driven endless conveyer guided on said frame, and means for digging material and for presenting such material to the beaters of the foremost shaft to be thereby thrown upwardly in engagement with the bottom lead of the endless conveyer, in combination with a buncher including a rock shaft mounted at the rearward end of the main frame and having rearwardly extending arms, and means for actuating the rock shaft to move the buncher to its respective receiving and discharging positions.

In testimony whereof I affix my signature.

LENERD E. MEADOR.