B. L. UFFORD.

VEGETABLE TOPPER.

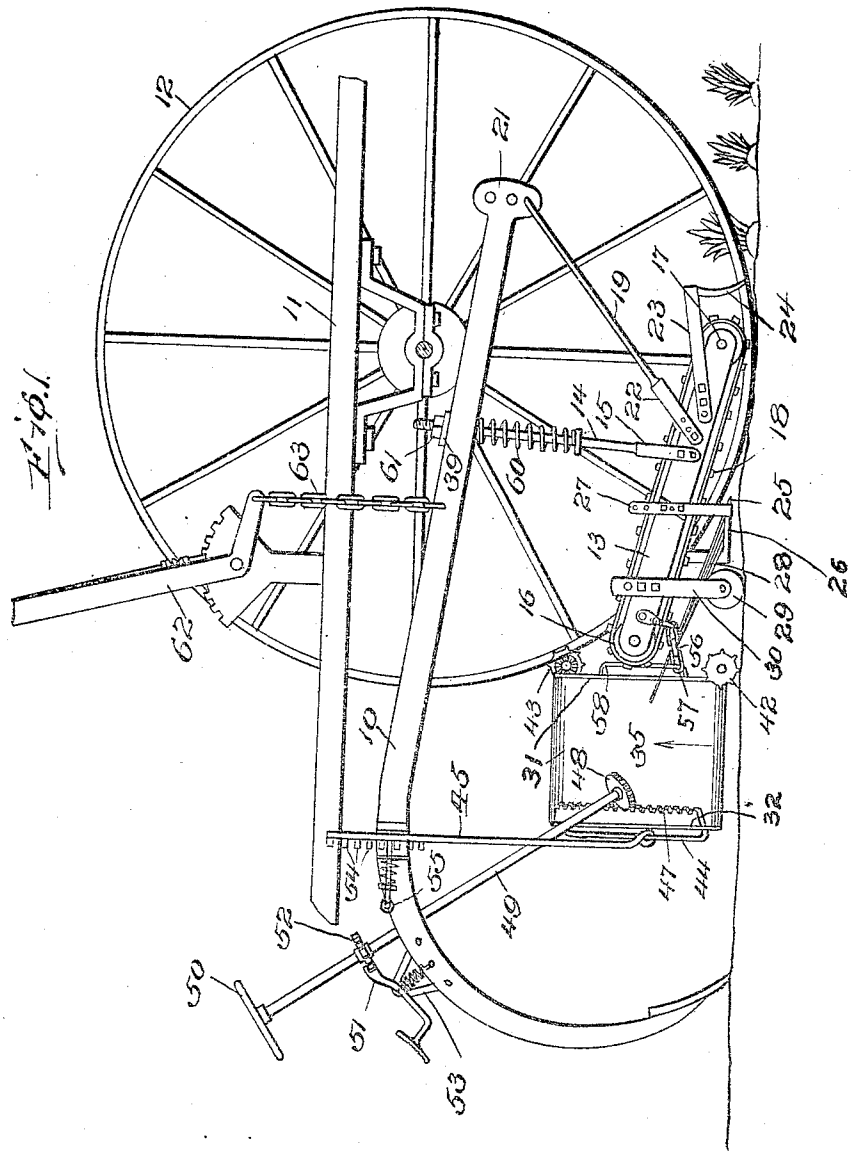
APPLICATION FILED MAY 29, 1909.

955,019.

Patented Apr. 12, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



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3 SHEETS—SHEET 2.

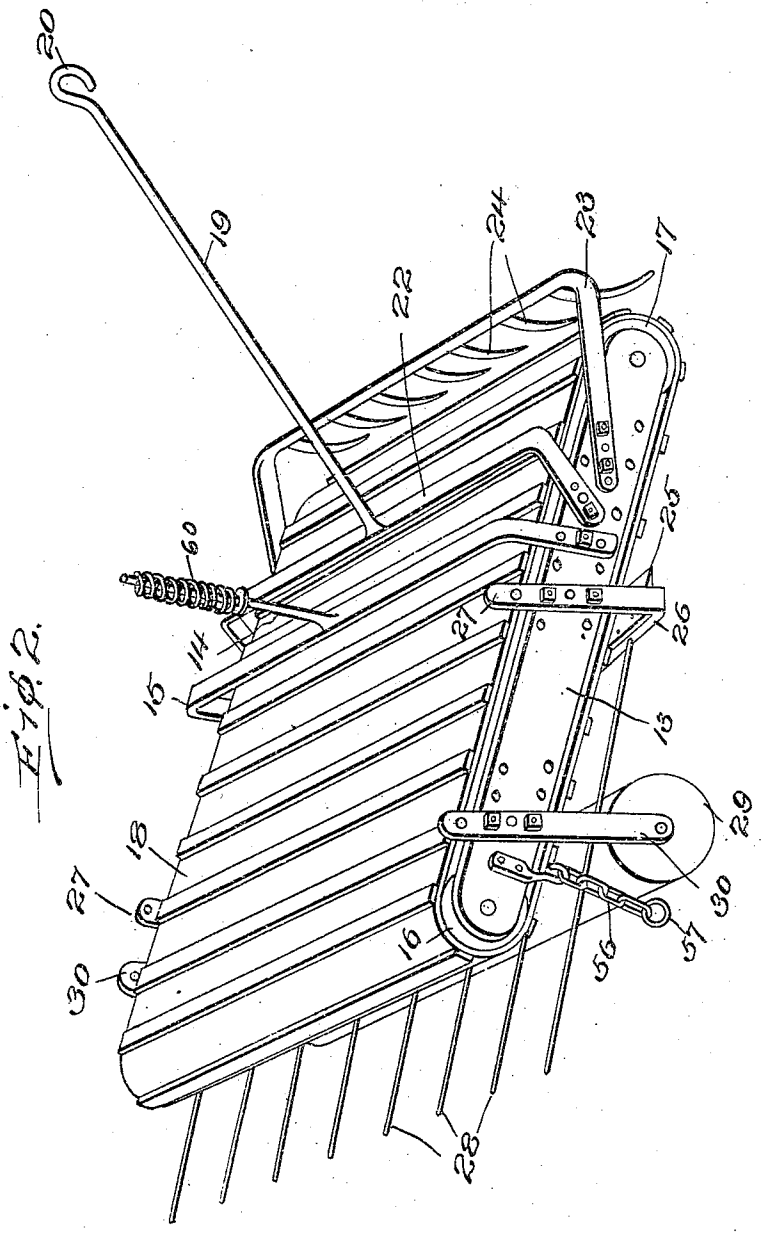

Fig. 2.

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3 SHEETS—SHEET 3.

Fig. 3.

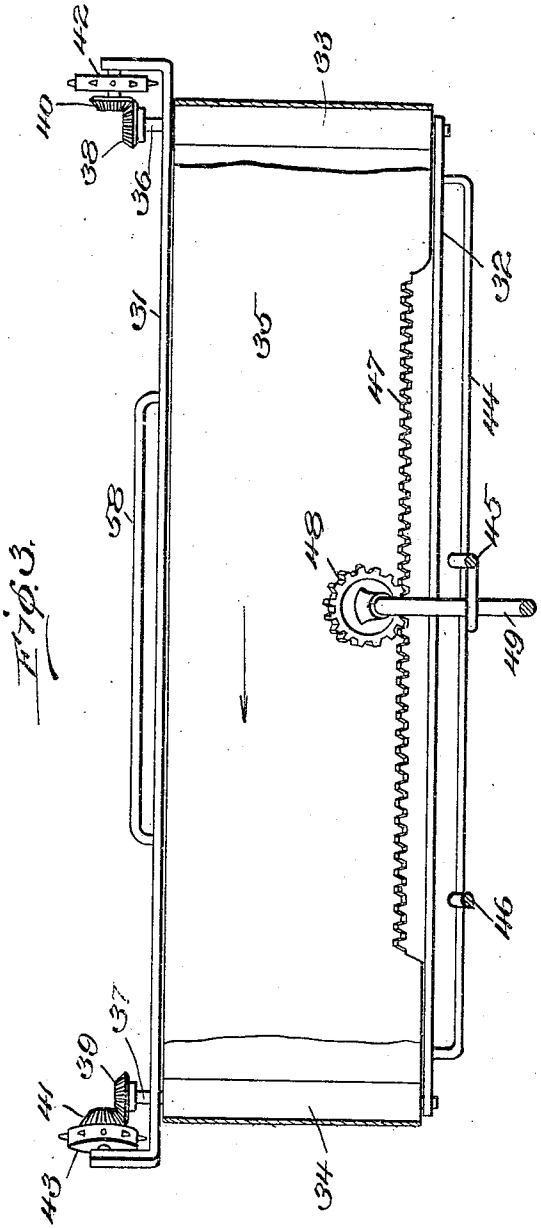
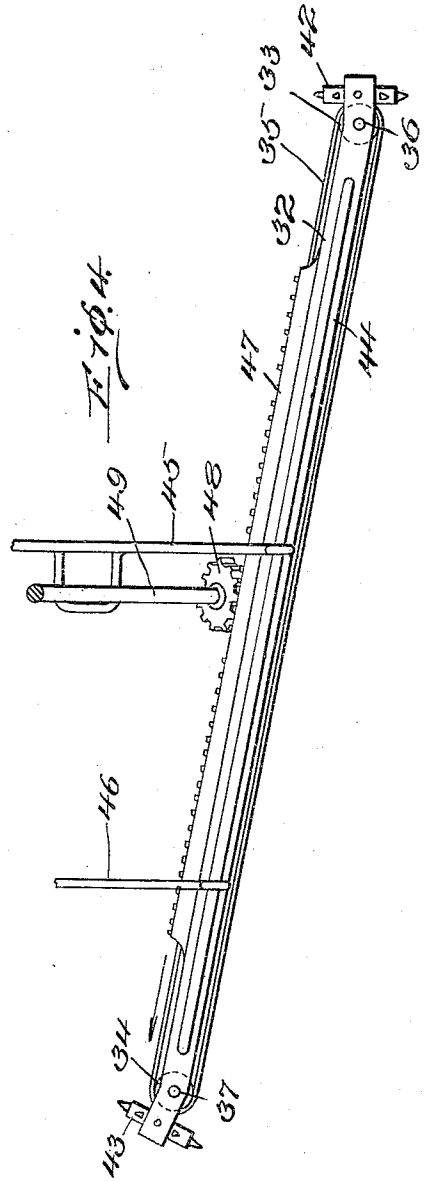


Fig. 4.



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UNITED STATES PATENT OFFICE.

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VEGETABLE-TOPPER.

955,019. Specification of Letters Patent. **Patented Apr. 12, 1910.**

Application filed May 29, 1909. Serial No. 499,115.

To all whom it may concern:

Be it known that I, BYRON L. UFFORD, a citizen of the United States, residing at Moffitt, in the county of Deuel and State of Nebraska, have invented certain new and useful Improvements in Vegetable-Toppers; 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 vegetable toppers, especially toppers for topping beets and the like, and has for an object to provide a device attachable to an ordinary digger and adapted to not only sever the tops from the beets but to convey such severed tops to one side of the row and deposit them in a windrow.

A further object of the invention is to provide improved means for supporting and arranging a transverse conveyer and means for conveying the severed tops to and depositing them upon the transverse conveyer.

A further object of the invention is to provide improved means for severing the tops from the beets and of handling the severed tops after being severed to deposit them upon a transverse conveyer to dump such tops at one side of the line of travel.

With these and other objects in view, the invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a view in side elevation of the improved topper with one wheel of the supporting vehicle removed and the axle shown in section. Fig. 2 is a perspective view of the topper knife and supporting parts and conveyer to conduct the severed tops to the transverse conveyer. Fig. 3 is a top plan view of the transverse conveyer, parts being broken away to show the rollers. Fig. 4 is a view in rear elevation of the transverse conveyer.

Like characters of reference designate corresponding parts throughout the several views.

The topping device which forms the subject-matter of this application is adapted to be secured to a digger shown conventionally as the beams 10, frame-work 11, and supporting wheels 12, it being understood that the device may be attached to diggers of different general structure and that the digger *per se* does not form any part of the present invention.

Beneath the beams of the digger a frame-work 13 is supported in any approved manner as by a rod 14 connected by means of a yoke 15 with the side pieces of the frame 13. At the opposite ends rollers 16 and 17 are journaled upon the frame 13 and over such rollers an apron 18 moves. The apron may be of any approved material and construction but preferably of fabric provided with transverse slats as shown particularly in Fig. 2. The apron as it passes over the forward roller 17 engages the ground to rotate the roller and move the apron and is drawn forwardly by means of a draft bar 19 having a hook or eye 20 engaging into one of the openings of the clevis 21 at the forward end of the digger beams. The draft bar 19 is connected at its lower end with the yoke 22 which is secured pivotally to the opposite sides of the frame 13.

Secured to the frame 13 and extending forwardly therefrom is a yoke 23 having downwardly extending teeth or fingers 24 serving as a rake in advance of the roller 17 to clear away trash and other extraneous matter and to properly position the tops of the beets to be acted upon.

Suspended beneath the apron 18 and frame 13 is a knife 25 preferably though not of necessity disposed obliquely relative to the line of travel and supported by means of a yoke 26 having upwardly extending side pieces 27 by which the position of the knife may be adjusted. The yoke 26 also carries fingers 28 extending rearwardly from the knife 25 and substantially or approximately parallel with the under surface of the apron 18. A supporting roller 29 is also provided journaled upon side pieces 30 adapted to support the rear end of the frame 13 and the parts carried thereby.

At the rear of the apron 18 and frame 13 a transverse conveyer is provided comprising side frame pieces 31 and 32 adjacent the extremities of which are journaled rollers 33 and 34 over which passes an apron 35. The rollers 33 and 34 are carried respectively upon shafts 36 and 37 which said shafts in turn carry beveled gears 38 and 39 intergearing with beveled gears 40 and 41. The beveled gears 40 and 41 are rigidly connected with spur or traction wheels 42 and 43 which serve to rotate the roller 33 and 34 and thereby move the apron 35, the direction

of movement of the apron depending upon which of the traction wheels 42 or 43 engages the ground. As shown at Figs. 1, 3 and 4, the traction wheel 42 is in engagement with the ground and the apron is moving in the direction indicated by the arrows at said figures.

The frame consisting of the side pieces 31 and 32 is supported by means of a slide bar 44 at the rear of such frame which bar moves slidably through supporting standards 45 and 46 depending from the beams 10 and adjustable relative thereto as hereinafter described. For moving the frame and conveyer transversely a rack 47 is secured to the rear side of the frame and a pinion 48 is rigidly carried by a shaft 49 which, in turn, is provided with a steering wheel 50, the secured adjustment being maintained by means of a pawl or detent 51 engaging a star wheel or pinion 52 upon the shaft 49 and held yieldingly in such engagement by the spring 53.

The standards 45 and 46 are preferably provided with teeth or other protuberances 54 forming notches into which a spring-pressed pawl or detent 55 is adapted to engage, it being understood that one of the such spring-pressed detents is carried by each of the beams 10 and by which the vertical position of the standards 45 and 46 is determined. As shown in the figures the standard 46 is adjusted at a higher elevation than the standard 45 whereby the end of the frame carrying the roller 34 is elevated from the ground while the traction wheel 42 engages the ground. It is obvious that by reversing the elevation of the standards 45 and 46 the ends of the conveyer will be reversed as to elevation whereby the traction wheel 43 will engage the ground and the traction wheel 42 be elevated, thereby rotating the rollers and moving the apron 35 in the opposite direction.

The frame 13 is provided with a chain 56 secured thereto in any approved manner having at its extremity a ring 57 which slidably engages a rod 58 at the forward side of the transverse conveyer. The chain 56 is, of course, duplicated upon the opposite sides of the frame 13 and is intended to provide a flexible connection between the conveyers and to permit the transverse movement of the transverse conveyer. The upright standard 14 extends through a keeper plate 59 and is provided with a spring 60 underneath such plate which is adapted to hold the frame 13 and its apron downwardly yieldingly to its work and a tension nut 61 is provided adapted to vary the tension of the spring 60 and the elevation of the frame 13.

The entire mechanism is supported from the beams 10 which are raised from the ground in any ordinary manner, such raising means being shown conventionally by the lever 62 and chain 63 connected with such beams.

It will be apparent that as the device moves forwardly over a row of standing beets the rake 24 will first clear the way after which the apron passing over the roller 17 will be actuated by contacting with the ground. Passing farther along the knife 25 engages the top of the beet to sever the top from the remainder of the body, the top being above the knife is engaged by the apron 18 and moved rearwardly supported upon the fingers 28, passing from such fingers over and upon the apron 35.

The device may be operated with the transverse conveyer remaining at one position to simply dump the severed tops away from the line of travel but is intended to be moved transversely as well as tilted so that the tops severed from two or four rows may be dumped in a windrow. This is accomplished by varying the point of discharge at the side of the vehicle and also to change the side at which the tops are dumped by moving the transverse conveyer as above described to reverse the motion of the apron.

What I claim is:—

1. In a beet topper, a topping knife, fingers extending rearwardly from the topping knife, an apron mounted to move rearwardly above the topping knife, and fingers positioned to engage the ground in front of the topping knife, and means to receive the tops from the fingers.

2. In a beet topper, a topping knife, fingers extending rearwardly from the topping knife, an apron mounted to move rearwardly above the topping knife and fingers, and positioned to engage the ground in front of the topping knife, and a transverse conveyer adapted to receive tops from the fingers.

3. In a beet topper, a topping knife, fingers extending rearwardly from the topping knife, an apron mounted to move rearwardly above and adjacent to the topping knife and fingers, and means holding the apron in engagement with the ground in front of the topping knife.

4. In a beet topper, a transverse conveyer, means for tilting the conveyer, means at opposite ends of the conveyer for engaging the ground, and means connecting such ground-engaging means with and to move the apron.

5. In a beet topper, a frame, rollers mounted at opposite ends of the frame, traction means at opposite ends of the frame adapted to engage the ground, and rotate the rollers, and a conveyer carried by the rollers.

6. In a beet topper, a frame, rollers mounted at opposite ends of the frame, traction means carried at opposite ends of the frame and adapted to actuate the rollers, means to tilt the frame to bring either traction means into engagement with the ground, and a conveyer carried by the rollers.

7. In a beet topper, a frame, rollers journaled at opposite ends of the frame, traction means carried at opposite ends of the frame and adapted when engaging the ground to move the apron in opposite directions, means to tilt the frame to bring either traction means into engagement with the ground, and a conveyer carried by the rollers.

8. In a beet topper, a transverse conveyer, means to tilt the transverse conveyer in either direction, means controlled by the tilting of the conveyer to move the conveyer in opposite directions, a topping knife in advance of the transverse conveyer, fingers extending rearwardly from the topping knife, an apron disposed to move above and adjacent to the topping knife and fingers, and means to move the apron to deliver tops from the knife and fingers upon the transverse conveyer.

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

BYRON L. UFFORD.

Witnesses:
ORA E. PHILLIPS,
JOHN GARETT.