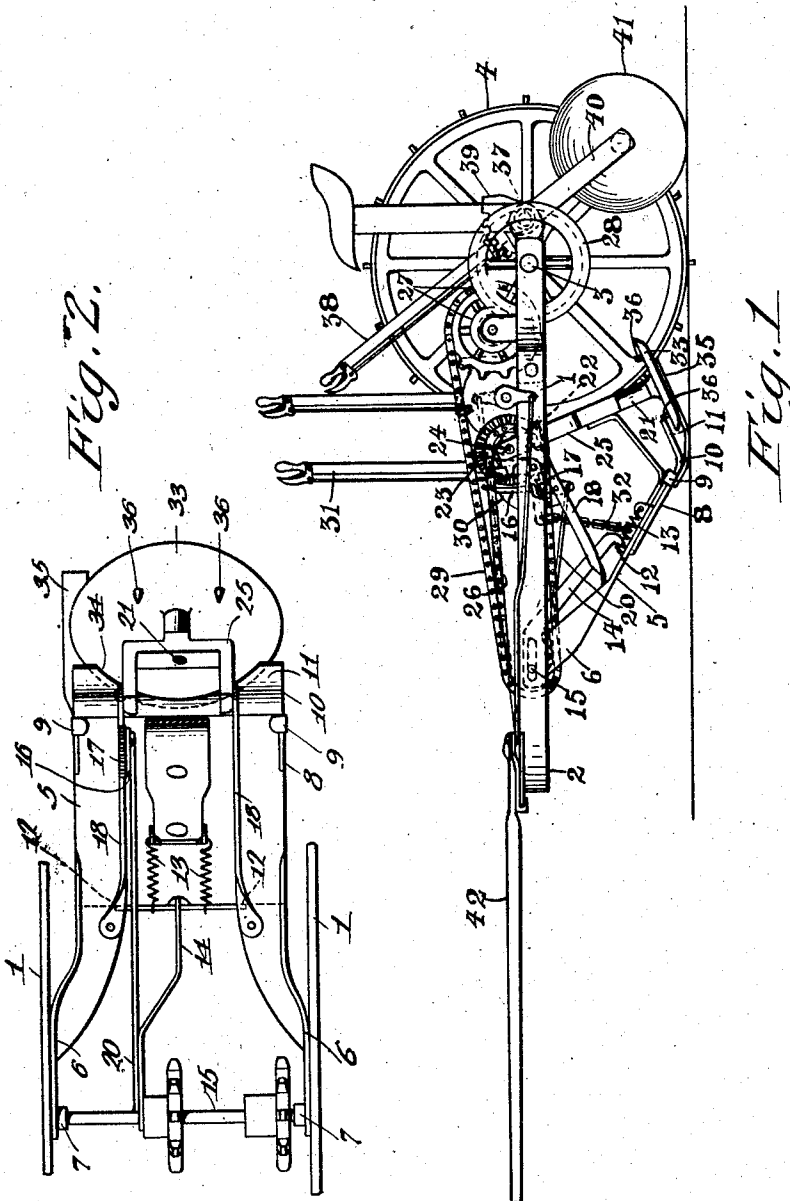


F. BRIGGS.
BEET TOPPER.

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1,027,399.

Patented May 28, 1912.



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FRANK BRIGGS, OF LEAVENWORTH, WASHINGTON.

BEET-TOPPER.

1,027,399.

Specification of Letters Patent.

Patented May 28, 1912.

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To all whom it may concern:

Be it known that I, FRANK BRIGGS, a citizen of the United States of America, residing at Leavenworth, in the county of

5 Okanogan and State of Washington, have invented certain new and useful Improvements in Beet-Toppers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 In the operation of beet harvesters it is desirable to adjust the top removing mechanism to take care of tops of different sizes and it is also necessary to adjust the cutting mechanism to sever more or less of the

15 beet crown from the beet according to the condition of the crop, as in one field the beet will have a larger proportion taken up by the so called crown than in other fields. This invention relates to beet toppers

20 wherein means are provided for changing the capacity of the cutter and top removing mechanism to accommodate different crops and wherein means are also furnished for leaving the beet row in condition for the

25 easy removal of the beets by a plow or lifter. The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

30 In the drawings, Figure 1 is a view in elevation of a beet topper that embodies features of the invention. Fig. 2 is a view in detail of a cutter and top removing means. As shown in the drawings a main frame

35 formed of a pair of parallel side members 1 suitably united at their forward ends by a transverse member 2, is supported or journaled at the rear end on a shaft 3 driven by a pair of traction bearing wheels 4,

40 which are operatively connected to the shaft through the usual ratchet or other compensating drive mechanism. A guide plate 5, preferably of sheet metal has a pair of longitudinally extending arms

45 6 bent obliquely at right angles and pivoted at their upper ends on bushings 7 secured in alined position near the forward end of the main frame members 1. A gage plate 8 is longitudinally reciprocable on the

50 guide plate to which it is secured preferably by inbent ears 9 at its lower end embracing the margins of the guide plate. The gage plate is bent transversely at sub-

stantially right angles near its lower end and is so arranged that a rounded shoulder 55 10 may trail freely on the surface of the ground with the inner upwardly extending arm 11 of the gage slightly oblique to the surface thereof. The forward end of the gage plate is upturned between the arms 60 of the guide plate with ears 12 overlapping the latter as a further means for retaining the gage plate in position. Suitably disposed springs 13 secured at one end to the gage plate and at the other to the guide 65 plate hold the gage plate projected to its limit of motion from the end of the guide plate. A link 14 is connected to the forward end of the gage plate and has an elongated slot which rides on a transverse shaft 15 70 journaled in the bushings 7. A ratchet lever 16 is pivoted on a quadrant 17 suitably mounted on a bearing bracket arm 18 of the guide plate; a rod 20 couples the forward end of the link 14 with the lever 75 whereby the gage plate may be locked in adjusted position. A cutter spindle 21 is journaled in the bearing bracket so as to rotate in a plane substantially perpendicular to the plane of the arm 11. The spindle 80 is driven from the main traction wheel shaft by any suitable means as for example a beveled pinion 22 on the upper end of the spindle meshing with the gear 23 that is mounted on a shaft 24. The latter is jour- 85 naled in a yoke 25 on the bracket and chain and sprocket connections indicated at 26 connect the latter shaft to the transverse shaft 15.

Chain and sprocket connections indicated 90 at 29 together with a reducing gear train 27 or like preferred driving means operate the transverse shaft from the traction wheel shaft. If preferred the drive gear 28 of this train may have a ratchet connection 95 not shown, with the main shaft instead of having such mechanism in the driving wheel hubs, whereby the machine may be backed without operating the cutting mechanism. A quadrant 30 and ratchet lever 31 100 with chain 32 or like means provide for swinging the guide and gage plates bodily clear from the ground.

A cutter disk 33 is secured on the lower end of the spindle 21 to rotate parallel to 105 and at an interval from the gage plate arm

11, whose end adjacent the disk has a concave margin 34 corresponding to the contour of the disk periphery and overlapping the latter slightly. The disk itself is preferably 5 dishd with its sharp or cutting edge slightly inbent toward the plate arm. A gage shoe 35 is secured to the gage plate adjacent and below the edge of the cutter disk on the side where the latter turns to 10 ward the gage plate.

A plurality of studs 36 or like projections are secured on the upper face of the disk to sweep the tops severed between the disk and plates to one side of the machine. A 15 rock shaft 37 is journaled in the extremities of the main frame members 1 behind the main axle and may be oscillated by a hand lever 38 interlocking with a quadrant 39 on the frame. A pair of parallel hangers 40 20 extend from the rock arm and disks 41 are journaled thereon. The disks rotate in planes parallel to the path of motion of the machine and are slightly tilted or convergent to each other. The usual draft rig- 25 ging 42 of any preferred type on the forward end of the machine together with the driver's seat and other operating or controlling mechanism that may be necessary, completes the topper.

30 By this form and arrangement of parts a beet topper is obtained which will handle either light or heavy crops as the throat or space between the gage plate and cutter disk may be enlarged or contracted to allow 35 free passage for the beet leaves and stalks. Furthermore the cutter may be adjusted to sever more or less of the crowns from the beets and the studs or projections on the upper surface of the cutter disk throw the 40 tops to one side of the path of the machine. The trailing markers cut into the ground on each side of the beet row so as to lessen the work of the lifter or plow which usually follows the topper.

45 Obviously, changes in the details of construction may be made without departing from the spirit of the invention and I do not care to limit myself to any particular form or arrangement of parts.

50 I claim as my invention:—

1. In a beet topper, a main frame, traction bearing wheels supporting the rear end thereof, a guide plate depending from the forward end of the frame, a gage plate lon- 55 gitudinally adjustable on the guide plate having its lower end upturned and extending beyond the guide plate to trail on the ground, a disk journaled on the guide plate to rotate in a plane parallel to and slightly 60 below the uptilted arm of the gage plate whose rear edge overlaps the disk slightly and conforms to the cutting edge of the latter, adjusting means for shifting the gage plate on the guide plate, and driving means oper-

atively connecting the disk and the traction 65 bearing wheels.

2. In a beet topper, a main frame, traction bearing wheels supporting the rear end thereof, a guide plate depending from the forward end of the frame, a gage plate lon- 70 gitudinally adjustable on the guide plate having its lower end upturned and extending beyond the guide plate to trail on the ground, a disk journaled on the guide plate to rotate in a plane parallel to and slightly 75 below the uptilted arm of the gage plate whose rear edge overlaps the disk slightly and conforms to the cutting edge of the latter, springs adapted to hold the gage plate retracted, adjusting means for posi- 80 tively shifting the gage plate on the guide plate, and driving means operatively connecting the disk and the traction bearing wheels.

3. In a beet topper, a main frame, traction 85 bearing wheels supporting the rear end thereof, a guide plate, longitudinally extending arms on the forward end thereof pivoted at their outer extremities on the main frame, a gage plate longitudinally 90 movable on the guide plate, ears on the gage plate engaging the guide plate, the lower end of the gage plate being upturned and extending beyond the guide plate to trail on the ground, a disk journaled on the guide 95 plate to rotate in a plane parallel to and slightly below the uptilted arm of the gage plate whose rear edge overlaps the disk slightly and conforms to the cutting edge of the latter, adjusting means for shifting the 100 gage plate on the guide plate, and driving means operatively connecting the disk and the traction bearing wheels.

4. In a beet topper, a main frame, traction 105 bearing wheels supporting the rear end thereof, a guide plate depending from the forward end of the frame, a gage plate longitudinally adjustable on the guide plate having its lower end upturned and extend- 110 ing beyond the guide plate to trail on the ground, a disk journaled on the guide plate to rotate in a plane parallel to and slightly below the uptilted arm of the gage plate whose rear edge overlaps the disk slightly and conforms to the cutting edge of the 115 latter, projections on the upper face of the disk, adjusting means for shifting the gage plate on the guide plate, and driving means operatively connecting the disk and the traction bearing wheels. 120

5. In a beet topper, a main frame, traction bearing wheels supporting the rear end thereof, a guide plate, longitudinally extending arms on the forward end thereof pivoted at their outer extremities on the 125 main frame, a gage plate longitudinally movable on the guide plate, ears on the gage plate engaging the guide plate, the lower

end of the gage plate being upturned and
extending beyond the guide plate to trail on
the ground, a disk journaled on the guide
plate to rotate in a plane parallel to and
5 slightly below the uptilted arm of the gage
plate whose rear edge overlaps the disk
slightly and conforms to the cutting edge of
the latter, projections on the upper face of
the disk, adjusting means for shifting the

gage plate on the guide plate, and driving 10
means operatively connecting the disk and
the traction bearing wheels.

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

FRANK BRIGGS.

Witnesses:

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