D. KLEMMER.

BEET TOPPER.

APPLICATION FILED JUNE 10, 1911.

1,046,198.

Patented Dec. 3, 1912.

2 SHEETS—SHEET 1.

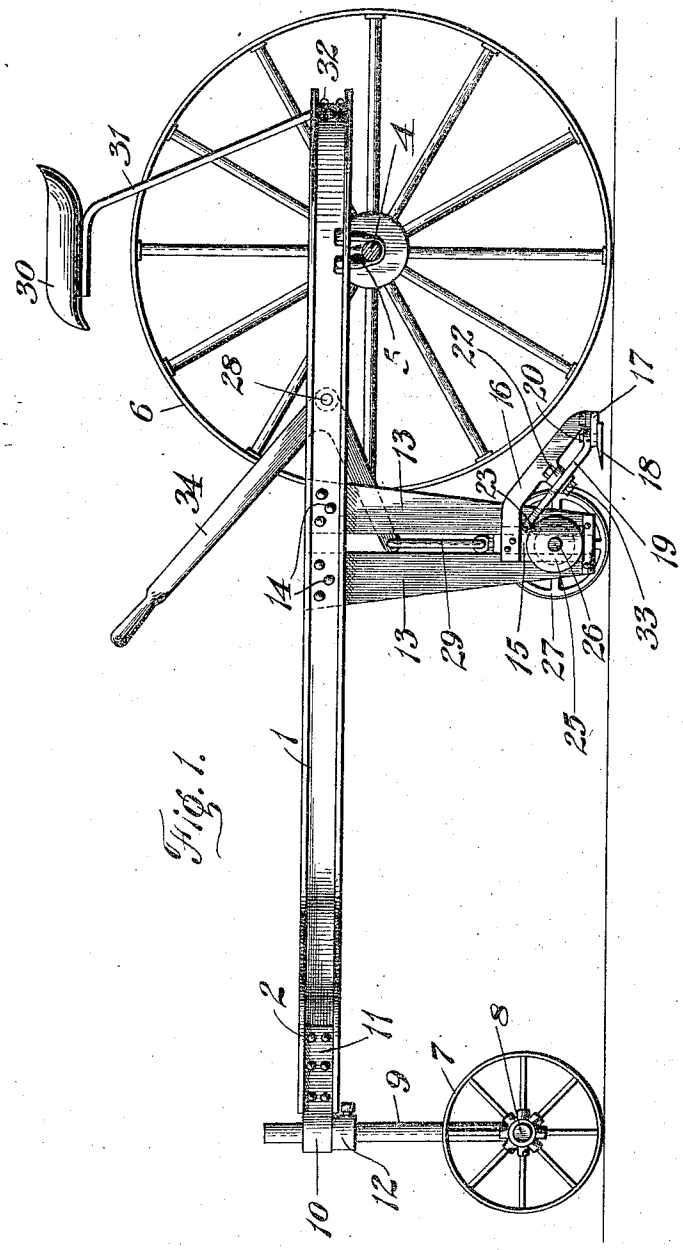

Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

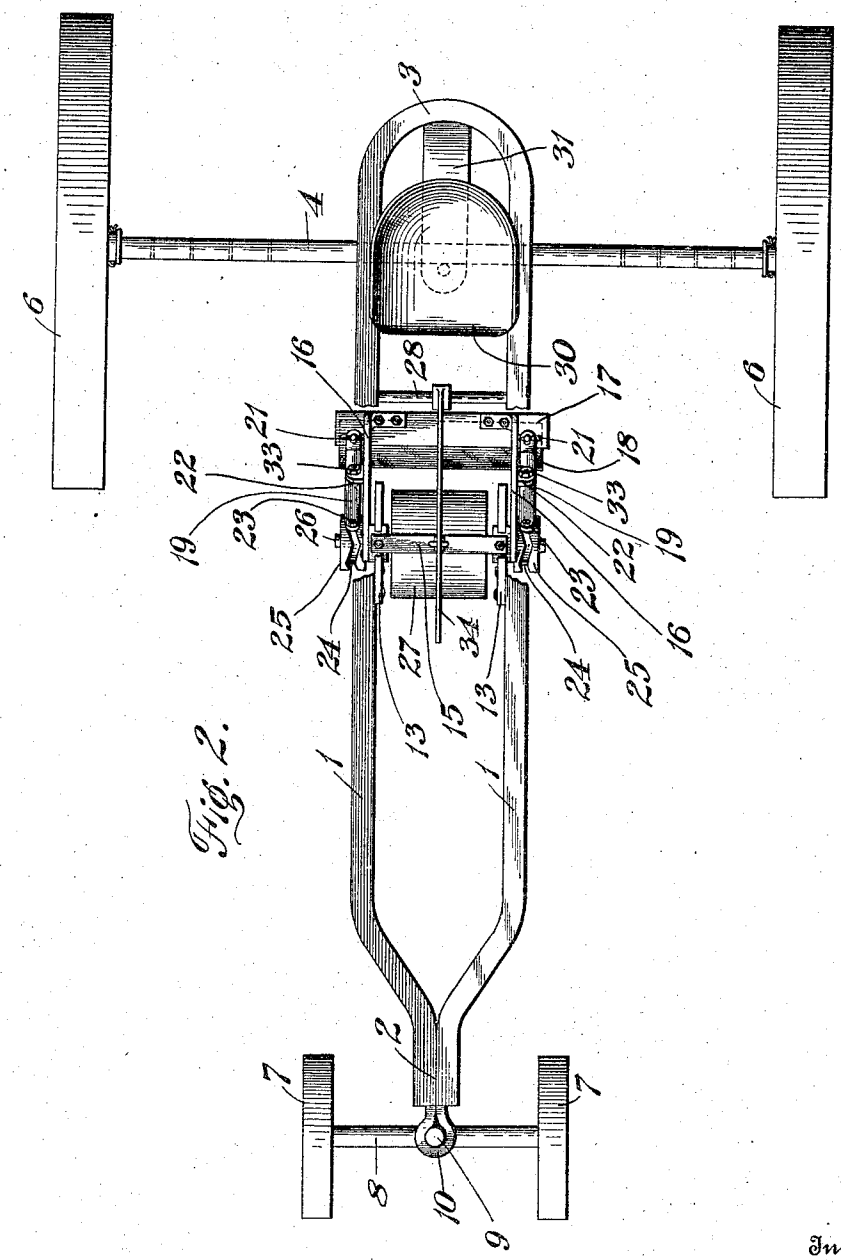

Fig. 2.

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UNITED STATES PATENT OFFICE.

DANIEL KLEMMER, OF DETROIT, MICHIGAN.

BEET-TOPPER.

1,046,198. Specification of Letters Patent. Patented Dec. 3, 1912.

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To all whom it may concern:

Be it known that I, DANIEL KLEMMER, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, 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.

In the process of topping beets by field machinery it is desirable that the operation of the cutter be positive while at the same time it be gaged accurately to sever the tops at the proper line. It is also desirable that the machines be of light draft.

This invention relates to a topping machine for severing the crowns and tops of sugar beets or like vegetables wherein a cutter is provided having positive shearing action on the tops of the beets that is carried by gaging mechanism which insures its application at the proper point.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view in side elevation of a machine embodying features of the invention; and Fig. 2 is a plan view thereof with parts broken away the draft rigging being omitted in both instances.

As herein shown in preferred form a horizontal main frame is formed of a bar, preferably of channel section, bent between its ends into parallel side members 1 whose forward end portions are obliquely inset and brought into parallel abutting relation as indicated at 2, the rear ends of the arms being preferably connected by a rounded portion 3 which acts as a brace to prevent racking of the frame. A rear axle 4 is secured as by clips 5 beneath the frame with bearing wheels 6 at its extremities. A pair of forward guide bearing wheels 7 are journaled on an axle 8 having an upright stem 9 swiveled in an eyelet 10 formed preferably of a bar bent into the desired form with its arms 11 riveted to the portions 2 of the frame. A stop collar 12 on the stem 9 forms an end thrust bearing supporting the eyelet 10.

A pair of depending longitudinally slotted guide plates 13 are secured as by rivets 14 or the like to the arms 1 forward of the axle 4 and in transverse alinement with each other. A yoke frame 15 is vertically movable in the slots of the guide plates 13 and has a pair of arms 16 extending back and down with their ends connected by a knife bearing plate 17. A knife 18 reciprocable on the plate 17 substantially parallel to the surface of the ground is operated by a pair of rock arms 19 pivoted at their lower ends to studs 20 on the knife plate 18 that play in slots 21 of the bearing plate 17. The rock arms are pivoted between their ends on studs 33 or the like secured on out-turned lugs 22 of the arms 16, the forward ends of the arms having projecting members 23 which may be either pins or friction rolls traveling in sinuous cam paths 24 formed in the peripheries of a pair of cam disks 25. The latter are secured to the outer end portions of a shaft 26, that is journaled in the yoke frame 15 and is driven by a gage roller 27 adapted to traverse the ground in advance of the knife 18. The yoke frame may be raised by any suitable means, as for example, a bell crank hand lever 27 mounted on a cross bar 28 spanning the interval between the arms 1 of the main frame, a link 29 or the like coupling one end to the yoke frame so as to raise the latter when the lever 27 is drawn back. The lever is located in convenient relation to an operator's seat 30 that is preferably carried by a spring arm 31 secured as by rivets 32 or the like to the rear of the main frame.

As a result of this construction, a topping mechanism is had which combines a knife having a shearing cut with a gaging roll that operates the knife and moves the latter up and down as it passes over a row of beets or the like. As the driving means for the knife constitute with the latter a unit structure that is vertically reciprocable in the guide plates of the main frame, there is no racking of the parts and no adjustment necessary of the transmission mechanism between the driving gage roll and the knife. The topping mechanism may be raised clear of the ground when the machine is on the road, and, when in the field, the simplicity of the machine and its light weight insure easy draft and obviate the necessity of frequent adjustment.

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.

What I claim is:

1. A topping machine comprising a main frame formed of a bar bent between its ends into parallel side members in spaced relation whose forward ends are inbent and united, a yoke frame reciprocable in the main frame in a vertical plane, a gage roller journaled on the yoke frame, a knife reciprocable on the yoke frame behind the roller, and means operated by the roller for reciprocating the knife.

2. A topping machine comprising a one piece substantially rectangular main frame, bearing and guide wheels supporting the frame, guide plates depending from the frame, a yoke frame reciprocable in the guide plates transversely to the main frame, a gage roll journaled in the yoke frame for rolling contact with the ground traversed by the machine, a cutting member reciprocable on the yoke frame in operative relation to the gage roller, and means driven by the gage roller for reciprocating the knife.

3. A topping machine comprising a one-piece substantially rectangular main frame, bearing and guide wheels supporting the frame, guide plates depending from the frame, a yoke frame reciprocable in the guide plates transversely to the main frame, a gage roll journaled in the yoke frame for rolling contact with the ground traversed by the machine, a cutting member reciprocable on the yoke frame in operative relation to the gage roller, drums mounted on the yoke frame to rotate with the roller and provided with sinuous cam paths in their peripheries and rock arms pivoted on the yoke frame and to the knife in operative engagement with the cam paths.

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

DANIEL KLEMMER.

Witnesses:
C. R. STICKNEY,
ANNA C. RAVILER.