

1,301,829.

H. S. FOUTZ.
BEAN CUTTER.
APPLICATION FILED JAN. 31, 1918.

Patented Apr. 29, 1919.
2 SHEETS—SHEET 2.

Fig. 3

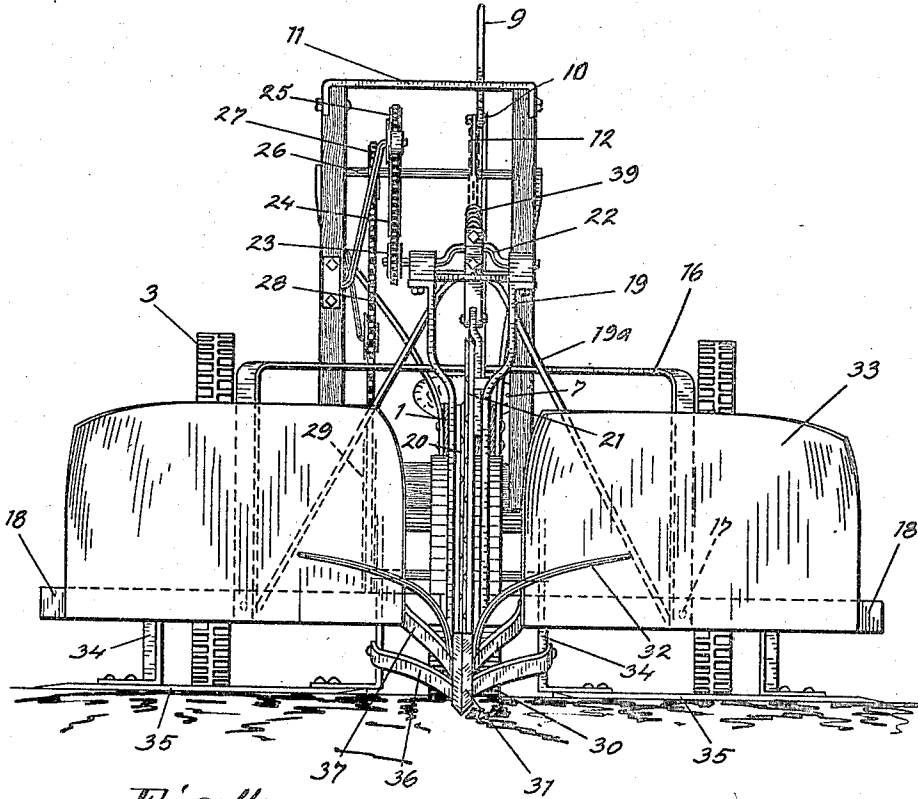
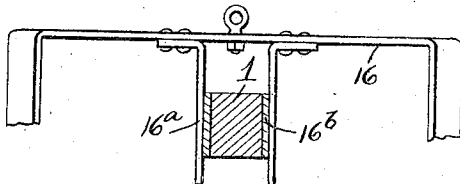


Fig. 4.



INVENTOR.
Horace S. Foutz

BY *Samuel S. Webster*
ATTORNEY

UNITED STATES PATENT OFFICE.

HORACE S. FOUTZ, OF MODESTO, CALIFORNIA.

BEAN-CUTTER.

1,301,829.

Specification of Letters Patent. Patented Apr. 29, 1919.

Application filed January 31, 1918. Serial No. 214,598.

To all whom it may concern:

Be it known that I, HORACE S. FOUTZ, a citizen of the United States of America, residing at Modesto, in the county of Stanislaus, State of California, have invented certain new and useful Improvements in Bean-Cutters; and I do declare the following to be a clear, full, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in cutters for bean plants in the field when the same are ready to harvest.

The object of the invention is to provide a cutter which will move between the rows and cut and separate the intertwining vines of adjacent rows and then cut the vines of each row and separate and place the same in windrows. The object is to do this without having the horses or tractor used for driving the cutter trample or move directly upon the bean vines which always occasions a great loss.

Also, the use of the machine does away with the handling of the beans with forks and pulling the intertwining vines apart which also tends to entail a great loss. The present invention is especially designed to cover improvements upon the structure shown in my Patent No. 1171603.

The structure which I particularly aim to improve upon is the cutter mechanism and the means for supporting and operating the cutter and spreader.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects, I accomplish by means of such structure and relative arrangement of the parts as will fully appear by a perusal of the following specification and claims.

On the drawings, similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a top plan view, partly broken out, of the complete cutter.

Fig. 2 is a side elevation of the same.

Fig. 3 is a front elevation thereof.

Fig. 4 is a fragmentary section taken on a line 4—4 of Fig. 1.

Referring now more particularly to the characters of reference on the drawings, the

numeral 1 designates the main supporting beam of the device which is secured at its forward end to the front axle 2 mounted on wheels 3. At its rear end, the beam 1 is supported on the tiller wheel 4. The shaft 5 of this tiller wheel is turnable through said beam and is provided with a foot bar 6 by means of which the driver in the seat 7 may steer the device.

Near the driver's seat 7 a notched quadrant 8 is secured to the beam 1. Pivoted to this quadrant and operable therewith is a vertical lever 9. A pivotally secured connecting rod 10 extends from a suitable point on this lever between frames 11 fixed to the beam 1 near the axle 2 to the upper end of a goose neck 12 to which it is also pivotally connected. This goose neck 12 is fulcrumed as at 13 on a bar 14 projecting upwardly from the outer end of the beam 1, and at its opposite end is flexibly connected, as at 15, with a rectangular vertical frame 16 slidably mounted at the forward end of the beam.

This frame is provided with downwardly depending guides 16^a thereon straddling the main beam 1, and abutting thereagainst, but adapted for vertical movement relative thereto. If made of wood, the beam 1 may have wearing strips 16^b at this point. On the lower ends of the sides of the frame 16, as at 17, is pivotally mounted a V-frame 18. The forward end of this frame 18 supports a vertical frame 19 secured in which is a fixed cutter bar 20 and a reciprocating cutter bar 21 cooperating therewith. The upper end of the reciprocating bar 21 is connected with a crank shaft 22 journaled on the upper end of the frame 19. This crank shaft is driven by means of the following structure:

On one end of the shaft 22 is a gear 23 connected by a chain 24 with a gear 25 fixed to a shaft 26 journaled in the frame 11. On said shaft 26 is another gear 27 connected by a chain 28 with a gear 29 mounted on the shaft 2 and driven with the rotation of the wheels 3.

The forward end of the frame 18 is supported on a wheel 30 which holds the cutter bars 20 and 21 normally above the ground level.

A nose bar 31 inclines downwardly from the base of the cutters 20 and 21 to the ground level and is provided with divider bars 32 which terminate adjacent divider plates 33

fixed to the sides of the V-frame 18. Supporting bars 34 drop downwardly from the sides of the frame 18 to the ground surface and fixed to these supports 34 are lateral cutting blades 35. Fender bars 36 and 37 extend from the nose piece 31 back to one of the supports 34 and the frame 18, respectively, to prevent the bean vines from working into engagement with or underneath the wheel 30.

In practice, if horsepower is used to drive the bean cutter, the horses are hitched to the double-trees 38 near the rear end of the beam 1 and push the cutting mechanism ahead of them. If a tractor is to be used as the motive power, then the bean cutting mechanism is suitably connected to the forward end of the tractor, since the object of the invention is to clear the beans from the path of the motive power so that the horses will not trample upon the same nor the tractor run over them.

As the cutter is driven ahead of the motive power, the nose piece 31 moves along very close to the ground and engages the intertwining vines from the adjacent rows. These slide upwardly along such nose piece into engagement with the cutter knives 20 and 21 where they are severed. The dividers 32 and the fender bars 36 and 37 push the cut vines aside until they come in contact with the plates 33 which push them into windrows. The blades 35 moving along the ground surface engage the vines adjacent the roots and sever them. Thus it will be seen that the vines may be separated, cut and formed into windrows all in one operation and with a minimum amount of handling or shaking of the vines. The machine will also clear a track for the motive power so that the same will not come into contact with the vines. Thus the beans will not be shaken or trampled from the pods to any marked degree.

The wheel 30 maintains the cutter mechanism on the surface of the ground and at the same time allows it to follow into depressions or the like by dropping downwardly on the pivotal point 17. Too great a downward movement, however, is avoided by the interposing of a tension spring 39 between the frame 19 and the frame 11.

When the device is to be transported from point to point, the cutting mechanism is lifted completely from the ground by means of the lever 9.

The vertical frame 19 is held rigid by means of a brace 19^a projecting from the top of the frame 19 back to the frame 18.

From the foregoing description it will readily be seen that I have produced such a device as substantially fulfils the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction

of the device, still in practice, such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent is:—

1. A bean cutter comprising a support, a lever fulcrumed to move in a vertical plane on the support, a goose neck lever fulcrumed to move in a vertical plane on the support and pivotally connected at one end to the first named lever, a cutting mechanism suspended from the other end of the goose neck lever, comprising a rectangular frame pivoted to said lever and arranged for vertical movement relative to the support, a V-shaped frame pivotally mounted at the lower end of said rectangular frame, back of the center of gravity of the V-shaped frame, vertical and horizontal cutters suitably mounted to said frame, a supporting wheel rotatably mounted in the V-shaped frame, and spring tension means between the support and the forward end of the cutter mechanism whereby a downward tipping motion of the same will be yieldably restricted.

2. A bean cutter comprising a support, a vertically disposed rectangular frame suspended at the front end of the support, a horizontally disposed V-shaped frame connected to the lower end of the rectangular frame, a roller supporting the forward end of the V-shaped frame, a vertical cutter arranged at the forward end of the V-shaped frame, horizontal cutters arranged along the sides of such frame, and means for adjusting the vertical position of the rectangular frame whereby the relative position of the V-shaped frame and its connected parts will be likewise vertically adjusted.

3. A bean cutter comprising a support, a lever fulcrumed to move in a vertical plane on the support, a goose-neck lever fulcrumed to move in a vertical plane on the support and pivotally connected at one end to the first named lever, a cutting mechanism suspended from the other end of the goose-neck lever, comprising a rectangular frame pivoted to said lever, a V-shaped frame connected to the lower end of said rectangular frame, a vertical frame mounted on the outer end of the V-shaped frame, a vertical cutter mounted on the vertical frame, and horizontal cutters arranged along the sides of the V-shaped frame.

4. A bean cutter comprising a support, a lever fulcrumed to move in a vertical plane on the support, a goose-neck lever fulcrumed to move in a vertical plane on the support and pivotally connected at one end to the first named lever, a cutting mechanism suspended from the other end of the goose-neck lever, comprising a rectangular

70

75

80

85

90

95

100

105

110

115

120

125

130

frame pivoted to said lever, a V-shaped
frame connected to the lower end of said rec-
tangular frame, a vertical frame mounted on
the outer end of the V-shaped frame, a verti-
5 cal cutter mounted in the vertical frame,
horizontal cutters arranged along the sides
of the V-shaped frame, and a tension spring
connected to the upper end of the vertical
frame and to the goose-neck lever on the

side of the fulcrum point opposite to that on 10
which the rectangular frame is connected.

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

HORACE S. FOUTZ.

Witnesses:

VERADING WARNER,
BERNARD PRIVAT.

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