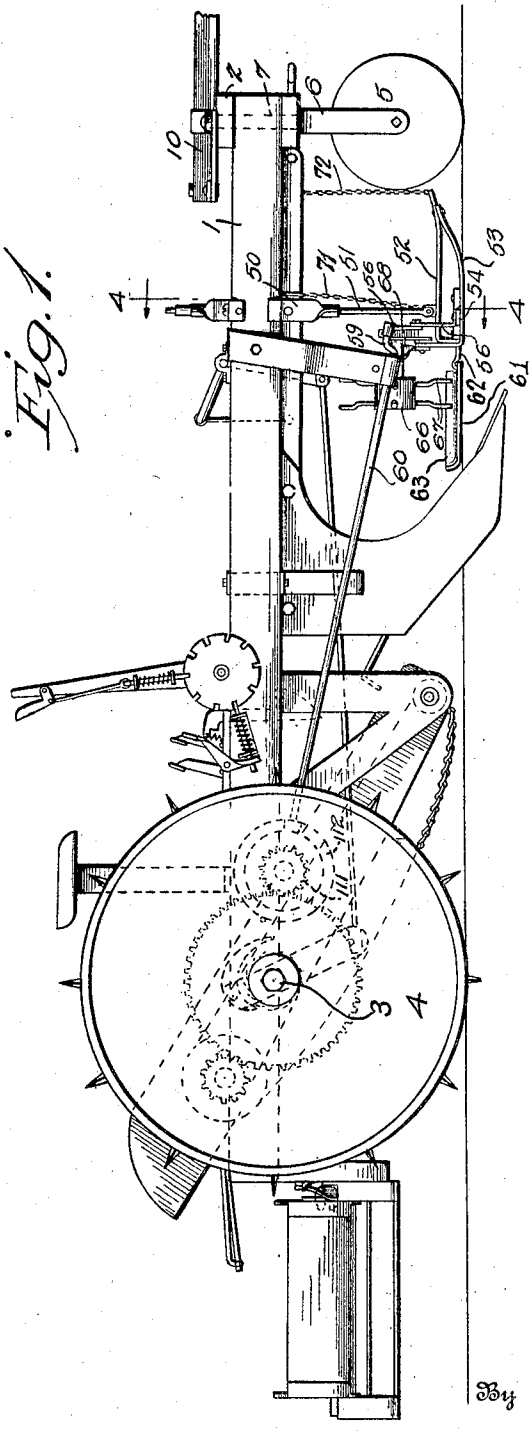
Dec. 16, 1924. 1,519,632

E. A. SAYEN

AGRICULTURAL MACHINE

Filed Oct. 5, 1922 3 Sheets-Sheet 1

Fig. 1.



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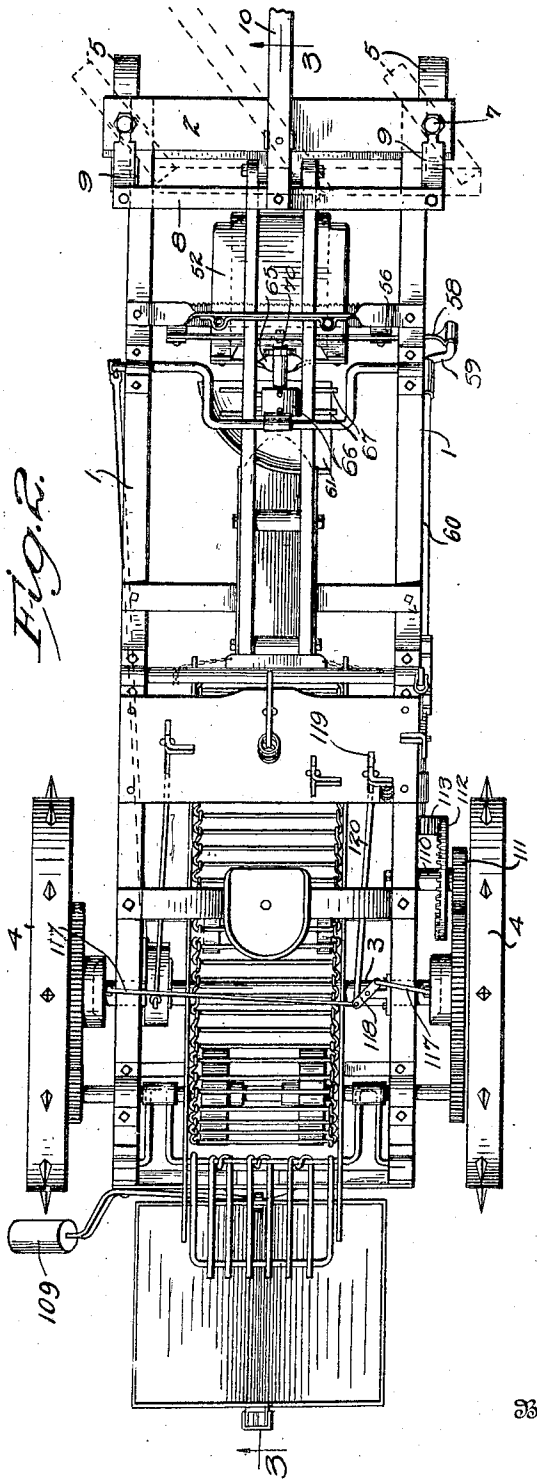


Fig. 2.

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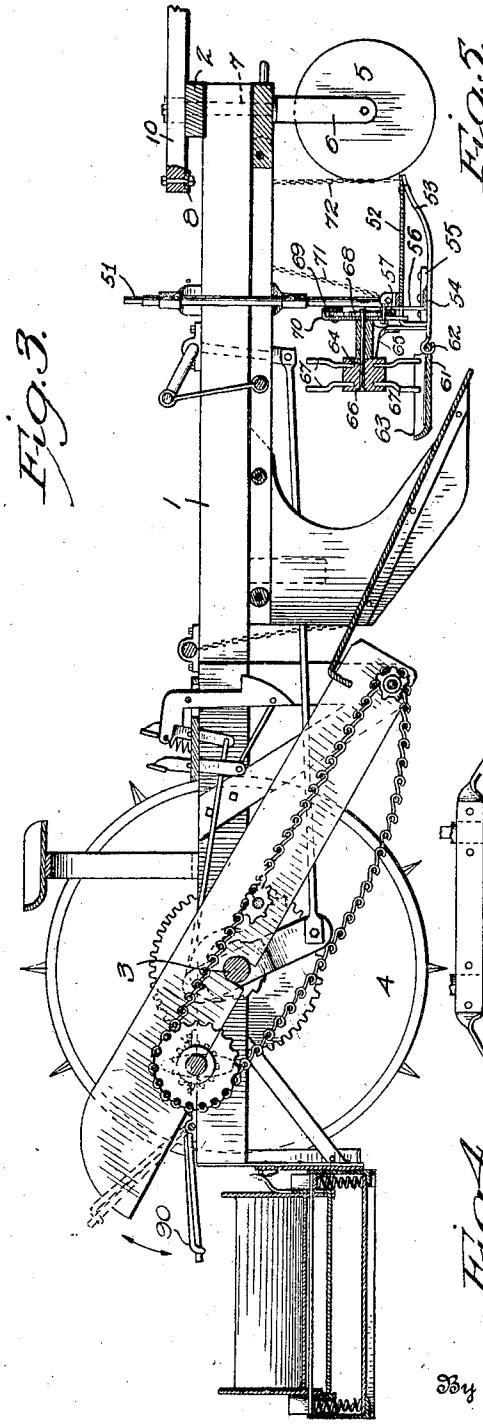


Fig. 3.

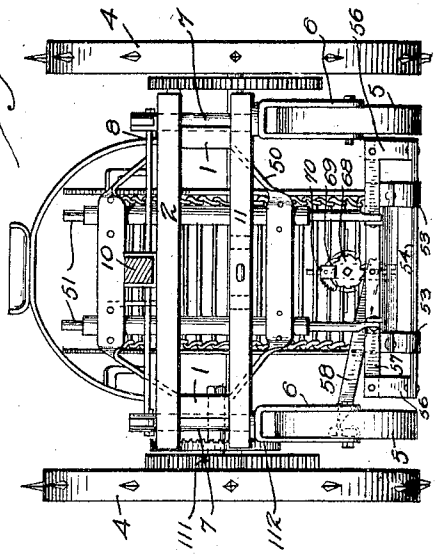


Fig. 5.

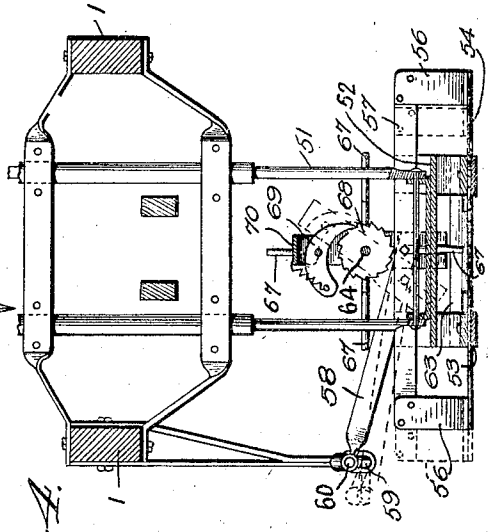


Fig. 4.

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UNITED STATES PATENT OFFICE.

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AGRICULTURAL MACHINE.

Application filed October 5, 1922. Serial No. 592,617.

To all whom it may concern:

Be it known that I, ELI A. SAYEN, a citizen of the United States, residing at Escanaba, in the county of Delta and State of Michigan, have invented certain new and useful Improvements in Agricultural Machines, of which the following is a specification.

This invention relates to agricultural machines, and more particularly to beet harvesters.

An object of the invention is the provision of a beet topper which will adjust itself to irregularities in the surface.

A further object of the invention is the provision of means for removing the beet tops, said means being driven by the drive mechanism of the topper.

In the accompanying drawings, I have shown one embodiment of the invention. In this showing:

Figure 1 is a side elevation,

Figure 2 is a plan view,

Figure 3 is a vertical central longitudinal sectional view on line 3—3 of Figure 2,

Figure 4 is a transverse vertical sectional view on line 4—4 of Figure 1, and

Figure 5 is a front elevation of the machine.

Referring to the drawings, the reference numeral 1 designates side bars of the frame or body which are connected to each other by transverse beams or bars. A rear axle 3 is mounted in suitable bearings in the side bars and is adapted to receive rear wheels 4. Front wheels 5 are mounted in yokes 6, having vertical arms or rods 7 secured thereto. These rods pass through the front cross bar and are connected to a steering rod 8 by links 9. A draw bar 10 is connected to the steering rod intermediate its ends.

The beet topping mechanism is carried by a frame 50, mounted on the main frame. Rods 51 are adjustably mounted in this frame and extend downwardly. The lower ends of these rods are pivotally connected to a substantially flat plate 52, having runners 53 mounted on its under side and slightly spaced therefrom. A knife 54 is arranged on the top of the runners, spaced from the plate 52 and is adapted to oscillate in suitable guides 55, carried by the runners. An arm 56 is secured to each end of the knife and these arms extend upwardly on each side of the plate. The arms are connected to a transverse member 57, arranged substantially parallel to the knife (see Figure 4). A connecting rod 58 is secured to this transverse member and the end of the connecting rod is secured to a crank portion 59 of a drive shaft 60.

A plate 61 is secured to the rear end of the cutting mechanism by a hinge connection 62 and this plate is provided with a flange or wall 63 on one side and on the back (see Figure 1) to deliver the beet tops to one side of the machine. Means are provided for positively removing the beet tops from the plate 61. As shown, a shaft 64 is arranged longitudinally of the machine over the plate 61, being mounted in suitable bearings in a bracket 65. This shaft is provided with a hub 66, disposed over the plate 61 and a plurality of arms 67 extend outwardly from the hub. The shaft is driven by means of a ratchet wheel 68 (see Figure 4) adapted to be engaged by a pawl 69 which is pivotally mounted in a yoke 70, loosely mounted on the shaft. The yoke is connected to the connecting rod 58 and is adapted to be oscillated by the connecting rod, giving the shaft and ratchet wheel a step by step motion and driving the hub 66. The cutting mechanism is also connected to the plow beam by means of chains 71 and 72 to permit adjustment thereof.

The shaft 60 of the cutting or topping mechanism is driven from the rear axle by means of suitable gearing. As shown, the machine is provided with a stub axle 110, having a pinion 111 meshing with a gear 83 on the axle. The shaft also carries a ring gear 112 adapted to mesh with a pinion 113 on the end of the shaft 60. Means are provided for disconnecting the driven parts of the machine from the source of power when desired. The gears 83 are loosely mounted on the axle and are provided with clutch faces 114 on their inner sides. A clutch member 115 is keyed to the axle adjacent each of the clutch portions of the gears by means of keys 116. Arms 117 are connected to these members and the other ends of these arms are connected to a link 118, pivotally mounted on the frame of the machine. A foot lever 119 is arranged at a convenient point and is connected to the link 118 by a connecting rod 120.

In operation, the cutting mechanism is

adjusted by means of the chains 71 and 72. These chains adjust the angle of the cutting mechanism which may be vertically raised by means of rods 51. The cutting mechanism rides over the ground on the runners 53 and the plate 52 flattens the tops of the beets. The beet tops are cut by the knife 54 which is oscillated through the drive mechanism described and the tops are conveyed onto the plates 61, whence they are thrown off to one side by the arms 67.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. Beet topping mechanism comprising a depending support, a substantially flat plate carried by said support and slightly spaced from the ground, a knife arranged beneath said plate, means for oscillating said knife, a second plate arranged rearwardly of said knife and adapted to receive the beet tops, and means for removing the tops from said plate.

2. Beet topping mechanism comprising a depending support, a substantially flat plate carried by said support and slightly spaced from the ground, a knife arranged beneath said plate, means for oscillating said knife, a second plate arranged rearwardly of said knife and adapted to receive the beet tops, said plate being provided with a flange on one side and at the rear to prevent the beet tops from being removed from said plate on said side or at the rear, and means for removing the beet tops from said plate.

3. Beet topping mechanism comprising a depending support, a substantially flat plate secured to said support, said plate being slightly spaced from the ground, a knife arranged beneath said plate, means for oscillating said knife, a second plate hingedly connected to said first plate and arranged in the rear of said knife, said second plate being adapted to receive the beet tops, and means for removing said beet tops from said plate.

4. Beet topping mechanism comprising a depending support, a substantially flat plate secured to said support, runners secured to said plate and arranged beneath it, said runners being slightly spaced from said plate to maintain it at a desired distance from the ground, a knife arranged beneath said plate, means for oscillating said knife, a second plate arranged rearwardly of said knife, said plate being adapted to receive the beet tops, and means for removing the beet tops from said plate.

5. Beet topping mechanism comprising a depending support, a substantially flat plate secured to said support, runners secured to said plate and arranged beneath it, said runners being slightly spaced from said plate to maintain it at a desired distance from the ground, a knife arranged beneath said plate, means for oscillating said knife, a second plate arranged rearwardly of said knife, said plate being adapted to receive the beet tops, beater arms arranged over said second plate, and means for imparting a step by step motion to said arms to remove the best tops from said plate.

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

ELI A. SAYEN.

Witnesses:
A. M. ANDERSON,
MARCELLA VAN DAUSEL.