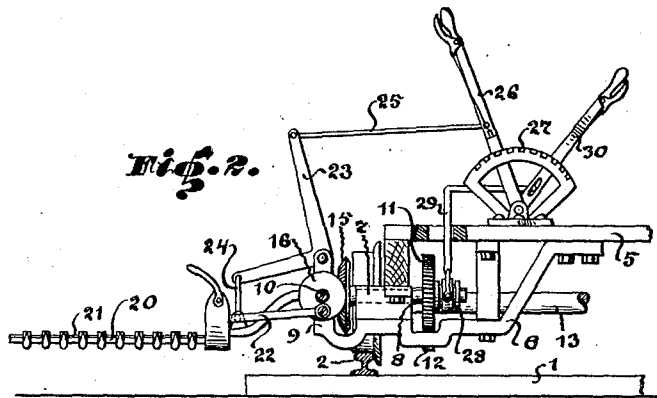
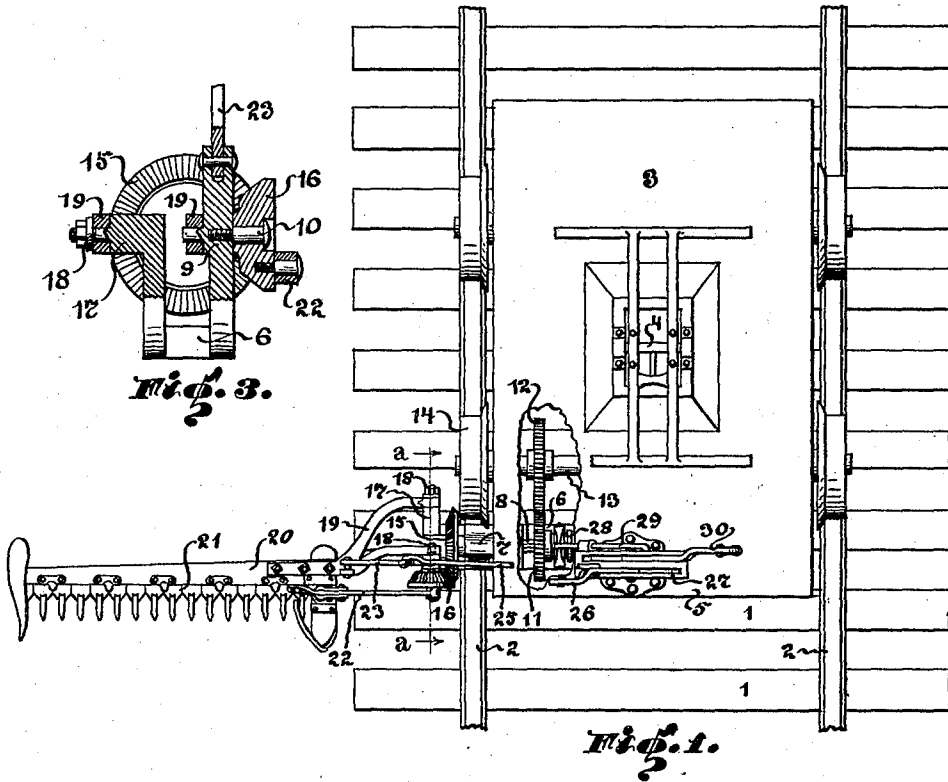


S. E. RAWLS.  
GRASS CUTTING MACHINE.

APPLICATION FILED MAY 14, 1915. RENEWED JAN. 31, 1919.

1,316,646.

Patented Sept. 23, 1919.



WITNESS:

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# UNITED STATES PATENT OFFICE.

SILAS E. RAWLS, OF CHICAGO, ILLINOIS.

## GRASS-CUTTING MACHINE.

1,316,646.

Specification of Letters Patent. Patented Sept. 23, 1919.

Application filed May 14, 1915, Serial No. 27,984. Renewed January 31, 1919. Serial No. 274,363.

*To all whom it may concern:*

Be it known that I, SILAS E. RAWLS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grass-Cutting Machines, of which the following is a specification.

My invention has relation to a grass-cutting or mowing machine for railroad service and in such connection it relates more particularly to the arrangement and construction of an attachment for hand cars whereby, grass, weeds and shrubbery may be cut on the road bed adjacent to the rails, the attachment traveling with and being operated by the wheels of a hand car while the same is propelled over the tracks.

In the upkeep of the right of way of steam or electric railroads a considerable item of expense is incurred in cutting down the weeds, grass and rank growths on the road bed adjacent to the tracks. In the usual course of procedure gangs of men are sent out along the road bed to cut the weeds, etc., with scythes, sickles, or other cutting implements wielded by hand. Some attempts have been made to cut the weeds, grass, etc., growing between the rails, and between the ties just outside the rails by mowers mounted on and operated by a hand car and some attempts to destroy the adjacent vegetation have been made by sprayer pipe discharging from beneath a hand car. In all attempts made prior to my present invention, so far as I am able to ascertain, the cutters or sprayers were arranged to operate directly beneath the floor of the car and could not be utilized to cut down the vegetation on the road bed some distance beyond the tracks.

An essential feature of my present invention is the provision of means operated by the wheels of the hand car whereby the grass, etc., on the road bed beyond the tracks may be cut or mown down and the utilization of this means whether the vegetation grows upon the ground substantially in a plane with the tracks or upon an embankment sloping away from said tracks.

In the carrying out my invention, a cutter bar is arranged to reciprocate beyond the side of a hand car and beyond the ends of the ties at that side of the track, the cutter bar being supported by a frame work carried by the underside of the floor of the hand car, and there is provided a means for oper-

ating the cutter bar consisting essentially of a pitman operated from the car axle by intermediate gearing and there is further provided a means for raising and lowering the cutter bar while the same is reciprocating to enable the bar to cut at an angle above or below the plane of the track, said means for raising and lowering the cutter bar being controlled by the operator of the car standing on the floor of said car.

The nature and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, in which

Figure 1, is a top or plan view of a hand car and the mowing attachment embodying main features of my invention.

Fig. 2, is an end elevational view partly sectioned, and

Fig. 3, is a cross-sectional view taken on line *a, a*, of Fig. 1.

Referring to the drawings 1 represents the ties and 2 the tracks of a railroad. The hand car 3 is arranged to be propelled over tracks 2 by the usual mechanism 4. On the under surface of the floor 5 of the hand car is arranged a frame work 6, in the top of which is arranged a bearing 7 for the transverse shaft 8 and at the end of which is arranged a bearing 9 at right angles to bearing 7 and adapted to receive and support the stub shaft 10. The transverse shaft 8 has at one end beneath floor 5 a cog wheel 11 gearing with a gear wheel 12 on one of the axles 13 of the hand car. The shaft 8 projects some distance beyond the wheel 14 on axle 13 and to its end is secured a miter gear 15 meshing with miter gear 16 on stub shaft 10. From the floor 5 of the hand car also projects a bracket arm 17 to which is pivotally secured as at 18 an arm 19 carrying the frame 20 on which the cutter bar 21 is arranged to reciprocate. This cutter bar 21 is reciprocated by means of the pitman 22 connecting the bar 21 eccentrically with the miter gear 16. To raise and lower the frame 20 and cutter bar 21 about its pivotal support 18 there is provided a bell crank lever 23 connected at one end to a link 24 projecting from frame 20 and at the other end by a link 25 with the hand lever 26 working over a sector 27 supported on top of the car 3. When it is desired to throw the shaft 8 out of gear with the axle 13, the gear wheel 11 which is feathered to shaft 8

may be slid out of engagement with gear wheel 12 on axle 13 by means of a clutch collar 28 operated by a clutch lever 29 which in turn is controlled by the hand lever 30 on top of car 3. The cutter bar 21 projects and operates some distance beyond the ties 2 and it may cut in a horizontal plane as illustrated in the drawings or in angular planes diverging toward or away from the horizontal by manipulation of the hand lever 26, and if not required it may be raised to inoperative position at right angles to the road bed.

Having thus described the nature and object of my invention what I claim as new and desire to secure by Letters Patent, is,—

In a device of the character described, a hand car, a cutting apparatus projecting from the side of the car beyond the ties of the road bed, a frame work arranged on the

underside of the floor of the car, a shaft revolving in said frame-work, a means for reciprocating the cutter bar of the cutting apparatus, said means operated by the shaft in said frame-work, a means for pivotally supporting one end of the cutting apparatus in said frame-work, a means for driving the shaft in said frame work from an axle of the car, a link projecting from the cutting apparatus, a bell crank lever carried by the aforesaid frame work, one arm of which is connected to said link, a second link connected at one end to the other arm of the bell crank lever, a hand lever operating said second link and a means for locking the lever.

In testimony whereof I have signed my name to this specification.

SILAS E. RAWLS.

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