Nov. 6, 1928.

1,690,950

M. SALAS

MOWER

Filed July 30, 1924

4 Sheets-Sheet 1

Fig. 1.

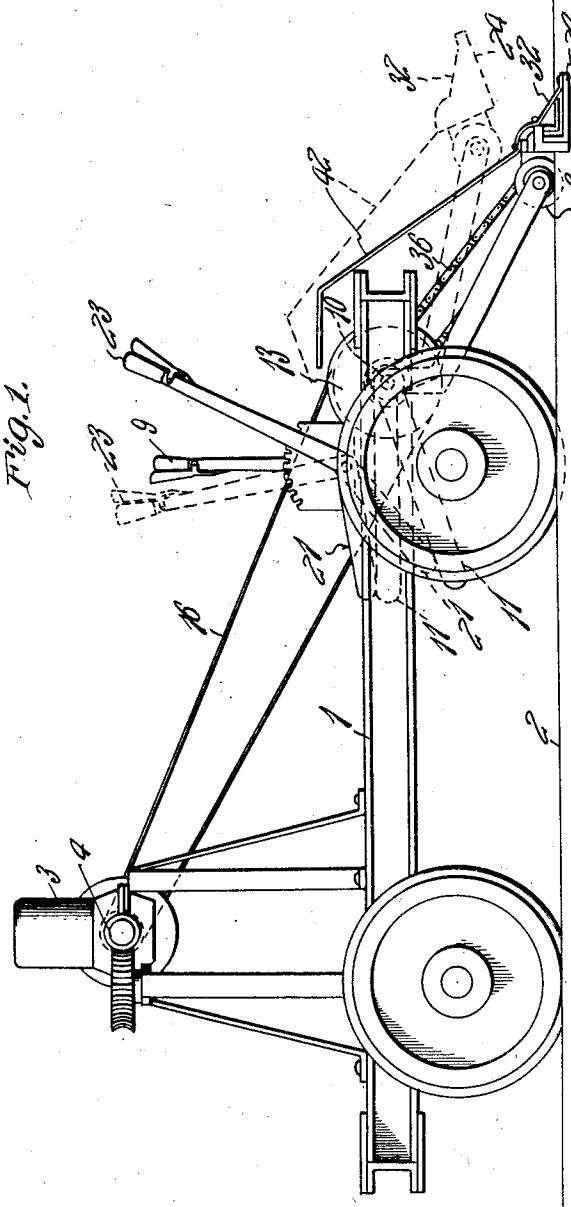
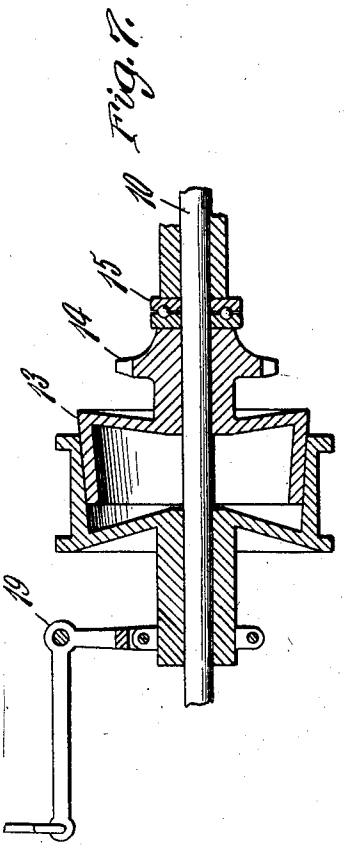


Fig. 2.



Mariano Salas

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BY Victor J. Evans

ATTORNEY

WITNESS:

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MOWER

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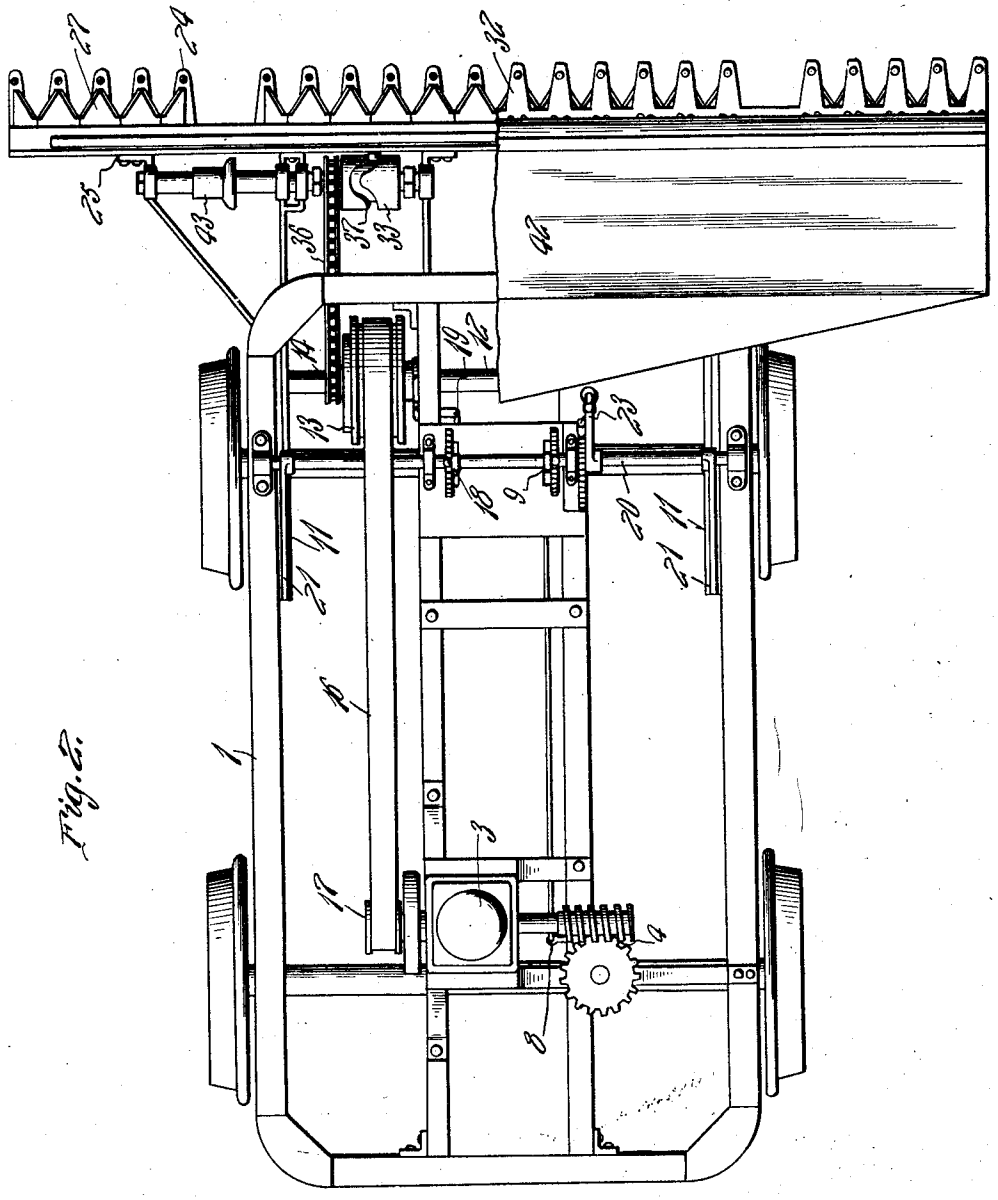

Fig. 2.

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Fig.8.

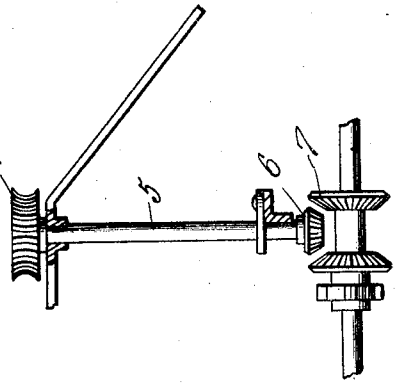

Fig.9.

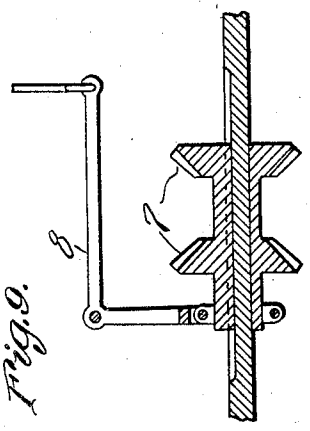

Fig.3.

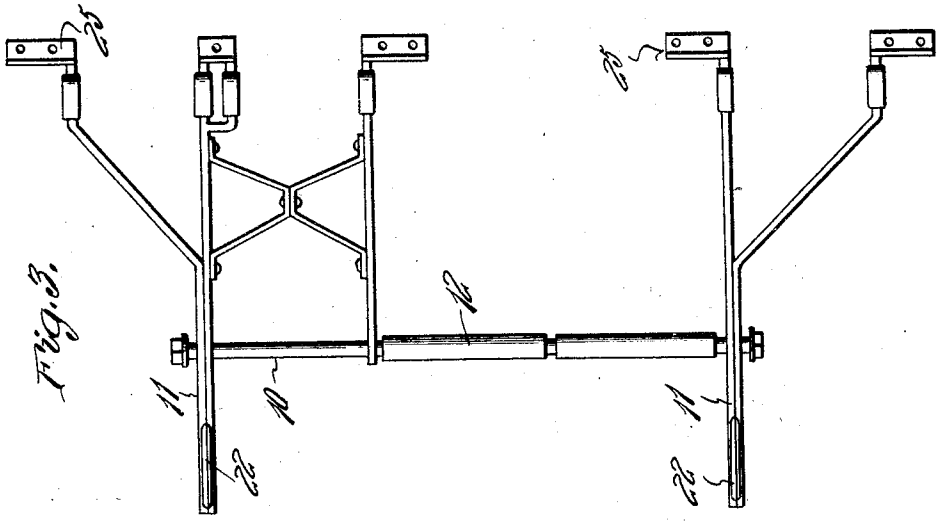

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Fig. 5.

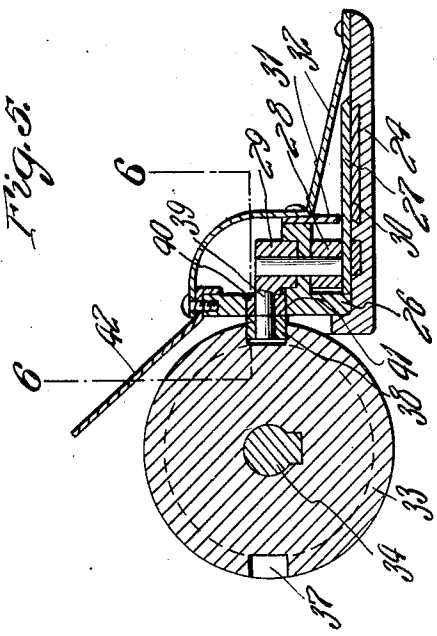


Fig. 6.

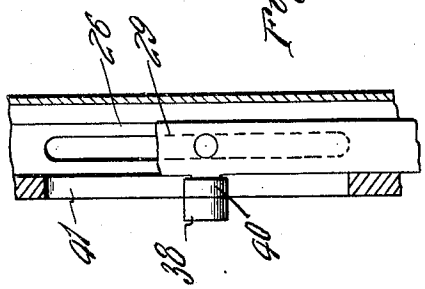
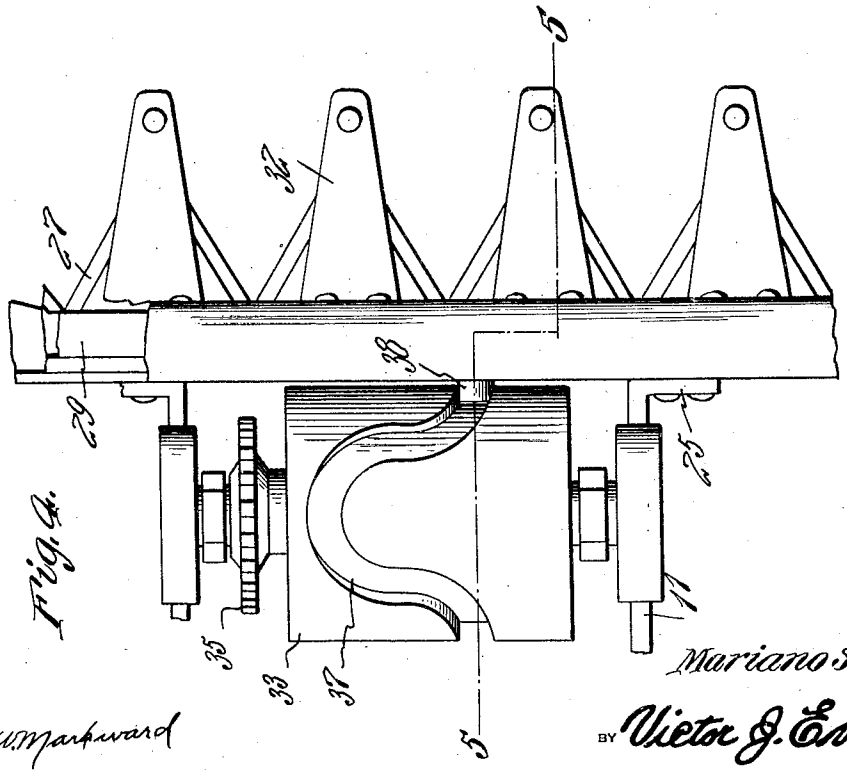


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MOWER.

Application filed July 30, 1924. Serial No. 729,157.

The primary object of this invention is to provide a mowing machine for use on railways for mowing the grass and weeds from between the rails of a track and from a strip along each side of the track.

Another object of the invention is to provide a truck for carrying the mowing attachment and which is arranged to engage the rails of the track and which is provided with a motor for propelling the same and for actuating the cutting knife or knives.

A further object of the invention is to provide means for raising the knife carrying part when the mower is not to be used.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an elevation of the invention.

Figure 2 is a plan view.

Figure 3 is a plan view of the tiltable frame which carries the mower mechanism.

Figure 4 is an enlarged plan view showing a portion of the cutting means and the cylindrical cam for operating the same.

Figure 5 is a section on line 5—5 of Figure 4.

Figure 6 is a section on line 6—6 of Figure 5.

Figure 7 is a sectional view through the combined pulley and clutch.

Figure 8 is a view of the driving means from the motor to the rear shaft.

Figure 9 is a view of the means for shifting the clutch member of said driving means.

In these views, 1 indicates a wheeled truck, the wheels of which are designed to engage the rails 2 of a track so that the device can be used on railroad tracks, electric car tracks and the like. A motor 3 is carried by the truck and the shaft of the motor is connected by the gears 4 with a vertical shaft 5, which has a beveled pinion 6 at its lower end for engaging either one of a pair of beveled gears 7 which are slidably mounted on the rear axle of the truck and which are movable by the links 8 which are connected with the hand lever 9. Thus the truck can be driven in either direction by the motor or by moving the gears 7 to a neutral position the truck can be freed from the motor. A shaft 10 is horizontally arranged adjacent the front end of the truck and a framing consisting of the arms 11 is pivotally mounted on said shaft. The arms are spaced apart by the sleeves 12 and a combined pulley and friction clutch 13 with which is associated the sprocket 14 is mounted on said shaft, ball bearings 15 being arranged between the sprocket and the small sleeve to take up thrust. A belt 16 passes over the pulley and over a pulley 17 on the motor shaft. A hand lever 18 is connected with the pulley by means of the links 19 so that said pulley can be shifted into and out of engagement with the clutch part to which the sprocket is connected. The rod 20 to which the levers 9 and 18 are pivoted has arms 21 thereon which engage grooves 22 in the extended part of the outer arms 11 so that when the shaft is rocked by means of the hand lever 23 the frame formed by the arms 11 will be tilted so as to place the mower parts in operative or inoperative position, as shown in full or dotted lines in Figure 1. An L-shaped supporting member 24 is bolted to the flanges 25 on the outer ends of the arms 11 and this member forms a support for a T-bar 26, blades 27 to which the cutter bar 28 is fastened and a driving bar 29 which is fastened to the cutter bar. The supporting member also carries the wear plate 30 for the blade and a plate 31 is fastened to the projecting part of the T-bar and extends down close to the blade for acting as a shield for the cutter bar and rear part of the blade. The usual plate guide and cutter bar protector 32 are fastened to the T bar and the outer edge of the supporting member. The blade is reciprocated by means of a cylinder 33 which is carried by a shaft 34 which has the sprocket 35 thereon which is engaged by a chain 36 which passes over the sprocket 14 and this cylinder has a cam groove 37 therein which engages a ring-like roller 38 on a projection 39 of the driving bar 29 which also has a ring-like roller 40 thereon for engaging a slot 41 formed in the T bar. Thus as the cylinder is rotated the cam groove acting upon the roller 38 will give reciprocating movement to the driving bar which in turn moves the cutter bar and the knife blades so that the cutting edges of the knives cooperating with the fingers formed on the supporting member will cut the weeds and grass between the rails and in a strip at the

outer sides of the rails. A deflector 42 is provided for the mowing parts for covering the same and for deflecting the grass and weeds cut by the knife to each side of the track. As will be seen the driving bar, the cutter bar and the knife blade are formed in sections which are spaced apart to receive the rails when the mower is in lowered position. Small wheels 43 are carried by the outer parts of the frame 11 for engaging the rails and act as rolling supports for the mower frame.

From the foregoing it will be seen that I have provided a simple arrangement of parts for cutting the weeds and grass between the rails and at each side of a track. The apparatus is mainly intended for use in tropical countries where the weeds grow abundantly and considerable labor is required to keep them cut. The stubble left by the machine acts to prevent the ballast from being washed out by heavy rains and by cutting the weeds the decay of the track parts is checked as they can quickly dry out after rains.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A mowing apparatus, comprising a truck having its wheels arranged to engage the rails of a track, a frame pivoted at the front of the truck and extending downwardly, a supporting bar at the front of the frame formed in sections, with one section between the rails and the others at the outer sides of the rails, cutting means carried by each section of the bar, rollers on the frame for engaging the rails, a motor on the truck, means for propelling the truck from the motor, means for actuating the cutting means from the motor and manually operated means for tilting the frame.

2. An apparatus of the class described comprising a truck, a motor thereon, means for propelling the truck from the motor, a shaft carried by the truck, a combined clutch and pulley on the shaft, a belt for connecting the motor with the pulley, manually operated means for shifting the clutch parts, a sprocket connected with a clutch part, a frame pivotally mounted on the shaft, and having rear extensions thereon, cutting means at the front end of the frame, an actuating member for the same, a sprocket associated with the actuating member, a chain connecting the sprockets, track engaging wheels carried by the frame, a shaft, arms thereon engaging the rear extensions of the frame and a hand lever connected with the shaft for tilting the same.

In testimony whereof I affix my signature.

MARIANO SALAS.