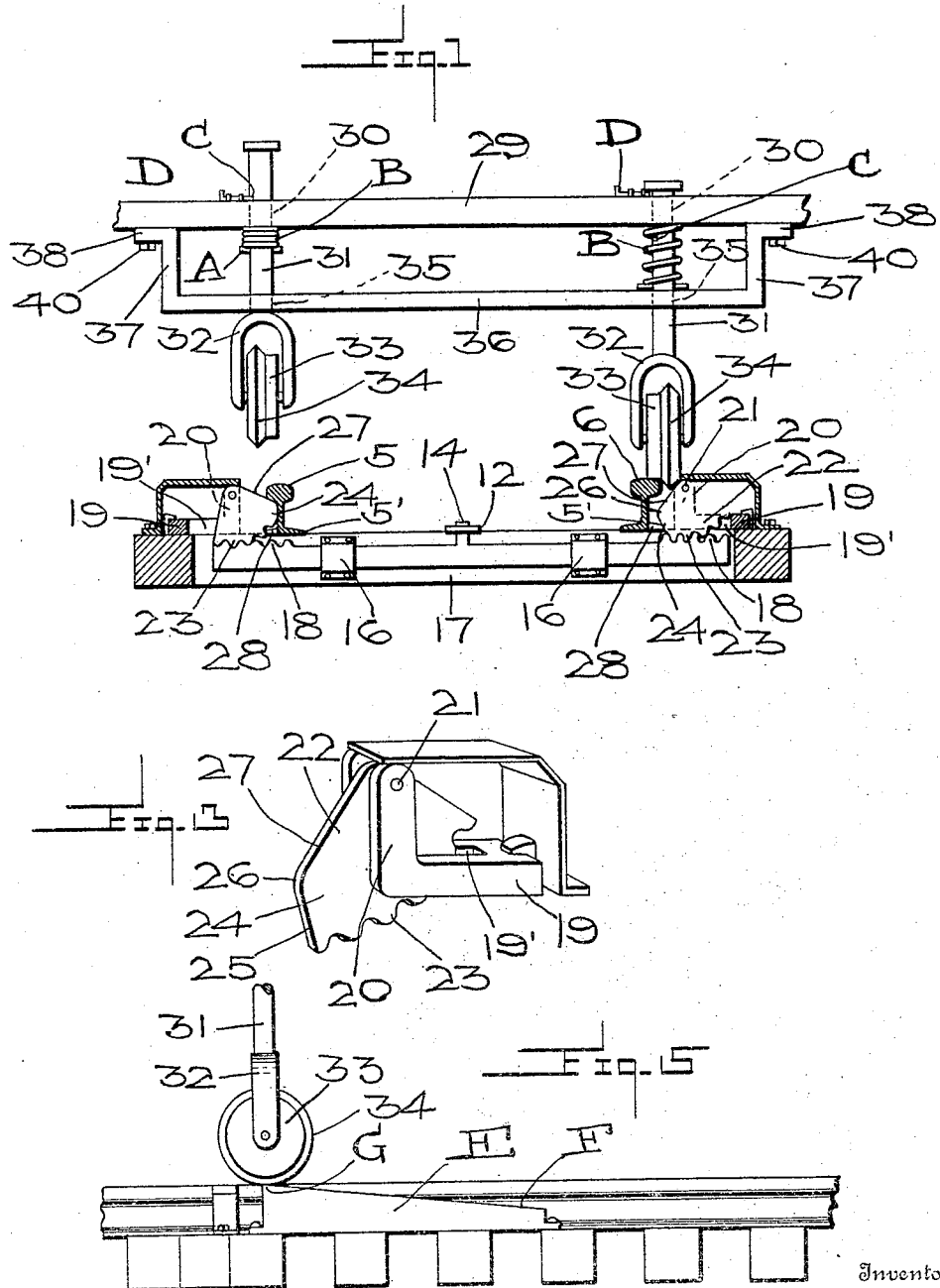


J. M. GODOY.
 AUTOMATIC SWITCH.
 APPLICATION FILED DEC. 21, 1908.

942,033.

Patented Nov. 30, 1909.

2 SHEETS—SHEET 1.



Inventor

Jose M. Godoy

Witnesses

Ed. R. Lusby
 E. L. Chandler

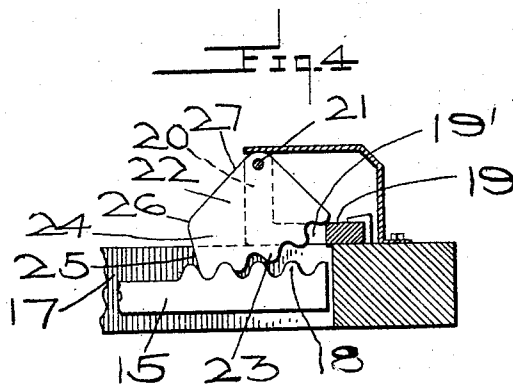
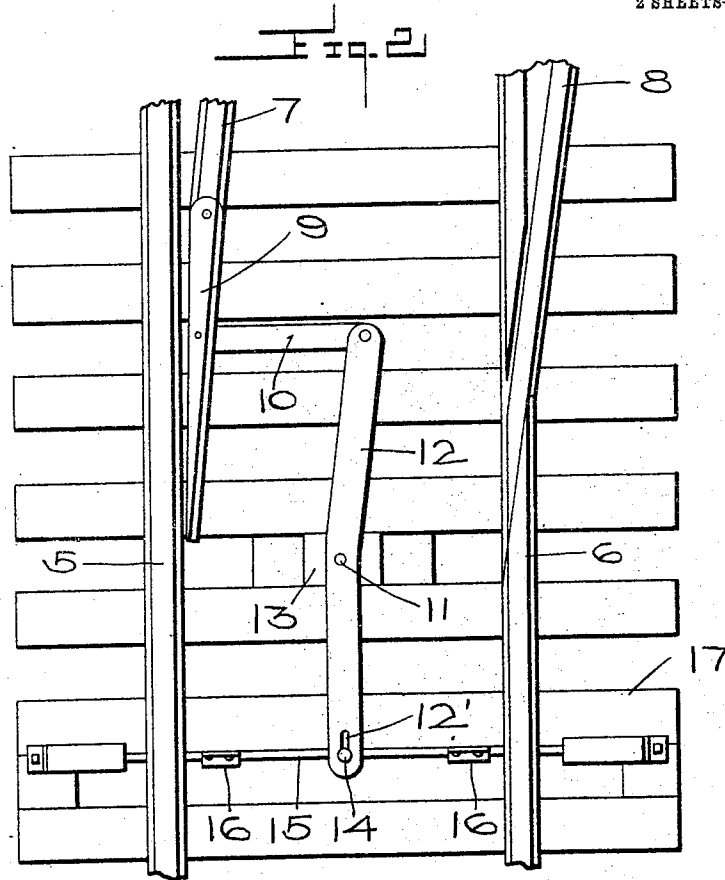
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UNITED STATES PATENT OFFICE.

JOSE MA GODOY, OF SAN ANTONIO, TEXAS.

AUTOMATIC SWITCH.

942,033.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed December 21, 1908. Serial No. 468,500.

To all whom it may concern:

Be it known that I, JOSE MA GODOY, a citizen of Nueva Leon, Mexico, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Automatic Switches, of which the following is a specification.

This invention relates to street railways and more particularly to switch operating mechanism therefor, and has for its object to provide a mechanism which may be moved into and out of position to automatically operate the switch, the arrangement being such that the rails of the track will act as stops for the mechanism.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like characters of reference indicate similar parts in the several views, Figure 1 is a transverse section of the track, the shift rod being shown in side elevation, one of the operating members being shown lowered and the other raised, Fig. 2 is a top plan of the switch and operating mechanism, Fig. 3 is a perspective view showing the mounting of one of the segments and the arrangement of the parts adjacent thereto, Fig. 4 is a vertical section through one of the operating members and its mountings. Fig. 5 is a side elevation.

Referring now to the drawings, there is shown a track consisting of two parallel rails 5 and 6 and a pair of switch rails 7 and 8. A switch point 9 is pivoted to the rail 7 for movement of its point transversely of the track into and out of engagement with the rail 5 and an inwardly extending link 10 is pivoted to the switch point and to a longitudinally extending lever 12 located between the rails and pivoted upon an upwardly extending pin 11 carried by a base plate 13. The opposite end of the lever 12 from the link 10 is pivoted upon an upwardly extending pin 14 carried by a transverse shift rod 15 the lever being longitudinally slotted as shown at 12' to permit movement of the parts as will be understood. The shift rod 15 is mounted for longitudinal movement in brackets 16 mounted upon the side of a transverse tie 17, the end portion of the shift rod extending outwardly beyond the

rails 5 and 6 as shown, and these end portions are provided with upwardly extending rack teeth 18.

Outwardly of the rails 5 and 6 and in parallel spaced relation thereto, there are longitudinally extending guide members 19 which, at points above the end portions of the shift rod 15 are cut as indicated at 19'. At opposite sides of these cuts there are upwardly extending parallel brackets 20 having horizontal pivot rods 21 engaged in their upper ends and receiving thereupon rack segments 22 having their arcuate toothed edges 23 engaged with the rack teeth 18 of the shift rod 15. The portions of the segments 22 lying adjacent to the rails 5 and 6 are enlarged as indicated at 24 to present straight edges 25 arranged for engagement with the webs of the rails as indicated, these straight edges forming angles indicated at 26 with inner diagonal edges 27 of the segments, these angles lying beneath the tread flanges of the rails as will be understood. As shown in the drawings, the base flanges 5' of the rails are cut away at their outer portions to receive the segments, these cuts being indicated at 28.

A car platform is indicated at 29 and has vertical openings 30 formed therethrough to receive vertically movable stocks 31 having yokes 32 at their lower ends receiving wheels 33 which rest upon the rails 5 and 6 and which have flanges 34 extending downwardly over the outer faces of the rails into the spaces between the rails and the members 19 for engagement of the edges 27 of the segments 22. The stocks 31 are engaged through openings 35 formed in a horizontal transverse metallic bar 36 located beneath the car platform 29, this bar 36 having upwardly turned end portions 37 provided with outwardly turned edges 38 which are secured to the car platform by bolts as indicated at 40. Operating member for the switch are thus formed.

It will be understood that in operation one of the wheels 33 is brought into engagement with its track, so that its flange 34 will extend into the space between the track and the adjacent member 19. Movement of the car will thus engage the flange 34 with the edge 24 of one of the segments, the latter being rocked upon its pivot to move the shift rod 15 and throw the switch.

As shown in the drawings, the stocks 31 have transverse pins A engaged there-

through, and strong open springs B are engaged with the stocks between these pins A and the car tracks 29. The springs thus act to hold the stocks against upward movement and with the wheels 33 in operative position. Notches C are formed in the stocks 31, however, and latches D are mounted upon the platform and may be engaged in the notches to hold the stocks raised if desired. It will be understood that a suitable lever mechanism, not shown, may be used for raising the stocks if it is desired to do so.

In order to assure positive operation of the switch mechanism, it is advisable that the wheels 33 come forcefully into engagement with the segments 22 at the upper portions of the segments, and as shown in Fig. 5 of the drawings, a block E is spiked to the ties outwardly of each of the rails, this block having its upper surface F slanted upwardly toward the adjacent segment 22. The corner of the block nearest to the segment, indicated at G, lies in a plane above the segment, and it will thus be seen that when the wheels 33 come into engagement with the upper faces F of these blocks E, the wheels will be raised against the action of the spring C until they have reached the corners G of the blocks, when they will pass from the blocks and will be moved downwardly by the springs to forcefully engage the upper edges 27 of the segments 22, thus moving the segments.

What is claimed is:

1. In a switch mechanism, the combination with parallel rails, of a shift rod mounted for movement transversely of the rails, a movable switch member, connections between the shift rod and switch member for movement of the latter, said shift rod having upwardly directed rack teeth at its ends, segments pivoted in position to engage the rack teeth and arranged for movement to shift the shift rod, said rails being located in position to receive the segments thereagainst to limit their movement in one direction and means arranged for engagement of the segments to move them upon their pivots.

2. In a switch operating mechanism, the combination with a shift rod having upwardly directed rack teeth at its ends, of segments pivoted in position for engagement of the rack teeth, said segments being movable upon their pivots to shift the shift rod, and means for moving the segments.

3. In a switch mechanism, the combination with parallel rails, of a transverse tie located beneath the rails, brackets carried by the tie, a shift rod slidably mounted in

the brackets for movement transversely of the rails, said shift rod extending outwardly beyond the rails at its ends and having upwardly directed rack teeth at its upwardly extending portion, longitudinal members located outwardly of the rails and in parallel relation thereto, said members being cut at points above the shift rod, upwardly extending brackets carried by the members at opposite sides of their cuts, segments pivoted between the brackets and engaging the rack teeth for the shift rod, said segments being movable upon their pivots to move the shift rods, said segments having straight edges disposed in position for engagement of the webs of the rails for limitation of the movement of the segments, said rails being cut for the reception of the segments, operating members for the mechanism, said members including wheels arranged for engagement of the rails and having flanges extending downwardly over the outer faces of the rails for engagement of the segments to move said segments upon their pivots, a movable switch member and connections between the switch member and the shift rod for simultaneous movement thereof.

4. In a switch mechanism, the combination with main truck rails and switch rails, of means for shifting the switch rails, a car upon the rails, a vertically movable member carried by the car, means arranged for actuation by the vertically movable member for operating the switch moving means and blocks located adjacent to the rails for engagement of the vertically movable member to raise said member into position for engagement of the operating means.

5. In a switch operating mechanism, the combination with a shift rod, of a segment pivoted for movement in a vertical plane and engaging the shift rod for movement of said rod when the segment is moved, a vertically movable member arranged for engagement of the segment to move said segment, a spring arranged to hold the vertically movable member with its segment-engaging portions below the upward limit of movement of the segment, and a slanted block located adjacent to the segment in position to receive the vertically movable member thereagainst for movement of said member against the action of the spring.

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

JOSE MA GODOY.

Witnesses:

JOHN BOYD,

J. J. SWEENEY.