F. TOLBERT.

AUTOMATIC SWITCH CONSTRUCTION.

APPLICATION FILED JAN. 30, 1911.

998,050.

Patented July 18, 1911.

2 SHEETS—SHEET 1.

Fig. 2.

Fig. 1.

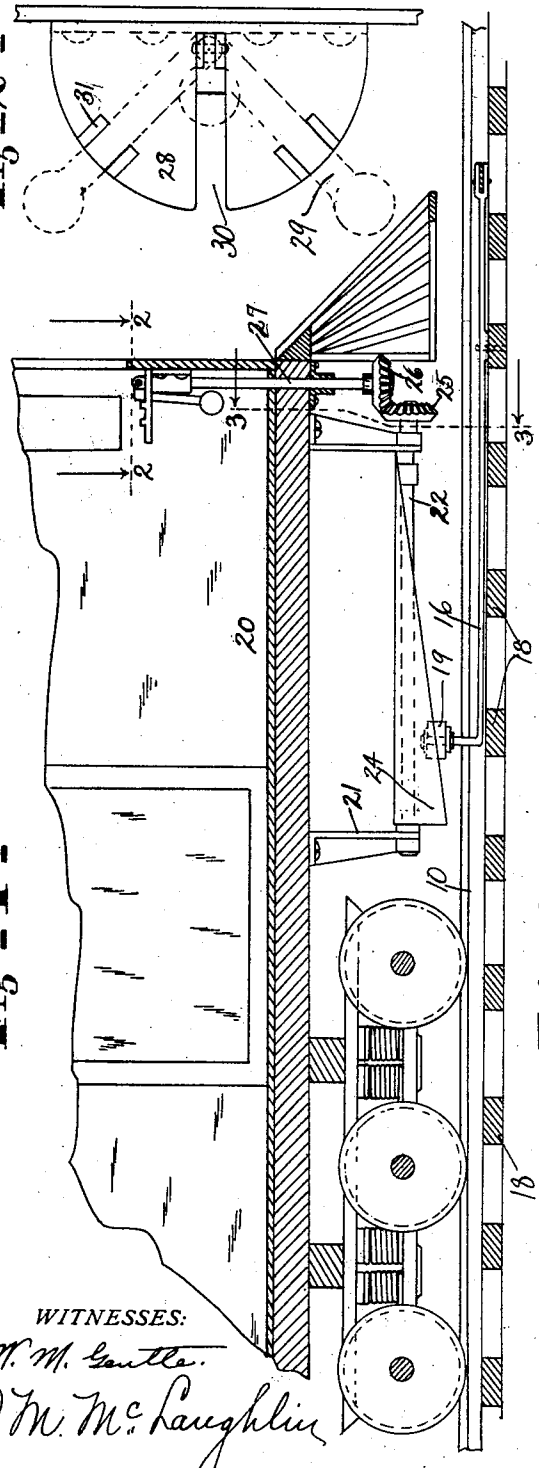


Fig. 4.

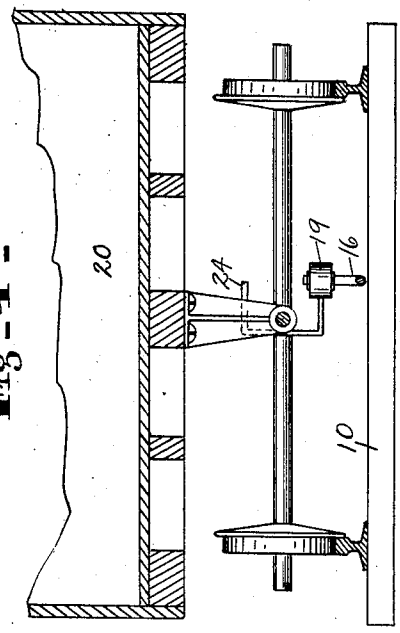
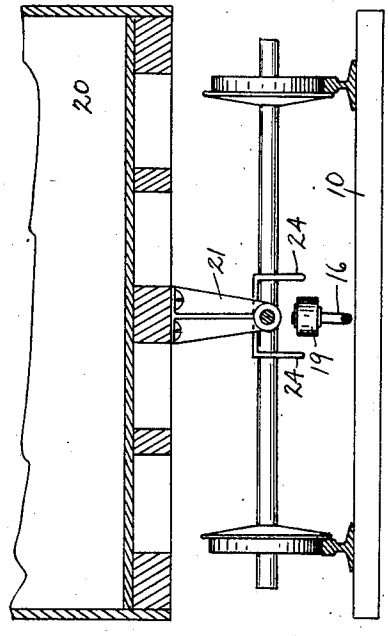


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 5.

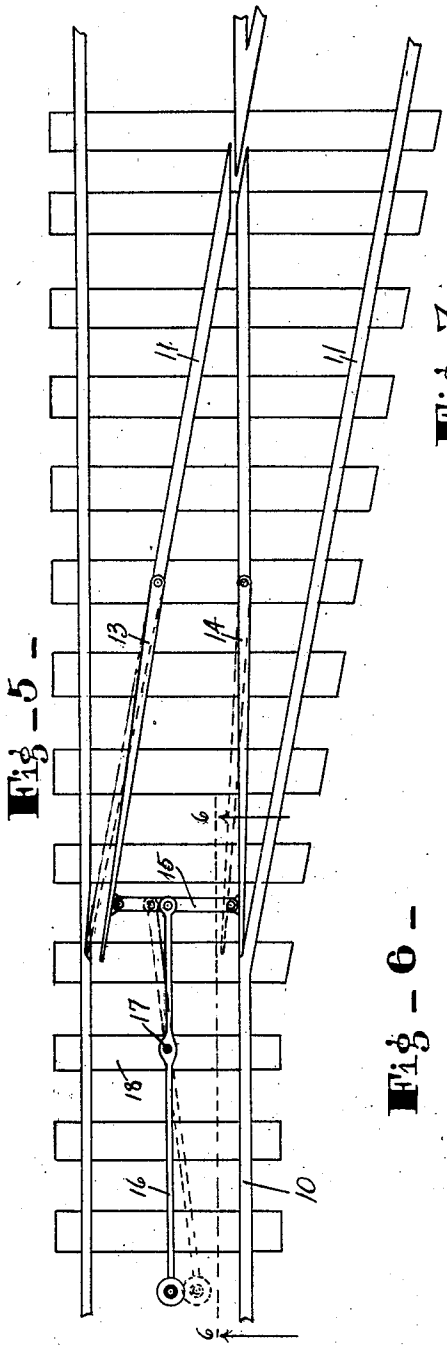


Fig. 7.

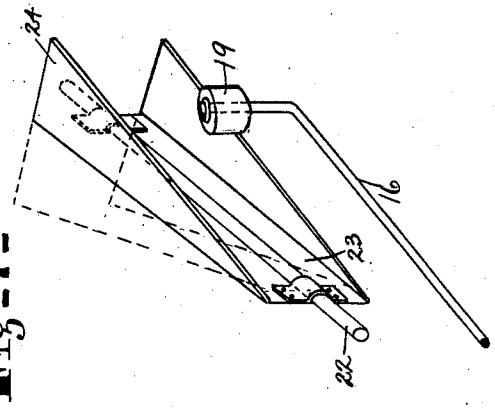


Fig. 6.

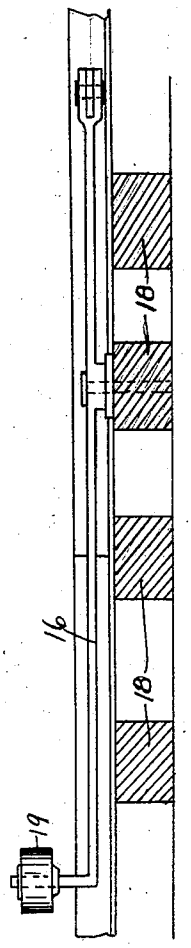
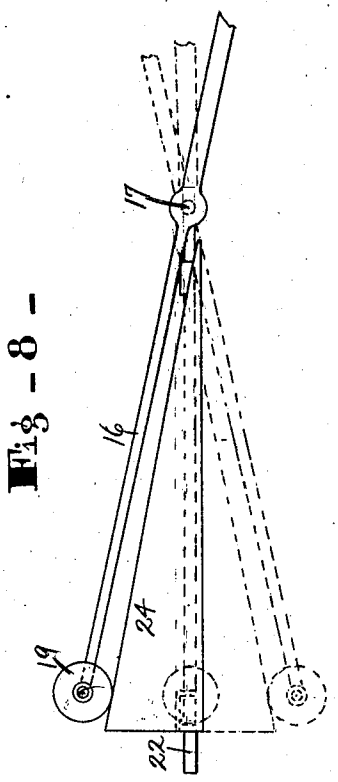


Fig. 8.



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UNITED STATES PATENT OFFICE.

FRED TOLBERT, OF ROGERS, ARKANSAS.

AUTOMATIC-SWITCH CONSTRUCTION.

998,050. Specification of Letters Patent. **Patented July 18, 1911.**

Application filed January 30, 1911. Serial No. 605,405.

To all whom it may concern:

Be it known that I, FRED TOLBERT, of Rogers, county of Benton, and State of Arkansas, have invented a certain useful Automatic-Switch Construction; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The object of this invention is to provide a practical mechanical means to enable the motorman of street and railway cars to throw switches without getting out of the car or reaching through the window thereof.

The nature of the invention will be understood from the following description and claims and the accompanying drawings.

In the drawings Figure 1 is a vertical longitudinal section through the lower front portion of a street car and through the track below. Fig. 2 is a horizontal section on the line 2—2 of Fig. 1. Fig. 3 is a transverse section on the line 3—3 of Fig. 1 showing the switch throwing device in one position. Fig. 4 is the same showing the switch throwing device in another position. Fig. 5 is a plan view of the railway track at the switch. Fig 6 is a vertical section through the track on the line 6—6 of Fig. 5. Fig. 7 is a perspective view of a portion of the switch throwing device on the track and the switch throwing device on the car, an altered position of the latter being shown by dotted lines. Fig. 8 is a plan view of what appears in Fig. 1, altered positions being indicated by dotted lines.

In detail there is shown herein a railway track including the main track rails 10, side track rails 11 and switch rails 13 and 14. The switch rail 13 is pivoted in alinement with one of the side track rails, and the switch rail 14 is pivoted in alinement with one of the main track rails. The movable ends of these switch rails are secured by a connecting bar 15 pivoted to them. A switch throwing lever 16 is pivoted between its ends at 17 on the cross tie 18 and at one end is pivoted about midway to the bar 15 and the other end is up-turned and carries a roller 19. In actual construction the lever 16 would be housed by a suitable covering, which, however, is not here shown.

The car 20 has two arms 21 extending downwardly from the forward portion in which the horizontal longitudinal shaft 22 is mounted, and said shaft has a switch throwing plate secured rigidly on it. This plate consists of a portion 23 which is horizontal when the device is idle, and two plates or flanges 24 extending downwardly from the sides thereof. These side flanges or plates are triangular, that is, they slope downwardly from the front toward the rear of the car.

The shaft 22 at its forward end has a bevel gear 25 which meshes with a bevel gear 26 on the lower end of a shaft 27 which runs up through the bottom of the car and through a horizontal plate 28 in the motorman's vestibule. A lever 29 is pivoted on the upper end of the shaft 27 so that when in a horizontal position, said lever 29 can be utilized to oscillate the shaft 27. When the switch throwing device is not in use, said lever 29 drops down through the slot 30 in the plate 28. When the switch throwing device is to be used, the lever is pulled up through said slot and moved laterally in one direction or the other to a point between the upwardly extending stop lugs 31 on the plate 28. One set of these stop lugs is positioned for holding the lever 29 where the switch throwing device will throw the switch in one direction. The other set of stop lugs is positioned where they will cause the switch to be thrown in the opposite direction.

Normally, the switch throwing plate is in the position shown in Fig. 1, and when the lever 29 is moved to one of the dotted line positions shown in Fig. 2, the switch throwing plate will be turned to the position shown in Fig. 7, wherein one of the flange plates 24 will engage the roller 19 and throw the switch lever 16 into the position shown by full lines in Fig. 8. That will close the main track and leave the switch open. When the lever 29 is thrown to the other dotted line position in Fig. 2, the switch throwing plate will be reversed to the dotted line position shown in Fig. 7 and the movement of the car will cause the switch lever 16 to be thrown to the dotted line position shown in Figs. 8 and 5, which will open the main track and close the switch to the side track.

I claim as my invention:

1. Mechanism in a car for operating switch throwing means on the track, which mechanism includes a longitudinally extending oscillatory plate mounted beneath the car with a pair of oppositely disposed flanges which taper forwardly, and means operative from

a point in the vestibule of the car for oscillating said plate so that in one position it will close the switch and in the other position it will open the switch as the car moves toward the switch.

2. Mechanism in a car for operating the switch throwing means on the track, which mechanism includes a longitudinally extending oscillatory shaft, a plate secured to said shaft which has a downwardly extending flange on each side of said shaft when the same is in normal position and which flanges taper forwardly, a shaft extending down from the vestibule of the car for oscillating said first-mentioned shaft, and means in connection with the upper end of said latter shaft to enable the same to be actuated.

3. The combination with a car, of arms extending downwardly from the bottom thereof, a horizontal shaft mounted longitudinally in said arms, a plate secured to said shaft with a flange extending downwardly at each side thereof and tapering forwardly, a bevel gear in the forward end of said shaft, a vertical shaft mounted in the bottom of the car and extending into the vestibule thereof, a bevel gear on the lower end thereof for engaging and driving said first-mentioned bevel gear, a lever connected with the upper end of said last-mentioned shaft, and means for limiting the throw of said lever arranged so that when the lever is at one position one of said downwardly extending flanges will be horizontal and below the shaft on which it is mounted, and when the lever is in the other position the other of said flanges will be horizontal and below the shaft on which it is mounted.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

FRED TOLBERT.

Witnesses:
H. C. FAIRBANK,
J. F. PORTER.