

J. MEANY.
 SWITCH THROWING MECHANISM.
 APPLICATION FILED JUNE 18, 1912.

1,048,563.

Patented Dec. 31, 1912.

Fig. 1.

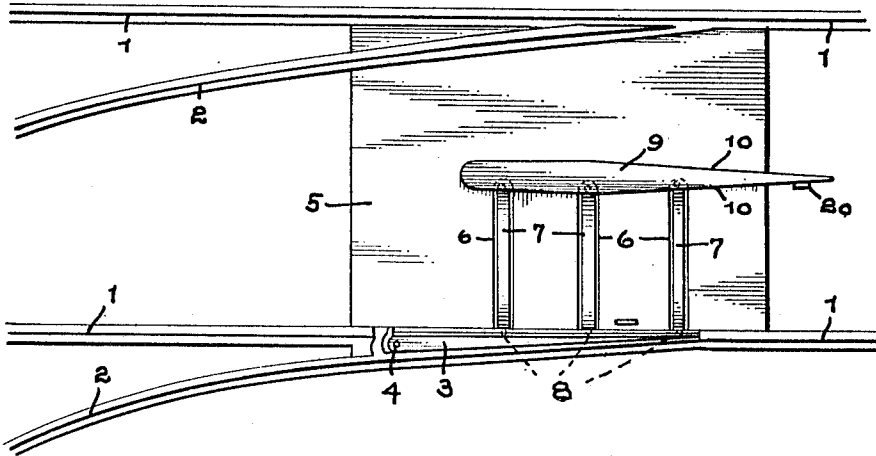


Fig. 2.

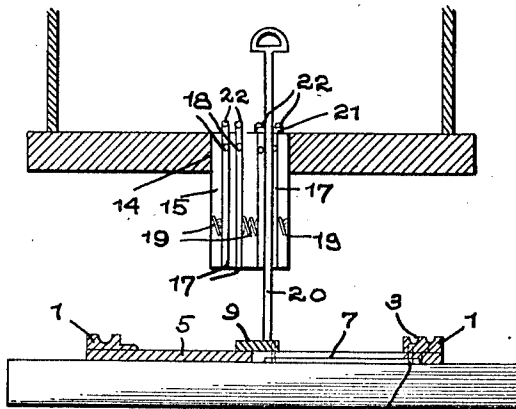


Fig. 3.

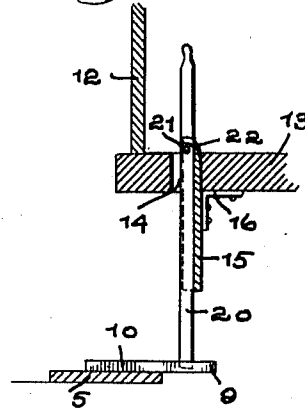


Fig. 4.

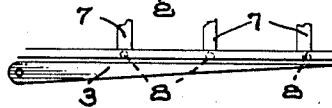
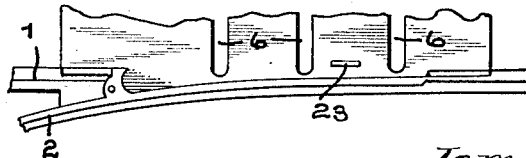


Fig. 5.



Witnesses

L. P. Meyer.
R. H. Krenkel.

Inventor
James Meany.

By *Joshua R. F. Fotte*
 Attorney

UNITED STATES PATENT OFFICE.

JAMES MEANY, OF PHILADELPHIA, PENNSYLVANIA.

SWITCH-THROWING MECHANISM.

1,048,563.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Original application filed March 5, 1912, Serial No. 681,690. Divided and this application filed June 18, 1912. Serial No. 704,294.

To all whom it may concern:

Be it known that I, JAMES MEANY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Switch-Throwing Mechanism, of which the following is a specification.

My invention relates to improvements in switch throwing mechanism, the object of the invention being to provide an improved mechanism supported on a car and which is constructed to permit the lateral swinging movement of the car, yet insures the switch being properly thrown without the necessity of stopping the car.

A further object is to provide a mechanism of this character which allows the switch to be thrown in either direction in accordance with the position of the switch throwing member.

This application is a division of my application filed March 5, 1912, and given Serial No. 681,690.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a plan view illustrating my improved switch. Fig. 2, is a view in cross section through the switch and through a car platform. Fig. 3, is a view in section at right angles to Fig. 2, the line of section being taken through the guide at one side of the switch operating bar. Fig. 4, is a broken plan view of the switch point, and Fig. 5, is a plan view of the track section at the switch point.

1, 1, represent the rails of the main track, and 2, 2, the rails of a turnout. These rails are curved and at their juncture my improved switch point 3 is located. This switch point 3 also has a longitudinal curve which normally registers with the curve in the side track and at one end the switch point is pivotally connected by a pin 4, so that it may be thrown to a position to close the main track and open the turnout. The rails, at their juncture, as well as the switch point, are supported upon a suitable bed 5 which is provided with transverse slots 6 in which links 7 are positioned. These links,

at one end, are pivotally connected to the switch point 3 as shown at 8, and at their other ends are pivotally connected to a switch member 9. This member 9 extends longitudinally of the track, and at opposite sides is tapered forming cam faces 10, 10. These cam faces 10, 10, are properly proportioned so that a bar 20 operated from a car 12 is adapted to throw the member 9 a distance sufficient to operate the switch point when said bar contacts with the cam faces 10, as will be hereinafter explained.

The car platform 13 is provided with a transverse opening 14, in which a depending board 15 is secured, and preferably held by a bracket 16. On the front face of this board 15, four parallel guides 17 are secured, the upper ends of which are pivotally connected to the board by means of screws 18, so that the guides at their lower ends have a certain amount of lateral movement. They are held, however, in normal position by springs 19 which are secured to the board, and these springs are adapted to compensate for any lateral swinging movement of the car for returning the guides to normal position.

A removable switch operating bar 20 is provided and is adapted to be inserted between the guides 17. While, of course, there are four of the guides, there are only two positions for the bar 20, one to throw the switch in one direction, and the other in the opposite direction.

A transverse pin 21 is positioned through bar 20, and is adapted to engage over the upper ends of the guides and under hooks 22 on plate 15. The pin is positioned on top of the guides 18 and is extended back under the hooks 22. The pin therefore maintains the bar in its operative position, and the hooks prevent any upward movement of the bar when the bar strikes the member 9.

Assuming the parts to be in the position shown in Fig. 1, and it is desired to take the turnout, the motorman places bar 20 between the left hand pair of guides which is the position shown in Fig. 2. As the car approaches the switch, the lower end of the bar will engage member 9 as shown in Fig. 1, so that the continued movement of the car will, due to the cam face 10, cause the member 9 to be moved so as to throw the switch point and open the turnout. If

the turnout is open, the bar will be positioned between the other guides so as to swing the switch point in the opposite direction as will be readily understood.

5 Street railway cars, as is well known, are mounted upon springs, and sometimes there is a considerable lateral swaying movement of the car. To prevent damage to the switch and to the mechanism for operating
10 the same in the event the car is swung laterally while moving over the switch, the springs 19 are provided, and they allow the guides to swing to compensate for this movement. It is to be understood, however, that
15 they are strong because it is necessary that they hold the guides in position to maintain the bar 20 substantially vertical so that it will throw member 9. To limit the movement of the switch point in one direction,
20 the stop 23 is fixed to the bed plate 5.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to
25 the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

30 Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a switch throwing mechanism, the combination with a car, of vertical guides

on the car having lateral movement, and a bar adapted to be positioned in said 35 guides and held thereby in position to throw a switch, substantially as described.

2. In a switch throwing mechanism, the combination with a car, a depending board secured to the car and projecting through 40 a slot therein, parallel guides pivotally connected adjacent their upper ends to said board, springs on the opposite sides of said guides, and a switch throwing bar adapted to be positioned between said guides, sub- 45 stantially as described.

3. In a switch throwing mechanism, the combination with a car, a depending board secured to the car and projecting through 50 a slot therein, parallel guides pivotally connected adjacent their upper ends to said board, springs on the opposite sides of said guides, a switch throwing bar adapted to be positioned between said guides, forwardly projecting hooks on the upper end of said 55 board, and a transverse pin on the switch throwing bar adapted to be positioned under said hooks, substantially as described.

In testimony whereof I have signed my name to this specification in the presence 60 of two subscribing witnesses.

JAMES MEANY.

Witnesses:

CHARLES E. POTTS,
R. H. KRENKEL.

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