

J. J. THOMAS.
 POINT CONTROLLING MECHANISM FOR TRAMWAYS AND THE LIKE.
 APPLICATION FILED MAY 20, 1910.

997,871.

Patented July 11, 1911.

Fig. 1

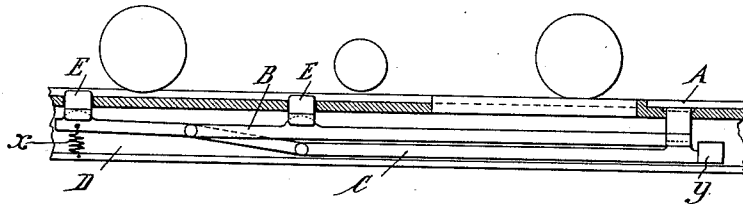


Fig. 2

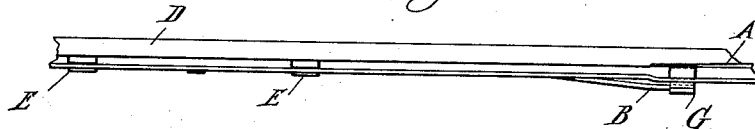


Fig. 3

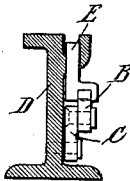


Fig. 4

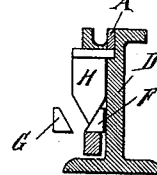
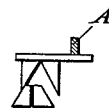


Fig. 5



Fig. 6



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POINT-CONTROLLING MECHANISM FOR TRAMWAYS AND THE LIKE.

997,871.

Specification of Letters Patent.

Patented July 11, 1911.

Application filed May 20, 1910. Serial No. 562,531.

To all whom it may concern:

Be it known that I, JAMES JEFFREY THOMAS, a subject of the King of England, and resident of Liverpool, England, have invented a Point-Controlling Mechanism for Tramways and the Like, of which the following is a specification.

The subject of the present invention concerns a point controlling mechanism for tramways and the like and relates more especially to a controlling mechanism by means of which the driver or motor man on a vehicle, can determine on approaching a point, whether the vehicle shall continue along the main line or shall be diverted along a branch line. For convenience I use the term "closed" to express that the points are in such a position that a car will keep to the main line, and I use the term "open" to indicate the opposite.

In order that the invention may be fully understood reference is made to the accompanying drawing, wherein—

Figure 1 shows the side of the rail with levers attached. Fig. 2 is a top view of the rail. Fig. 3 is a section of rail showing an end view of the levers. Fig. 4 is a section of the rail and point tongue showing the position of the wedges. Fig. 5 shows an alternative method of making the upper lever. Fig. 6 shows the wedges arranged to work in the reverse direction.

The essential feature of this invention is that the point tongue (marked A in the drawings) is operated by means of wedges one on either side of a wedge forming part of, or being attached to, the point tongue, the two former being actuated by the driver or motor man pressing down a wheel or other instrument carried by the car, in the following manner. Below the road surface are two levers the uppermost of which, B, is pivotally supported by the other lever C which is pivoted to the rail D or any other fixture. The lever B carries two upwardly projecting pieces E, E one on each side of the fulcrum, which pass through slots in the groove of the rail. These pieces normally are flush with the top of the rail, and are arranged apart at a distance equal to half the wheel base of the car. The lever has upon one end a wedge G, and attached to the other end a spring X which keeps the lever in its normal horizontal position. The other lever C carries a weight Y in order to

keep the end, having the wedge F, depressed. The wedges G and F are placed on either side of a wedge H attached to the point tongue A, and are adapted to be so adjusted that if either of them is raised it acts upon the wedge H and forces the point tongue A into a certain position. In action, when it is desired that the vehicle shall be diverted along a branch line, the wheel or other instrument controlled by the motor-man is lowered into the groove of the rail with the result, that it and the front wheel of the car will simultaneously engage the projecting pieces E, E, of the upper lever B, thereby forcing the lever bodily downward, the latter thus turning the lower lever C upon its pivot and raising the end having the wedge F until it engages the wedge H upon the point tongue and forces it into the open position. If it is desired that the car shall keep to the main line the wheel or other instrument controlled by the motor-man is kept in its raised or inoperative position, so that the pieces E, E, are only engaged by the car wheels which strike them separately with the result that the lever B rocks upon its pivot without moving the other lever. This causes the end having the wedge G to rise and engage the wedge H thus forming the point tongue into its closed position.

In order to reduce the space required I may make two levers as shown in Fig. 5 to do the work of the upper lever B. In that case I will pivot the two levers upon the point of the lower lever C. The short lever 1 which is operated by the car wheels has a projection 2 upon the end nearest to the point tongue which when the other end of the lever is depressed engages with a projection 4 upon the long lever 3 and raises it, thus operating the wedge affixed to the end. But if the other end of the lever is depressed it is free to move without the long lever. Also I may attach two wedges instead of one to the point tongue A as shown in Fig. 6 which will enable me to either reverse the movement of the point tongue or the position of the levers.

Having now fully described my said invention what I claim and desire to secure by Letters Patent is:—

In point controlling mechanism the combination with a rail, of a lever B, a second lever C pivotally supporting the first lever and being in turn pivoted to the said rail,

projections on each side of the pivot which connect the two levers, slots in the groove of the rail through which the said projections are guided and adapted to be depressed in
5 turn or together by the car wheels and an auxiliary wheel, wedges on the ends of the levers nearest the rail point tongue and a wedge upon the point tongue with which the first mentioned wedges cooperate, sub-

stantially as described and shown and for 10 the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JAMES JEFFREY THOMAS.

Witnesses:

H. WILLIAMS,
FRED NAYLOR.

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