

No. 841,876.

PATENTED JAN. 22, 1907.

C. LAROCQUE.
RAILWAY SWITCH.

APPLICATION FILED SEPT. 20, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

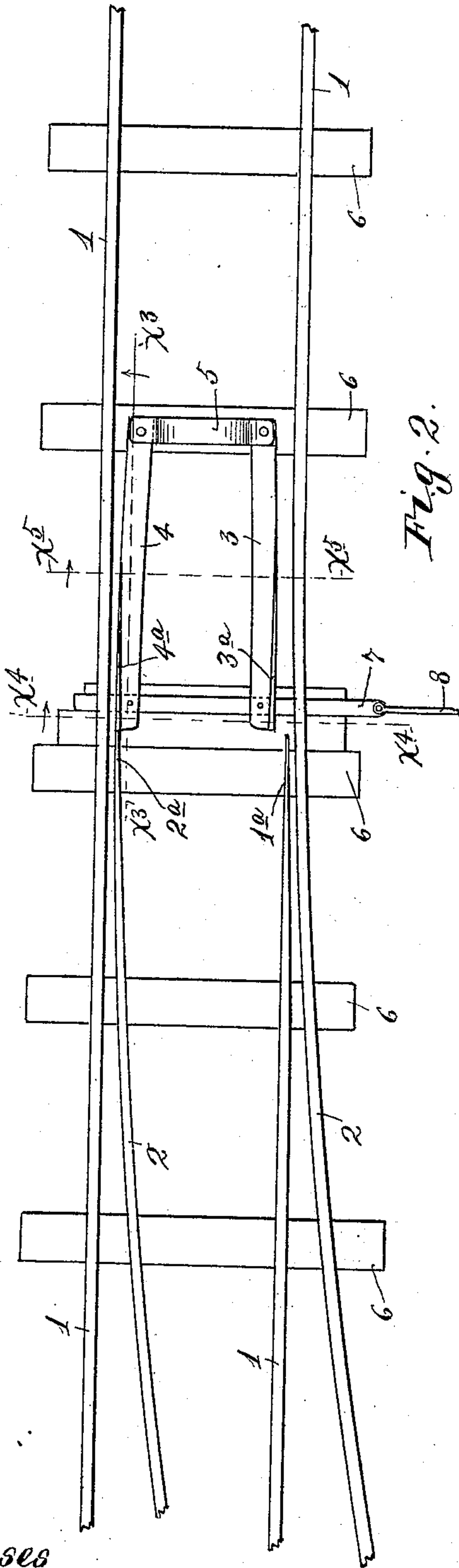
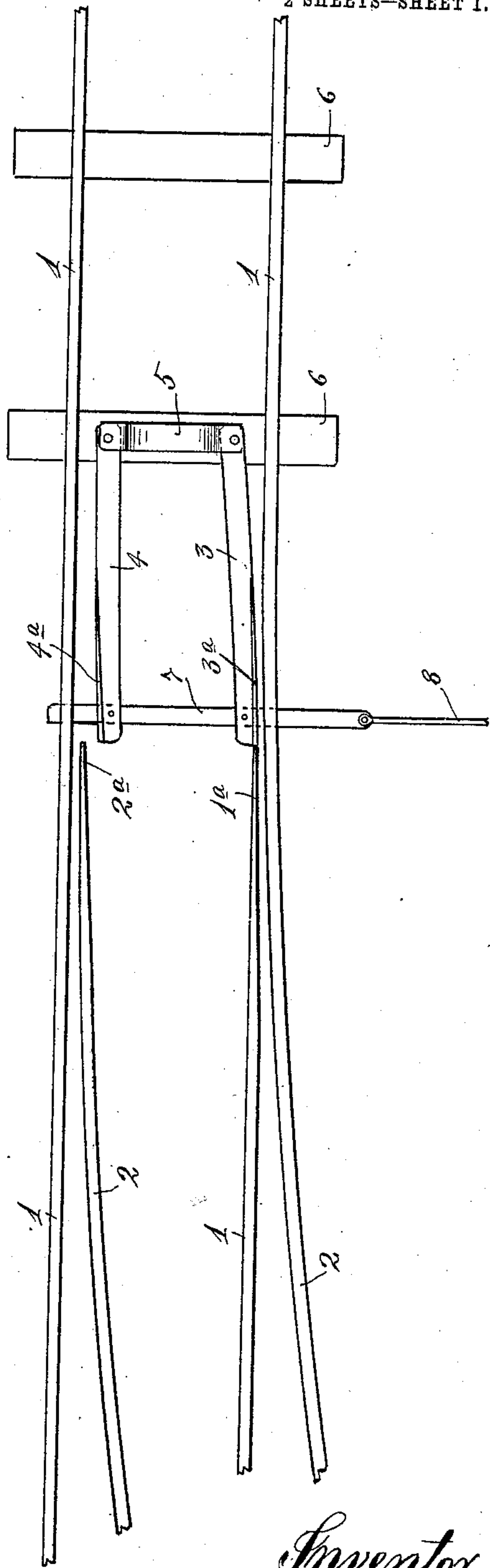


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

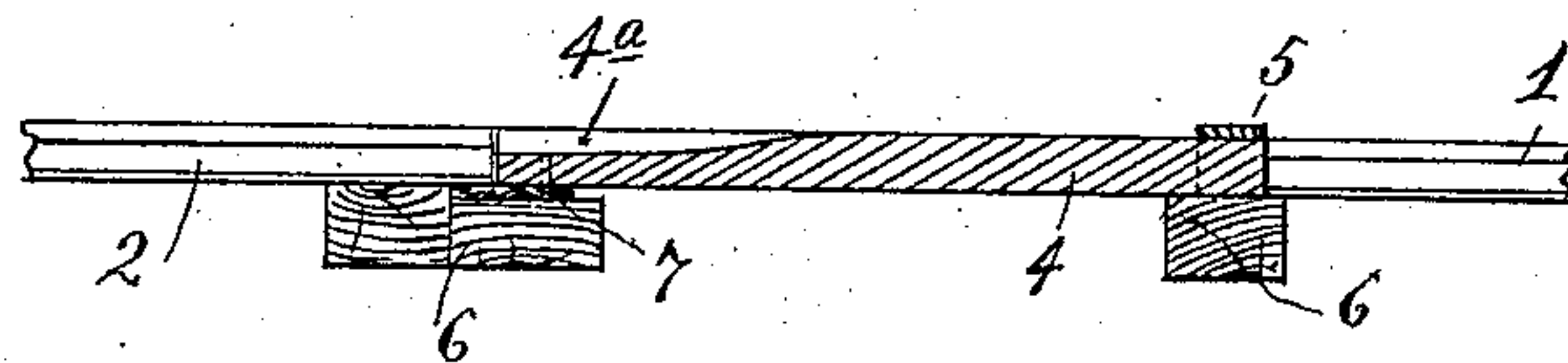


Fig. 4.

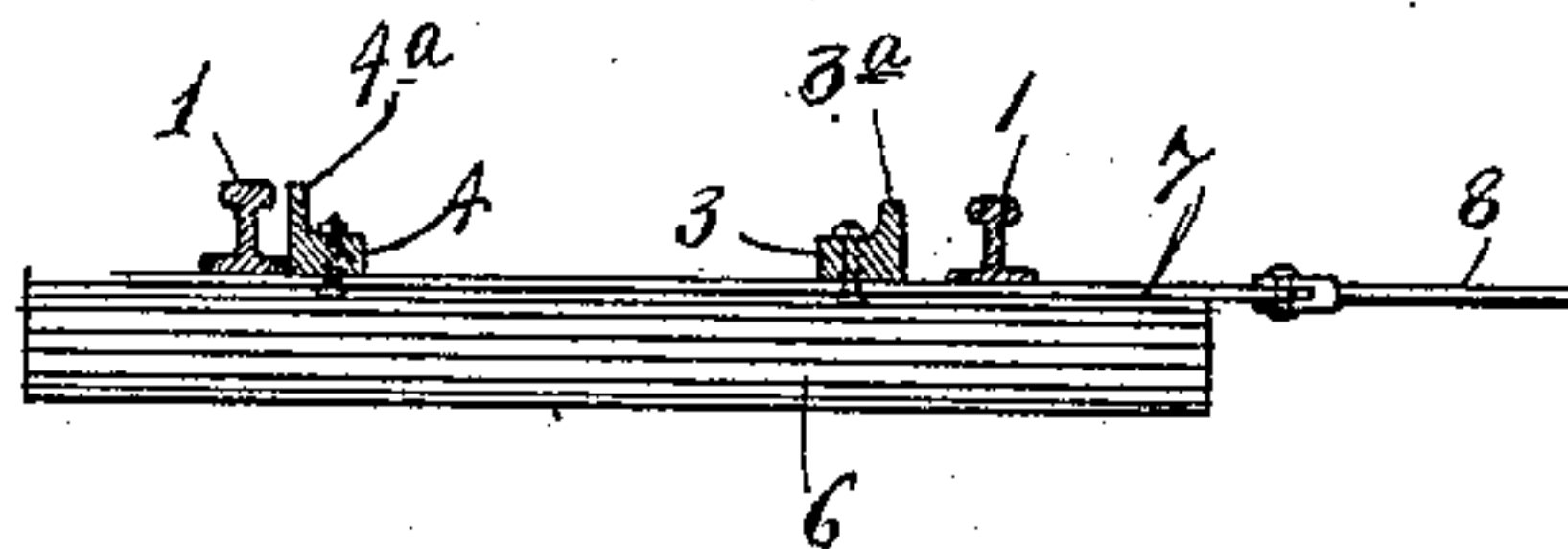
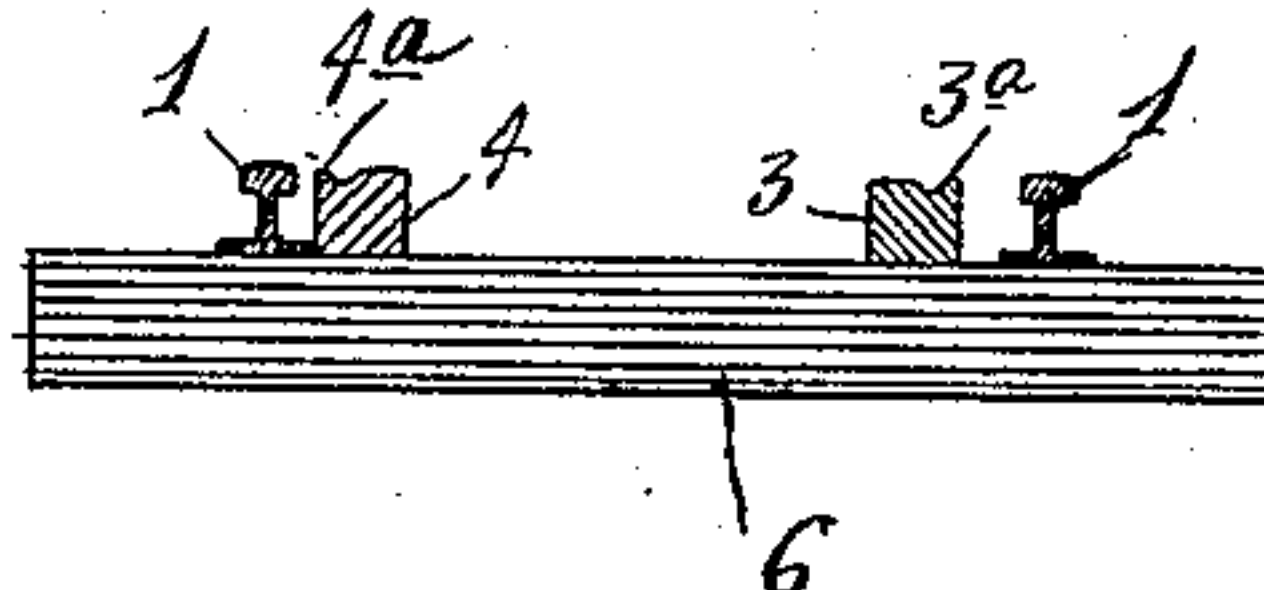


Fig. 5.



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CHARLES LAROCQUE, OF OLGA, NORTH DAKOTA.

RAILWAY-SWITCH.

No. 841,876.

Specification of Letters Patent.

Patented Jan. 22, 1907.

Application filed September 20, 1906. Serial No. 335,383.

To all whom it may concern:

Be it known that I, CHARLES LAROCQUE, a citizen of the United States, residing at Olga, in the county of Cavalier and State of North Dakota, have invented certain new and useful Improvements in Railway-Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide a safety railway-switch of simple construction and improved action; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

Briefly stated, the particular object of the invention is to provide an improved switch which when set to cause a train to run on the main-line track, for instance, will nevertheless direct a train from the switch or branch-line track onto the main track without derailment, and, on the other hand, which when set to direct a train from the main-line track onto the side or branch track when the train is running in one direction will nevertheless cause a train running in the other direction on the main track to pass the switch without derailment.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to the drawings, Figures 1 and 2 are plan views showing the improved switch applied to the junction of the main-line track and the switch or branch track, the said two views illustrating different positions of the switch. Fig. 3 is a vertical section taken on the line $x^3 x^3$ of Fig. 1. Fig. 4 is a transverse vertical section taken on the line $x^4 x^4$ of Fig. 1, and Fig. 5 is a transverse vertical section taken on the line $x^5 x^5$ of Fig. 1.

The numeral 1 indicates the rails of the main-line track, and the numeral 2 the rails of the side or branch track, which rails are fixed or stationary. The inner rails of the main and branch tracks terminate at the switch or junction of the two tracks in tapered or pointed rail portions 1^a and 2^a , respectively, that terminate at points transversely opposite to each other, the said pointed rails being spaced apart slightly

from the adjacent rails, so as to permit the passage of the wheel-flanges.

The switch proper is made up of a pair of oscillatory rail sections or bars 3 4, that are located inside of the track-rails 1, being pivoted at one end, as shown, to a bearing 5, that is rigidly secured to one of the ties 6. The free ends of the switch-rails 3 4 terminate in such positions that they are adapted to be moved into alinement, respectively, with the pointed rail-sections 1^a and 2^a , and they are connected by a sliding tie-bar 7, that has pivotal connections therewith and is adapted to be operated by the usual switch-stand. (Not shown.) The numeral 8 indicates a connecting rod or link for connecting the sliding bar 7 to the said switch-stand. The connections between the sliding bar 7 and the free ends of the switch-rails 3 and 4 are such that when the said rail 4 is alined with the rail 2^a , as shown in Fig. 1, the rail 3 will be set far enough inward from the rail-section 1^a to permit the wheel-flanges to pass between the same. It follows from this same relative arrangement that when the switch-rail 3 is alined with the rail-section 1^a the switch-rail 4^a will be set far enough inward from the rail-section 2^a to permit the wheel-flanges to pass between the same, as shown in Fig. 2.

By reference particularly to Figs. 3 and 4 it will be noted that the main portions of the free ends of the rails 3 and 4 are reduced and inclined downward toward the free ends, but are left with raised flanges 3^a and 4^a , respectively, which flanges run out at approximately the central portions of the said respective rails.

Fig. 1 shows the switch set to guide a train on the main line made up of the rails 1, and by reference to said view it will be noted that the flanges 4^a in this position of the parts form a continuation of the reduced rail-section 2^a . With the switch thus set, a train running in either direction on the main line will run smoothly past the switch and will not be permitted to run onto the side track or branch line 2. However, a train approaching the main line from the side track or branch line will not be derailed, but will be caused to run onto the branch line by the action of the supplemental rail-flange 4^a of the switch-rail 4, which, acting on the wheel-flanges, holds the opposite wheels on the op-

posite rail 1 until they have reached positions in which the wheels on both sides of the car properly engage with the two rails 1. In thus directing the train from the side track to the main line the wheels, the flanges of which come into contact with the supplemental rail-flange 4^a, are raised slightly by the inclined surface of the switch-rail 4, and a slight jolt will be produced as the wheel-flanges run from the said switch-rail 4 onto the adjacent rail 1.

It will of course be understood that the switch will not be intentionally set, as shown at Fig. 1, for the purpose of directing a train from the switch-track onto the main line, but, on the contrary, that it will be set as shown in Fig. 2, where it is expressly intended that the train shall be directed from the switch-line onto the main line. Otherwise stated, the switch described is a safety-switch, which in any set position will not cause a train to be derailed in passing by the switch.

As already stated, Fig. 2 shows the switch set for the purpose of directing a train from the switch-line onto the main line, or vice versa; but with the switch set as shown in Fig. 2 a train approaching from the left toward the right on the main line will not be derailed; but in passing the switch the flanges of the wheels on the right-hand side of the train will engage the supplemental wheel-flanges 3^a and will run up the inclined portion of the switch-rail 3 and off the same onto the adjacent rail 1, with but a slight jolt in passing

from the former to the latter, this action being the same as that described in connection with Fig. 1.

As is evident, the improved switch above described is made up of but very few parts and has no parts that are likely to get out of order or to be blocked against operation by snow, ice, or dirt. Aside from its safety feature it is a simple and highly-efficient form of switch, and, furthermore, is a switch that may be installed at a very small cost.

What I claim is—

The combination with adjoining rails of a main line 1 and a branch line 2, the inside members of said rails 1 and 2 having the reduced terminal portions 1^a and 2^a, of a switch made up of the switch rails or bars 3 4 pivoted at one end and located inside of the adjacent rails 1, the said rails 3 and 4 being reduced from the intermediate portions toward their free ends and having respectively the supplemental rail-flanges 3^a and 4^a, and the tie-bar 7 pivotally connecting the free ends of said rails 3 and 4, and so spacing the same that their supplemental rail-flanges 3^a and 4^a will be moved alternately into alignment with the said terminal rail portions 1^a and 2^a, substantially as described.

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

CHARLES LAROCQUE.

Witnesses:

SAMUEL CROSS,
R. E. A. CUFFE.