

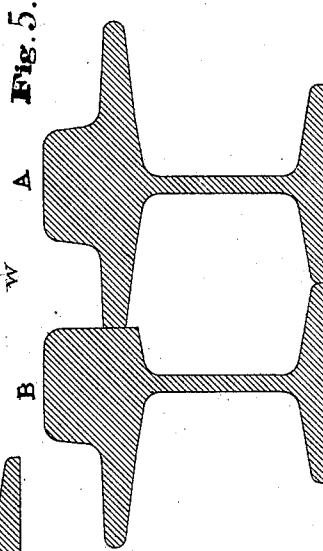
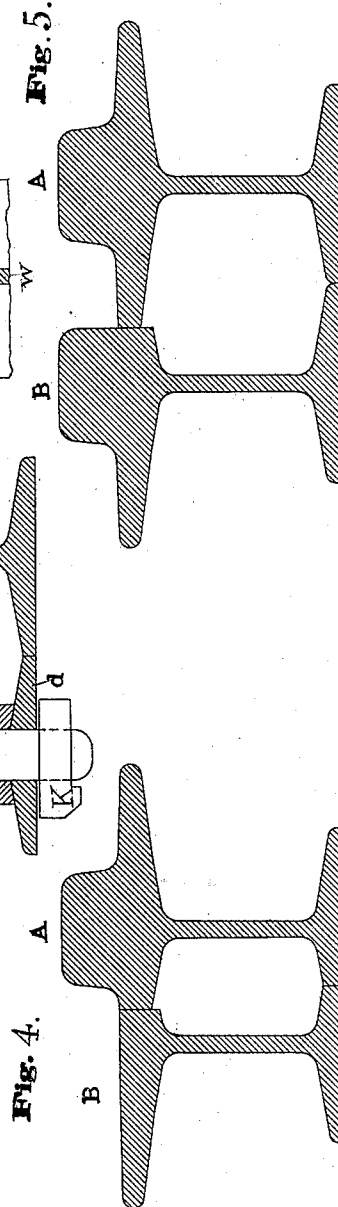
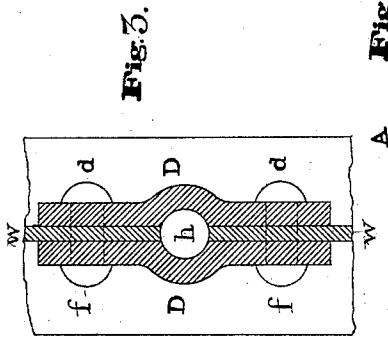
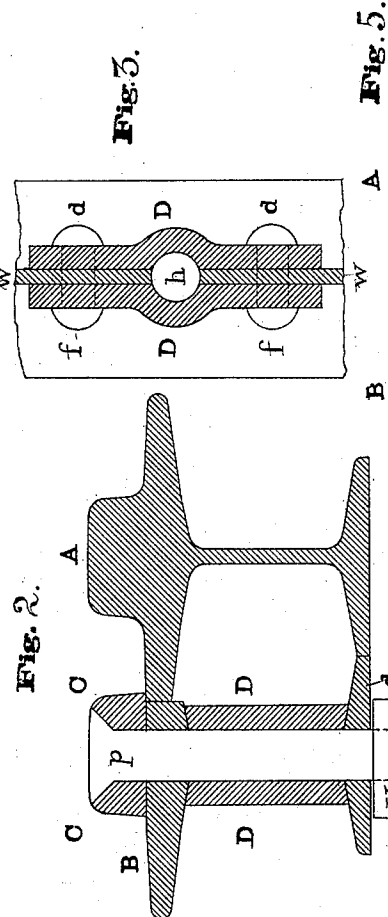
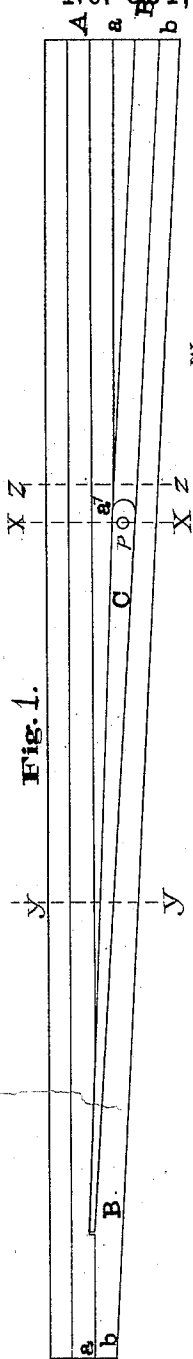
(No Model.)

2 Sheets—Sheet 1.

A. J. MOXHAM.
RAILROAD SWITCH.

No. 331,525.

Patented Dec. 1, 1885.



WITNESSES

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Francis J. Kelly

INVENTOR

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 6.

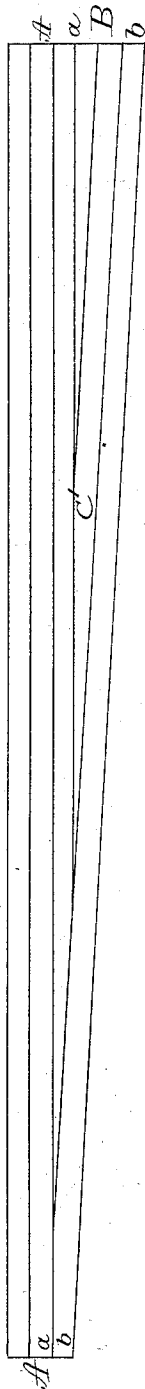
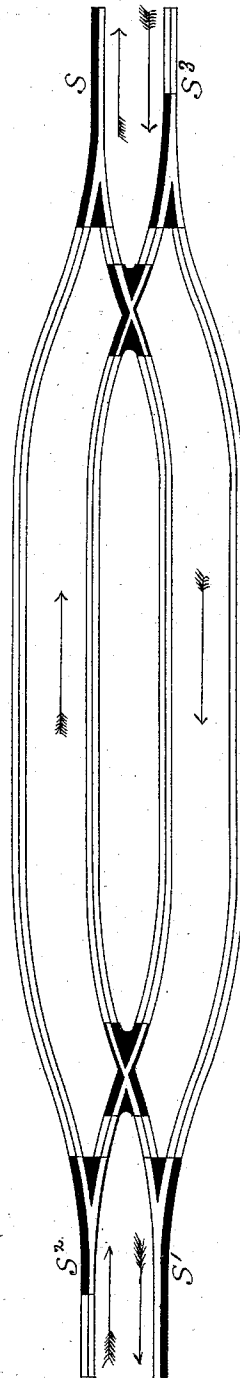


Fig. 7.



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UNITED STATES PATENT OFFICE.

ARTHUR J. MOXHAM, OF JOHNSTOWN, PENNSYLVANIA.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 331,525, dated December 1, 1885.

Application filed August 25, 1885. Serial No. 175,290. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. MOXHAM, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Switches, which invention or improvement is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is to provide a form of switch more particularly for street-car tracks, which shall be made of two center-bearing girder-rails capable of being connected by splice-bars or otherwise to the rails which are used for the rest of the track.

The invention consists of the combination of parts, as hereinafter described, and set forth in the claim.

In the accompanying drawings, Figure 7 is a general plan of an entire turn-out or passing switch for a railroad-track, merely intended to illustrate the location of the switches shown in detail in the preceding figures, for effecting the necessary turn-outs to permit of the cars passing each other in opposite directions from a single track. Fig. 1 shows the switch in plan, having a movable tongue. Fig. 2 shows a vertical cross-section through the switch at the line *xx*, Fig. 1. Fig. 3 shows a horizontal section taken through Fig. 2 at the line passing through the letters *DD* in said Fig. 2. Fig. 4 shows a vertical cross-section through the switch at the line *yy*, Fig. 1, the tongue being omitted. Fig. 5 shows a vertical cross-section through the switch at the line *zz*, Fig. 1. Fig. 6 shows the switch in plan, having a fixed instead of a movable tongue, the head of the rail *B* being partly cut away to perform the office of a "blind switch."

In said figures the several parts are indicated by letters, as follows: *A*, one center-bearing girder-rail, and *B* a similar center-bearing girder-rail, constituting, respectively, the main portions of the switch. Between said rails is pivoted, at the point *p*, as seen in Fig. 1, the movable tongue *C*, whose end terminates near the point *B'*, said rails being cut, as shown in said figure, so that as they converge room will be made for said tongue and its proper sweep or throw upon its pivot. At the line *zz*, Fig. 1, the rails *A B* have been given such convergence that the head of rail *B* is vertically

cut through, as shown in Fig. 5, and one side tram of rail *A* is cut through and abuts the cut head of rail *B*, as shown in said figure. The convergence continuing, at the line *xx*, Fig. 1, the rails *A* and *B* are cut, as shown in Fig. 2. In said figure the rail *A* is shown having a part of one side tram and a part of one lower flange cut off, said sections abutting, respectively, one slightly cut-away lower flange and one closely cut-away side tram of the rail *B*. The head of rail *B* is also at this point entirely cut away down to its side trams, as shown at *a*, Fig. 1, its place being supplied by the movable tongue *C*, as shown at said point *a*, and also at *C C*, Fig. 2. The web *w* of the rail *B* is cut or bored through at the point *a'*, as shown in plan in Fig. 3, and two side splice-pieces, *D D*, are riveted through the web, as shown at *ff*, Fig. 3, said splice-pieces being offset, so as to form a boss at the points *D D*, Fig. 3. Through the hole, *h*, thus formed the pin or pivot *p* of the tongue *C* is inserted and secured by a key, *K*, driven through said pin below the flange *d* of the rail *B*. The convergence continuing, at the line *yy*, Fig. 1, the rails *A* and *B* are so cut as at said line to present, respectively, the forms of cross-section shown in Fig. 4. The proper or desired convergence being thus given to the rails by the angular cutting described, they may be secured or tied together by bolts or rivets and chocks at suitable intervals, but preferably riveted, rather than bolted, in any well-known manner.

The letters *a b*, Fig. 1, indicate in plan the respective terminal widths of the side trams of the rails *A* and *B*, and the letter *d*, Figs. 2 and 3, indicates one lower flange of the rail *B*.

The head of the rail *B* may be either entirely cut away, as shown at *a'*, Fig. 1, to provide for the insertion of the movable tongue *C*, or said head may be only partly cut away, as shown at *C'* in Fig. 6, in which latter figure the uncut portion is on one side of the groove, and, taking the place of the movable tongue, forms a fixed tongue or blind switch.

In the general plan, Fig. 7, the letters *S S'* indicate the location of two side switches devoid of movable tongues, and *S S'* the location of two main switches, having either fixed or movable tongues, as may be preferred.

The arrows indicate the directions in which the cars would move in passing each other.

For connecting the ends of these switches to the main track, any of the various known forms of splice-bars can be used, preferably the same as those used in the rest of the track when the track is made of center-bearing girder-rails.

In constructing the switches of the center-bearing rolled girder-rails herein described the whole line of track may be of one uniform material—namely, preferably rolled steel, if used in connection with rolled-steel frogs. The webs of the rails used impart stiffness to the whole structure, being utilized to connect the one part with the other. A strong and durable set of switches of uniform design and material, preferably the same as used for the rest of the track, if said track is constructed of center-bearing girder-rails, is thus furnished for such track, adding greatly to the efficiency of the railway and saving much loss

of time, and consequent expense in effecting repairs, such as would be required with less durable switches.

It is obvious that, if desired, the web of one rail, the two being convergent, can be left on until the said webs meet. The two rails at one end can then be riveted together directly through their webs without the insertion of any chocks whatever.

Having thus fully described my said improvement, as of my invention I claim—

A railway-switch for street-car tracks, composed of two rolled center-bearing girder-rails cut and fitted together at the necessary angle to deflect the car, secured together at their junction, and at their divergent ends to the main rails of the track, substantially as and for the purposes set forth.

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