

(No Model.)

2 Sheets—Sheet 1.

A. J. MOXHAM.  
RAILROAD SWITCH.

No. 333,474.

Patented Dec. 29, 1885.

Fig. 1.

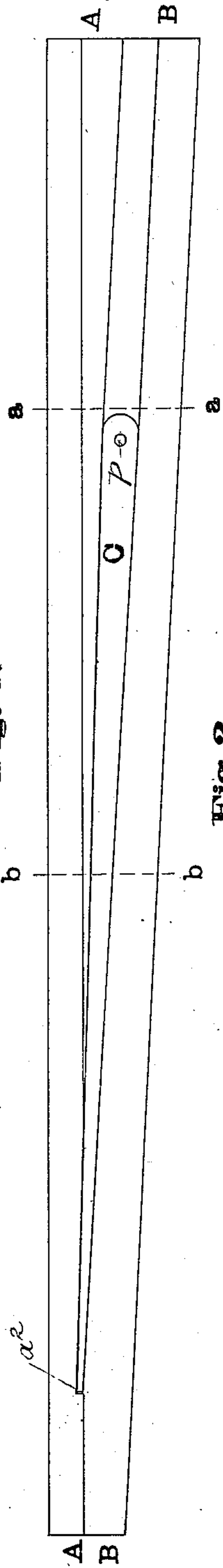


Fig. 2.

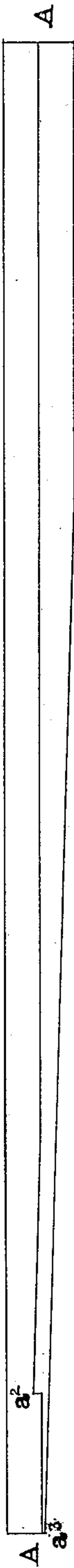


Fig. 3.

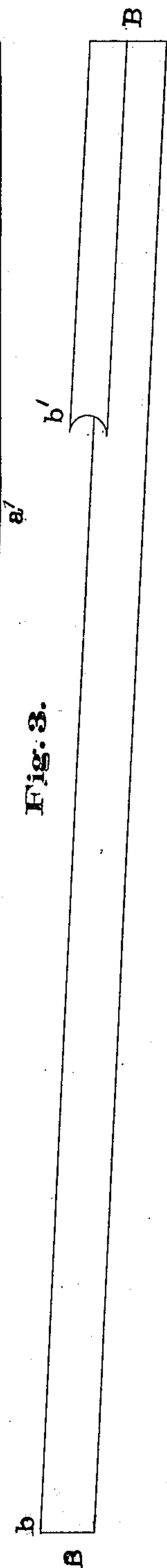


Fig. 5.

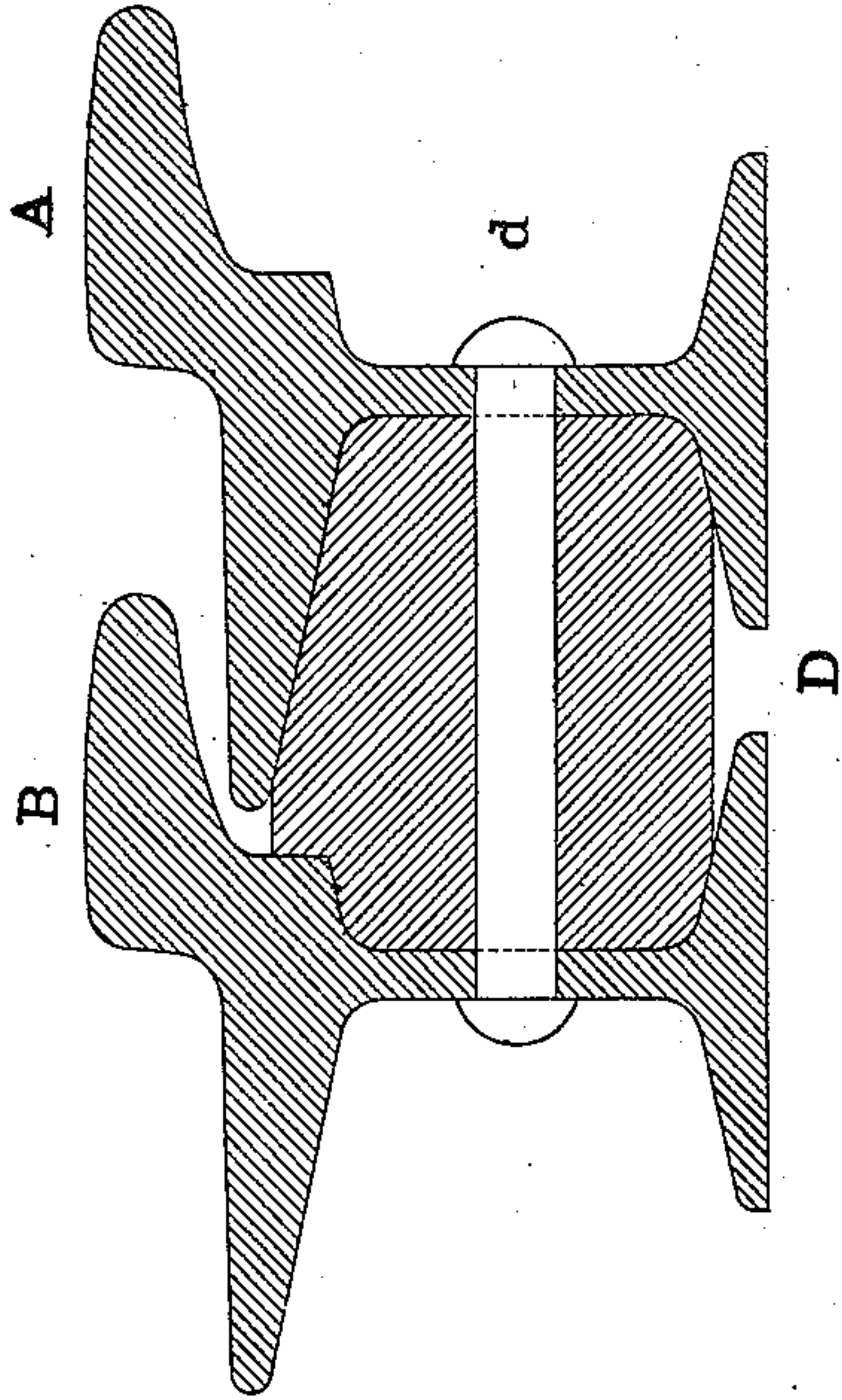
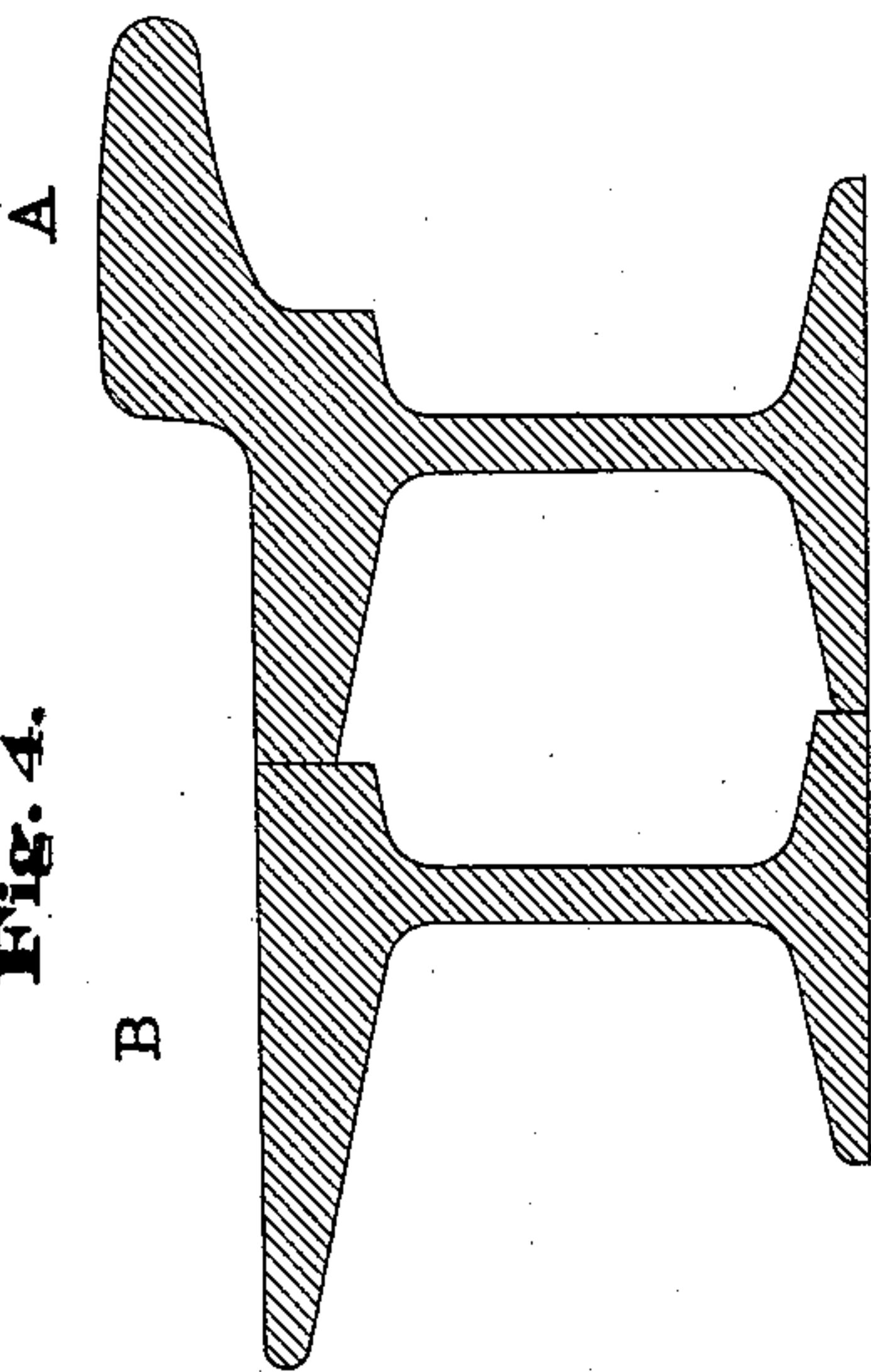


Fig. 4.



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Fig. 6.

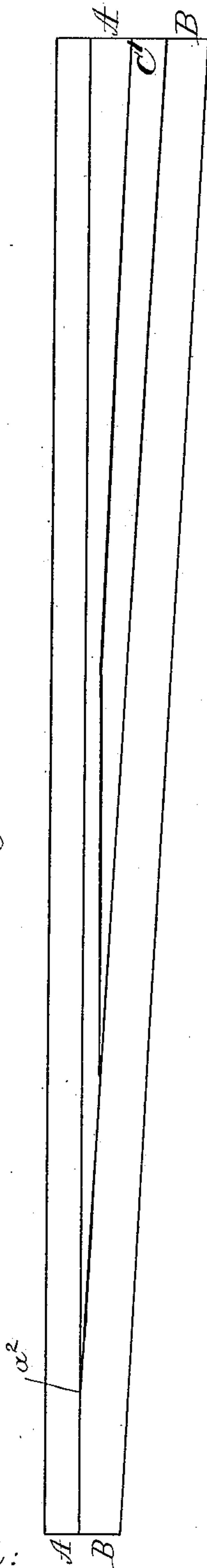
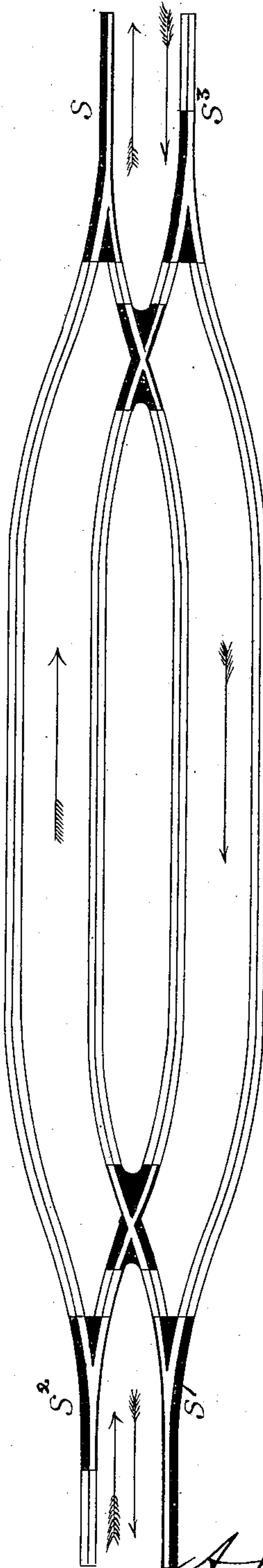


Fig. 7.



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# UNITED STATES PATENT OFFICE.

ARTHUR J. MOXHAM, OF JOHNSTOWN, PENNSYLVANIA.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 333,474, dated December 29, 1885.

Application filed August 24, 1885. Serial No. 175,152. (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 side-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, also in plan, the rail A of Fig. 1 detached. Fig. 3 shows, likewise in plan, the rail B of Fig. 1 detached. Fig. 4 shows a vertical cross-section through the switch at the line *b b*, Fig. 1, the tongue being omitted. Fig. 5 shows a vertical cross-section through the switch at the line *a a*, 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 side-bearing girder-rail having a wide tram below the level of the head proper of the rail; B, a similar side-bearing girder-rail.

For the purpose of inserting the movable tongue C, as shown in Fig. 1, said rails are cut, as more clearly shown in Figs. 2 and 3, respectively, so that, as they converge, room will be made for said tongue and for its proper movement. At the line *a a*, Fig. 1, the rails are still apart and uncut, being tied together at a proper angle of separation by the metal block or chock D and the rivets *d*, as shown in cross-section at Fig. 5. Just in

advance of said line *a a*, and over the block D, the head of the rail B is cut away and curved out, as seen at *b'*, Fig. 3, and, the rails still converging, the tram of rail A and lower flange of rail B are thence cut at such angle as to cause the said rails to unite at the line *b b*, Fig. 1, as shown in cross-section at Fig. 4, whence the two rails are continued in contact to a sufficient distance beyond the end of the tongue C, which terminates at the point *a'*, Fig. 1. The tongue C is pivoted near its base by a pin, *p*, which passes down through the block D, below which said pin may be secured by a key or other suitable fastening in any ordinary manner of securing such pins or pivots. It can now be seen that the head of the rail B may be either entirely cut away, as shown at *a a*, Fig. 1, to provide for the insertion of the movable tongue C, or said head may be only partly cut away, as shown 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, C'.

In the general plan, Fig. 7, the letters *S<sup>2</sup> S<sup>3</sup>* 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.

The side-bearing girder-switches herein described may be connected to the main track by any known form of splice-bars, preferably by the same bars used to unite the main rails, if said rails be of girder form, for a main advantage of this type of switch is that it can be constructed of the same type of side-bearing rail as used in the rest of the track, thus reducing the system of construction to one standard by permitting the use of the same chairs, joints, bolts, and other appendages throughout the whole line of track.

If these switches be used in connection with rolled-steel frogs, one uniform material and type of rail—namely, rolled-steel and side-bearing girder-rails—will constitute the whole line of the track. The webs of the rails as they converge may be riveted or bolted either directly together or through interposed spacing-chocks. In either event said webs impart stiffness to the whole structure by con-

necting one part with another. A strong and durable set of switches, of uniform design and material, may thus be furnished for any given line of track, adding greatly to the efficiency  
5 of the railway by saving much loss of time and consequent expense in effecting repairs.

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

o A railway-switch for street-car tracks, composed of two rolled side-bearing girder-rails,

of similar forms, devoid of guards, 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  
15 set forth.

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