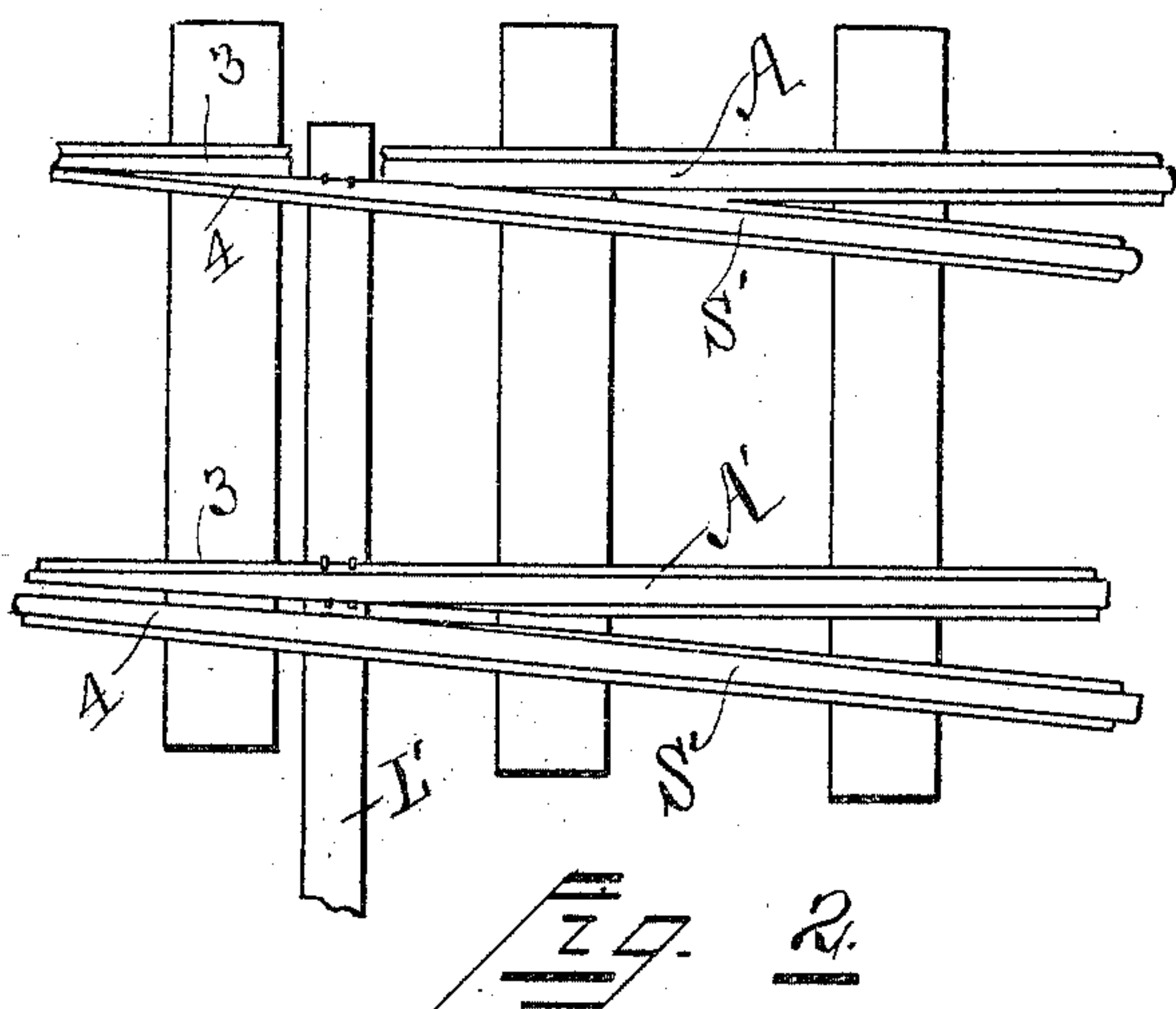
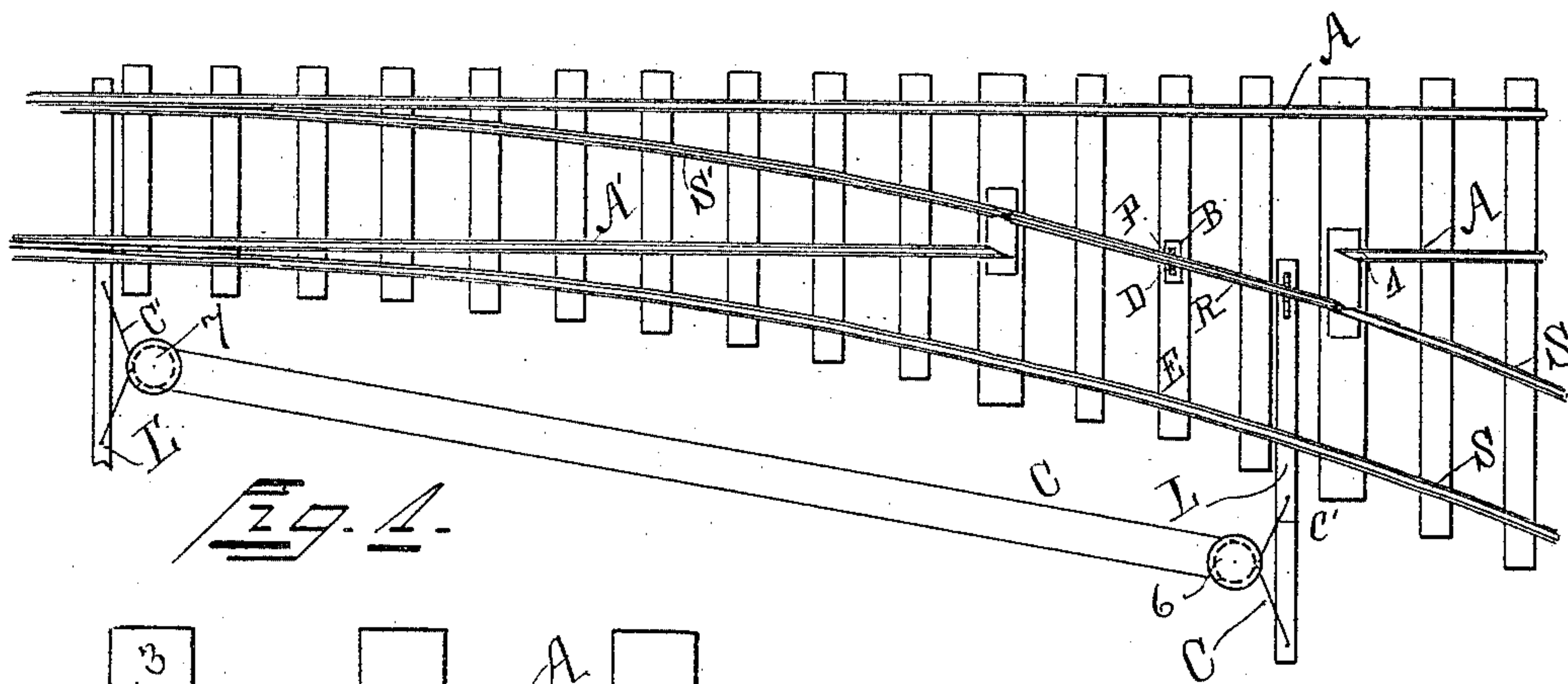


(No Model.)

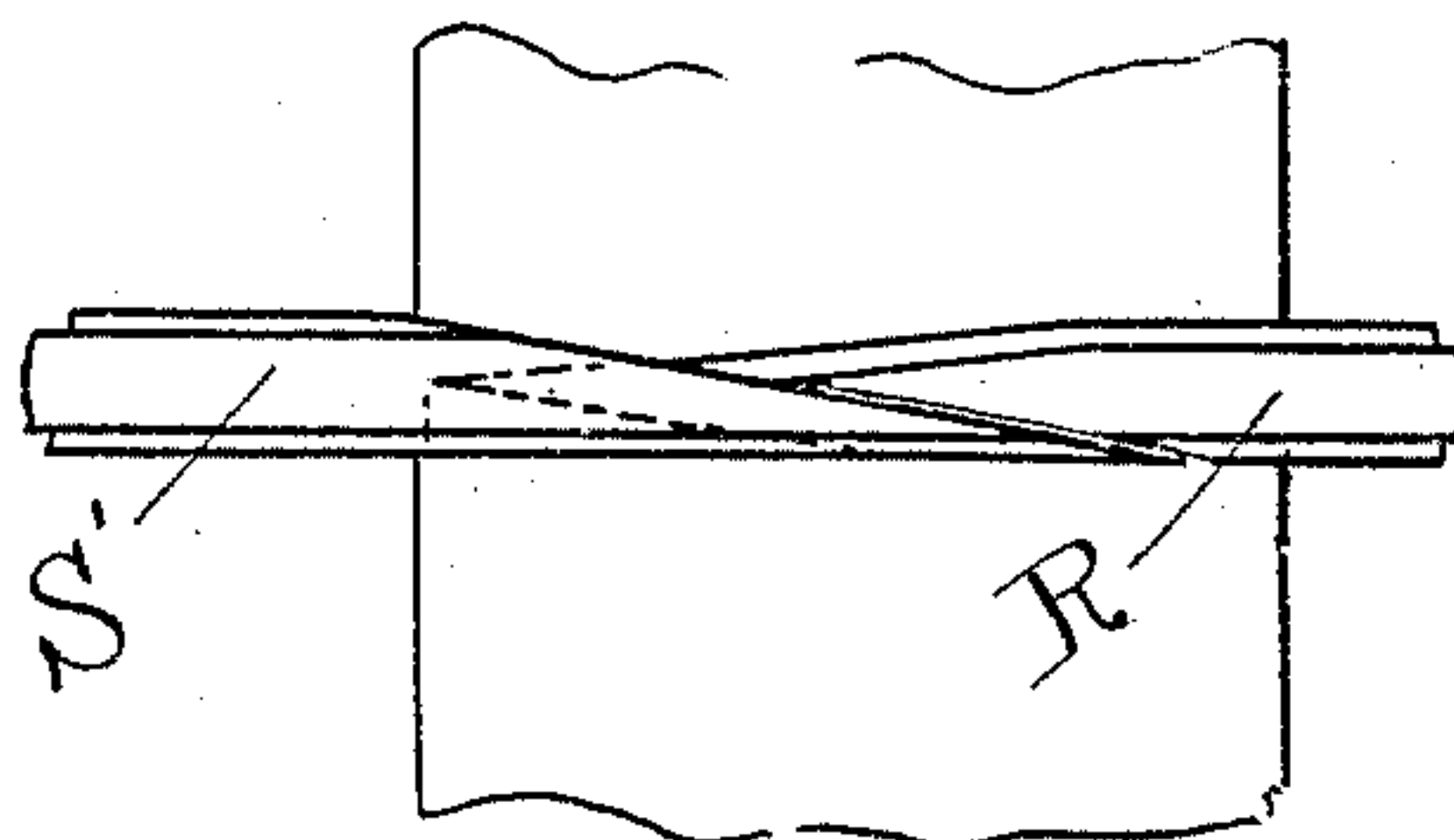
W. & G. E. THURTL.  
RAILWAY SWITCH.

No. 491,500.

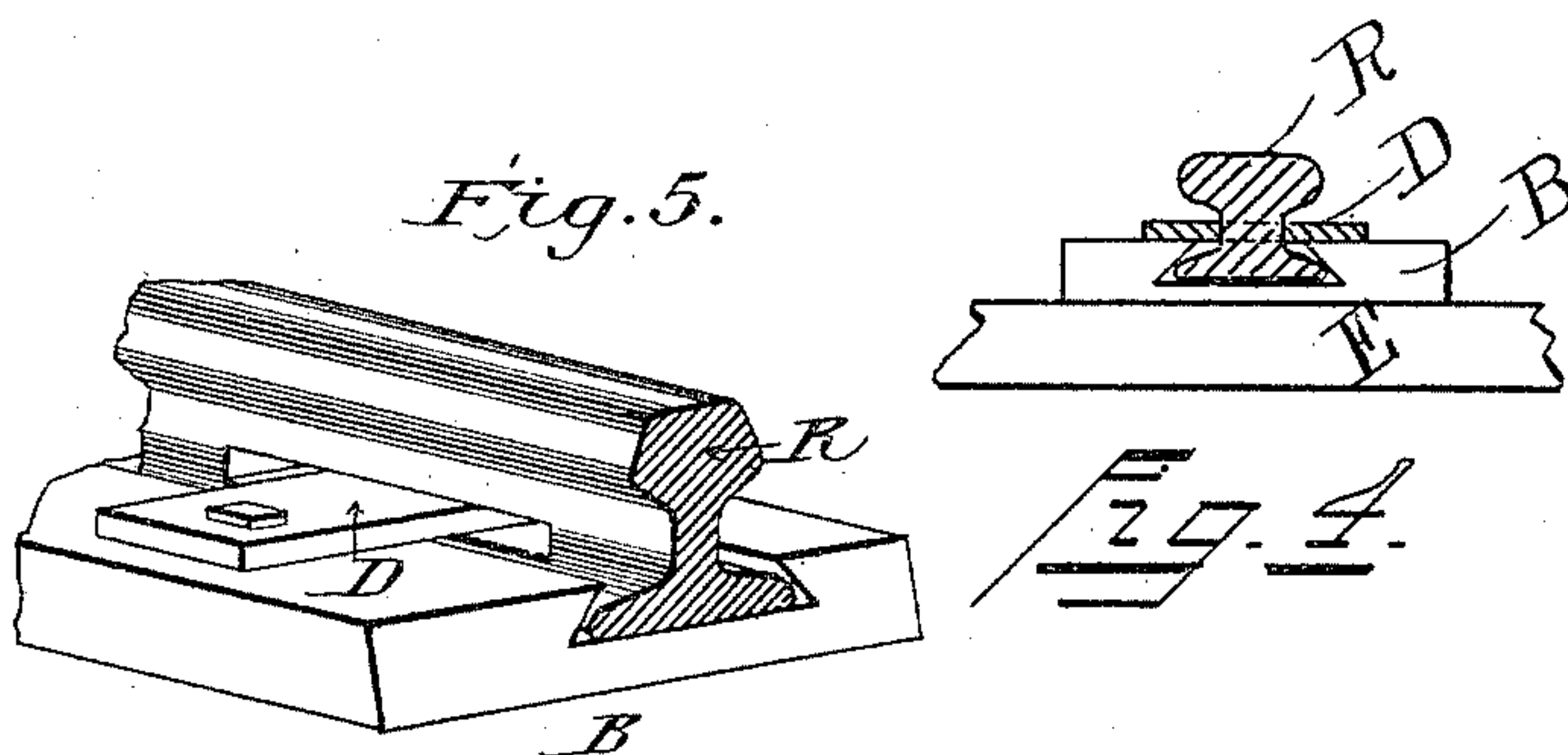
Patented Feb. 7, 1893.



2.



3



*Fig. 5.*

WITNESSES:

George A. McCandless,  
George W. Hudson.

William Thurth INVENTORS  
George E. Thurth  
BY  
*A. J. Hawthorn*  
ATTORNEY



# UNITED STATES PATENT OFFICE.

WILLIAM THURTLÉ AND GEORGE E. THURTLÉ, OF BAY CITY, MICHIGAN.

## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 491,500, dated February 7, 1893.

Application filed September 23, 1892. Serial No. 446,703. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM THURTLÉ and GEORGE E. THURTLÉ, citizens of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Railway-Switches; and we do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention is a railway switch, and consists in the special construction arrangement and combination of parts as shown and claimed.

Figure 1, is a plan view of the switch. Fig. 2, is an enlarged view of the end of the same. Fig. 3, shows the joint of the split ends. Fig. 4, end section of the pivoted rail. Fig. 5 is a perspective of the connection between rail R, plate D, bed B.

In the drawings A A are main rails, and S S side rails.

R is a pivoted rail, movable to side track or main track as desired. It is pivoted at P at about its middle length by means of the plate D passing through a groove made for the purpose in its web, the groove being long enough to allow the free lateral movement to the side rails. The plate D is bolted to the bed B upon which the rail R rests, and bed B being secured to the tie E. One end of the pivoted rail R is secured to the movable bar L passing under the outer side rail or main rail as the case may be.

6 is a capstan having two cables C C' passing over it, one from the inside, the other outside, one end of each cable secured to the bar L on each side from the capstan.

A' and S' are end rails of the middle rail of the main track and side track respectively. The outer ends of these end rails are free and movable simultaneously, being connected to a movable bar, L', which runs under the outer main rail, and side rail.

7 is a capstan at the side of the protruding end of the bar L' and the other ends of the cables C C' run over this capstan and are connected to the bar L' the same as the other ends

are connected to the bar L cable C running over the inside of the capstan and cable C' outside, thus as the capstan is turned, one bar L', will be forced inward and L outward, or vice versa. Each end of the pivoted bar R is double beveled, that is each side is cut off forming a point. The head is beveled also, but the bevel of the head is cut back of the bevel of the web so that the bevel web point projects. The opposite ends of the main rail and side rail are also beveled, on the sides next to each, but one side only, and the head instead of being cut away projects over the bevel of the web the same distance that it is cut back on the end of the pivoted rail R, so that as the ends of the pivoted rail and side rail come together one will lap upon the other, the head of the one will lap over the web of the pivoted rail, forming a smooth diagonal joint; thus causing less jar to a passing car than a straight joint.

The ends of the main rails and side rails at their union or junction are split rails, i. e., each has a beveled end, and the head and web are beveled in the same manner, viz. so that the head of one will lap over the web of the other making a long diagonal junction.

It will be seen that if it is desired to run the car onto the side track, moving the capstan 6 will connect the pivoted rail to the side track rail and at the same time the split end of the end rail of the inner side track rail will be brought into union with the split end of the main rail while the split end of the end rail of the inner main rail will be separated from the outer side rail, as shown on Fig. 2, far enough to allow the flange of the car wheel to pass between them, thus turning it onto the side rails.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is;—

1. In a railway switch, the combination with main rails and side rails having beveled ends, pivoted rail R, beveled on both sides of each end, the bevel of the head being back of the bevel of the web, the pivotal plate D, the bed B, the movable bar L, connected to the end of the rail R, the cables, C, C', capstan 6, of the capstan 7, bar L', connected to the movable ends of the end rails, A' and S', the end rails A' and S' of the inner main rail and



side rail respectively, the ends of the said end rails being beveled or split to correspond and fit into the bevel of the main rail and side rail, thereby forming a long diagonal joint at each junction of the main rail and side rails substantially as described and as and for the purpose set forth.

2. In a railway switch the combination with the main rails A, A, and side rails S, S, the inner main rail and side rail having beveled or split ends, the bevel of the head projecting over the bevel of the web, the end rails A' and S' of the inner main rail, and side rail having their ends beveled as their principal rails, and their outer movable ends beveled, with the bevel of the head cut back of the bevel of the web, of the pivoted rail R, pivotal plate D, bed B, bar L secured to one end of the pivoted rail R, the cables, C, C', secured at one end to the outer end of the bar L, capstans 6 and 7, the bar L' to which the other ends of the cables C C' are secured and to which are secured the movable ends of the

end rails A' and S', substantially as described and as and for the purpose set forth.

3. In a pivoted rail for railway switch, the combination with the rail R having each end beveled on each side forming a point, the bevel of the head being cut back of the bevel of the web, so that the web beveled point projects, and provided with a longitudinal groove through the web at about the middle of its length, of the plate D passing through the groove in the web of the rail, and being narrower than the groove, the bed piece B to which the plate D is bolted, and supporting the rail R upon the tie E, substantially as described and as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM THURTLÉ.  
GEORGE E. THURTLÉ.

Witnesses:

GEORGE A. McLANDRESS,  
A. H. SWARTHOUT.