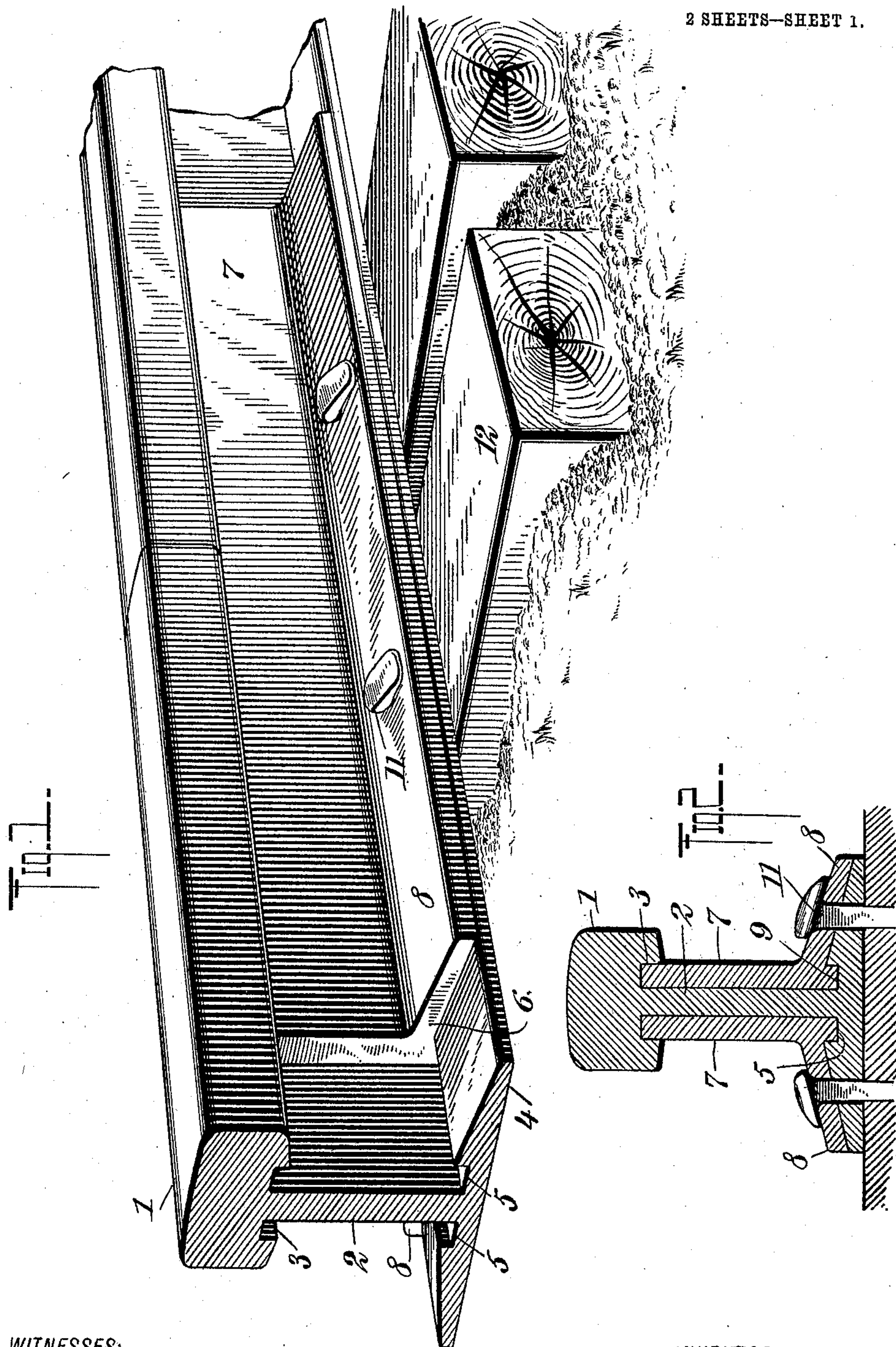


No. 805,905.

PATENTED NOV. 28, 1905.

J. T. EVANS.  
RAILWAY RAIL JOINT.  
APPLICATION FILED JULY 14, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

*Geo. P. Ringbrey.*  
*C. R. Thompson*

INVENTOR

*John T. Evans*

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*Mumford*

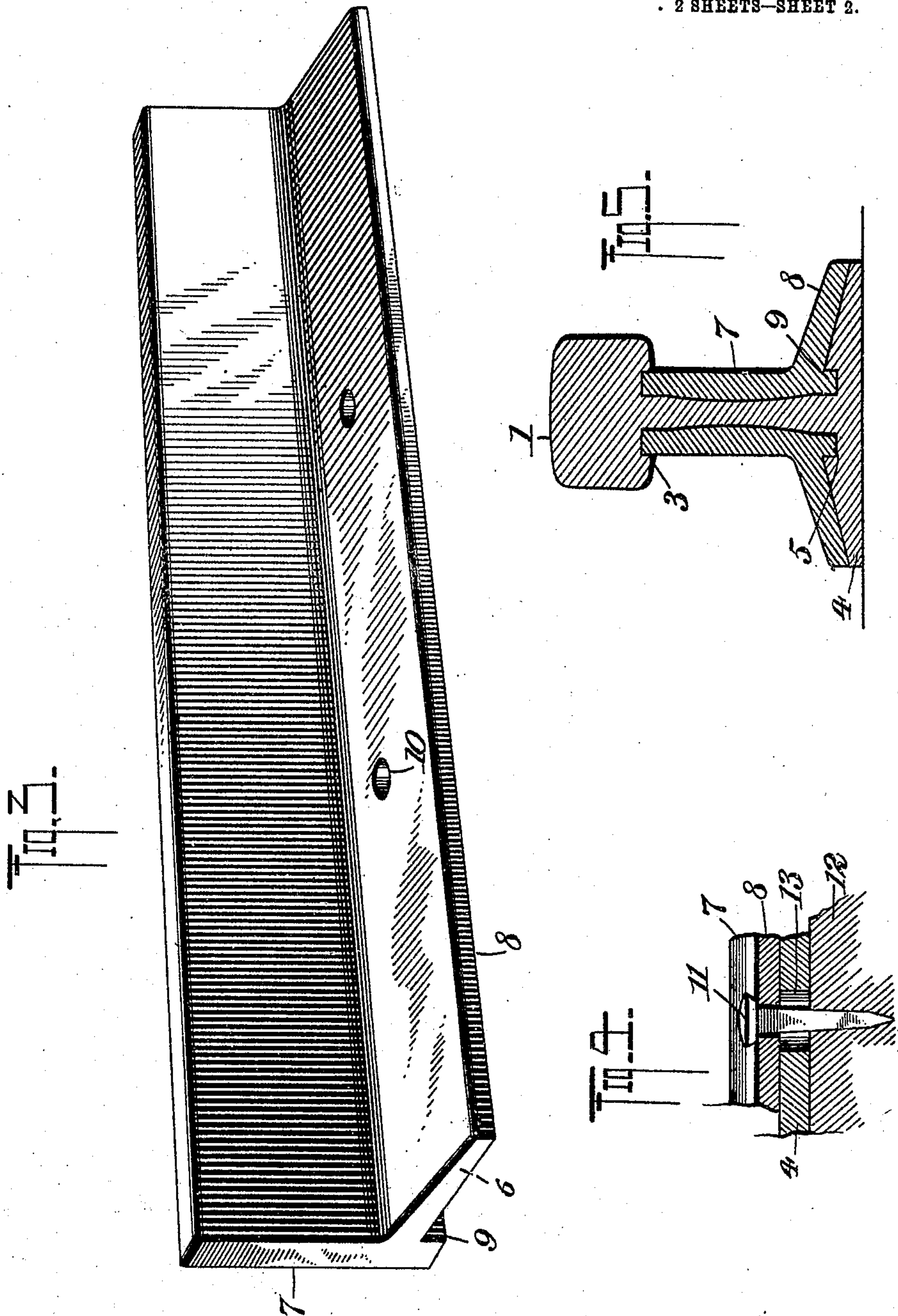
ATTORNEYS

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WITNESSES:

*Geo. O. Kingbury*  
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# UNITED STATES PATENT OFFICE.

JOHN TUDOR EVANS, OF NEW YORK, N. Y.

## RAILWAY-RAIL JOINT.

No. 805,905.

Specification of Letters Patent.

Patented Nov. 28, 1905.

Application filed July 14, 1904. Serial No. 216,495.

*To all whom it may concern:*

Be it known that I, JOHN TUDOR EVANS, a citizen of the United States, and a resident of the city of New York, Coney Island, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Railway-Rail Joint, of which the following is a full, clear, and exact description.

This invention relates to improvements in joints for railway-rails, the object being to provide a joint of novel construction that may be readily placed in position and secured without the employment of bolts as ordinarily used with fish-plate joints.

Other objects of the invention will appear in the general description.

I will describe a railway-rail joint embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of two rails and a joint-plate embodying my invention securing the same together. Fig. 2 is a cross-section thereof. Fig. 3 is a perspective view of one of the joints. Fig. 4 is a sectional detail showing the connection between the joint, rail, and tie; and Fig. 5 is a section showing a slight modification.

The rails 1 are provided at the under side of the head, near the web 2, with channels 3, and the base-flanges 4 are also provided with channels 5, these channels of course extending longitudinally of the rails. The joint consists of plates 6, which are substantially L-shaped in cross-section—that is, they have upright portions 7 for engaging against the rail-webs and outwardly-extended flanges 8 for engaging upon the base-flanges of the rails. The upper edges of the portions 7 engage in the channels 3, while at the junction of the parts 7 and 8 each plate is provided with a downwardly-extended rib 9 for engaging in the channels 5 of the two abutting rails. The flange portions 8 are provided with perforations 10, through which fastening-spikes 11 pass into the ties 12. Openings 13 in the base-flanges of the rails, through which the spikes pass, are elongated, thus allowing for sliding movement by expansion and contraction of the rails.

It will be noted that the spikes 11 are the

only fastening devices employed. Therefore it is not necessary to provide the webs of the rails with holes for the passage of bolts, which obviously has a tendency to weaken the rails.

The channels in the rails will be sufficiently long to permit the sliding of the joint-plates longitudinally a sufficient distance to permit the rail ends to be placed together, after which the joint-plates are slid into position on the two connected rails.

In Fig. 5 it will be noted that the inner sides of the vertical portions 7 of the joint-plates are transversely curved or convexed to conform to the concavity usually found in the webs of ordinary rails.

Having thus described my invention, I claim is new and desire to secure by Letters Patent—

1. The combination with railway - rails having longitudinal channels in their base-flanges, of joint - plates substantially L-shaped in cross-section and having ribs for engaging in said channels, the said ribs and channels being so arranged as to permit sliding movement of the rails on the plates.

2. The combination with railway - rails having longitudinal channels in the under side of their heads and longitudinal channels in their base - flanges, of joint - plates having vertically-disposed portions, the upper edges of which engage in the channels in the heads, and ribs on the lower portions for engaging in the channels in the rail base-flanges, the parts being so arranged as to permit movements of the rails lengthwise of the joint-plates.

3. The combination with railway - rails having longitudinal channels in the under sides of their heads and longitudinal channels in their base-flanges, of joint-plates substantially L-shaped in cross-section, the upper continuous edges of which engage in the channels in said heads and ribs at the lower sides of the plates for engaging in the channels in the base-flanges, the said ribs being extended the entire length of the plates whereby the rails may slide thereon.

4. The combination with railway - rails having longitudinal channels formed in the under sides of the head portions and longitudinal channels formed at the junction of the rail webs and base-flanges, the said base-flanges being provided with elongated openings, of joint-plates substantially L-shaped in cross - section, the upper edges of said

plates engaging in the channels in the rail-heads, the base-flanges of said plates being provided with openings for spikes, and ribs on said plates for engaging in the channels  
5 formed at the junction of the webs and the base-flanges.

5. The combination with railway-rails, of joint-plates substantially L-shaped in cross-section, the said rails being provided with  
10 longitudinal channels, the said plates having portions for engaging in said channels, and

connections between the plates and rails whereby the rails may slide by expansion and contraction.

In testimony whereof I have signed my  
name to this specification in the presence of  
two subscribing witnesses.

JOHN TUDOR EVANS.

Witnesses:

H. P. WHITNEY,  
W. H. FOOTE.