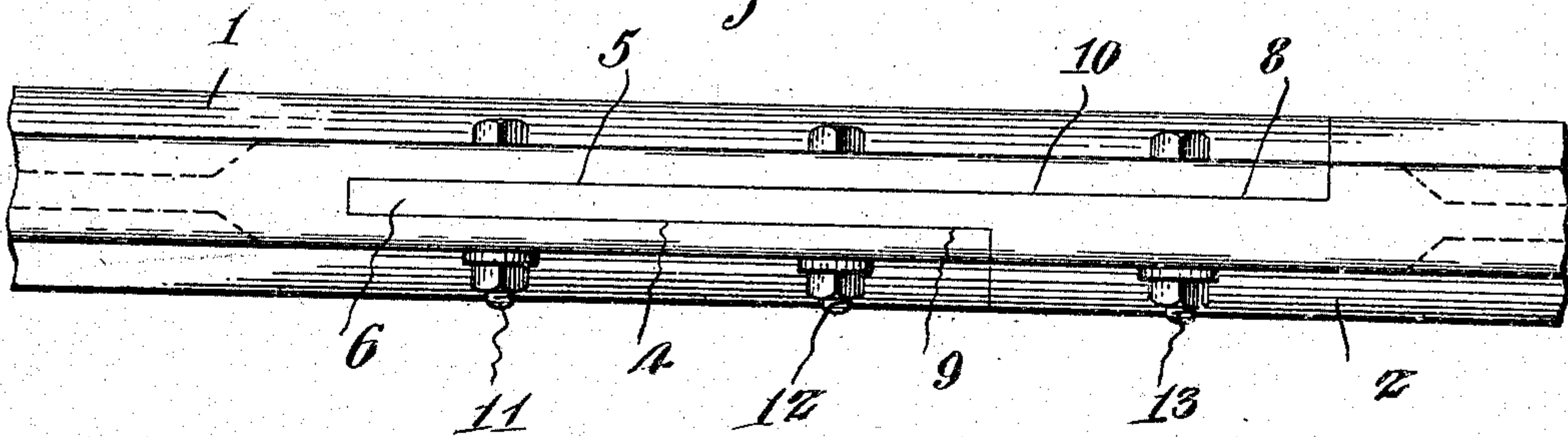


C. H. BEUTLER.  
RAIL JOINT.  
APPLICATION FILED SEPT. 10, 1909.

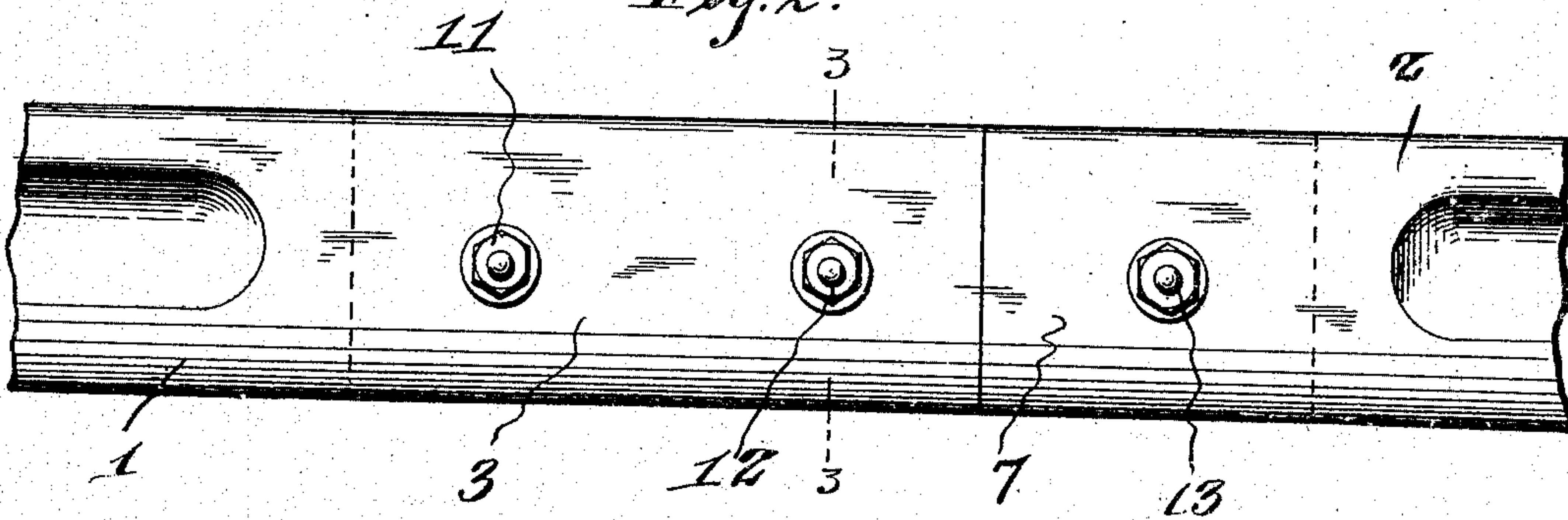
953,583.

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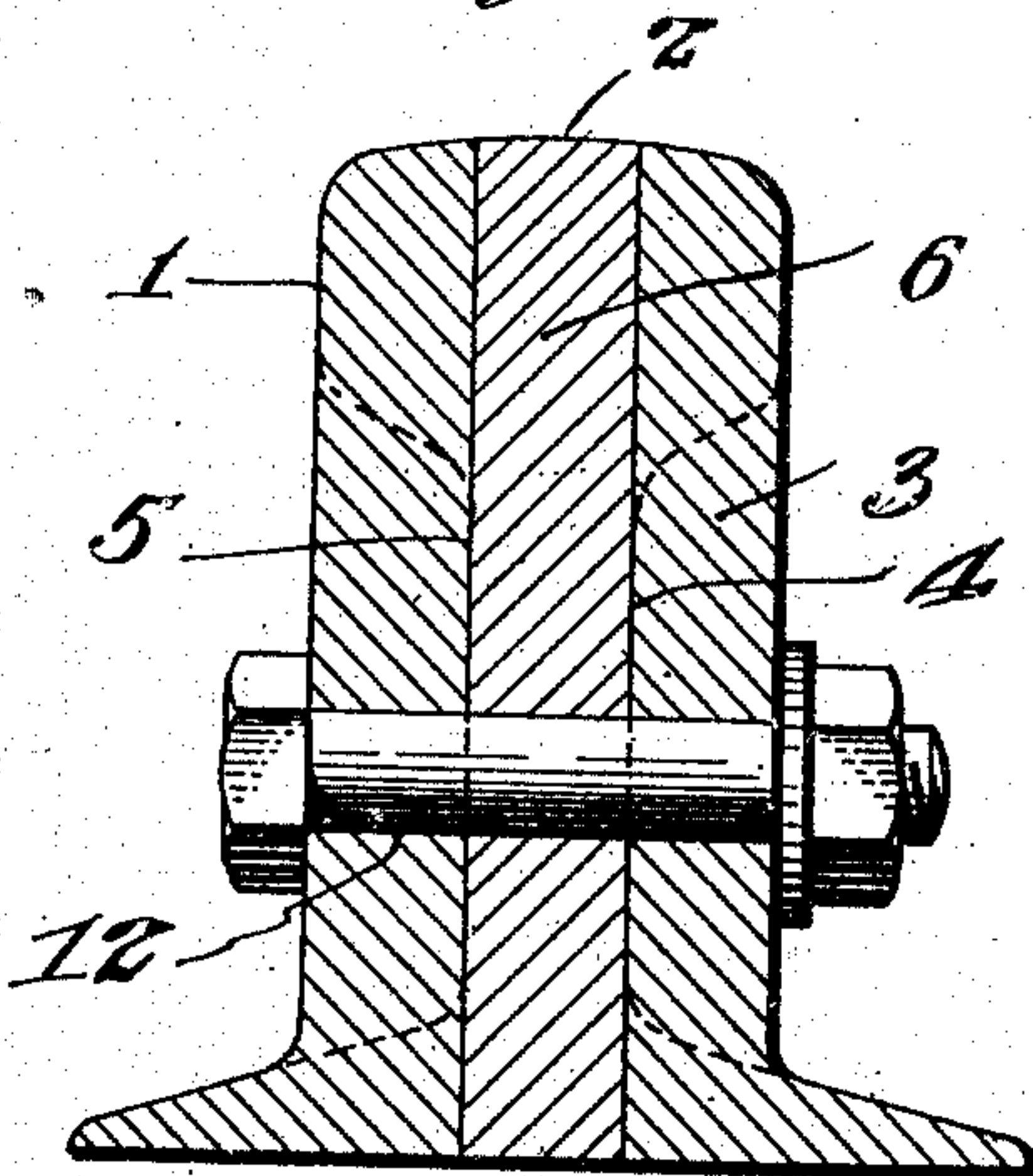
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

Adolph S. Beutler  
Lee H. Ringwald

Inventor:

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# UNITED STATES PATENT OFFICE

CHRISTIAN H. BEUTLER, OF MOUND TOWNSHIP, McPHERSON COUNTY, KANSAS.

## RAIL-JOINT.

953,583.

Specification of Letters Patent.

Patented Mar. 29, 1910.

Application filed September 10, 1909. Serial No. 517,175.

*To all whom it may concern:*

Be it known that I, CHRISTIAN H. BEUTLER, a citizen of the United States, residing in Mound township, in the county of McPherson and State of Kansas, (whose post-office address is Moundridge,) have invented a new and useful Rail-Joint, of which the following is a specification.

My invention relates to improvements in rail joints and its object is to provide one of the scarf type which may be readily produced and assembled at a small cost, which will be strong and durable, and which will hold the abutting ends of two rails in perfect alinement so that they cannot shift laterally or vertically.

With the above and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, hereinafter fully described and claimed, and illustrated in the accompanying drawings in which:—

Figure 1 is a top plan view of a rail joint constructed in accordance with my invention; Fig. 2 is a side elevation; and Fig. 3 is a vertical cross section taken on the plane indicated by the line 3—3 in Fig. 2.

Referring more particularly to the drawings 1 and 2 denote two track rails having their intermediate or body portions of ordinary construction, and their ends united by my improved scarf joint. In producing this joint I enlarge transversely, as shown at 3, the web portion of the rail 1 at one end of the latter and I cut away or remove the opposite side portions of both the head, web and base flanges of the rail at this end to provide the two recesses 4, 5, and the centrally disposed tongue 6. The recess 4 is approximately two-thirds of the length of the recess 5, and in width said recesses are approximately one-third of the thickness of the enlarged end 3 of the rail, so that the thickness or width of the tongue 6 is one-third the width of the head 1 of the rail and substantially the same as the thickness of the web of the body portion of the rail. The other rail 2 has its adjacent end enlarged transversely at its web portion, as shown at 7, and in this enlarged end of the rail is formed the longitudinally extending, centrally arranged, vertical recess or slot 8 for the reception of the tongue 6, said slot 8 forming two side portions 9, 10, which are of unequal length and adapted to enter the short and long recesses 4, 5, in the sides of

the enlarged end of the rail 1. Owing to this peculiar manner of shaping the enlarged ends of the two rails so that they fit into each other and have overlapped portions at the joint, the track will not be reduced in strength at the joint because of the central arrangement of the tongue 6 and the enlarged side portions or plates 7, 8.

To retain the rails in engaged or interlocked position a pair of transverse openings are formed in the tongues 6 and a third transverse opening is formed in the enlarged portion 3 of the rail 1. Similar transverse openings are formed in the enlarged end of the rail 2 so as to register with the first mentioned openings, and bolts or similar removable fastenings 11, 12, 13, are passed through said openings, as clearly shown in the drawing. These transverse bolts in passing through the web portions of the overlapped ends of the jointed rails effectively unite the latter so that they cannot shift vertically with respect to each other and cause an uneven surface on the tread of the track at the joint.

It will be understood that each track rail in a track constructed in accordance with my invention has at one end one of the tongues 6, and at its other end a removable groove or slot 8 for the reception of the tongue on the next adjacent track rail.

From the foregoing it will be seen that the invention may be produced at a small cost and may be quickly and easily assembled to provide an effective joint. The peculiar shape and proportions of the overlapped parts of the joint renders the latter exceedingly strong and rigid so that the track will not be weakened at the joint and the sections will be held in perfect alinement.

Having thus described the invention what is claimed is:

The herein described rail joint comprising a pair of T-shaped rails having their web portions transversely enlarged at their adjacent ends to render said enlarged web portions of the same width as the head portions of the rails, one of said rails having the opposite sides of its enlarged web and head portions formed with long and short recesses extending inwardly from the extremity of the rail and from the bottom to the top of the same, said recesses forming a longitudinally extending tongue disposed in the plane of the longitudinal axis of said rail, the other rail having its end formed with a



longitudinal slot extending vertically from the bottom to the top of the rail and through its enlarged web portion and the head, said slot forming two side portions, one of the  
5 latter being of less length than the other whereby they will enter the long and short recesses mentioned in the first rail when the tongue of the latter enters said slot, a pair of bolts passed transversely through said tongue

on one rail and the side portions of the other 10 rail, and a third bolt passed through the long side portion of one rail and the opposing portion of the other rail, as shown and described.

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Witnesses:

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