

No. 843,409.

PATENTED FEB. 5, 1907.

J. L. MERTINS.
RAIL JOINT.

APPLICATION FILED JUNE 19, 1906.

Fig. 1.

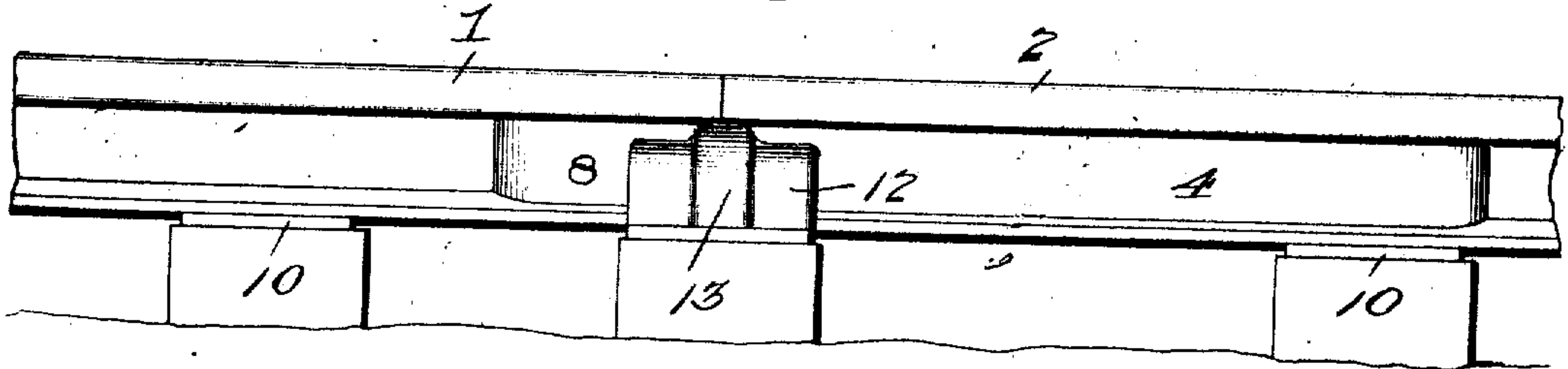


Fig. 2.

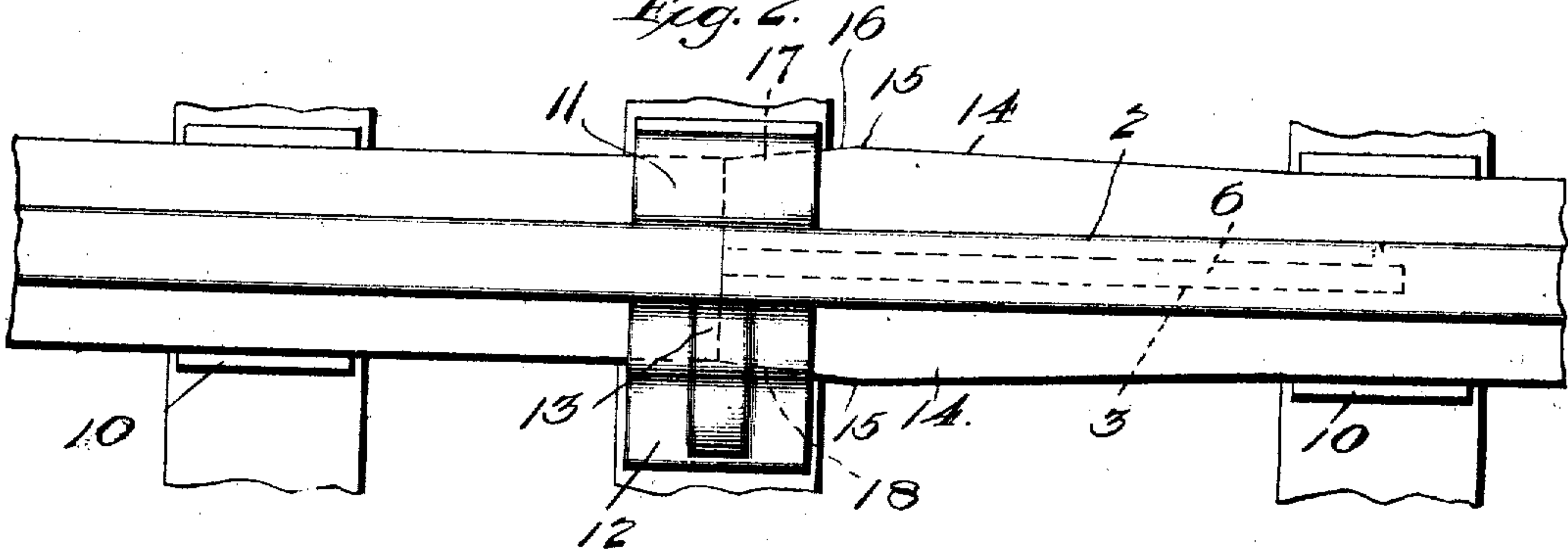


Fig. 3.

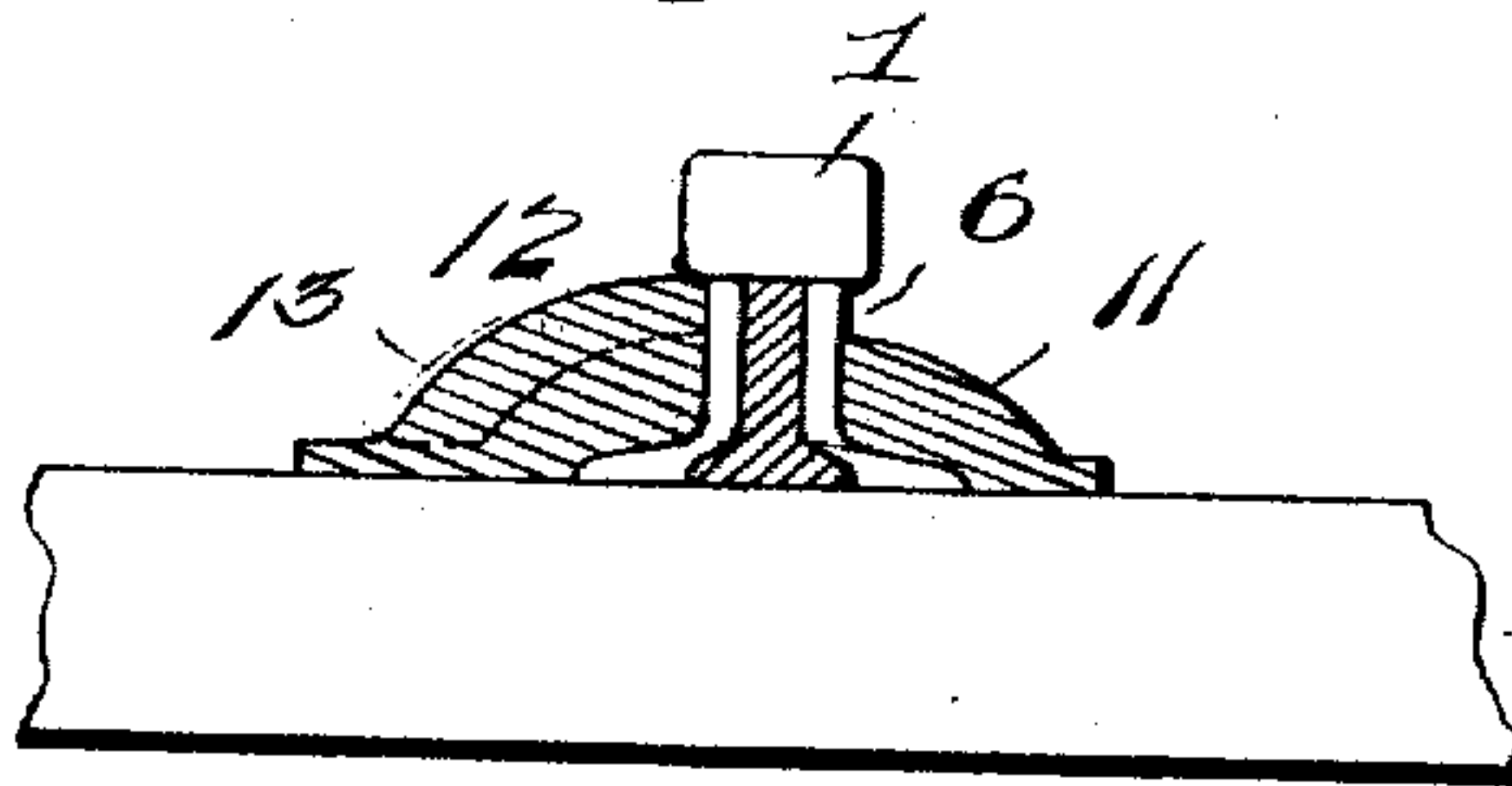
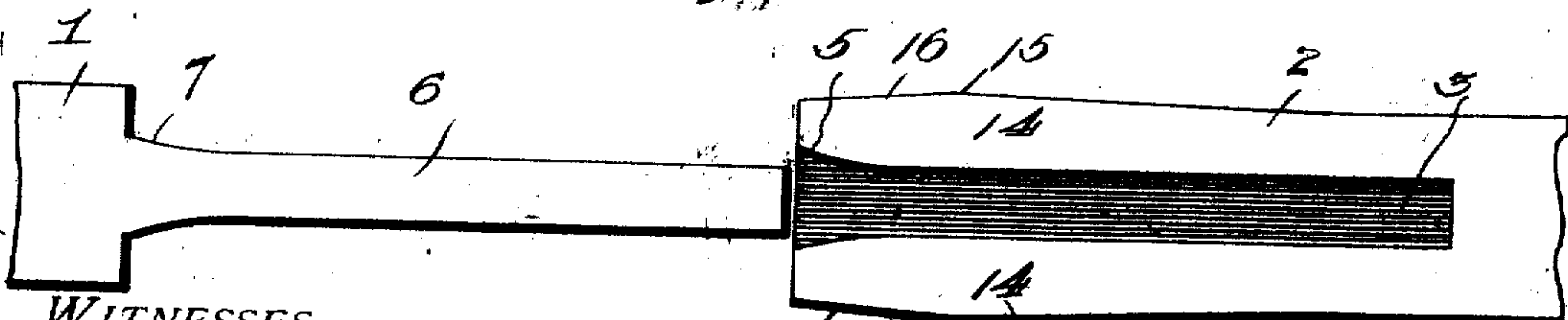


Fig. 4.



WITNESSES:

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RAIL-JOINT.

No. 843,409.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed June 19, 1906. Serial No. 322,373.

To all whom it may concern:

Be it known that I, JOHN L. MERTINS, a citizen of the United States, residing at Wolfe City, in the county of Hunt and State of Texas, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail-joints; and the primary object of the same is to provide a device of this class having a particular construction and arrangement of parts whereby wear and tear on the wheels of rolling stock will be reduced to a minimum and the joint as an entirety effectively secured by a special form of securing means.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of portions of rails embodying the improved joint. Fig. 2 is a top plan view of the same. Fig. 3 is a transverse vertical section therethrough. Fig. 4 shows the extremities of contiguous rails separated and embodying a portion of the features of the joint.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numerals 1 and 2 designate rail-sections, the section 2 having a longitudinal seat-slot 3 cut therein and opening through the center of the bottom thereof and extending completely out through the end. On opposite sides of this seat-slot the web of the rail extremity carrying the same is enlarged or transversely thickened, as at 4, to preserve the strength of the said rail-section in view of the removal of the material to form the said seat-slot. The seat-slot 3 at the extremity where it opens through the end of the section 2 has a flared mouth 5, for a purpose which will be presently set forth. The section 1 is formed with a longitudinally centrally-disposed tongue 6, and at the point where it meets or intersects with the body of the section 1 it is transversely enlarged to provide a wedge 7 to fit in the flared mouth 5 of the seat-slot 3 of the section 2. The web of the rail-section 1, adjacent the end of said section, is also transversely thickened, as at 8. The slot 3 is of such depth and the tongue 6 of such vertical extent that when the two rail-sections 1 and 2 are brought in close relation end to end the flanges of the said sections will be in the same horizontal plane

and are adapted to be arranged on suitable plates 10 on the ties.

At the joint or abutting ends of the two sections a preferred form of securing means is used and consists of opposite inwardly-projecting chair members 11 and 12, which are secured to the ties by means of suitable spikes, the chair member 12 having a central rib 13, which engages the rail-sections close up to the heads thereof, as shown by Fig. 3. The opposite members of the base-flange of the rail-section 2 are flared, as at 14, to compensate for the increased thickness of the web and to carry out the idea of strengthening the said section in a transverse direction owing to the formation of the seat-slot 3, and from the maximum projection 15 of the flare the flange members taper or converge, as at 16, to the terminals of said members. The openings through the inner portions of the chair members 11 and 12, as at 17 and 18, are made to correspond to this taper and receive the said tapered extremities of the flange members. By this means the rails will be prevented from buckling, and a secure fastening will result when the chair members are spiked to the tie on which they are disposed. The improved joint permits necessary expansion and contraction of the rails, but will obstruct any undue slipping thereof in a longitudinal direction, and, furthermore, sagging of the joint will also be obviated. This construction, while adapted for rail-joints throughout a railroad-line, is particularly effective on curves, and the employment of fish-plates and bolts as in ordinary railroad-joints is entirely dispensed with, and from a comparative standpoint the improved joint will entail but very little expense in excess of the ordinary fish-plate and bolt connection and with the additional advantage of quick assemblage and safety. Furthermore, the rails will be more durable at their meeting ends when connected by the improved joint.

The rib 13 of the one chair member is always on the outside of the rail-sections, and the opposite chair member, which is of less vertical extent, gives a clearance for the flanges of the car-wheels, and therefore it is necessary to form the outer chair members as rights and lefts to accommodate this particular application. Another advantage that may be mentioned with respect to the improved rail-joint is that it requires no straight forward movement to connect the

rails and thereby avoid any reverse backward movement to disconnect the rails. The improved rail-joint parts are separated by simply moving the chair plates or members back on the rail-section 1 and raising the rail-section 2 straight up, and in assembling the parts the rail-sections are lowered one upon the other and the chair-plates moved forward from the rail-section 1 over the rail-section 2.

What I claim is—

A rail-joint consisting of rail-sections, one of the sections having an undercut longitudinally-extending seat-slot opening out through the end thereof and a thickened web on opposite sides of the slot, and the other sec-

tion provided with a central, longitudinally-extending tongue to fit in the said slot and the web thereof thickened for a short distance, the flange members of the section having the slot therein adjacent to said slot being first flared and then tapered or converged to their free extremities, and chair members applied to opposite sides of the joint and having the inner slots shaped to receive the converged portions of the flange members.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN L. MERTINS.

Witnesses:

R. N. SELLERS,
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