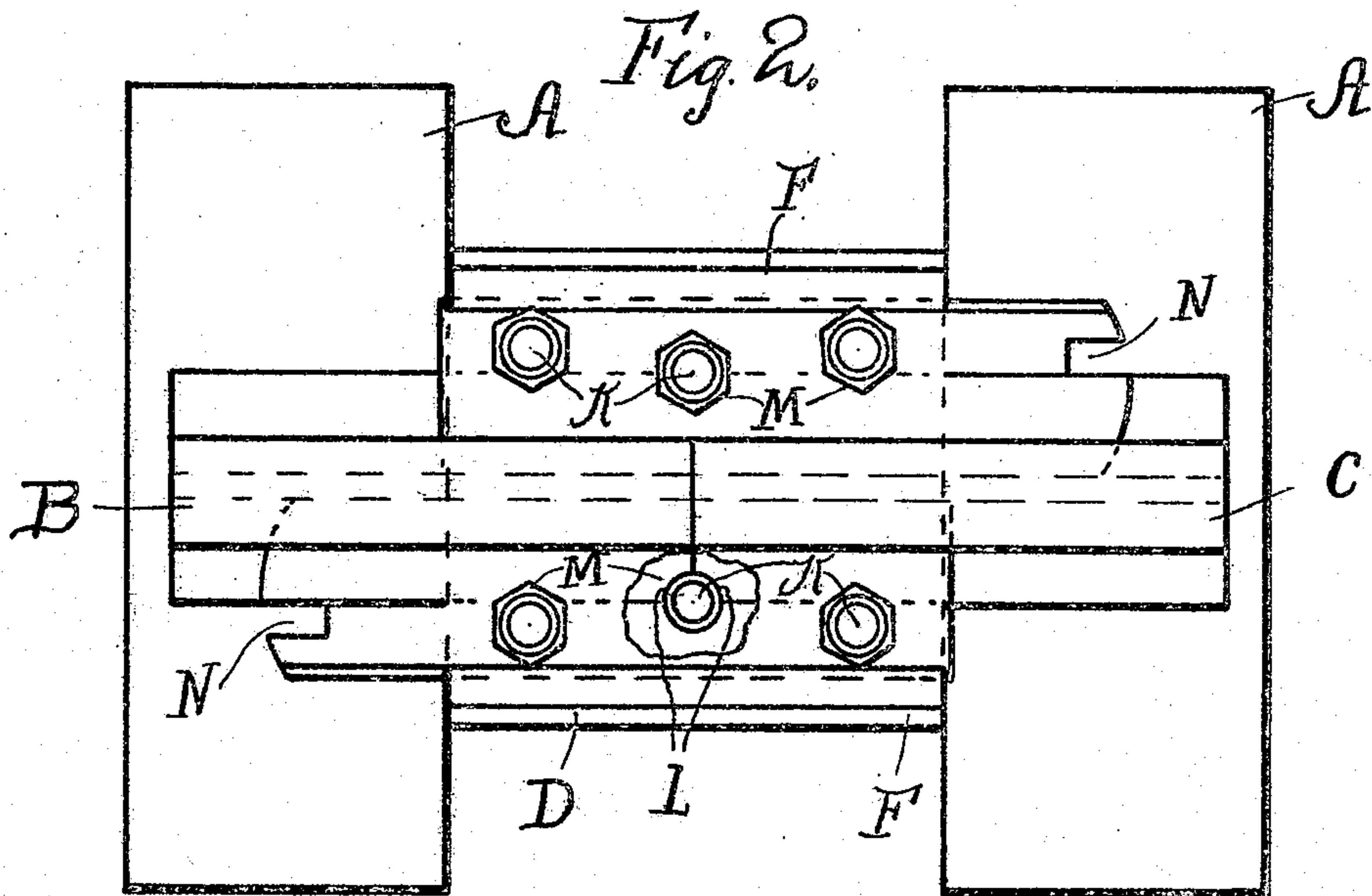
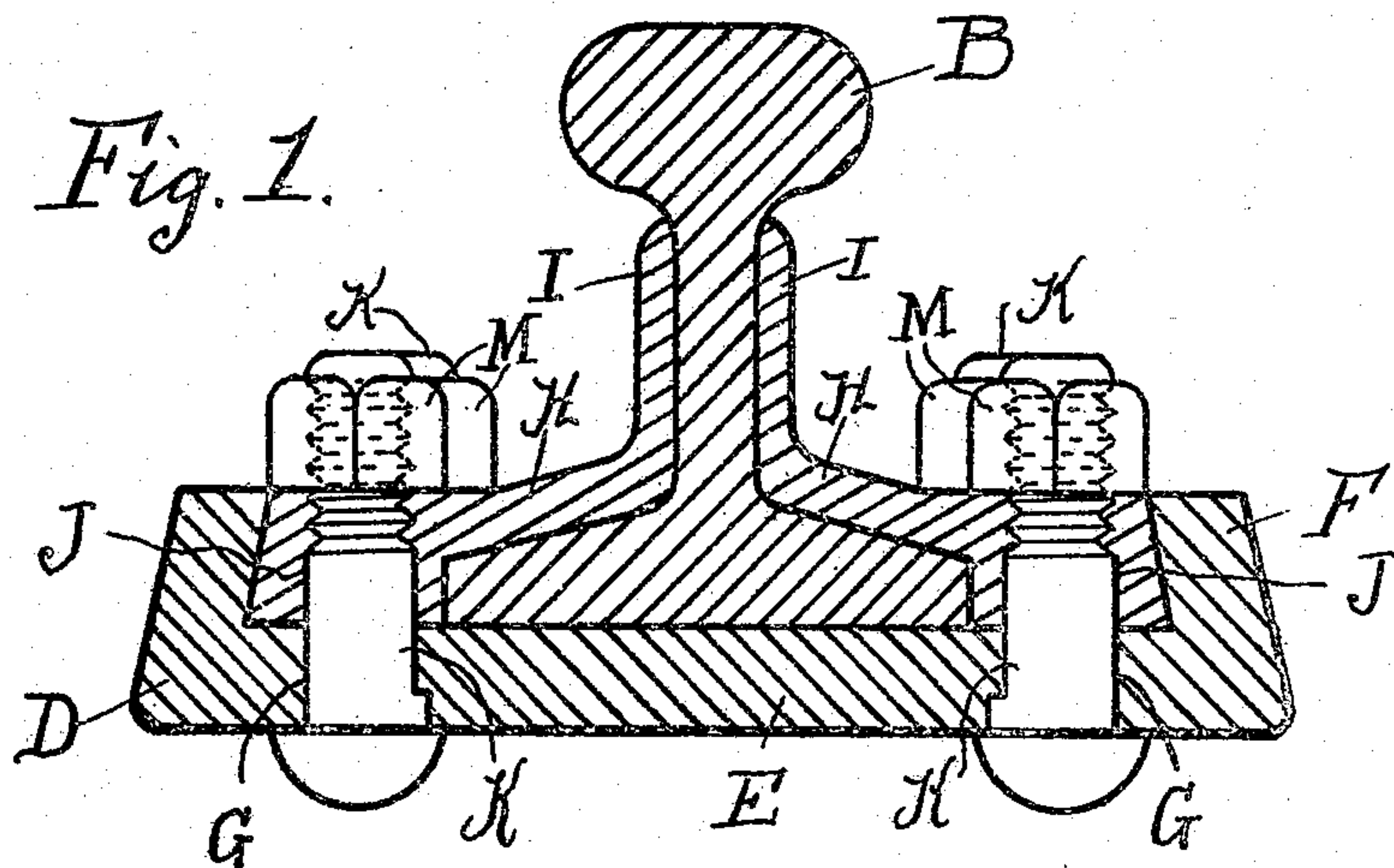


J. BROWN.
RAIL JOINT.

APPLICATION FILED AUG. 28, 1908.

930,834.

Patented Aug. 10, 1909.



WITNESSES

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JOHN BROWN, OF CAMDEN, NEW JERSEY.

RAIL-JOINT.

No. 930,834.

Specification of Letters Patent.

Patented Aug. 10, 1909.

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To all whom it may concern:

Be it known that I, JOHN BROWN, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented a certain new and useful Improvement in Rail-Joints, of which the following is a specification.

My invention relates to a new and useful improvement in rail joints, and has for its object to provide an exceedingly simple and effective device of this character by means of which the ends of two rails may be joined together without the use of bolts and nuts, thus allowing the rails to expand and contract.

Another object of my invention is to provide a rail joint which will require no change in the present rails and will necessitate but very little cutting of said rails.

A still further object of my invention is to provide a rail joint in which the rail will require no bolt receiving openings in the web thereof, therefore the strength of the rail will not be diminished.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a transverse sectional view of a rail joint made in accordance with my improvement, and Fig. 2, a plan view thereof.

In carrying out my invention as here embodied, A represents the ties and B and C the meeting ends of two rails.

D represents a chair which is adapted to rest between the ties, and this is so formed to produce a bottom E and upwardly extending flanges F. In the bottom are formed a number of bolt receiving openings G, the use of which will be hereinafter described.

H denotes the fish plates which have formed therewith the upwardly extending flanges I, and said flanges are adapted to rest against the web of the rails and extend upward in proximity to the head of the rail thus forming a strong and efficient brace. In proximity to the outer edges of these fish plates are formed the bolt receiving open-

ings J, through which the bolts K are adapted to pass, said bolts first passing through the openings G in the base of the chair. The center bolts are out of line with the others, being closer to the rail than the others. These center bolts are set in far enough so that when the ends of the rails meet it is required that a portion of the flange of the rails be cut away to form the curved notch L. This is done so that when the rails expand they will each move to the center bolts and will then be prevented from moving farther, thus when the two rails meet they must meet approximately in the center of the chair. On the ends of these bolts are threaded the nuts M for holding said bolts in place, and if found desirable these may be located in any of the ordinary ways. One end of each fish plate is adapted to overlap and rest on a tie, and in this end is formed the opening N for the reception of a spike so that the fish plate may be fastened to the tie, in this way being prevented from moving or getting out of line.

By the use of my improvement an excellent electric contact is provided between the rails as the fish plate always fits snugly against the web of said rails, thus doing away with the necessity of using a copper cable.

In practice should the fish plates be drawn extra tight against the rails, said rails will not be prevented from expanding and contracting as the jar of the passing train will cause the rails to slip if they are expanding or contracting, but at any other time they will be held securely in position and always in line, the upwardly extending flanges of the fish plates preventing the ends from moving from side to side and the base of the chair preventing the ends from moving downward.

Of course I do not wish to be limited to the exact details here shown, as these may be varied within certain limits without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is—

1. The herein described combination with the meeting ends of two rails having curved notches formed in the meeting ends of the flanges, a chair so formed as to produce a bottom and upwardly extending flanges, the bottom of said chair having bolt receiving openings formed therein, fish plates having openings formed in proximity to their outer

edges, the center ones being out of line with the others or set inward, one end of each of said fish plates being elongated to extend over the ties in opposite directions, and having a notch for the reception of a spike, upwardly extending flanges formed with said fish plates, bolts passing through the bolt receiving openings in the chair and fish plates and nuts threaded on the ends of said bolts, as shown and described.

2. The herein described combination with the meeting ends of two rails having curved notches formed in the meeting ends of the flanges, a chair so formed as to produce a bottom and upwardly extending flanges, the bottom of said chair having bolt receiving openings formed therein, fish plates having openings formed in proximity to their outer edges, the center ones being out of line with the others or set inward, one end of each of said fish plates being elongated to extend over the ties in opposite directions, and having a notch for the reception of a spike, upwardly extending flanges formed with said fish plates, means for securing said fish plates to the chair and means for securing

the fish plates to the ties, substantially as shown and described.

3. In a rail joint, the combination of the meeting ends of two rails having curved notches formed in the meeting ends of the flanges, of a chair so formed as to produce a bottom and upwardly extending flanges, the bottom of said chair having bolt receiving openings formed therein, said chair adapted to rest between two ties, fish plates having bolt receiving openings formed in proximity to their outer edges, the center opening in each plate being nearer the inner edge of the plate, said fish plate having a notch in one end thereof through which passes a spike for fastening it to a tie, bolts passing through the bolt receiving openings in the chair and fish plates, and nuts threaded on said bolts, as shown and described.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOHN BROWN.

Witnesses:

CARRIE HILL,
WALTER S. MATTISON.