July 30, 1929. F. CRISMOR ET AL 1,722,901

RAIL JOINT AND PROTECTOR

Filed June 2, 1928

Fig. 1.

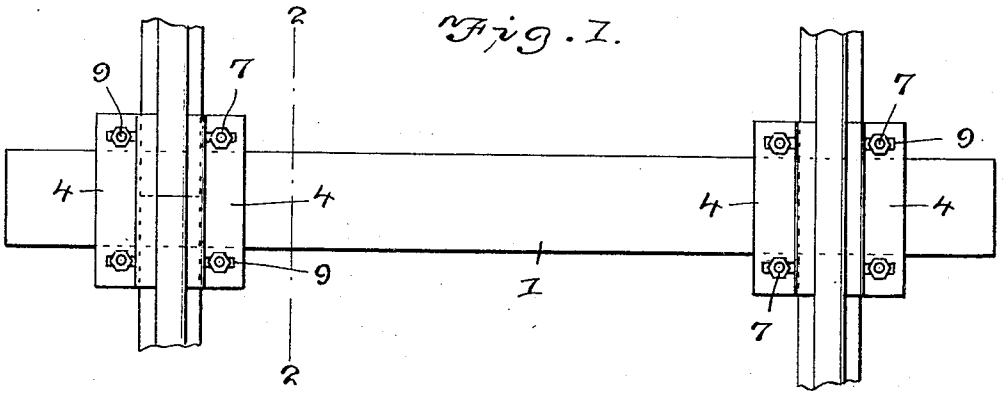


Fig. 2.

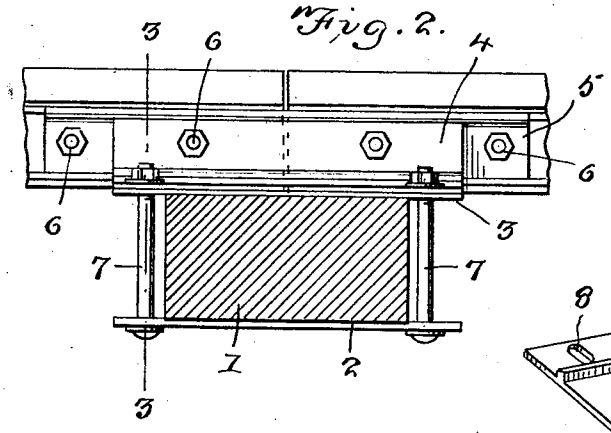


Fig. 3.

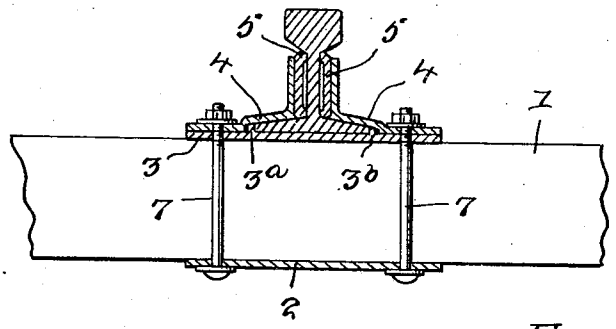
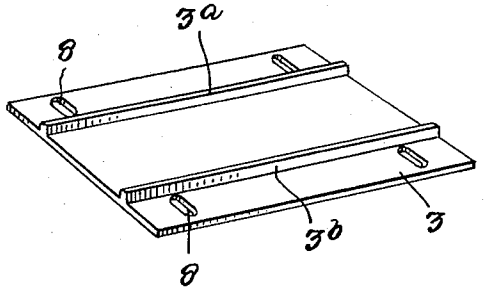


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK CRISMOR, OF CALEDONIA, AND MARTHA MILLER, OF MARION, OHIO.

RAIL JOINT AND PROTECTOR.

Application filed June 2, 1928. Serial No. 282,376.

This invention relates to rail joints and its general object is to provide a joint between the meeting ends of consecutive rails that is designed so that the use of spikes is eliminated, and that the cross tie on which the joint is supported will be protected from weather elements which result in rapid decay more especially when spikes are used, thus inviting dangerous conditions which might cause very serious fatalities.

We provide a type of joint in which both the underside and top side of the tie at the joint are covered by cross plates which prevent the infiltration of water by rain and thus retarding decay. We provide at the bottom of the tie a malleable iron plate and superpose over it a chair plate having longitudinal ridges embracing the base of the rails at a joint.

We provide two pairs of bolts at the sides of the joint out of contact with the ties thereby avoiding the use of spikes in any part of the joint. Spikes in the wood permit infiltration of water and conduce to decay of the wood of which the tie is composed. We provide a pair of bond bars or plates against the web of the rails at the joint and secure outside of them angular plates, all four plates being firmly clamped by bolts passing through holes in the web.

The several features of novelty more fully hereinafter described, will be definitely indicated in the appended claim.

In the accompanying drawings illustrating the invention—

Figure 1 is a plan of the rail joint embodying our improvement as shown applied to a single tie.

Figure 2 is a side elevation and part section on plane 2—2 of Figure 1 illustrating the joint.

Figure 3 is a section on plane 3—3 of Figure 2.

Figure 4 is a perspective of a rail plate chair we prefer to employ.

Referring now in detail to the drawings 1 represents a cross tie usually made of oak or chestnut on the top of which we apply at the rail joint between two adjoining rails a ribbed chair plate 3 and immediately below the same beneath the tie 1 an iron plate somewhat wider than the cross tie to accommodate a locking bolt. This bottom plate 2 is in alinement with the chair plate 3, the latter being provided with longitudinal ridges 3^a, 3^b which form a seat for the base of the rail and prevent lateral shifting of the same at the joint. We apply angular braces 4 which seat against a pair of bond bars 5 seated against the web of the rail at each side adjacent the joint. The web is drilled with holes to accommodate bolts passing through the braces and bars as indicated at 6 to clamp the rail ends together at each side of the joint which permits the plates 5 bonding the ends of the rails together in alinement and the inner bolts adjacent the joint engage the brace plates as indicated in Figure 2. The chair plates are provided with slotted openings 8 and registering slots 9 are punched in the angle plates 4. The slots are arranged so that when the parts are assembled the bolts 7 pass outside the sides of the tie as will be evident from Figures 1 and 3 and a firmly seated joint is provided without injuring the body of the cross tie by spikeholes, thus conducing greatly to the life and safety of the tie and the strength of the joint over a maximum period of time.

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

A rail fastener comprising a chair adapted to rest upon a rail tie, longitudinally disposed ribs formed with said chair and rising therefrom to receive the base of rails therebetween, bond bars for engagement with the webs of rails, angular brace plates having parallel vertical portions with openings therein to receive rail bolts that pass thru the bond bars, central portions included in said angular brace plates and being shaped to follow the shape of the top of the base of the rails and the ribs, horizontal portions formed with central portions and being provided with slots adapted to register with slots formed in the chair, a bottom plate, bolt and nut connections for securing the bottom plate to the chair with the bottom plate on the underside of the tie and the bolts of the bolt and nut connections passing thru the registering slots and being disposed exteriorly of the sides of the tie.

In testimony whereof we affix signatures.

FRANK CRISMOR.
MARTHA MILLER.