G. H. SHANE.

INSULATING MEANS FOR RAILWAY TIES AND CHAIRS.

APPLICATION FILED JAN. 13, 1913.

1,082,826. Patented Dec. 30, 1913.

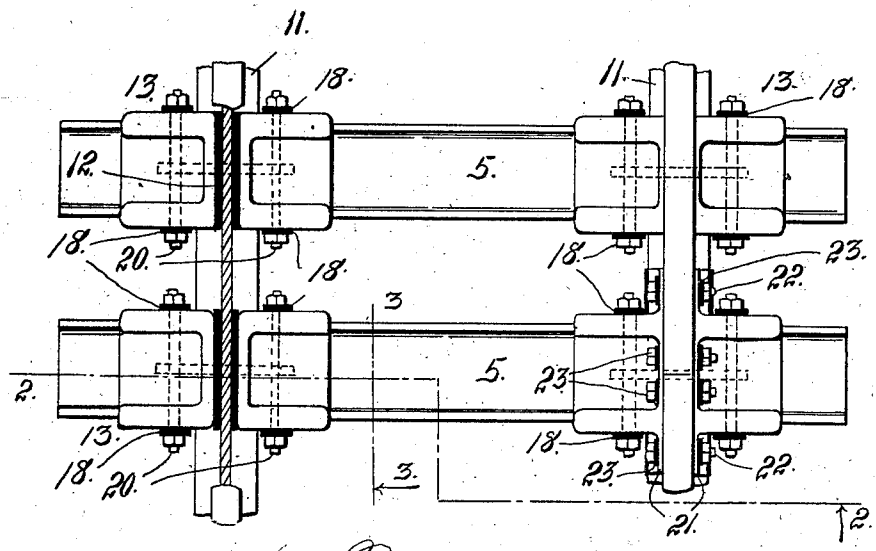


Fig. 1.

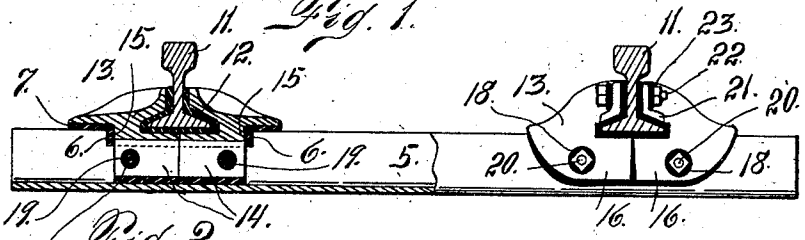


Fig. 2.

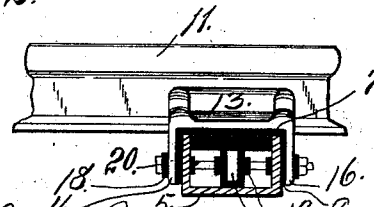


Fig. 3.

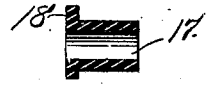


Fig. 4.

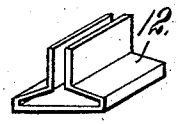


Fig. 5.

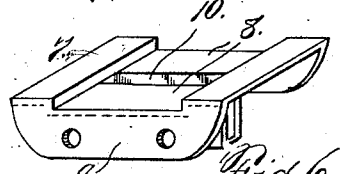


Fig. 6.

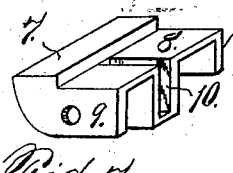


Fig. 7.

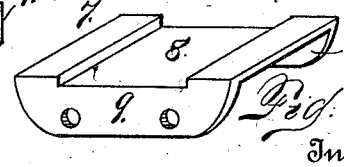


Fig. 8.

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UNITED STATES PATENT OFFICE.

GEORGE H. SHANE, OF DENVER, COLORADO, ASSIGNOR TO THE STEEL RAILWAY TIE AND APPLIANCE COMPANY, OF DENVER, COLORADO, A CORPORATION OF COLORADO.

INSULATING MEANS FOR RAILWAY TIES AND CHAIRS.

1,082,826. Specification of Letters Patent. Patented Dec. 30, 1913.

Application filed January 13, 1913. Serial No. 741,703.

To all whom it may concern:

Be it known that I, GEORGE H. SHANE, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Insulating Means for Railway Ties and Chairs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in insulating means for railway ties and chairs of the nature claimed and described in Patent No. 894,072, issued to Robert E. Foresman and myself, July 21, 1908, and in my application, Serial No. 728,970, filed November 1, 1912.

One object of the present invention is to provide means for insulating the tie from the chair and the chair from the rail, where it is desired to utilize one or both of the rails for the transmission of electric current, as in block signaling systems, or on electric roads.

Another object is to provide a construction in which the insulation shall be of such form that it will be impossible to assemble it improperly whereby the employment of high grade labor will be unessential.

Other objects will appear hereinafter as I proceed with the description of that embodiment of the invention which for the purposes of the present application, I have illustrated in the accompanying drawing, in which:

Figure 1, is a plan view of a section of track equipped with my improved insulating means; Fig. 2, is a view partly in section upon the line 2—2, Fig. 1, looking in the direction of the arrow. Fig. 3, is a section taken upon the line 3—3, Fig. 1, looking in the direction of the arrow. Fig. 4, is a sectional detail of an insulating sleeve employed in my invention. Fig. 5, is a detail in perspective of a rail casing of insulating material. Fig. 6, is a view in perspective of one form of the main insulating member. Fig. 7, is a similar view showing one of a pair of insulating members which may be employed instead of the single member of Fig. 6. Fig. 8, is a similar view of a modification.

Similar reference numerals refer to like parts throughout the views.

In the drawing which forms a part of this specification the numeral 5, designates a tie of channel iron, the side flanges of which are cut away at 6, forming rectangular recesses therein which constitute seats or bearings for the members 7, depressed through out their middle portions 8, to fit into the recesses 6 thereby preventing movement of the insulation members longitudinally of the ties. Each insulation member 7, is provided at its sides with depending flanges 9, which are arranged to embrace the opposite sides of the tie.

In the preferred form of insulation member illustrated in Fig. 6, the depressed portion 8, is interrupted centrally by a pocket 10, made integral with the portion 8, and extending for the full length of that portion in a direction parallel to the side flanges 9. The pocket 10, is made of the proper depth to rest upon the base of the tie 5, when the insulation member is in place as clearly illustrated in Fig. 2.

The different parts of the modification of Fig. 7, are precisely similar to those of Fig. 6 and will not require further description. It may be advantageous to construct the insulation member in two parts as indicated at Fig. 7, especially where it is desired to apply the insulation to tracks already in place. About the bottom of the rail 11, I locate an insulating casing 12, which is approximately as long as the tie is wide, one of these casings being positioned upon the rail above each tie. Rail chairs 13, made in two parts and having central depending ribs 14, are mounted upon the insulation members 7, the ribs 14 fitting into the pockets 10, of the members 7, and the lower surfaces of the chairs having shoulders 15, adapted to engage against the ends of the depressed portions 8. The chairs 13, are also provided with depending side flanges 16, which overlap the flanges 9, of the insulation members. When the parts are in position insulation sleeves 17, having enlarged heads 18, are forced through alining openings in the flanges 16, and 9, and side flanges of the tie 5. Insulation sleeves 19 are also forced through alining openings in the ribs 14 and side walls of the pockets 10. Then by the

insertion of a bolt 20, the parts are made fast.

In the lower right hand part of Fig. 1, is illustrated a modified form of rail chair for use at rail joints, the chairs being provided with side plates 21 through which additional bolts 22, pass, the result being a combined chair and fish plate construction, which, however, is fully described and illustrated in my previous application above referred to. The insulation member 7, used in connection with this latter construction is identical with that used for the regular chair, it being necessary only to employ additional insulation sleeves 23.

In Fig. 8, I have illustrated a modified form of insulation member 7, in which the pocket 10, is omitted. This construction will be employed where the middle rib 14, of the chair 13, is dispensed with or it may be used upon ties of different cross section, or material where the need for insulation arises.

I do not desire to limit myself to the use of any particular material for the insulating members 7, as their composition forms no part of the present application. However, I may say that I believe paper or wood fiber properly treated will be found satisfactory.

From the foregoing description it is believed that the method of putting into use my improved insulating means will be evident without further description.

I claim as my invention:

1. In combination a channel shaped railway tie, an insulation member having downwardly extending flanges adapted to embrace the tie and a downwardly extending pocket portion arranged intermediate said flanges, the bottom of said pocket portion being adapted to rest upon the floor of the tie, a rail chair having downwardly extending flanges adapted to embrace the flanges upon said insulation member, a downwardly extending rib mounted upon said chair intermediate said flange and adapted to fit snugly within said pocket portion of the insulation member and insulated fastening means for securing together said tie, insulation member and chair.

2. The combination with a channeled railway tie of a divided chair seated on the tie over the channel therein and having downwardly projecting flanges embracing the opposite sides of the tie a rail seated on the chair and embraced by the portions thereof, fastening means passing through the flanges of the chair and tie, and means for completely insulating from each other the rail, the chair, and the tie.

3. The combination with a railway tie, having a transversely cut out portion providing shoulders of an insulation member having depending flanges adapted to embrace the opposite sides of the tie and a depressed central portion adapted to engage said shoulders, a chair made in two sections, each having a shoulder adapted to abut against one of the shoulders formed by the depressed portion of the insulation member, and provided with depending flanges embracing the corresponding flanges upon the insulation member a rail seated within and embraced by the chair, and fastening means for securing together said tie, insulation member and chair.

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

GEORGE H. SHANE.

Witnesses:
A. J. O'BRIEN,
IRA E. DOLAN.