

UNITED STATES PATENT OFFICE.

GEORGE A. WEBER, OF NEW YORK, N. Y.

INSULATED RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 608,088, dated July 26, 1898.

Application filed November 5, 1897. Serial No. 657,585. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WEBER, of the city, county, and State of New York, have invented a certain new and useful Improvement in Insulated Rail-Joints, of which the following is a specification.

It is desirable oftentimes, where a car-rail is used as a part of an electric circuit, that the rail should be thoroughly and effectually insulated from the adjacent rail.

The present invention relates to means for connecting the contiguous ends of car-rails, by the use of which not only does a firm and secure joint result, but, additionally, thorough insulation exists between the connected rails.

I will describe a rail-joint in whose construction there are embodied the features of my improvement and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a cross-section of a car-rail adjacent to the extremity thereof, taken through line xx of Fig. 2, and illustrates a construction for connecting the rail with the adjacent rail which embodies my improvement. Fig. 2 is an elevational view of the rail-joint shown in section in Fig. 1; and Fig. 3 is a view similar to Fig. 2, but showing a slight modification.

Similar letters of reference designate corresponding parts in all figures.

A A' designate two contiguous rails whose adjacent ends are to be joined to each other to form a portion of the track, but in a manner to insulate the one from the other.

B is a rail-chair of appropriate design, forming the support for the ends of the rails. It here comprises a horizontal lower or bearing plate b and an upwardly-extending integral bolt-supporting plate b' . The point common to the plates is enlarged, as shown at b^2 , for strengthening purposes and to facilitate the securing of the chair.

The rails A A' do not rest directly upon the bearing-plate b , but upon an interposed strip C of insulating material, which may be extended upwardly a short distance along the surface of the plate b' or may extend to a point near the top of said plate, as shown in Fig. 3.

D D are fish-plates provided with projections d' , said fish-plates extending for a

short distance along each rail and secured by bolts D' and nuts d , passing through suitable openings in the webs of the rails, the fish-plates D D, and the plate b' of the rail-chair.

The chair B is provided with openings for the passage of bolts D'. In these openings are seated two packing washers or thimbles $b^3 b^4$, one of which, b^4 , is of insulating material, which form packing-rings for and insulate the heads of bolts D' D' from the chair B.

F F are two pieces of packing material, as wood, extending on each side of the rail a distance corresponding to the length of the fish-plate through which the bolts pass, forming a cushioning packing for the joint.

The abutting faces of the rails may be insulated from each other simply by an air-space, if so desired. More positive insulating means may, however, be used, consisting of a plate G of insulating material, agreeing, desirably, with the cross-sectional outline of the rail and interposed between the two abutting surfaces.

Having described my invention, what I consider as new, and desire to secure by Letters Patent, is—

1. An insulated rail-joint, comprising a rail-chair for supporting the contiguous ends of rail-sections having a bolt-supporting plate at one edge thereof, insulating material between the ends and said plate, said insulation extending to or near the top of the bolt-supporting plate and conforming to the angle of the rail-chair, insulated blocks on each side of the rail-sections, a bolt or bolts extending through the insulating-blocks, rail, insulation and bolt-supporting plate, and an insulation for the end of the bolt passing through the bolt-supporting plate, substantially as described.

2. An insulated rail-joint, comprising a rail-chair for supporting the contiguous ends of rail-sections, having a bolt-supporting plate at one edge thereof, insulating material between the ends and said plate, said insulation extending to or near the top of the bolt-supporting plate and conforming to the angle of the rail-chair, insulated blocks on each side of the rail-sections, a bolt or bolts extending through the insulating-blocks, rail, insulation and bolt-supporting plate, and an

insulation for the end of the bolt passing
through the bolt-supporting plate consisting
of a metal flanged thimble, a bushing or in-
sulation between the thimble and bolt and an
5 insulation-washer on said bushing between
the nut and flange of the metal thimble, sub-
stantially as described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

GEORGE A. WEBER.

Witnesses:

ERNEST HOPKINSON,

W. LAIRD GOLDSBOROUGH.