No. 734,419. PATENTED JULY 21, 1903.

J. D. KEILEY.

INSULATED JOINT.

APPLICATION FILED APR. 25, 1903.

NO MODEL.

Fig. 1.

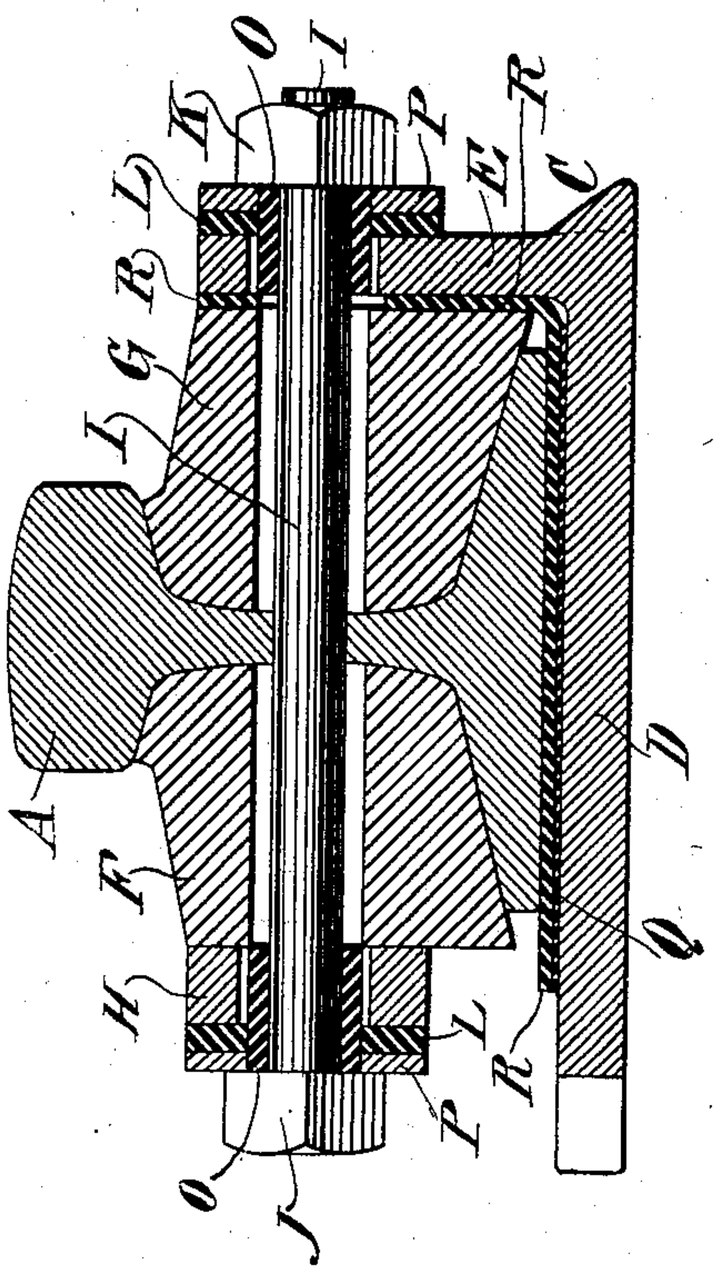
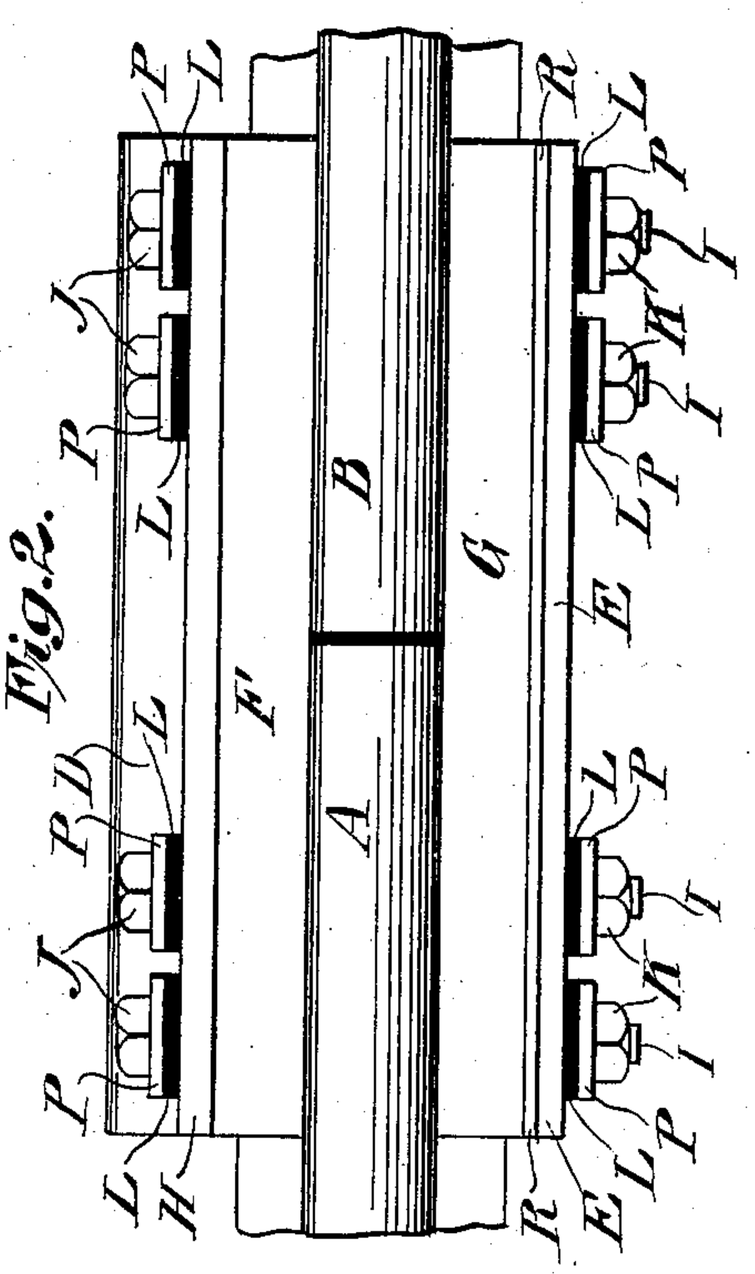


Fig. 2.



Witnesses
C. Mitchell
A. L. O'Brien

John D. Keiley
Inventor
By Dickerson Brown Raymond & Brownell Attys

No. 734,419. Patented July 21, 1903.

UNITED STATES PATENT OFFICE.

JOHN D. KEILEY, OF NEW YORK, N. Y., ASSIGNOR TO THE WEBER RAILWAY JOINT MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF WEST VIRGINIA.

INSULATED JOINT.

SPECIFICATION forming part of Letters Patent No. 734,419, dated July 21, 1903.

Application filed April 25, 1903. Serial No. 154,307. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. KEILEY, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Insulated Joints, of which the following is a specification, accompanied by drawings.

This invention relates to insulated rail-joints; and its objects are to improve upon the construction of such joints for railroad-rail sections and improve their efficiency and high insulating qualities.

Further objects of the invention will hereinafter appear; and to these ends the invention consists of devices for carrying out the above objects constructed and arranged as hereinafter more fully described and claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a transverse sectional view of a rail-joint embodying the invention, and Fig. 2 is a plan view of the same.

Referring to the drawings, A and B represent the ends of two rails to be insulated from each other. The rails are shown supported upon a suitable chair C, comprising the base D and upright E. Arranged at each side of the webs of the rails are insulating packing-blocks F and G, in this instance of wood. Preferably a metallic strengthening-bar H extends along the inside of the joint, and suitable bolts I secure the parts of the joint together. The heads J, nuts K, and shanks of the bolts are suitably insulated from the metallic parts of the joint, in this instance, as shown, by suitable insulating-washers L and insulating-sleeves O. As shown, metallic washers P are arranged beneath the heads and nuts of the bolts.

The improvement relates more particularly to the insulation of the bases of the rails from the rail-chair. It is extremely desirable to thoroughly insulate the bases of the rails from the chair, and according to this construction insulation of high efficiency is obtained. Beneath the bases of the rails, or beneath the base of at least one rail, layers of insulating material are arranged, one of these layers being of material of relatively high insulation and the other a layer of material of relatively lower insulation. The layer Q, arranged next to the base of the chair, is preferably of micaceous material, or a sheet of mica, while the layer R, arranged over the layer Q, is of thicker and tougher material of relatively lower insulation, such as vulcanized fiber or other similar tough material. One of the objects of placing the thicker and tougher layer over the thinner layer of less durable material is to form a soft surface or cushion for the micaceous matter to prevent injury due to the shocks and jars incident to constant traffic over the rails. The two layers of insulating material serve to thoroughly insulate the joint. Any suitable means may be provided for maintaining the insulation in position upon the chair—as, for instance, by extending the layer R of material upwardly between the packing-block G and the upright of the chair—so that when the joint is tightened the upwardly-extending portion of the insulation is tightly gripped between the packing-block and the chair.

I do not herein claim the strap or band extending across the joint and opposing the upright of the rail-chair, as insulated rail-joints embodying this feature are shown, described, and claimed in the copending applications of George A. Weber, to which I have permission to refer, as follows: Serial Nos. 63,124 and 63,125, filed June 4, 1901; Serial No. 87,053, filed December 24, 1901; Serial No. 124,193, filed September 20, 1902, and Serial No. 133,770, filed December 3, 1902.

Obviously some features of this invention may be used without others, and the invention may be embodied in widely-varying forms.

Therefore without limiting the invention to the construction shown and described or enumerating equivalents I claim, and desire to secure by Letters Patent, the following:

1. In a rail-joint, the combination with rail ends to be insulated one from the other, of a suitable support for said rails, and means for holding the rails in proper alinement, a thin layer of material of relatively high insula-

tion and a thicker layer of tougher material of relatively lower insulation, both arranged between at least one of the rails and the support, for substantially the purposes set forth.

2. In a rail-joint, the combination with the rail ends of a rail-chair comprising a base and an upright, insulating-blocks arranged at each side of the webs of the rails, bolts for securing the parts of the joint together, means for insulating said bolts from the metallic parts of the joint, a thin layer of material of relatively high insulation arranged upon the base of the chair, and a thicker layer of tougher material of relatively lower insulation arranged over said thin layer and beneath the base of at least one of the rails, for substantially the purposes set forth.

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

JOHN D. KEILEY.

Witnesses:
PERCY HOLBROOK,
GEO. A. WEBER.