

No. 762,669.

PATENTED JUNE 14, 1904.

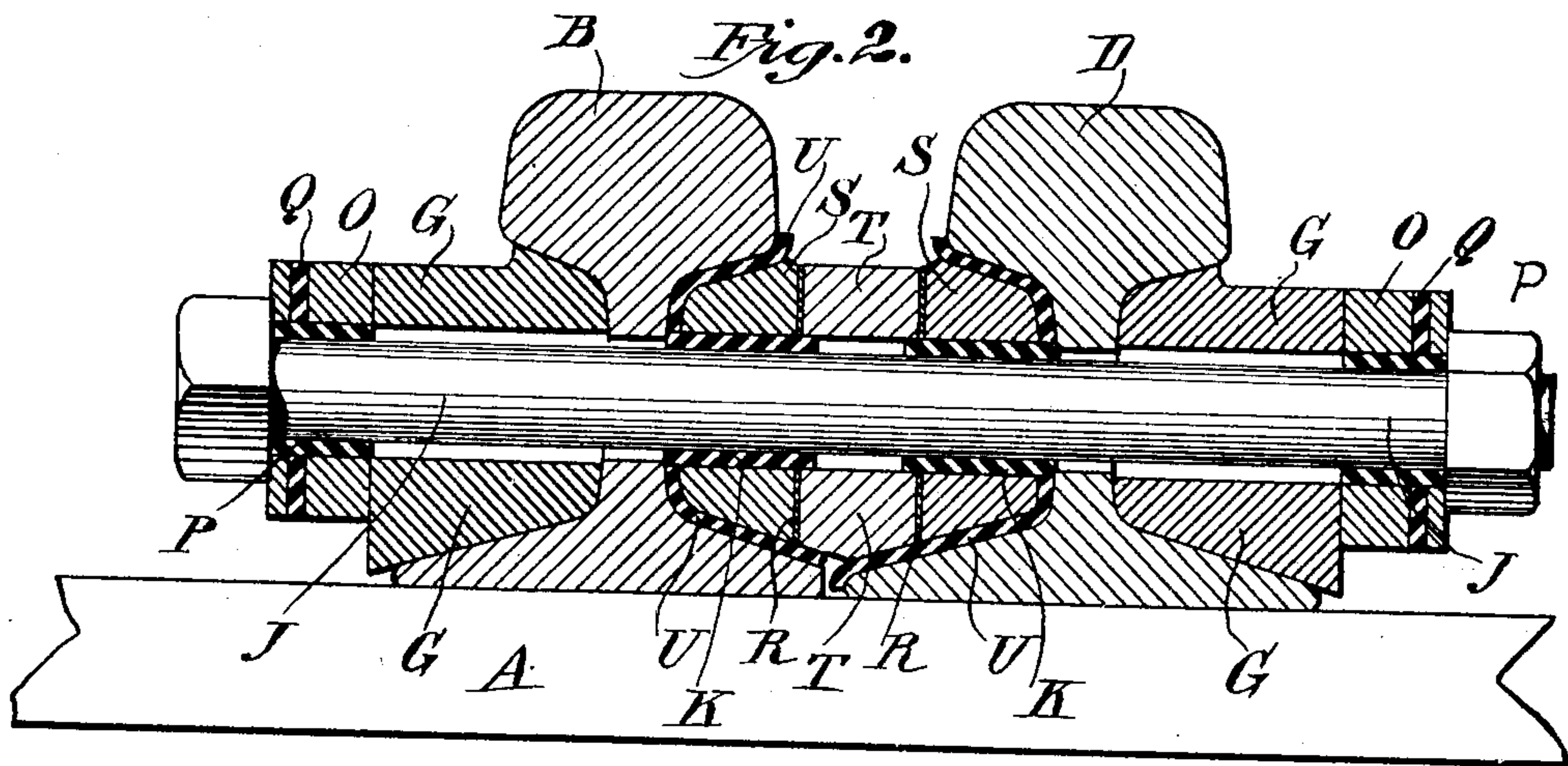
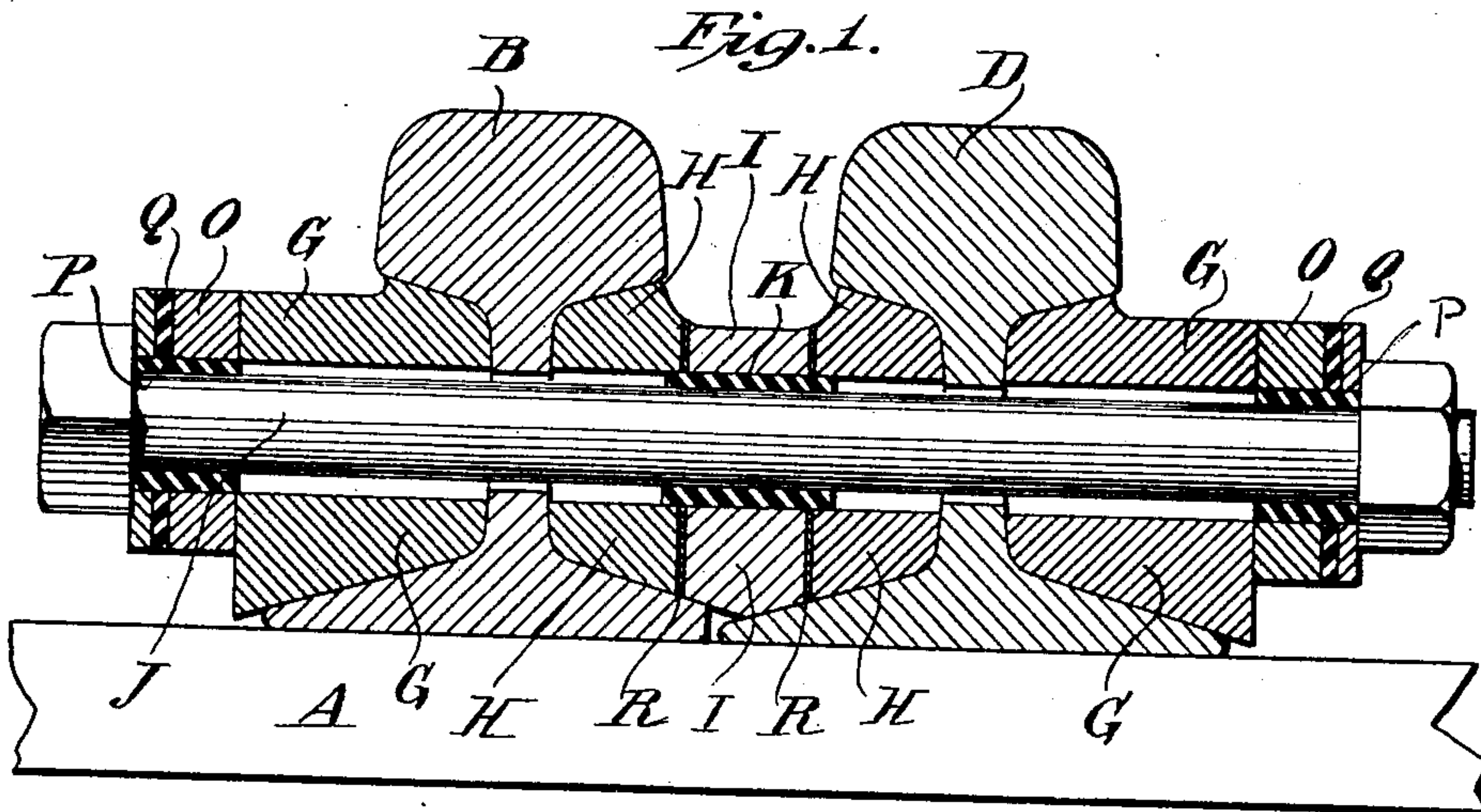
G. A. WEBER & P. HOLBROOK.

INSULATED RAIL JOINT.

APPLICATION FILED NOV. 13, 1903.

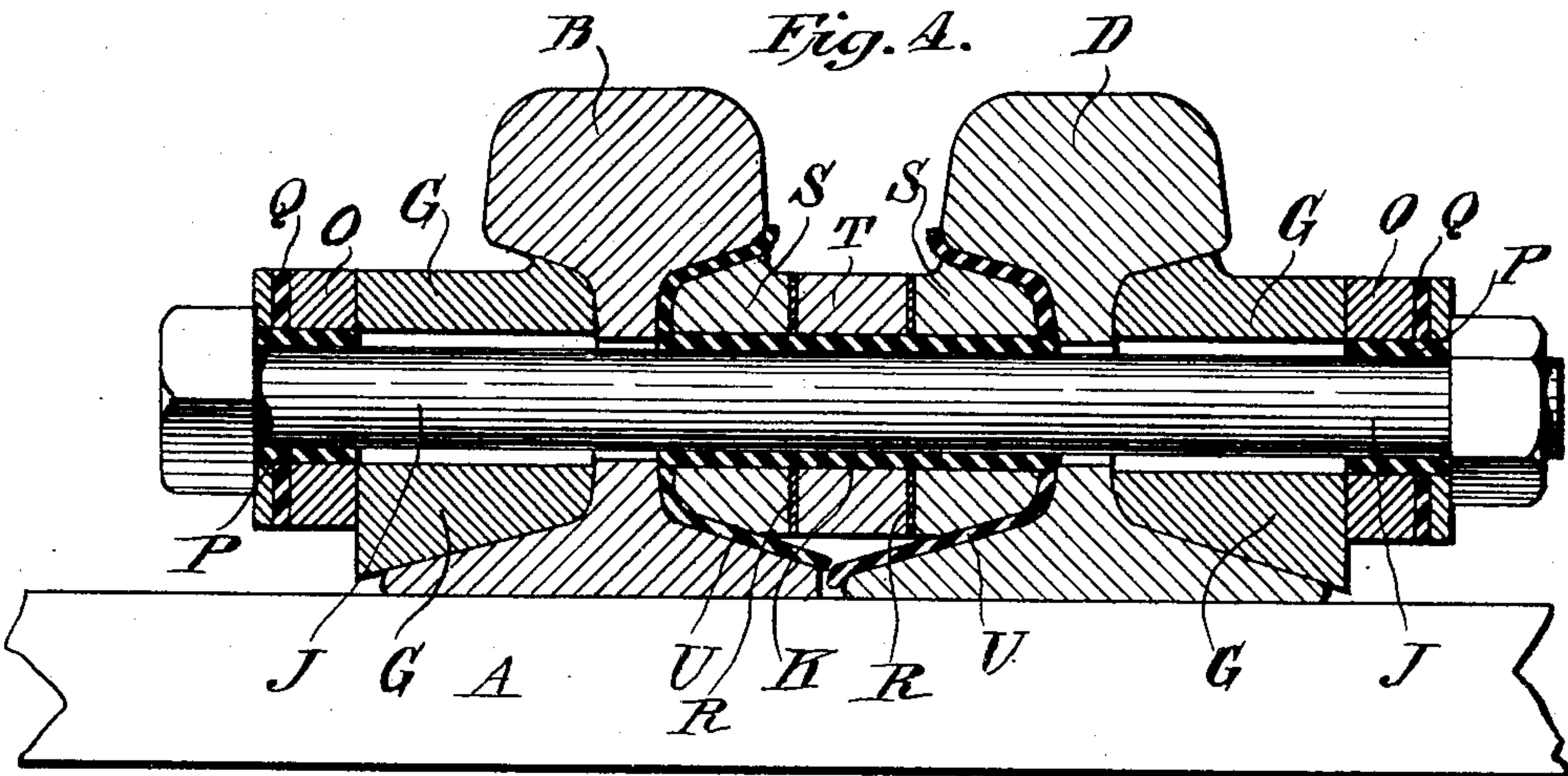
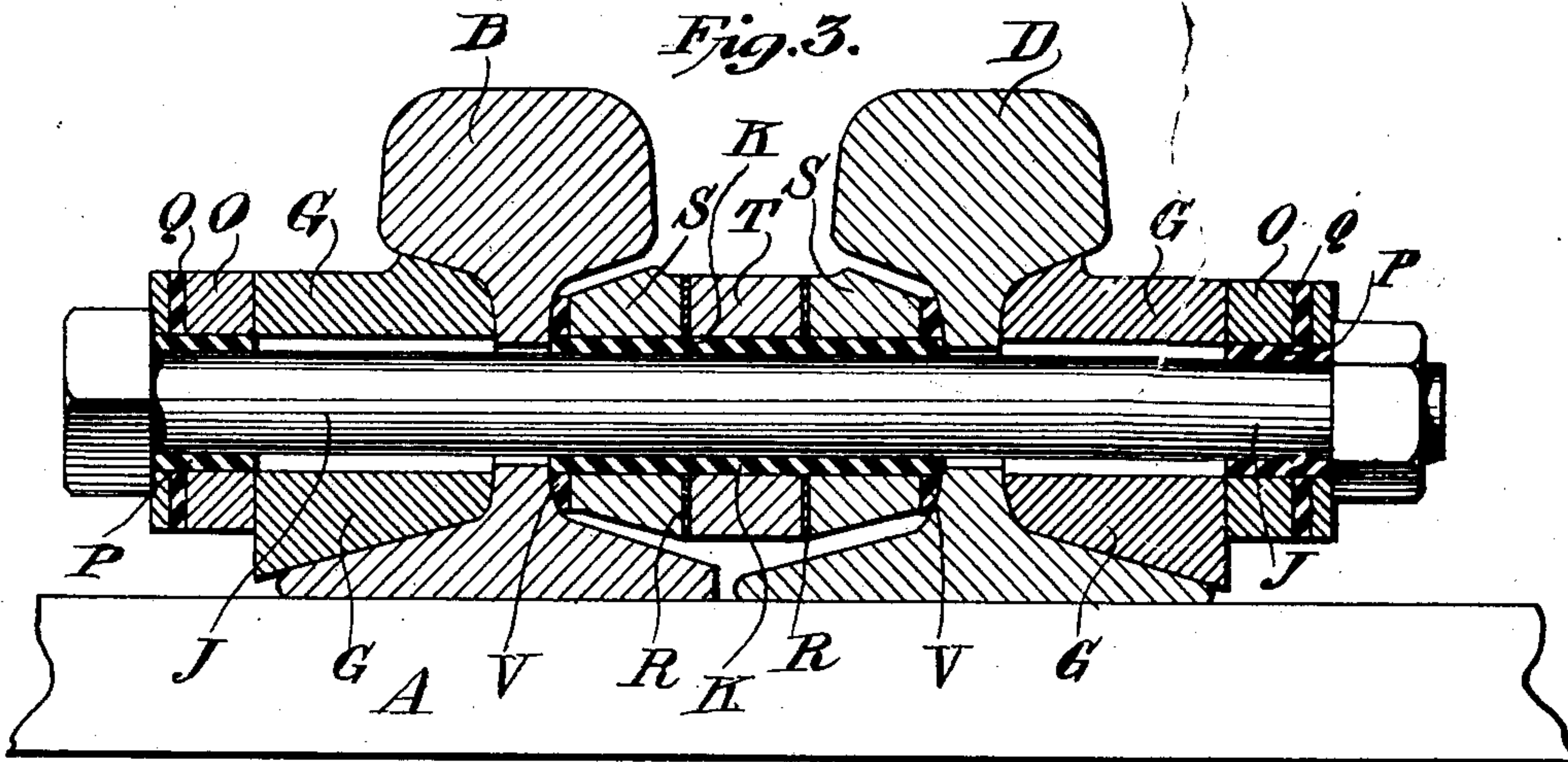
NO MODEL.

6 SHEETS—SHEET 1.



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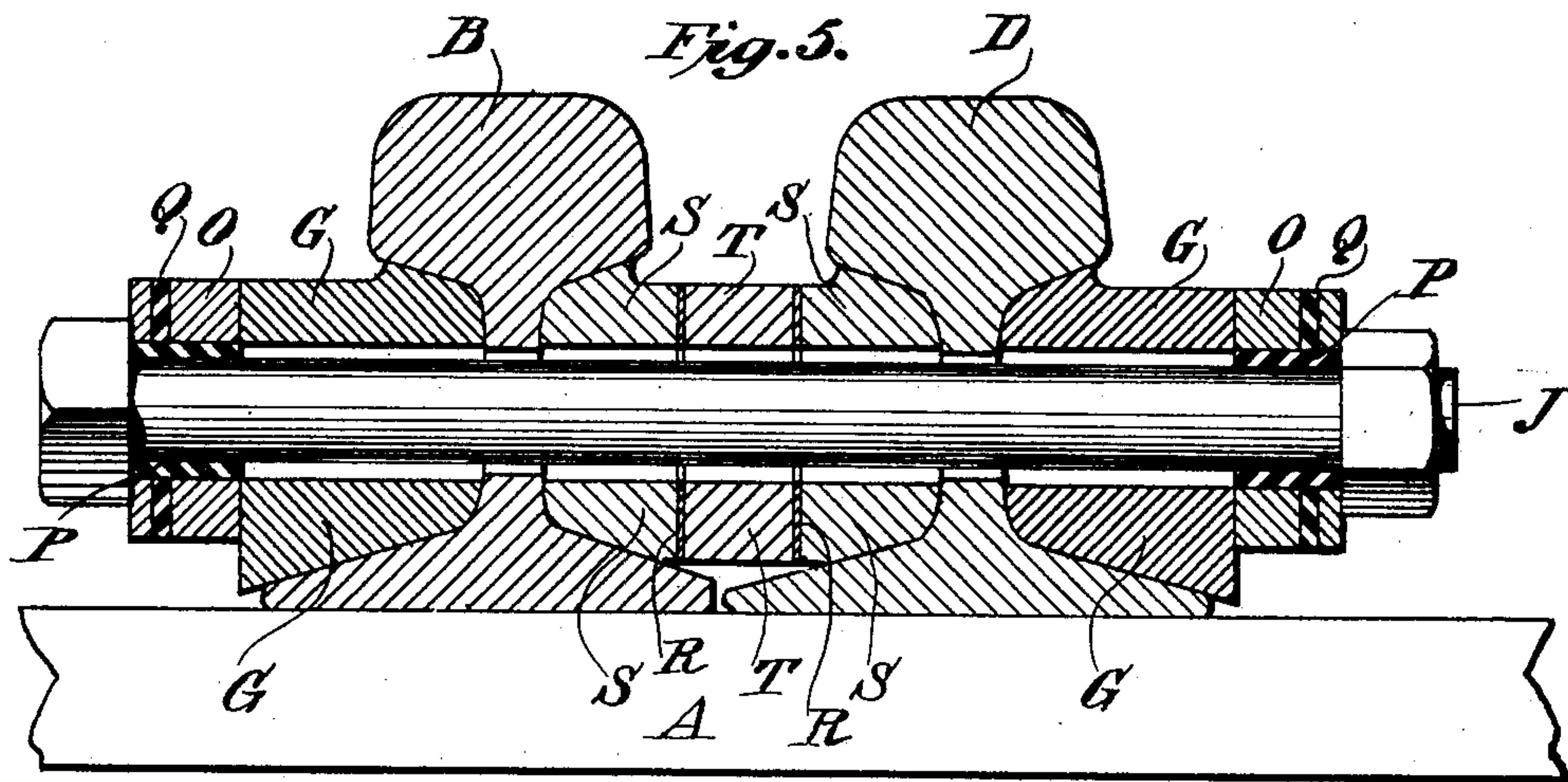
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6 SHEETS—SHEET 3.



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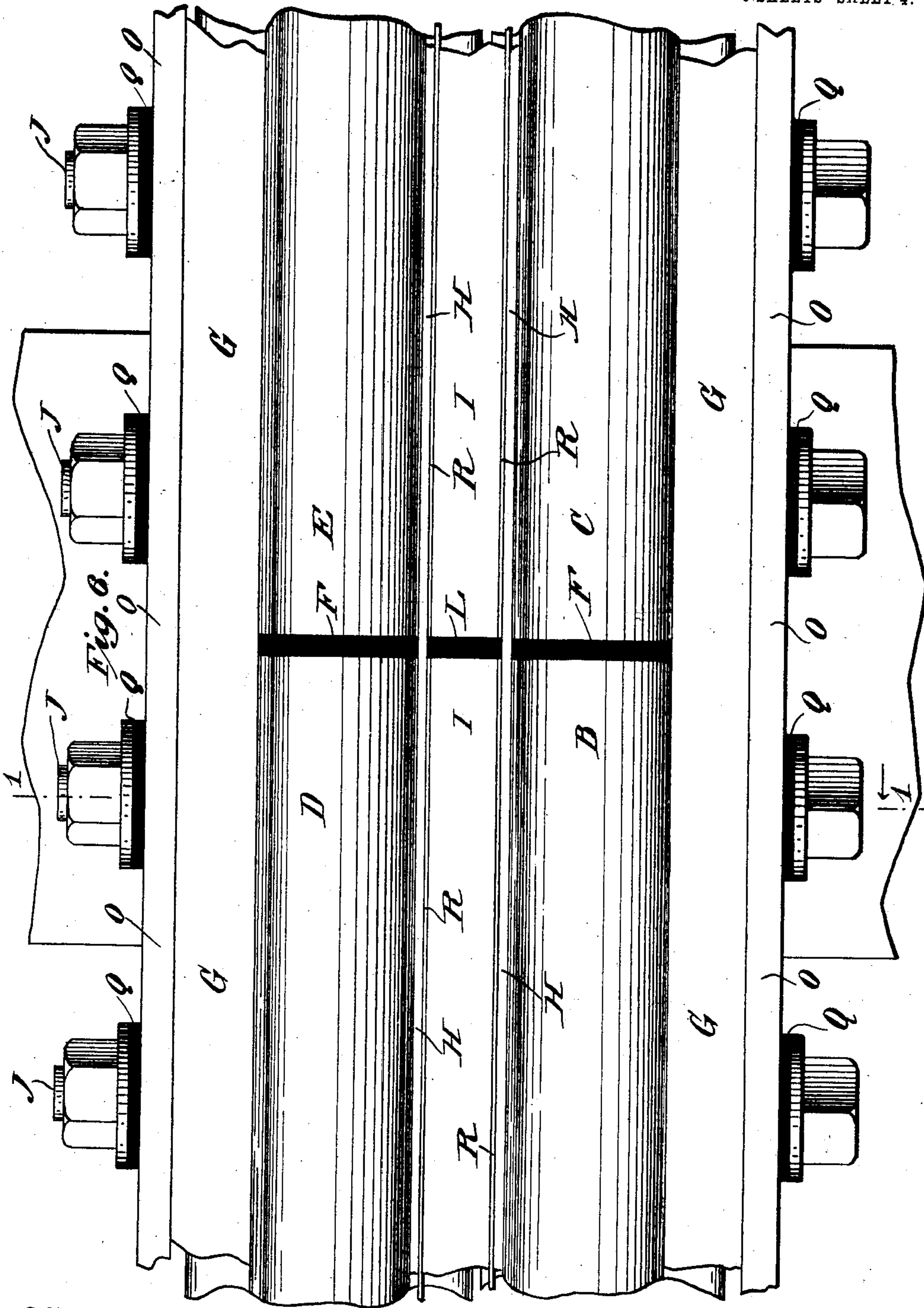
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6 SHEETS—SHEET 4.



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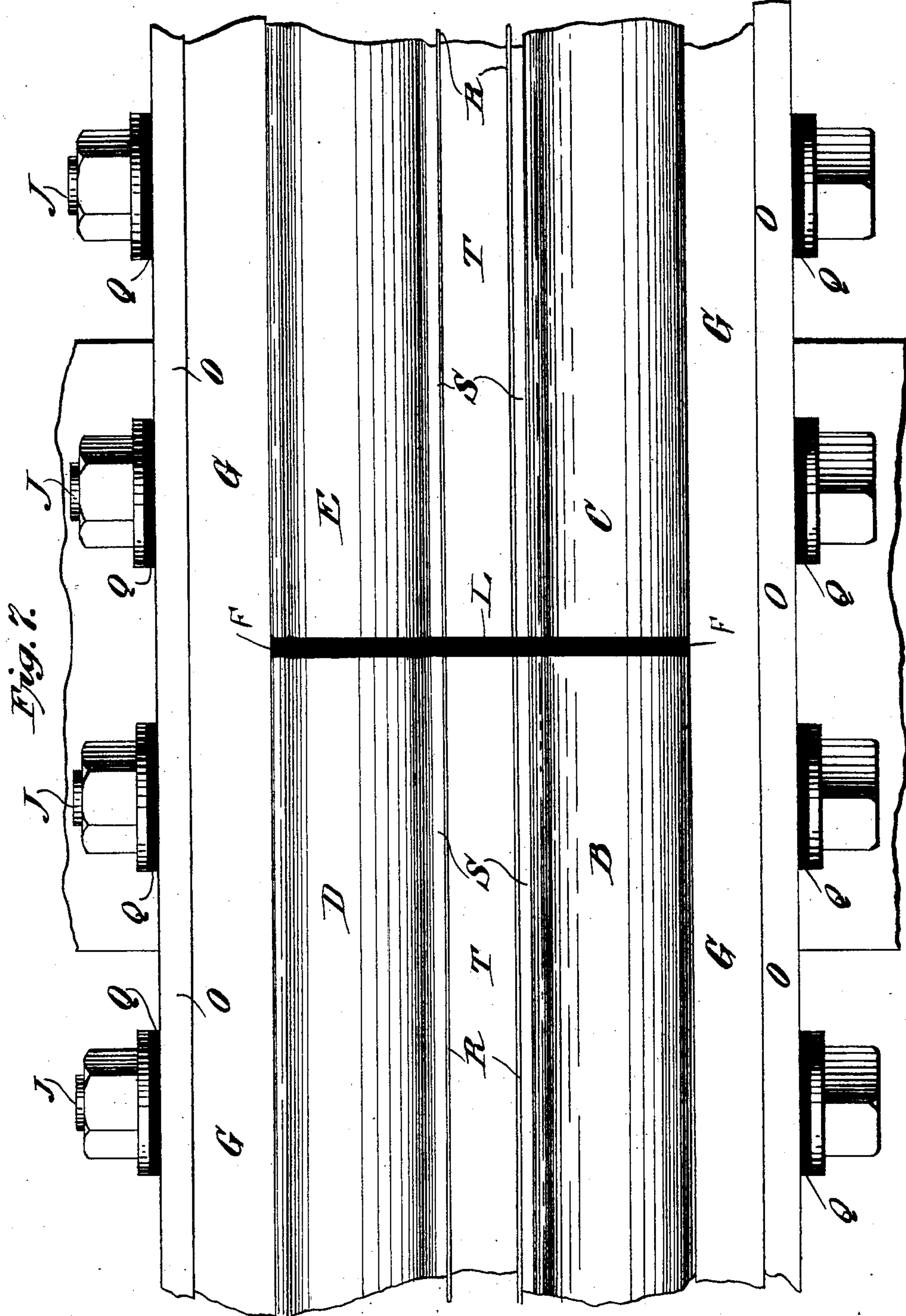
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6 SHEETS—SHEET 5.



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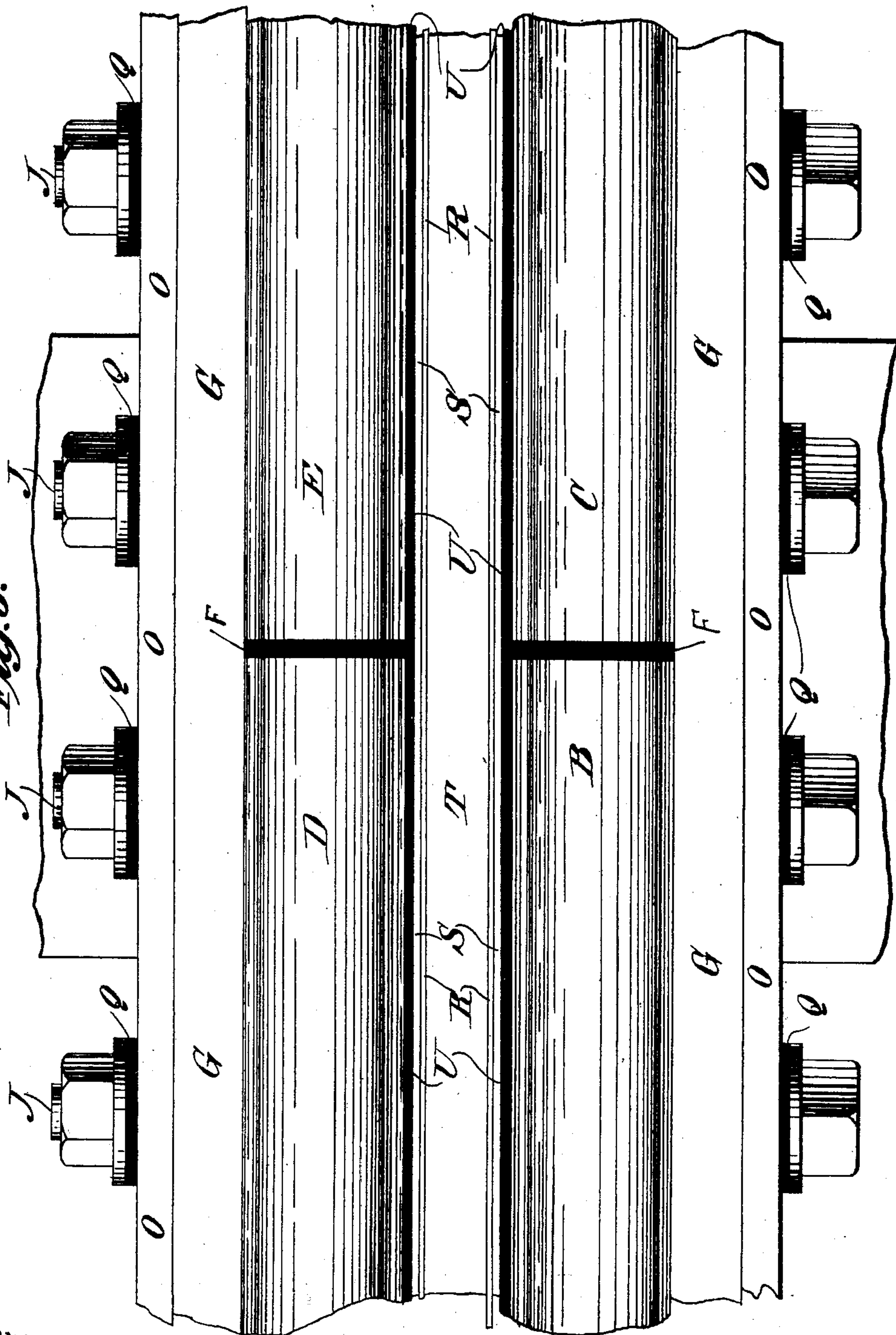
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6 SHEETS—SHEET 6.

Fig. 8.



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UNITED STATES PATENT OFFICE.

GEORGE A. WEBER AND PERCY HOLBROOK, OF NEW YORK, N. Y., ASSIGNORS TO WEBER RAILWAY JOINT MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF WEST VIRGINIA.

INSULATED RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 762,669, dated June 14, 1904.

Application filed November 13, 1903. Serial No. 181,009. (No model.)

To all whom it may concern:

Be it known that we, GEORGE A. WEBER and PERCY HOLBROOK, citizens of the United States, and residents of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Insulated Rail-Joints, of which the following is a specification accompanied by drawings.

10 This invention relates to improvements in insulated rail-joints, but more particularly to the construction of insulated twin joints; and its objects are to improve upon the construction of such joints and enable them to be readily assembled and taken apart without disturbing the rails.

Further objects of the invention will hereinafter appear; and to these ends the invention consists of an insulated joint for carrying out the above objects embodying the features of construction, combinations of elements, and arrangement of parts, having the general mode of operation substantially as hereinafter fully described and claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a transverse sectional view of a joint embodying the invention having two wooden filling-blocks between the rails next to the rail-webs with a metal bar between said blocks. Fig. 2 is a transverse sectional view of a joint in which metal bars are arranged between the rails next to the rail-webs with the wooden filling-blocks between said bars. Figs. 3 and 4 are transverse sectional views of a joint in which all three filling-blocks are of metal. Fig. 5 is a transverse sectional view of a joint in which all three filling-blocks are of wood. Fig. 6 is a top plan view of a joint like that shown in Fig. 1, having wooden fillers between the rails next to the rail-webs and showing the metal bar between the wooden blocks broken. Fig. 7 is a top plan view of a joint like that shown in Figs. 3 and 4 in which all three metal fillers are broken and do not extend continuously across the joint. Fig. 8 is a top plan view in which all three filling-blocks are made continuous, the mid-

dle one being either metal or wood and the outer ones being metal.

Referring to the drawings, A represents the rail-tie, upon which the rail ends B, C, D, and E rest. Posts F, of insulating material, may be inserted between the meeting faces of the rail ends or else air-gaps may be left for insulating purposes. The rail ends of each pair B C and D E are insulated from each other and each rail end is insulated from all the others, according to the constructions in the drawings and to be described and claimed.

In all of the figures filling-blocks G, preferably of wood, are arranged along the webs of the rails on the outside, while between the rails filling or separating blocks or bars are inserted to space the rails apart the desired distance and maintain a rigid joint.

As shown in the figures, three filling blocks or bars are arranged between the webs of the rails, the object of this construction being to enable the joint to be taken apart and assembled without disturbing the rails. If one continuous solid filling-block were inserted between the rails, it could not be removed upwardly without separating the rails, and this is disadvantageous and not permissible in many instances, because it is found necessary often to alter the joint and replace some of the parts without disturbing the rails. According to this construction after the bolts are removed the filling-blocks between the rails may be removed by first taking out the central one and then removing the others.

In Fig. 1 the filling-blocks H adjacent the webs of the rails are shown of wood, while the central middle bar I is made of metal. The blocks H and bar I may be continuous and extend across the joint or else they may be broken. It is preferable to have the wooden blocks H extend continuously across the joint, and if the central metal bar I is broken it is not necessary, of course, to insulate it from the bolts J. If the bar I is continuous, an insulating-sleeve K, of suitable insulating material, as fiber, should be arranged beneath the bar I over the bolt. If the bar I is made discontinuous or broken, as

in Fig. 6, the insulating-sleeve K may be dispensed with, and preferably the post L, of insulating material, should be inserted between the meeting faces of the parts of the bar, as shown in Fig. 6.

Preferably outside of the outer wooden filling-blocks G continuous metal bands or straps O are arranged, which are insulated from the bolts in the usual manner by means of the insulating-sleeves P and washers Q. Metal liners or take-up blocks R are preferably inserted between the bar I and the blocks H at each side to take up play. Liners R of different thicknesses may be inserted as desired to take up play.

In Fig. 2 metal filling-blocks S are arranged adjacent the webs of the rails, with a wooden filling-block T arranged between said blocks S. With this arrangement if the metal blocks S are continuous and extend across the joint they should be insulated from the bolts J and from the rails, as shown by the insulating material U of any suitable character, such as fiber, and by means of the sleeves K. As before, the metal liners or take-up blocks R are inserted between the filling-blocks. If the filling-blocks S and T are discontinuous, the insulation U and K (shown in Fig. 2) is not necessary.

In Figs. 3 and 4 all three filling-blocks are shown of metal, with the metal liners or take-up blocks R inserted between them. If the metal filling-blocks are continuous, as shown in Fig. 8, and extend across the joint, insulating material U and the washer K, of insulating material, are needed, as shown in Fig. 4, or else the outer blocks S may be insulated from the rail-webs by means of the insulating-washers V. If the filling-blocks S and T are discontinuous, as shown in Fig. 7, the insulating material U and sleeves K are not necessary; but insulating material may be inserted between the meeting faces of the ends of the metal filling-blocks. In Fig. 5 all three filling-blocks are shown of wood, which makes a very good construction.

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 nor enumerating equivalents, we claim, and desire to obtain by Letters Patent, the following:

1. An insulated rail-joint, comprising the meeting ends of pairs of rails, with a plurality of longitudinally-extending filling blocks or bars arranged side by side between the rails, and bolts for securing the parts of the joint together, for substantially the purposes set forth.

2. An insulated rail-joint, comprising the meeting ends of pairs of rails, means at the outside of the joint for maintaining the rails in alinement, blocks arranged along the rail-webs between the rails, with a separating-bar between said blocks, and bolts for securing the parts of the joint together, for substantially the purposes set forth.

3. An insulated rail-joint, comprising the meeting ends of pairs of rails, with a plurality of longitudinally-extending filling blocks or bars arranged side by side between the rails, bolts for securing the parts of the joint together, and metal liners or take-up blocks between said filling-blocks, for substantially the purposes set forth.

4. An insulated rail-joint, comprising the meeting ends of pairs of rails, means at the outside of the joint for maintaining the rails in alinement, blocks arranged along the rail-webs between the rails, with a separating-bar between said blocks, bolts for securing the parts of the joint together, and metal liners or take-up blocks between the said filling-blocks and separating-bar, for substantially the purposes set forth.

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

GEORGE A. WEBER.
PERCY HOLBROOK.

Witnesses as to signature of George A. Weber:

E. VAN ZANDT,
A. L. O'BRIEN.

Witnesses as to signature of Percy Holbrook:

MARION HALL,
A. L. O'BRIEN.