

J. C. JONES.
INSULATED RAIL JOINT.
APPLICATION FILED MAR. 27, 1908.

919,877.

Patented Apr. 27, 1909.

2 SHEETS—SHEET 1.

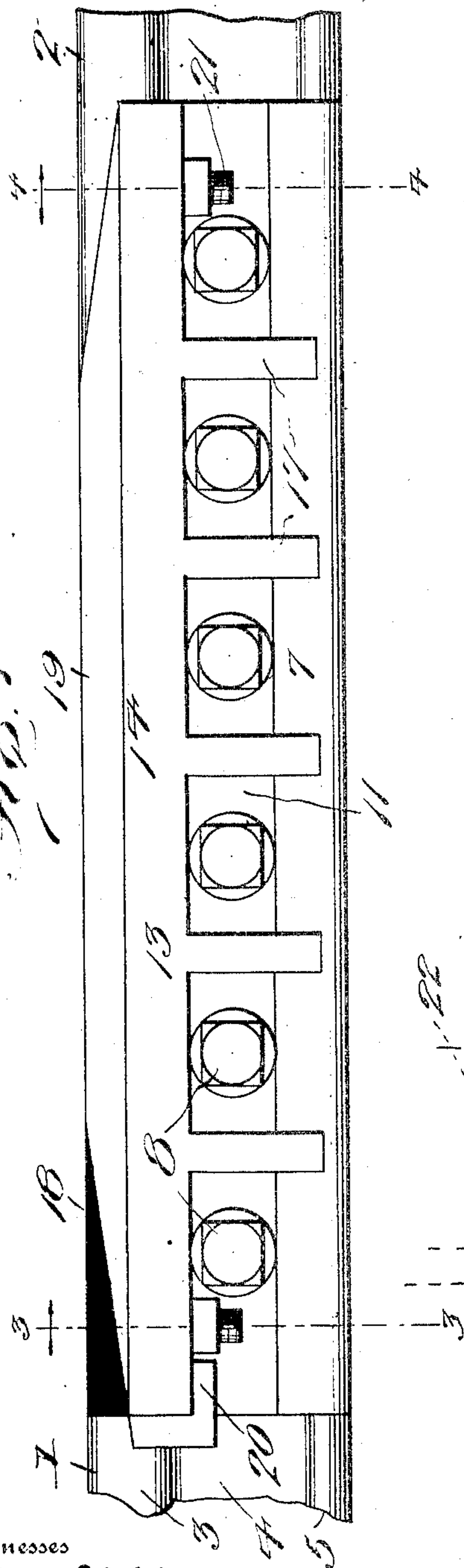


Fig. 1.

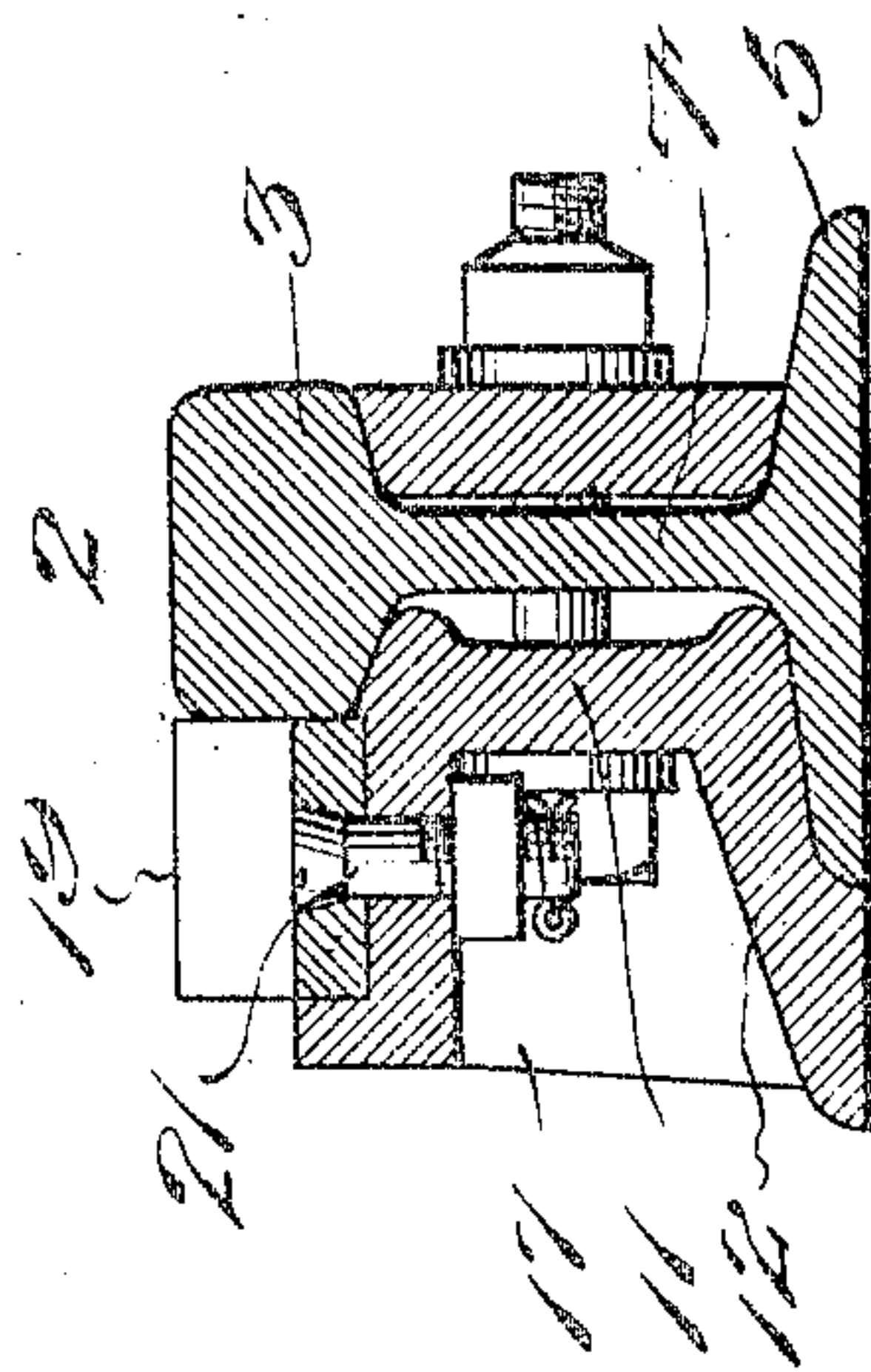
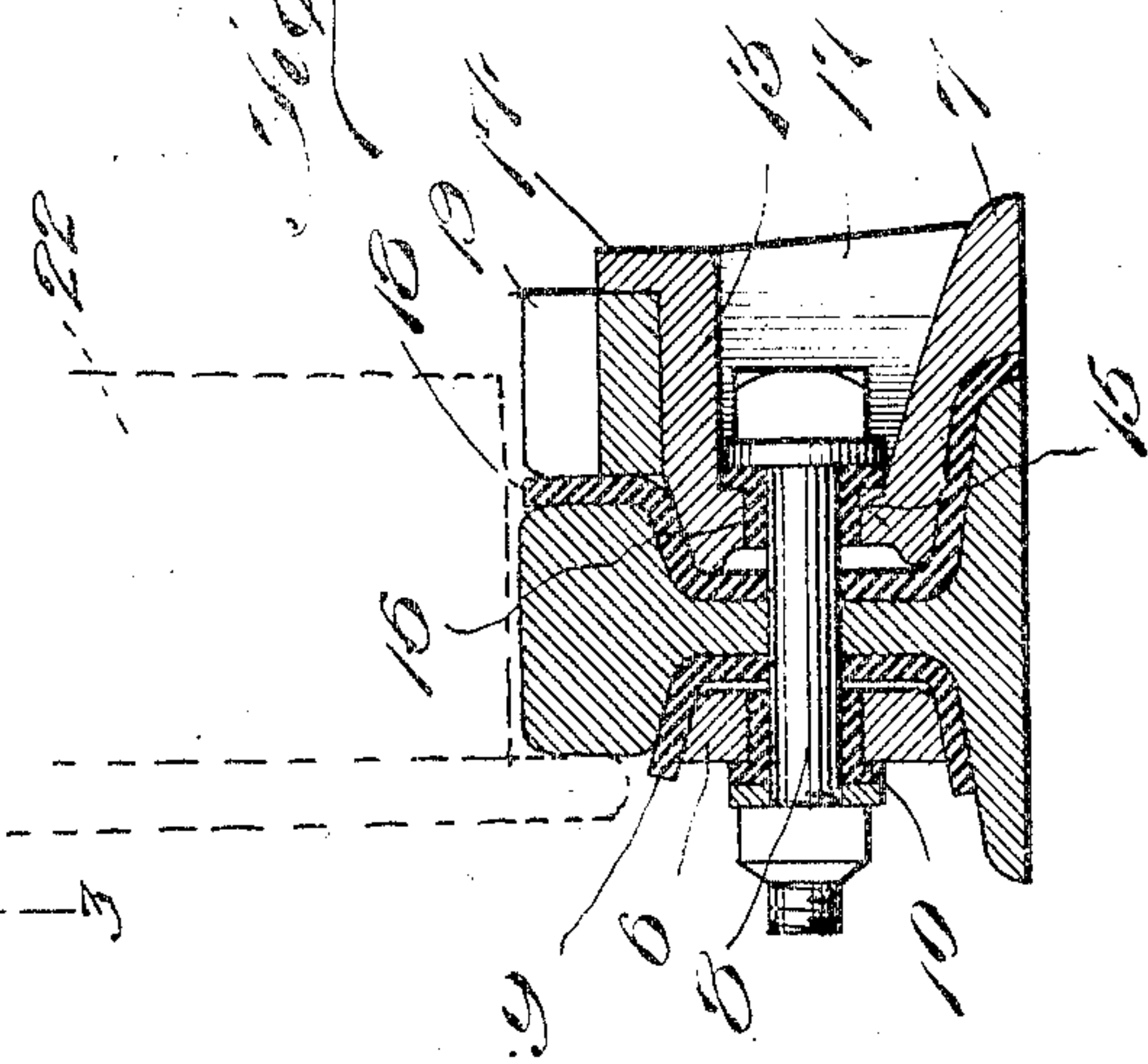


Fig. 3.



Witnesses

Hugh H. Ott.
Wm. North

Inventor

Joshua C. Jones

By

Victor J. Evans

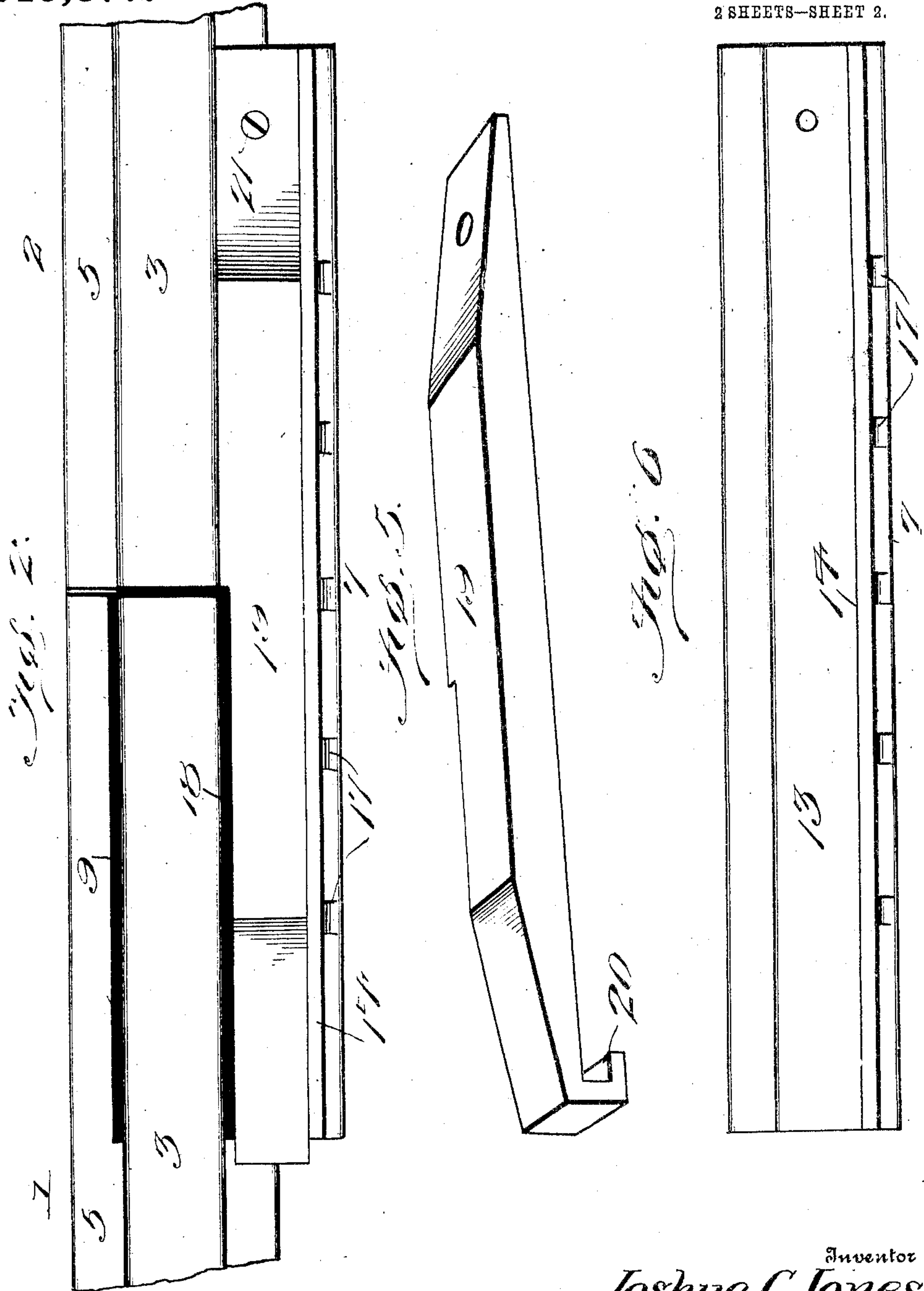
Attorney

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Attorney

UNITED STATES PATENT OFFICE.

JOSHUA C. JONES, OF WILKES-BARRE, PENNSYLVANIA.

INSULATED RAIL-JOINT.

No. 919,877.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed March 27, 1908. Serial No. 423,577.

To all whom it may concern:

Be it known that I, JOSHUA C. JONES, a citizen of the United States, residing at Wilkes-Barre, in the county of Luzerne and State of Pennsylvania, have invented new and useful Improvements in Insulated Rail-Joints, of which the following is a specification.

This invention relates to rail joints, and the object of the invention is to provide means for preventing the ends of rails deflecting unduly under the weight of a train passing from one rail to the succeeding rail by providing a splice bar of novel construction and having a separable tread which supplements the heads of the adjacent rails and serves as a bearing for the wheels of the cars.

Another object of the invention is to provide fiber sheets between one of the rails and the splice bars, whereby the rails are effectively insulated from each other.

With these and other objects in view the invention resides in the novel construction of elements and their arrangement in operative combination, hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the meeting ends of a pair of rails, showing my improvement in position thereon. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical transverse section upon the line 3-3 of Fig. 1. Fig. 4 is a similar section upon the line 4-4 of Fig. 1, and looking in the direction of the arrows. Fig. 5 is a perspective view of the removable tread. Fig. 6 is a similar view of the outer splice bar.

In the accompanying drawings, the numerals 1 and 2 designate the meeting ends of a contiguous pair of rails. The rails 1 and 2 are of the ordinary construction, having heads 3, webs 4 and base flanges 5.

In the contemplated form of my improved insulated joint I employ an inner splice bar 6 and an outer splice bar 7. The inner splice bar 6 is of the usual construction of that type employed for being positioned adjacent the web of the rails between the heads and base flanges thereof. The splice bar 6 is provided with the usual openings adapted for the reception of the retaining elements 8, by which the ends of the rails are connected together. In the present instance I employ a fiber sheet 9, of suitable non-conducting material, which is interposed between the rail 1 and the splice bar 6. The openings provided

within the bar 6 are also provided with an insulated thimble 10, interposed between the retaining element 8 and the opening within the splice bar.

The outer splice bar 7 comprises a face portion 11, adapted to be positioned in the under face of the head 3 and upon the base flange 5 of the rail sections. This face portion 11 is provided with a foot portion 12, adapted to overlie the base 5 of the rails, upon the sides of the rails on which the splice bar 7 is positioned. The splice bar 7 is also provided with an outwardly extending horizontal portion 13, having a vertical flange or extension 14. The face portion 11 of the splice bar 7 is provided with a series of openings alining with the openings in the bar 6 and the openings in the web of the rail section. These openings 15 are provided with insulated thimbles 16, adapted for the reception of the retaining elements 8, and for insulating the elements from the splice bar 7. The splice bar 7 is provided with a series of walls 17, between the upper horizontal portion 13 and the foot 7, whereby the portion 13 is effectively braced and supported upon the splice bar.

Interposed between the adjacent meeting ends of the rails 1 and 2 and continued along the rail 1 between the rail and the splice bar 7 is a sheet of fiber 18, constructed of suitable non-electric conducting material. By the arrangement of the insulating material in connection with the rails and the splice bars connected with the rails, it will be seen that I have provided an effective means for insulating the rails 1 and 2, as well as the splice bars and the retaining elements connected therewith, from each other.

Within the channel formed between the fiber 18 upon one side of the head of the rail 1 and the side of the head of the rail 2 and the horizontal portion 13 and flange 14 of the splice bar 7 is positioned a tread member 19, extending the entire length of the bar 7. This tread 19 is provided upon one of its ends with a lip 20, adapted to engage beneath the horizontal portion 13 of the bar 7, while its opposite end is provided with a suitable perforation adapted to aline with a similar opening provided upon the body 13. These openings are adapted for the reception of a retaining element 21, by which the tread is effectively secured upon the horizontal portion of the splice bar 7. The tread 19 is adapted to have its upper face in alinement with the face

of the heads of the rails, whereby the treads or faces 22 of the car wheels are adapted to ride above the meeting ends of the rails, and thereby entirely overcome the deflecting of the rails at their point of meeting. The tread 19 has its ends gracefully sloping toward its face, so that the wheels 22 of the cars will meet with no abrupt obstruction.

From the above description it will be seen that I have provided a simple, comparatively cheap and thoroughly efficient insulated rail joint, one wherein simple means are provided for preventing undue deflection of the meeting ends of rails as a car passes from one rail to the succeeding rail, and one in which the tread of the splice bar is readily removable when worn or broken, and whereby a new tread may be easily and quickly applied to the splice bar.

While the tread member 19 has been shown and described as being provided with a lip by which it is at one end positioned upon the member 7, it is to be understood that this lip may be dispensed with and the tread attached to the member 7 by suitable retaining elements upon both of its ends.

Having thus fully described the invention what is claimed as new is:

1. The combination with the meeting ends of a pair of rails, of an inner splice bar having a facing of insulated material, and an outer splice bar also having a facing of insulated material, the outer splice bar being provided with an outwardly extending flange having its edge provided with a vertically projecting offset, the body of the flange being provided near one of its ends with an opening, and a tread member having a hooked lip adapted to engage one end of the flange and being provided at its opposite end with retaining means whereby the same is secured upon the flange between the rails and the vertically projecting offset of the splice bar.

2. The combination with the meeting ends of an insulated rail joint, an inner and an

outer splice bar for the rail joints, the outer splice bar being provided with an outwardly extending head portion having its edge provided with an upwardly extending flange, the head being provided with a series of downwardly projecting supporting partitions, the side of the splice bar between the partitions being provided with openings alining with openings provided in the rail webs and the opposite splice bar, insulated thimbles in these openings, connecting elements for the members, and a tread member having a lip adapted to engage the horizontal offset of the outer splice bar and to rest between the vertical flange and the insulated rails and to be removably connected with the splice bar at its opposite end.

3. The combination with the meeting ends of a pair of rails, of an inner splice bar having a facing of insulated material and an outer splice bar also having a facing of insulated material, the insulated material extending along the face of the top of the rail adjacent the splice bar, the splice bar having a face portion engaging the webs of the rails and the head and the base flange of the rails, a horizontal portion upon the splice bar having a vertical flange, walls or ribs between the under side of the horizontal portion and the foot of the flange, the horizontal portion being provided with an opening, and a tread provided with a finger adapted for engaging one end of the horizontal portion and having its opposite end provided with a suitable opening alining with the opening in the horizontal portion of the flange and adapted for a retaining element, and the body of the tread adapted to extend above the heads of the rails.

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

JOSHUA C. JONES.

Witnesses:

JAMES F. MILLER,
WM. P. HILBERT.