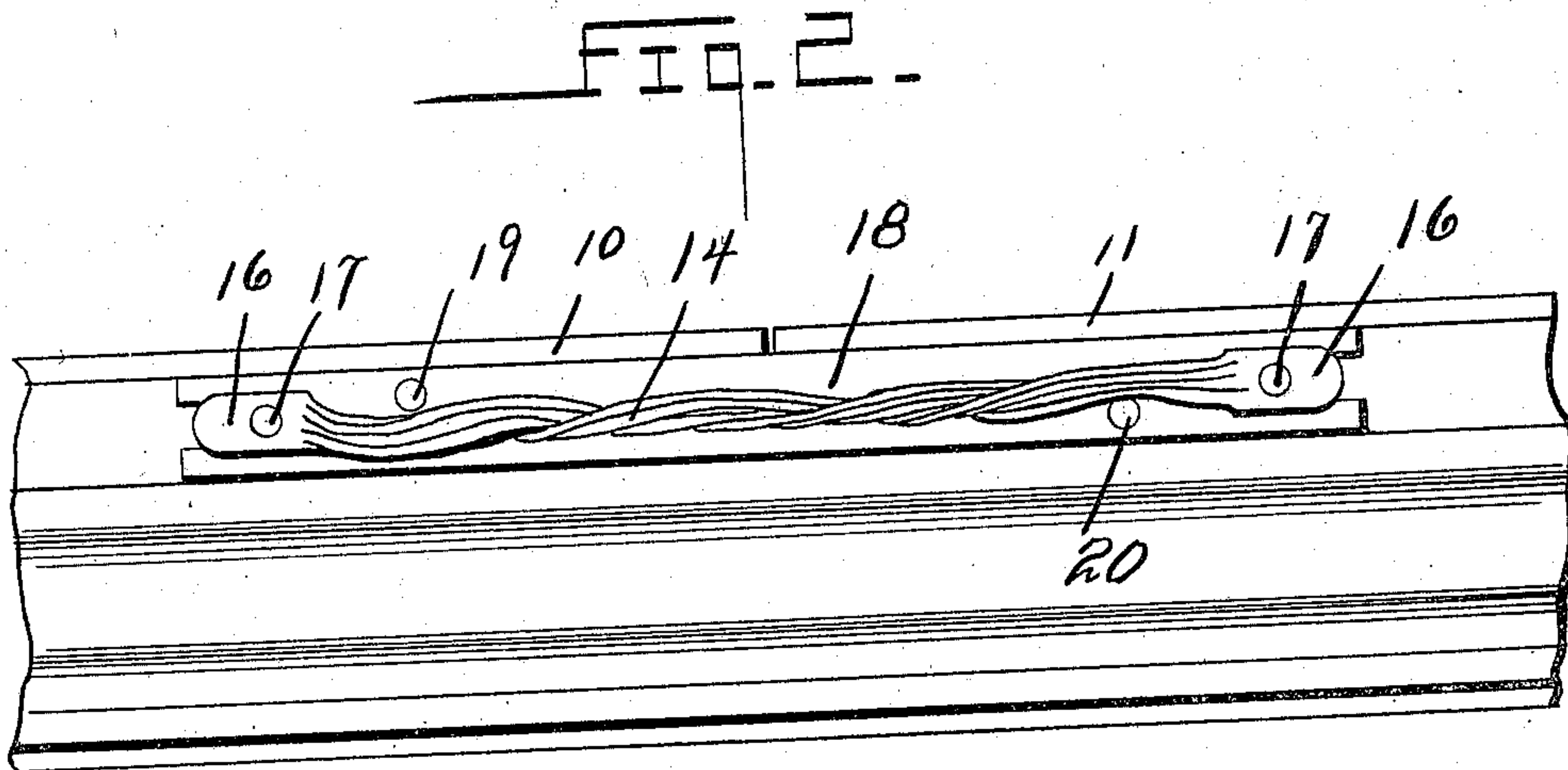
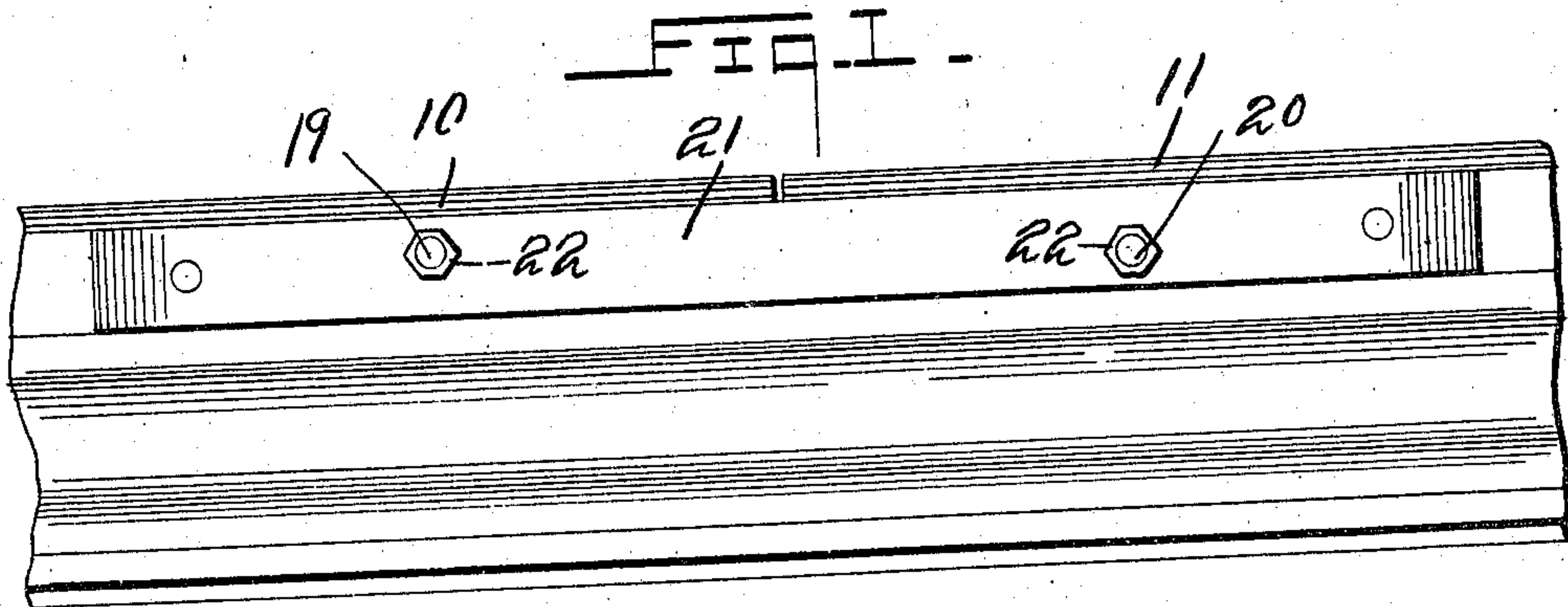


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RAIL BOND.
APPLICATION FILED AUG. 4, 1908.

Patented Oct. 6, 1908.

2 SHEETS—SHEET 1.

900,298.



Inventor
Archie W. McConnell.

Witnesses
G. C. Johansen.
E. L. Chandler

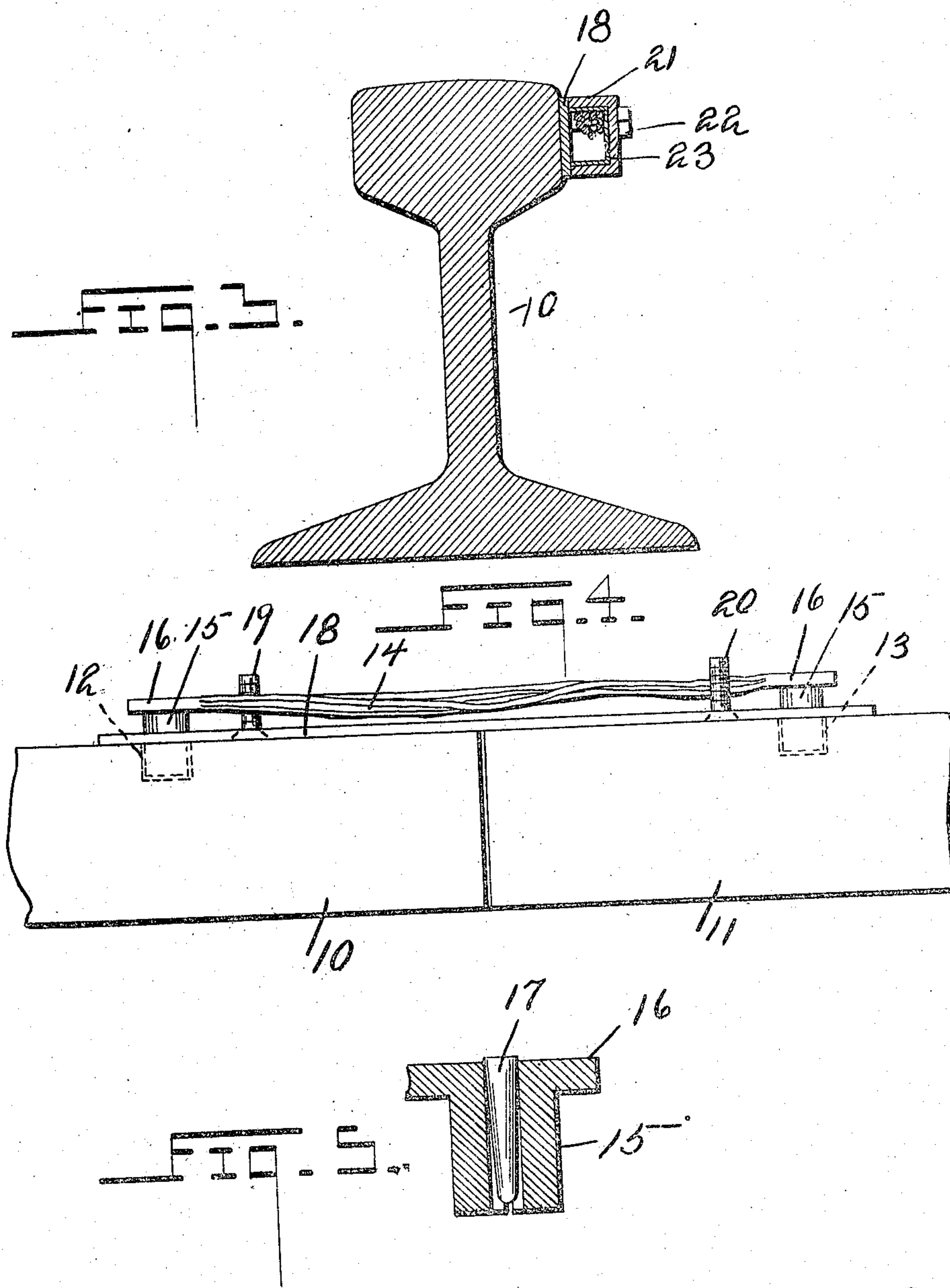
By Woodward & Chandler
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UNITED STATES PATENT OFFICE.

ARCHIE W. McCONNELL, OF ANDERSON, SOUTH CAROLINA.

RAIL-BOND.

No. 900,298.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed August 4, 1908. Serial No. 446,947.

To all whom it may concern:

Be it known that I, ARCHIE W. McCONNELL, a citizen of the United States, residing at Anderson, in the county of Anderson and State of South Carolina, have invented certain new and useful Improvements in Rail-Bonds, of which the following is a specification.

This invention relates to electric railways and has especial reference to a bond which is used at the connections between the rails thereof.

An object of this invention is to provide a bond which is securely held at the extremities of the rails so as to form a better conducting medium than has heretofore been devised.

A further object of this invention is to provide a device of this character with means whereby the bond will not be severed or injured by the movement of the extremities of the rails as the trains pass over them.

The invention further designs a casing which is positioned about the rail bond to protect the same from vehicles or the like which frequently catch and break the same from their fastenings.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the bond and its attachments applied to a rail joint, Fig. 2 is a view of the same having the outside casing removed, Fig. 3 is a transverse section of Fig. 1, Fig. 4 is an edge view of the bond and the protecting plate, the casing being removed from the same, Fig. 5 is a detailed view of one of the securing members employed at the extremity of the bond.

Referring to the drawings, 10 and 11 designate the extremities of the rails which are secured together in any well known manner. The heads of the rails 10 and 11 are apertured as at 12 and 13 into which are inserted the engaging members at the opposite ends of the bond 14. The engaging members each comprise a cylindrical body 15 which is split into several sections at its lower extremity and which carry a head 16 at the opposite extremity thereof. The head 16 is apertured

to receive an expansion bolt 17 which extends downwardly through the body 15 and forces the several sections outwardly to engage against the sides of the apertures 12 and 13.

The securing members carried by the bond 14 as well as the bond itself are constructed of copper and are adapted to convey the current across the intersection of the rails. A metallic plate or strip 18 is disposed adjacent to the heads of the rails 10 and 11 which engages upon its outer face the bond 14. The opposite extremities of the plate 18 are recessed to receive the fastening members which extend into the heads of the rails and support the bond 14. This arrangement securely holds the plate 18 in position as well as the bond 14. Bolts 19 and 20 are passed through the plate 18 from the inner face thereof having their heads countersunk in said plates for the purpose of allowing the same to lie closely in contact with the heads of the rails 10 and 11. The bolts 19 and 20 are positioned diagonally at the opposite edges of the plate 18 and extend outwardly therefrom where they engage through a U shaped casing 21 which protects the bond 14. The casing 21 is provided with a lining of copper 23 which frictionally engages against the bond 14 and acts as a conductor if for any reason the bond 14 should be broken or burned out. The casing 21 is secured upon the bolts 19 and 20 by nuts 22 which engage the outer surface of the casing 21. The opposite extremities of the casing 21 are beveled toward the heads of the rails 10 and 11 for the purpose of preventing the engagement of any portion of a vehicle or the like which would tend to displace or injure the bond 14.

What is claimed is:—

1. A device of the character described comprising a bond, a plate positioned between said bond and a rail joint and a casing disposed about said bond.

2. A device of the character described comprising a bond, a plate clamped between said bond and a rail joint, a casing disposed about said bond and a copper lining carried by said casing.

3. A rail bond having means for securing the same to a rail, said means comprising a cylindrical body being split into a plurality of sections at its lower extremity, a head positioned upon the upper end of said body having an aperture formed therein and an expansion bolt positioned through said aperture

and extending downwardly into said cylindrical body.

4. A device of the character described comprising a rail bond, expansion fastening
5 means positioned at the extremities of said bond a plate having recessed extremities engaged about said fastening means, a casing disposed about said bond and secured to said plate and a lining of conducting material positioned in said casing.
10

5. In a device of the character described

the combination with a rail bond of a plate disposed between said bond and a rail joint, of a casing positioned about said rail bond and a conducting lining in said casing. 15

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

ARCHIE W. McCONNELL.

Witnesses:

THOS. G. WATKINS,
JNO. C. WATKINS.