

No. 689,545.

Patented Dec. 24, 1901.

C. HANSEL.
ELECTRIC RAILWAY.

(Application filed Aug. 8, 1900.)

(No Model.)

FIG. 1.

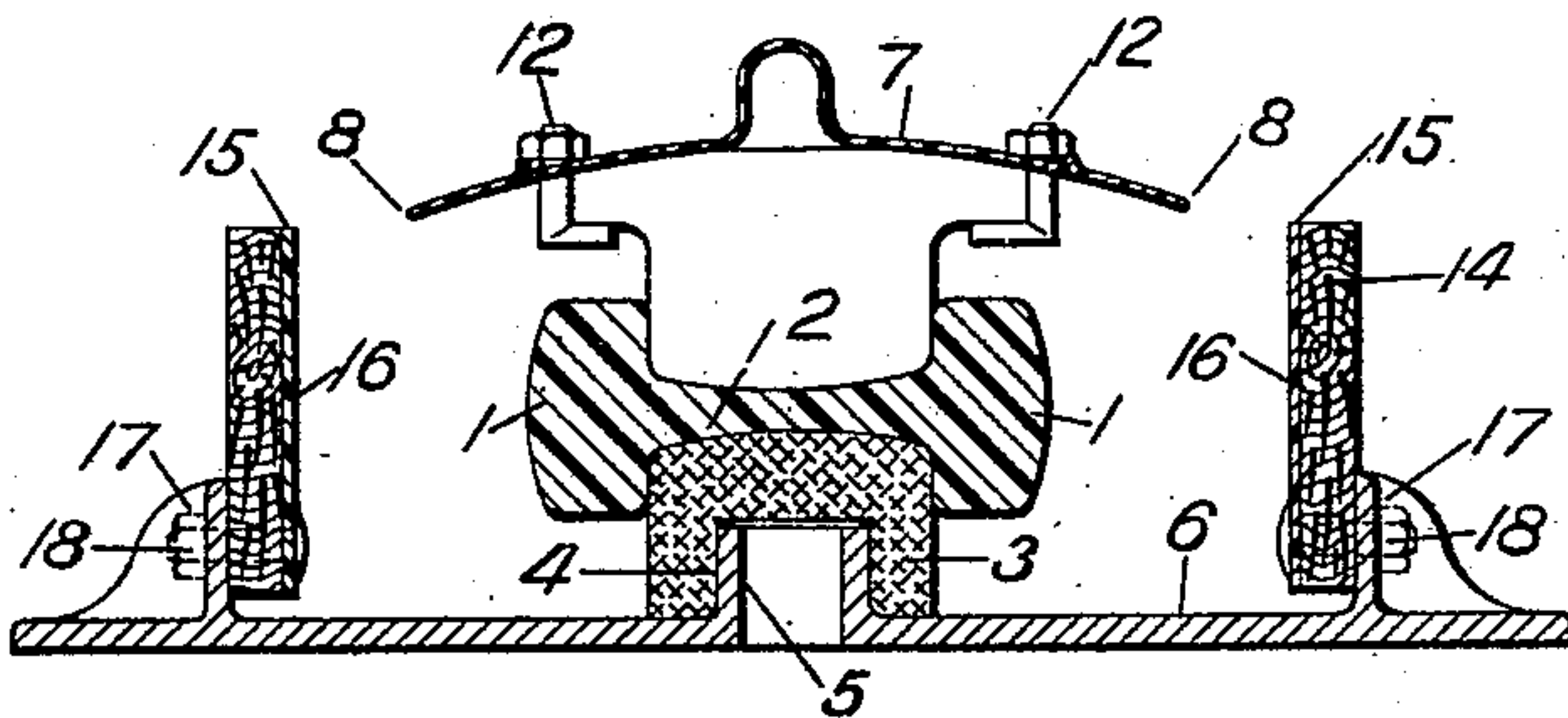


FIG. 2.

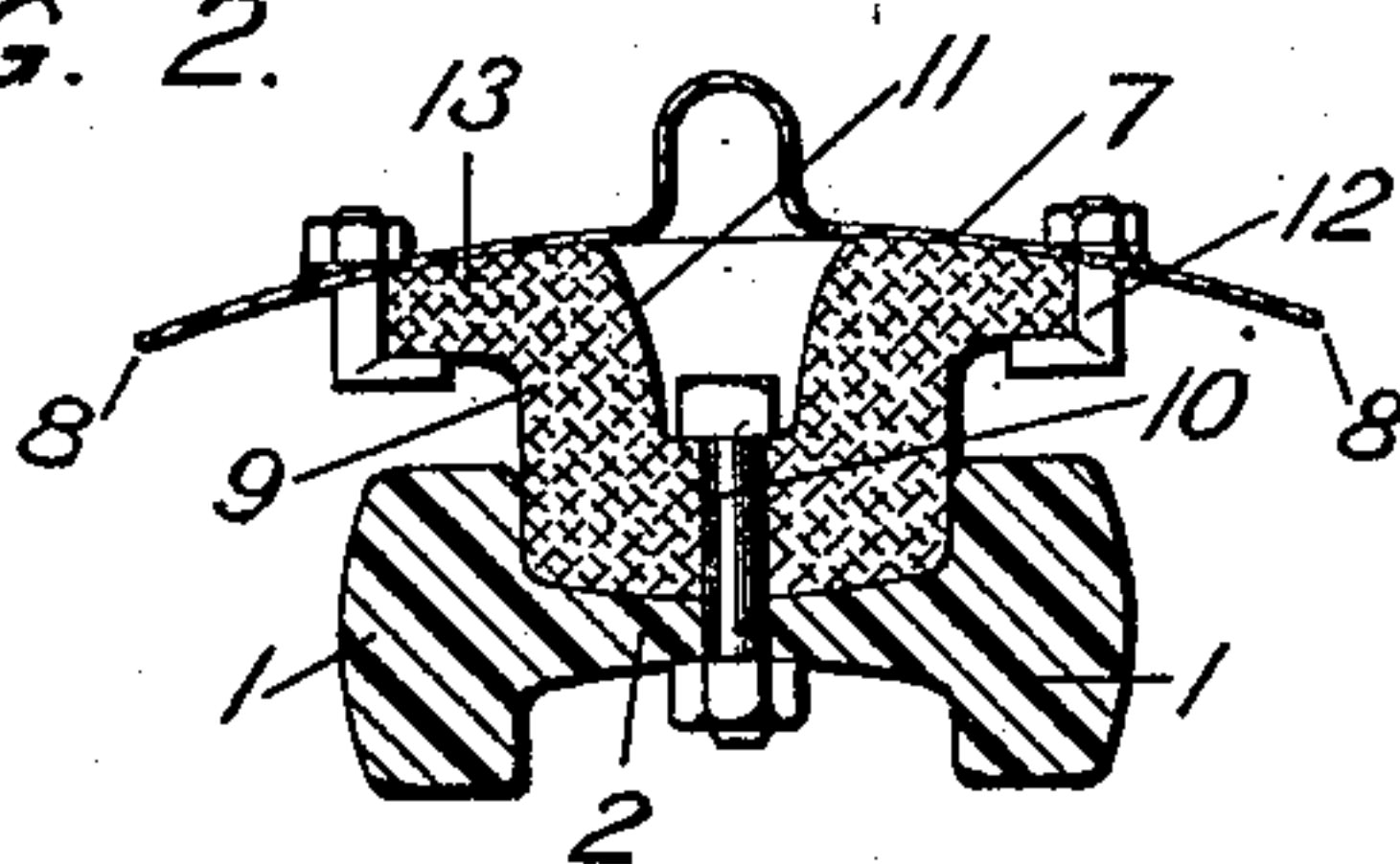


FIG. 3.

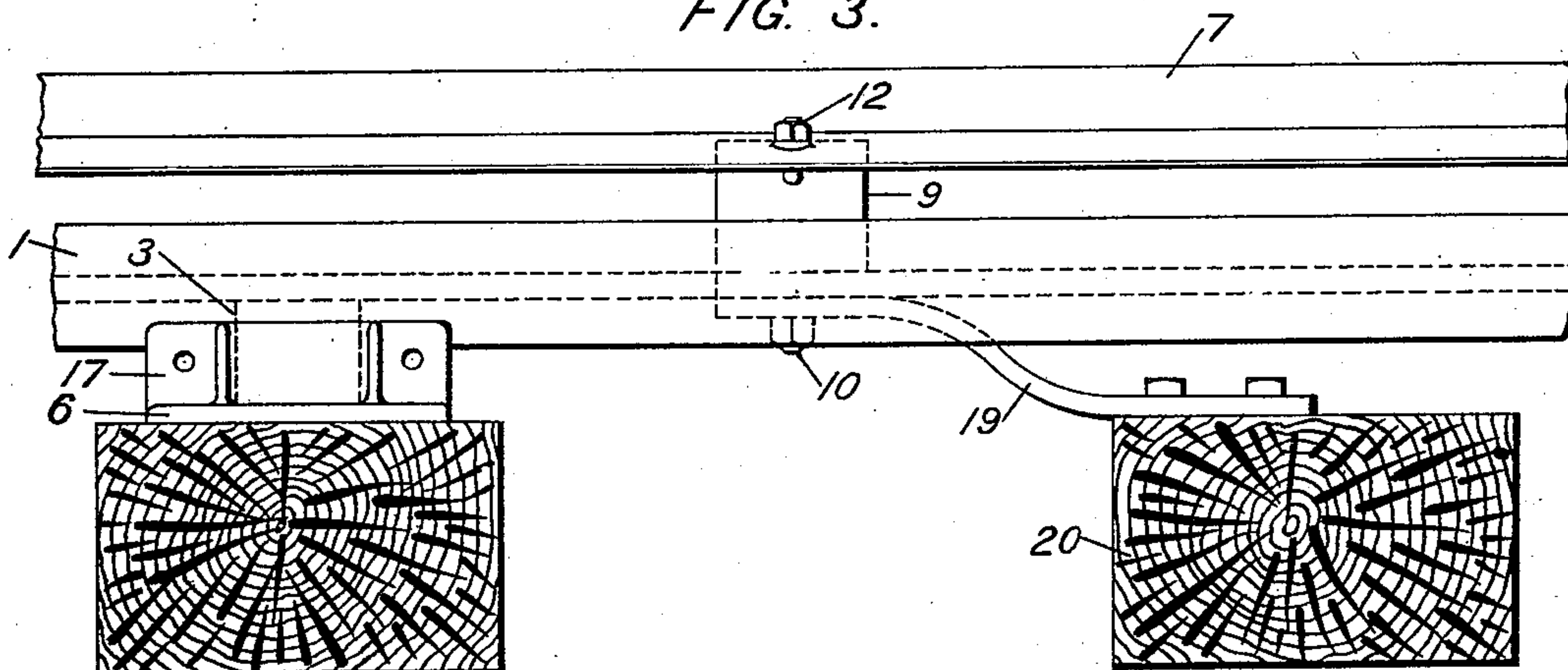
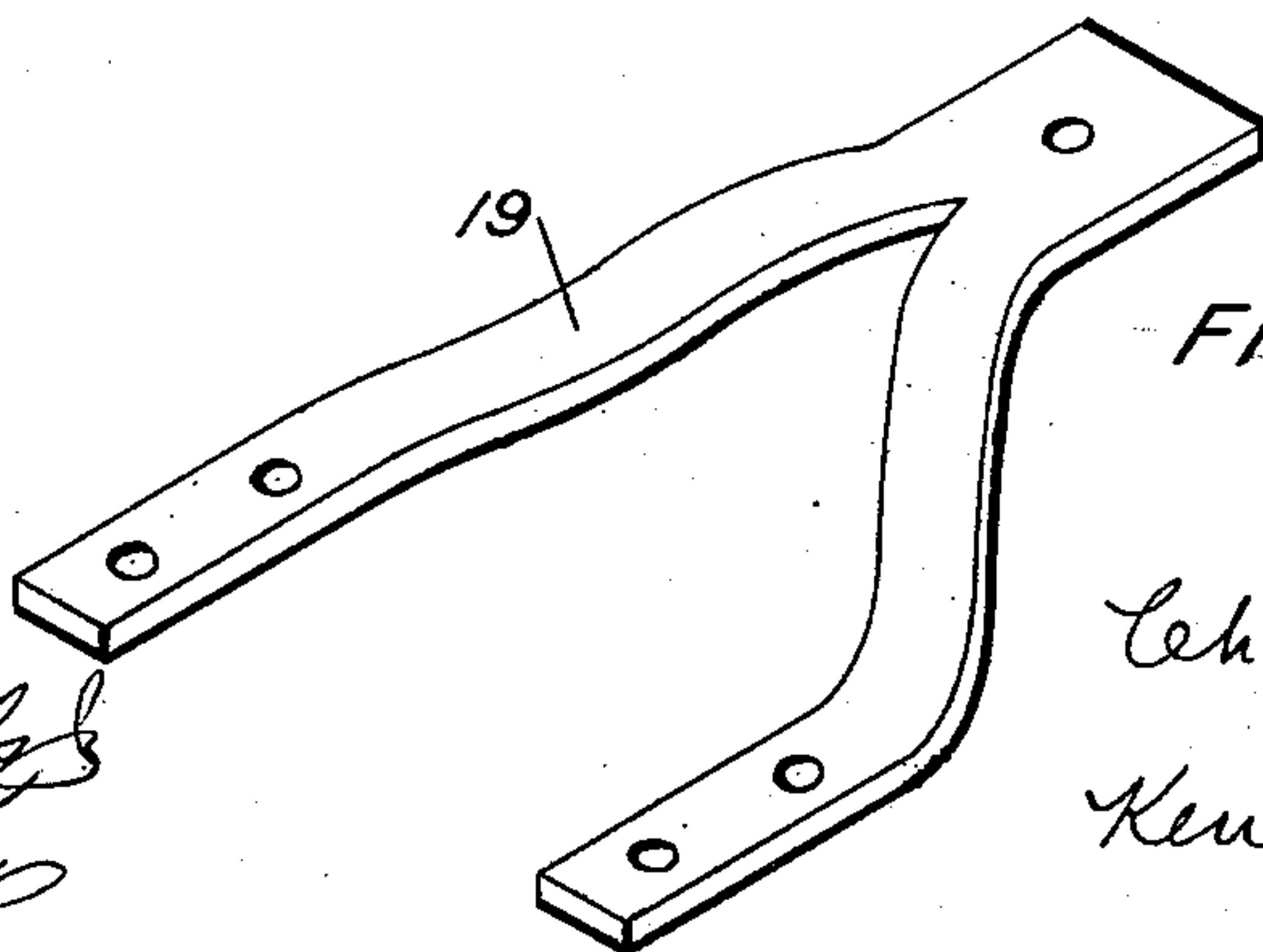


FIG. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES HANSEL, OF NEW YORK, N. Y., ASSIGNOR TO THE CENTRAL ELECTRIC CONSTRUCTION COMPANY, A CORPORATION OF WEST VIRGINIA.

ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 689,545, dated December 24, 1901.

Application filed August 8, 1900. Serial No. 26,213. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HANSEL, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Electric Railways, of which the following is a specification.

My invention relates to electric railways, and more particularly to that type of electric railways in which the conductor provided to supply motive power to the trains is located at or near the surface of the roadway structure.

My invention has for its objects to provide for such conductor or "third rail," as it is sometimes called, a simple and efficient cover or shield and supports for the same; also, to provide a support whereby vertical movement between the conductor with its shield and the roadway structure is permitted; also, to provide an anchor which will prevent the creeping of the conductor with relation to the roadway structure without interfering with the vertical movement between said parts, and to otherwise improve and simplify and render more practical the construction of electrical railways of the type referred to.

My invention consists in the novel features of construction and combinations of parts herein described.

The accompanying drawings, which are referred to herein and form a part hereof, illustrate by way of example one embodiment of my invention and serve, in connection with the description herein, to explain the principles of my invention and the best mode contemplated by me of applying those principles.

In the drawings, Figure 1 is a transverse section through the conductor and one of the supports for the same. Fig. 2 is a similar view taken through a conductor and one of the supports between the conductor and the shield. Fig. 3 is a side elevation of the conductor and shield and the parts associated therewith, and Fig. 4 is a perspective view of a detail.

Like reference-numerals refer to like parts.

My invention is particularly directed to that type of conductor or third rail which is provided with a pair of oppositely-arranged contact-surfaces adapted to cooperate with the double-contact trolley device such as

shown, for example, in the patent granted to B. C. Seaton, August 30 1898, No. 610,092. The conductor shown consists of a rail having a pair of heads 1, forming the contact-surfaces, said heads being connected by a web 2. The rail is loosely supported on an insulating-block 3, which is adapted to engage the web 2 and fill the space between the lower portions of the heads 1, so as to prevent lateral movement thereof. The blocks 3 are provided on their under sides with recesses 4, which loosely engage the upwardly-extending bosses 5 of the base 6.

A continuous metallic shield 7 is located above the conductor and is extended outwardly beyond both sides thereof and is slightly bent downwardly from the center in each direction, so as to form dripping edges 8, by which the moisture will drip clear of the contact-surfaces of the conductor. Shield 7 is supported by and insulated from the conductor, there being provided for this purpose a series of separated insulating-supports, each consisting of a block 9, of insulating material, which is adapted to engage the web 2 of the conductor between the heads 1. The blocks 9 are rigidly secured to the web 2 by means of bolts 10, the heads of which are located in recesses 11, formed in the upper sides of the blocks 9. The shield 7 is rigidly secured to the blocks 9 by means of the bolts 12, having heads adapted to engage the under side of the outturned flanges 13 of the blocks 9. A pair of guard-rails 14 are preferably arranged on opposite sides of the conductor, with their upper edges 15 adjacent to the outer edges 8 of the shield 7. These guard-rails are preferably formed of wood, with a metallic lining 16 on the inner surface thereof, said parts being secured together and to the upwardly-projecting brackets 17, carried by the base 6, by means of bolts 18.

It will be seen by the construction described that vertical movement between the conductor with its shield and the roadway structure is permitted, but that lateral movement between said parts is prevented. In order to prevent longitudinal creeping of the conductor and its shield with relation to the roadway structure, an anchor 19 is provided, which preferably consists of a piece of plate

metal, one end of which is secured to the conductor and the other end of which is preferably bifurcated and secured to one of the sleepers 20 of the roadway structure. This form of anchor, while effectually preventing the creeping of the conductor, will not interfere with the vertical movement which inevitably takes place between the conductor and the roadway structure as the train passes thereover.

While in many of its features my invention is limited to conductors of the double-contact type, it is in some of its features applicable to other forms of conductors, and I therefore do not desire to limit myself to the particular construction herein shown and described nor to the particular construction by which my invention is carried into effect, as many changes may be made therein without departing from the principles of my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. In an electric railway the combination with the roadway structure, of a continuous conductor, a shield carried by said conductor, and a series of insulating-supports for said conductor, each support consisting of a base and a block loosely confined between the base and the conductor, whereby relative movement between the conductor with its shield and the roadway structure is permitted.

2. In an electric railway the combination with a continuous conductor, of a continuous

metallic shield therefor, a series of separated insulating-supports for said shield carried by said conductor, means for securing said shield to said supports and means insulated from said shield for securing said supports to the conductor.

3. In an electric railway the combination with a continuous conductor having oppositely-arranged contact-surfaces, of a continuous metallic shield therefor, a series of separated insulating-supports for said shield carried by said conductor, means for securing said shield to said supports, and means insulated from said shield for securing said supports to the conductor.

4. In an electric railway the combination with the roadway structure, of a continuous conductor, a series of supports for said conductor, the construction being such as to permit vertical movement of the conductor with relation to the roadway structure and an anchor adapted to prevent longitudinal movement of the conductor with relation to the roadway structure without interfering with the vertical movement thereof.

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

CHARLES HANSEL.

Witnesses:

J. H. FREEMAN,
EDWIN SÉGER.