

No. 780,502.

PATENTED JAN. 24, 1905.

A. H. HOPKINS.
THIRD RAIL.

APPLICATION FILED NOV. 18, 1904.

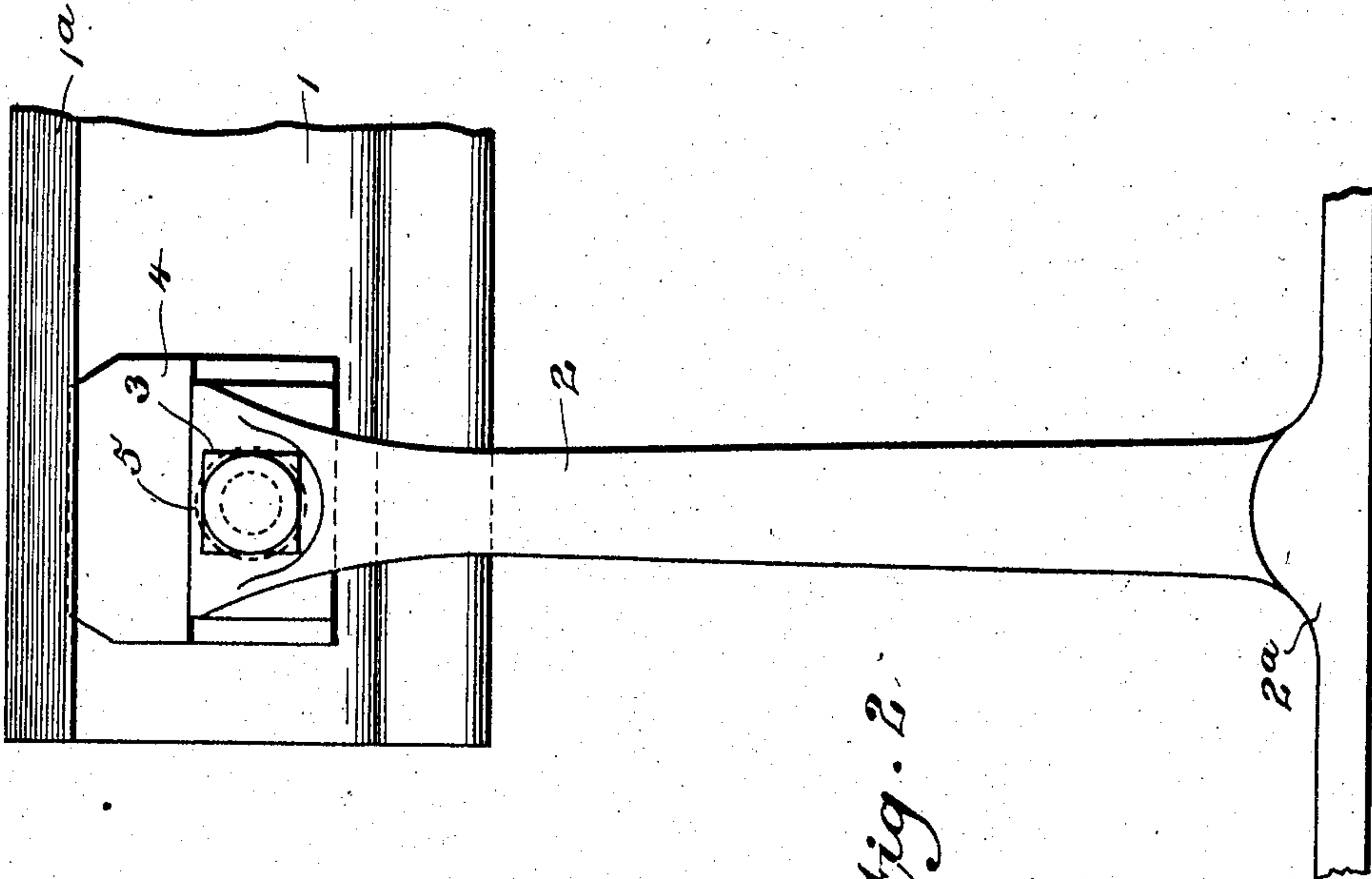


Fig. 2.

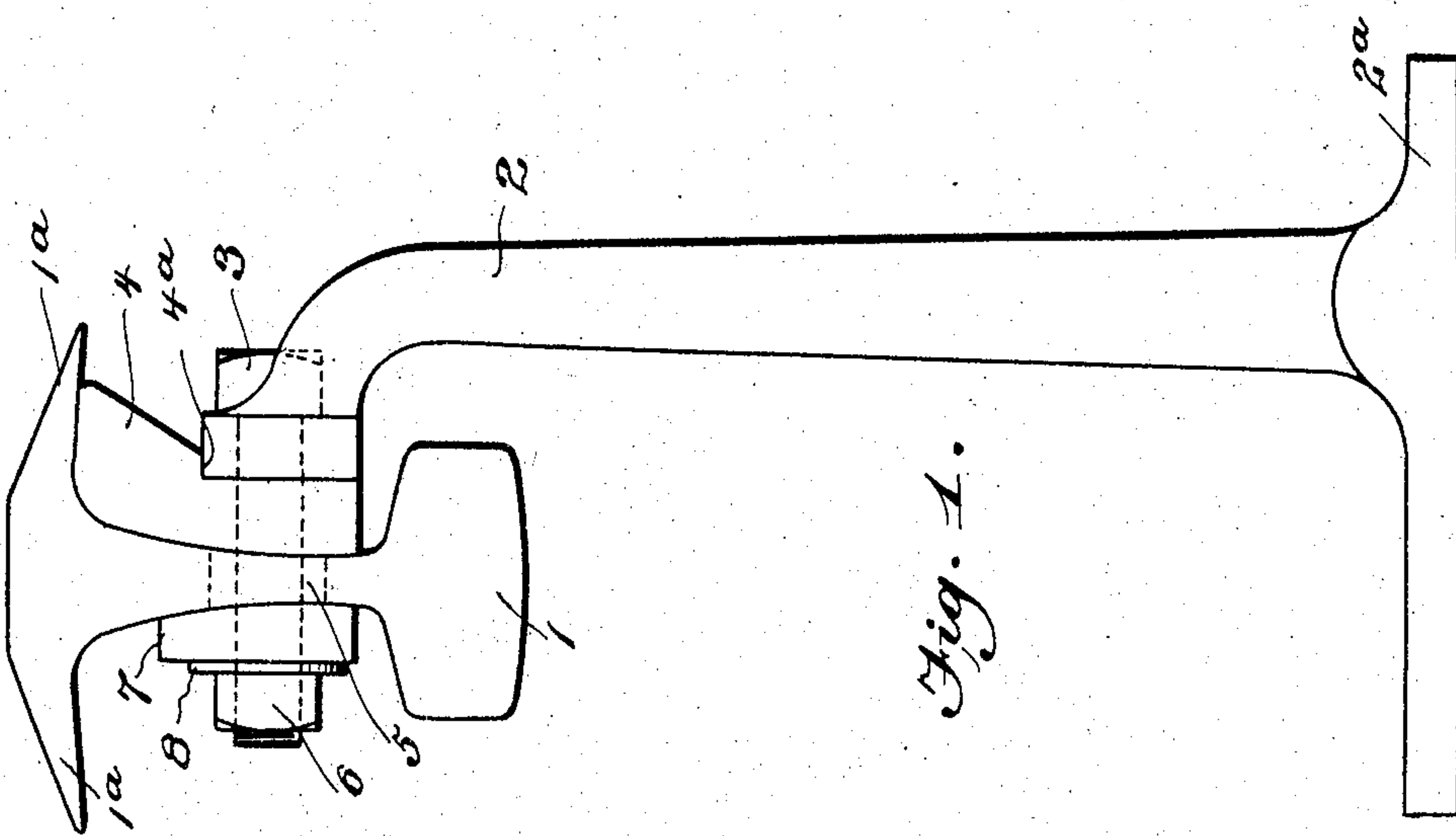


Fig. 1.

Witnesses
A. P. Walton.
E. F. Lamp

Inventor
Alfred H. Hopkins.
by
Milo B. Stevens & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

ALFRED H. HOPKINS, OF CHICAGO, ILLINOIS.

THIRD RAIL.

SPECIFICATION forming part of Letters Patent No. 780,502, dated January 24, 1905.

Application filed November 18, 1904. Serial No. 233,295.

To all whom it may concern:

Be it known that I, ALFRED H. HOPKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Third Rails, of which the following is a specification.

This invention is an improved third-rail conductor and supporting-bracket for electric railways, the rail being of the inverted or under-running type.

An object of the invention is to permit the use of ordinary steel rails with a slight modification, as an inverted third rail for electric railways, the modification being an inclination of the ordinary base of the rail, which forms the top of the conductor, to act as a shed to protect the head or contact portion of the rail from snow, ice, and water.

A further object is to form for use in combination with such a rail a bracket of improved construction, as will more fully hereinafter appear.

In the accompanying drawings, Figure 1 is an end elevation of the invention. Fig. 2 is a side view thereof.

The inverted rail is indicated at 1 of substantially the same form as an ordinary steel rail, except that at the top the flanges are bent or inclined downwardly, as at 1^a, to form a shed for the head of the rail, which effectually protects the same against snow, ice, and water, and so avoids the difficulties and inconveniences incident to interrupted contact with the shoe of the car. Said rail is supported by a bracket 2, having a flat foot-piece 2^a of suitable form to rest upon and be bolted to the cross ties or timbers of the railway structure. The head of the bracket has an opening to let through the attaching-bolt 3, and it is to be noticed that the attachment is to the web of the rail through a hole in which the bolt extends.

4 indicates an insulating-block interposed between the head of the bracket and the side of the rail, and this block preferably overhangs the head of the bracket, as indicated at

4^a, and extends up under the flange 1^a of the rail.

5 indicates an insulating-sleeve which surrounds the bolt within the hole through the web of the rail, and 7 indicates an insulating-block on the outer side of the web under the nut 6 of the bolt.

8 is a washer between the nut and the insulating-block.

The side connection through the web of the rail allows the nut and bolt to be readily got at for attachment and removal. The insulating-block 4, resting on the head of the bracket, affords a partial support for the rail in addition to its function as an insulator. The shed formed by the rail-flanges extends over the joint between the rail and the bracket, so that there is little danger of leakage or short-circuiting in consequence of water entering between the insulation and the other parts of the joint.

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

1. The combination with a third-rail conductor having a depending contact portion or head, a shed thereover, and a connecting-web, of a bracket bolted at its head to the web of the rail, under the said shed.

2. An inverted-rail conductor having at the bottom a contact portion and at the top outstanding flanges forming a shed, and a web therebetween, in combination with a bracket, and insulated bolts extending through the web of the rail and connecting the same to the bracket.

3. An inverted-rail conductor having a contact-head at the bottom and outstanding downwardly-inclined flanges at the top, forming a shed, in combination with an insulated bracket secured to the side of the rail, under said shed.

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

ALFRED H. HOPKINS.

Witnesses:

WM. J. ROBINSON,
SIGNA FELTSKOG.