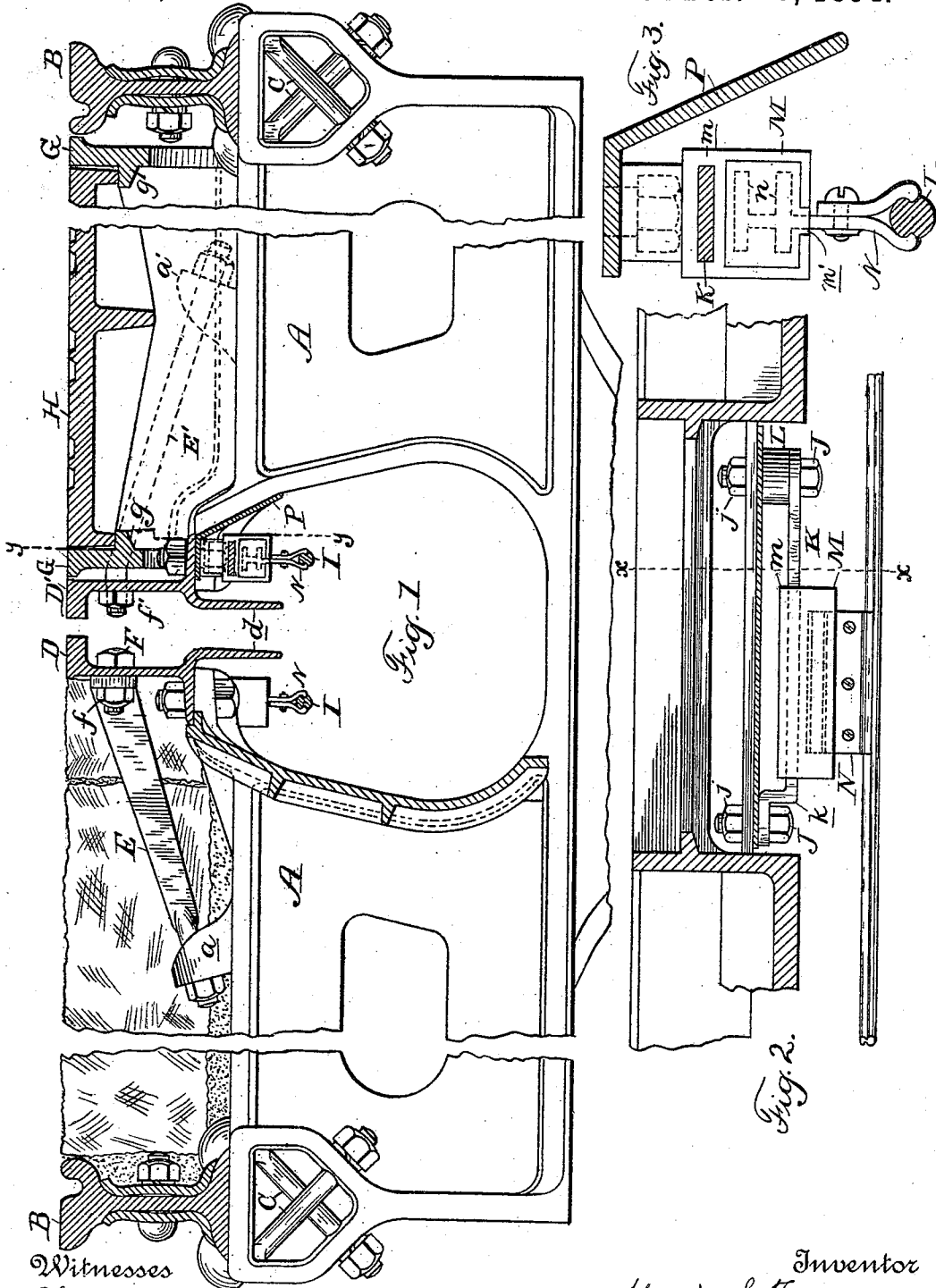


(No Model.)

M. S. TOWSON.
ELECTRIC RAILWAY CONDUIT.

No. 515,179.

Patented Feb. 20, 1894.



Witnesses
Thos. E. Robertson
W. E. Clendaniel

Inventor
Morris S. Towson
By J. W. Robertson
Attorney

UNITED STATES PATENT OFFICE.

MORRIS S. TOWSON, OF CLEVELAND, OHIO, ASSIGNOR TO ALBERT G. WHEELER, OF CHICAGO, ILLINOIS.

ELECTRIC-RAILWAY CONDUIT.

SPECIFICATION forming part of Letters Patent No. 515,179, dated February 20, 1894.

Application filed January 6, 1893. Renewed December 28, 1893. Serial No. 495,014. (No model.)

To all whom it may concern:

Be it known that I, MORRIS S. TOWSON, a citizen of the United States of America, residing at Cleveland, Cuyahoga county, Ohio, have invented certain new and useful Improvements in Railway-Conduits, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to underground conduits for electric railways and more particularly to the devices by which the conductor is suspended and protected, and it consists in the peculiar construction, arrangement and combinations of parts hereinafter more particularly described and then definitely claimed.

In the accompanying drawings—Figure 1 is a vertical transverse section on the line *xx* on Fig. 2 of a conduit constructed according to my improvement. Fig. 2 is a longitudinal section through the line *yy* on Fig. 1 of parts of the above. Fig. 3 is a transverse vertical section of the parts immediately below the rail on a larger scale.

Referring now to the details of the drawings by letters—A is the yoke, preferably of the form shown in my application having the Serial No. 448,385, filed October 10, 1892, but this form is not absolutely necessary, as other forms of yokes may be employed, and on this yoke are secured the track rails B by hook-headed bolts C as described in said application.

At D D' are shown the slot rails seated on the top of the yoke and held there by bolts, in the ordinary manner, and the stay rods E E'. The stay rod E is secured to the rail by a bolt F and nut *f* as shown, while its other end is threaded to receive a nut and is dropped into a forked projection *a* on the yoke. The rod E' has both ends threaded, one of which ends is passed through the rail to receive a nut *f'*, while the other end (also provided with a nut) is dropped into the projection *a'*. By this arrangement the width of the slot can be increased if desired by tightening up the nut *f'* in the slot.

At G is shown the man-hole casting, provided with the cover H resting on a flange *g*, through which man-hole access is had to the conduit to hang the conductors I, which are suspended from the rails by means of the bar

K, box M, and clamp or carrier N. The bar K is secured to the under side of the foot of the slot rail by bolts J and nuts *j*. The bar K may be a bar having a thick washer, similar to that indicated at L between it and the foot of the rail at each end or it may have one end bent, as shown at *k*, and thus dispense with a washer at one end. Hanging from this bar is the open-ended box M, having a loop *m* extending over the bar, and a slot *m'* at the bottom through which passes the clamp N by which the conductor is carried. This clamp is provided with flanges *n* extending on both its sides inside the box and the latter is filled with an insulating compound preferably of powdered mica and shellac, which is forced into the ends of the box, and when hard not only forms a secure mode of fastening the clamps in the box, but also performs the office of insulating the conductor. As the loop *m* is a loose fit on the bar K, it permits of movement longitudinally to accommodate expansion and contraction in the conductor. Each slot rail is provided with a depending extension *d* which forms a guard or protection for the conductor on the slot side of said rail, and beneath the foot of the rail and between it and the bar K, and forming a protection from dripping water on the other side of the rail, is a guard plate P, which is held in place by the same bolts that hold the bar K.

By this construction, a very convenient means of attaching and supporting the conductor is provided, which is not only very convenient when used in building new electric railways, but may be very advantageously used in changing from a cable to an electric system, as the bars K and boxes M can be readily attached to the feet of the ordinary slot rails by operating through the man-holes.

What I claim as new is—

1. The combination with a slot rail, of a conductor suspended from said slot rail by fastenings passing through the foot of the rail, substantially as described.

2. The combination with a slot rail and a conductor, of a box M carrying the conductor and loosely connected to the rail, to permit of longitudinal movement, substantially as described.

3. The combination with a slot rail and a

conductor, of a box M, having an open end and a slot *m* in its bottom, a conductor, carrier or clamp N passing through said slot and having an enlarged head secured in said box by an insulating compound, substantially as described.

4. The combination with a slot rail and conductor, of the bar K, box M and carrier N, secured in said box by an insulating compound, substantially as described.

5. The combination with a slot rail and a conductor, of a guard plate P projecting downward from and secured directly to the foot of the rail, substantially as described.

6. The slot rail herein shown and described,

having a perforated foot to receive the conductor attachments, a vertical web provided with holes to receive the securing bolts, a wide overhanging lip to provide space for the bolts, and a depending extension of the foot to form a guard for the conductor, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 6th day of January, 1893.

MORRIS S. TOWSON.

Witnesses:

T. J. W. ROBERTSON,
W. E. CLENDANIEL.