(No Model.)

L. ESCHNER.

TROLLEY WIRE SHIELD.

No. 514,353. Patented Feb. 6, 1894.

FIG. 1.

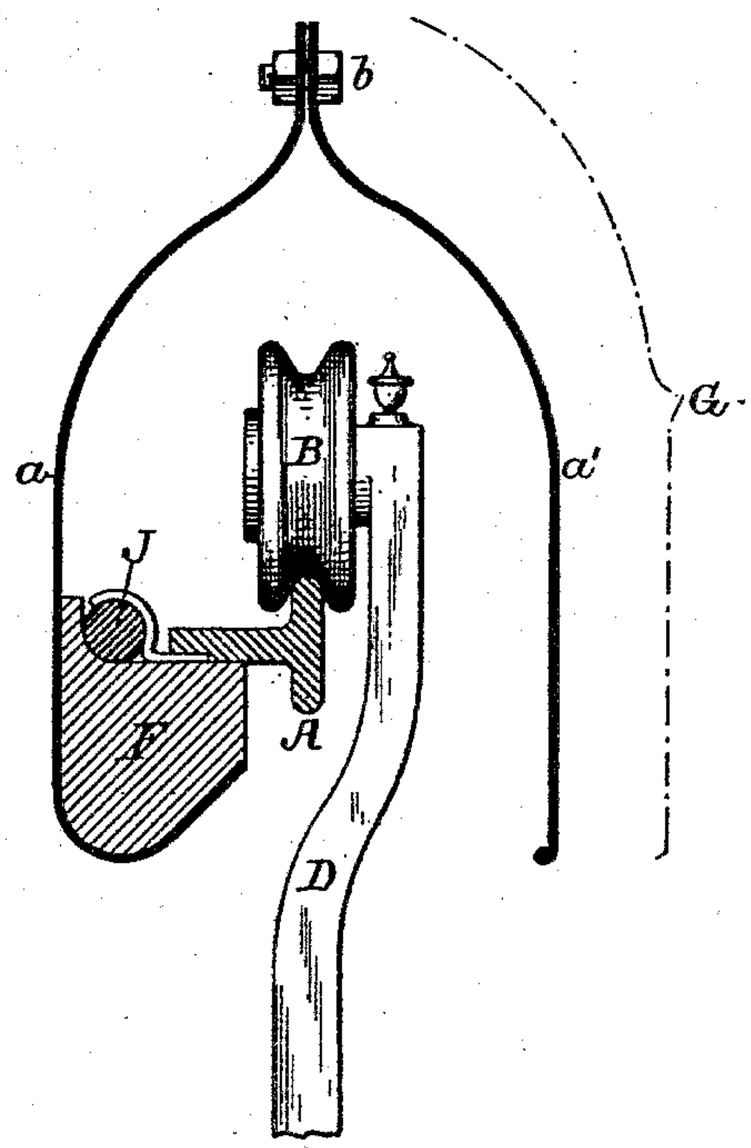
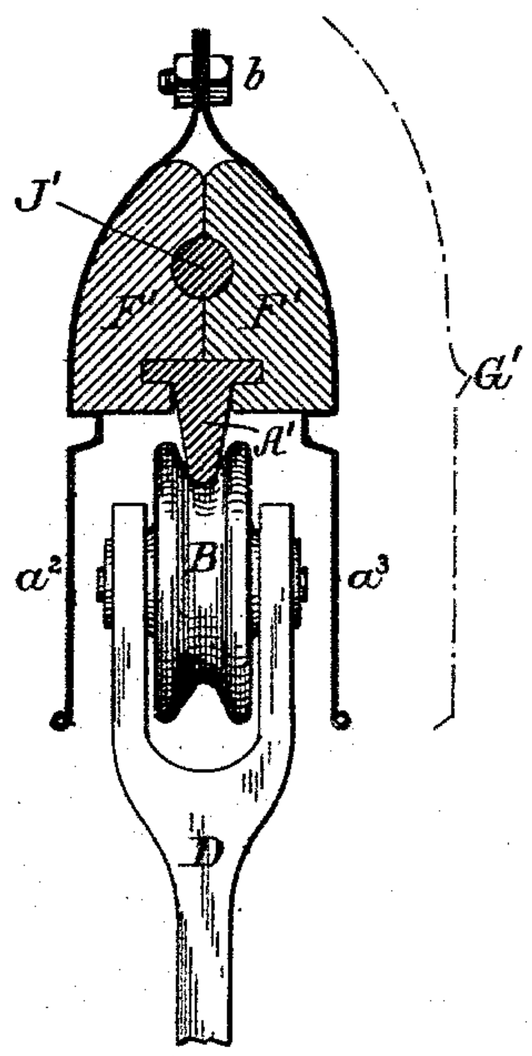


FIG. 2.



Witnesses:
Alex. Barkoff
A. V. Groupe

Inventor:
Louis Eschner
by his Attorneys
Howson & Howson

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LOUIS ESCHNER, OF PHILADELPHIA, PENNSYLVANIA.

TROLLEY-WIRE SHIELD.

SPECIFICATION forming part of Letters Patent No. 514,353, dated February 6, 1894.

Application filed April 30, 1892. Serial No. 431,231. (No model.)

To all whom it may concern:

Be it known that I, LOUIS ESCHNER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Shields for Trolley and Feed Wires of Electric Railways, of which the following is a specification.

One object of my invention is to so construct an overhead electric conductor intended for the reception of a trolley wheel that said conductor will be effectually protected on all sides from contact with other wires, a further object being to likewise protect the feed wire if desired, and to protect the wire or wires and the trolley itself from the weather. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1, represents a transverse section of an overhead electric conductor constructed in accordance with my invention, the trolley and part of the trolley-carrying arm being also illustrated, and Fig. 2, is a like section of another form of my improved conductor.

In Fig. 1 A represents the trolley wire or conductor, B the trolley, and D part of the trolley-carrying arm mounted upon the car to which the current is to be supplied, the trolley shown being adapted to run upon the top of the conductor A which is T-shaped in cross section, however, so as to provide two vertical flanges and thereby permit the trolley to run either above or below the same as may be found most desirable in any given case. This form of conductor, moreover, possesses extreme rigidity and has such a large cross sectional area that it serves to conduct a large volume of current without the necessity of employing so high a tension as is ordinarily used.

The horizontal arm of the conductor A is secured in any suitable manner to a block F of insulating material mounted in the upturned lower end of one of the side plates *a* of a shield or protector G which is substantially in the form of an inverted U or V, the other side plate *a'* projecting downward on the outside of the trolley and trolley arm to a point below the conductor A so that said conductor is effectually protected from contact with any other wire approaching the same either from above, from below, or from either side, hence the accidents due to the contact of telephone or telegraph wires or like conductors with the conductor A are effectually overcome, while at the same time the trolley, as well as the conductor, are protected from rain, hail, sleet and snow which interfere seriously with the operation of exposed trolley wires.

The shield G may consist of one piece of sheet metal bent to the desired form, although it is preferably composed of opposite side plates united at the top in any suitable manner, as for instance by means of transverse bolts *b*.

The bending upward of the lower end of the side plate *a* of the shield renders the lower portion of said side plate exceedingly stiff and rigid so that it provides a perfectly secure support for the insulating block F.

It is preferable to mount the feed wire J upon the insulating block F, short branch wires or couplings serving to convey current from said feed wire to the conductor A at appropriate intervals in the length of said conductor, although, if desired, the current may be supplied to the conductor A from an underground feed wire by means of branch wires carried up through the posts to which are connected the supporting wires for the main conductor, so that any desired section of the main conductor can be cut out of circuit when necessary.

As the shield G can be readily formed from sheet metal it is inexpensive, and its weight is not sufficient to prove objectionable, while at the same time it possesses ample rigidity to prevent it from being bent or distorted by the weight of any other wires which may chance to fall upon or drop against the same.

In Fig. 2 I have shown a modified form of the improved shield or guard applied to a conductor A' for an under contact trolley. In this case each half of the shield G' carries in the upper portion an insulating block F' and the upper portion of the conductor is clamped between the said blocks, which may also serve to confine the feed wire J' if desired.

The opposite sides a^2, a^3 of the shield project down below the conductor so as to protect the same and inclose or partially inclose the trolley.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination of an open bottomed shield or guard, an internal insulating block mounted upon one side of said shield, and a conductor secured to said insulating block and having both an upwardly projecting and a downwardly projecting flange beyond the same whereby it is adapted for receiving a trolley either from above or from below, substantially as specified.

2. The combination of an electric conductor for trolleys, an open bottomed shield or guard inclosing said conductor, an insulating block mounted on the inside of said shield or guard, and supporting the conductor, and a feed wire also supported upon said insulating block, substantially as specified.

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

LOUIS ESCHNER.

Witnesses:
FRANK BECHTOLD,
HARRY SMITH.