No. 838,177. PATENTED DEC. 11, 1906.

T. FILDES.

ELECTRICAL CONTACT SHOE.

APPLICATION FILED FEB. 20, 1906.

Fig. 1.

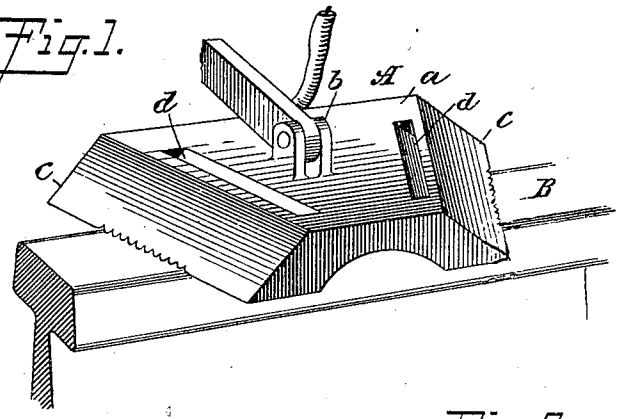


Fig. 2.

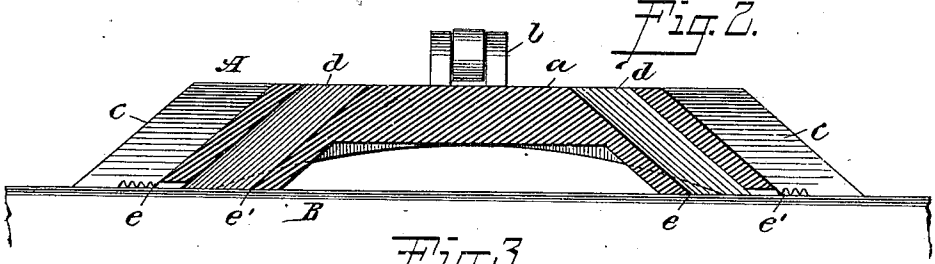


Fig. 3.

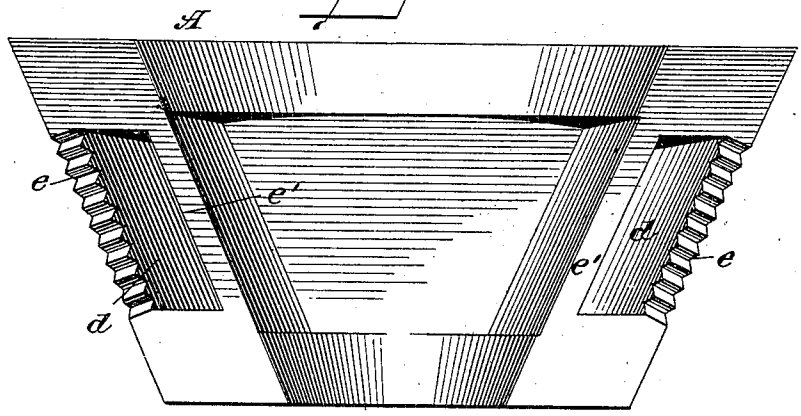
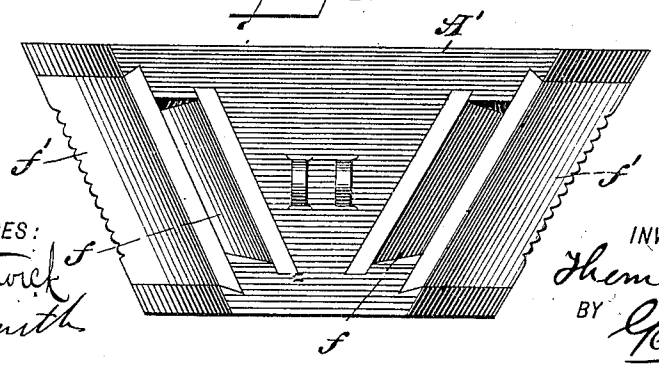


Fig. 4.



WITNESSES:

M. Van Nortwick

N. B. Smith

INVENTOR

Thomas Fildes

BY George Beck

ATTORNEY

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS FILDES, OF RICHMOND HILL, NEW YORK, ASSIGNOR TO GEORGE COOK, OF ALLENDALE, NEW JERSEY.

ELECTRICAL CONTACT-SHOE.

No. 838,177. Specification of Letters Patent. Patented Dec. 11, 1906.

Application filed February 20, 1906. Serial No. 301,996.

To all whom it may concern:

Be it known that I, THOMAS FILDES, a citizen of the United States, and a resident of Richmond Hill, borough of Queens, in the county of Queens and State of New York, have made and invented certain new and useful Improvements in Electrical Contact-Shoes, of which the following is a specification.

My invention relates to an improvement in contact-shoes for third-rail electric railways, the object being to provide a shoe of this kind or character so constructed that it will effectually remove the ice and snow which collects on the third rail and under all conditions make and maintain an efficient electrical contact therewith.

A further object of the invention is to so construct the shoe that the contacting parts when worn down from service may be easily and readily removed and others substituted therefor; further, to provide a shoe which will be simple and economical to construct, durable, and efficient in use; and with these and other ends in view it consists in certain novel features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of a contact-shoe constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is an inverted plan view, and Fig. 4 is a top plan view of a modified form thereof.

Referring to the drawings, A represents the shoe adapted to contact with the third rail B, usually arranged parallel to the track-rails, said shoe, if desired, being cast of a single piece of metal and provided on its upper side *a* with lugs or other means *b* for attachment to the operating-levers. The shoe is preferably hollowed out on its under side, as illustrated in Figs. 2 and 3, in order that the sides only may bear upon or contact with the rail B. These two sides *c* of the shoe are made slanting—that is, converging toward one end thereof, whereby to effect a shearing cut of the ice or snow on the rail and force the same to one side of the latter. These sides *c* are also beveled in the direction of their width or height, thereby presenting a sharp cutting edge to the ice or snow collected on the conductor-rail B, and thereby facilitating the removal thereof. The converging sides of the shoe are each provided with an opening *d*, extending entirely through the same, thereby forming the contacting edges *e e'*, as clearly illustrated in Fig. 3, the outer edges *e* being grooved or serrated, forming cutting-teeth. By means of this construction it will be understood that as the shoe moves along the rail the sharp toothed edge *e* of the sides of the shoe will effect a shearing cut to the accumulated ice and snow on the rail, entirely removing the same and depositing it to one side of said rail B. Should, however, the edge *e* fail to remove all of the ice and snow, the following edge *e'*, which also bears on and contacts with the rail, will in turn effectually remove it, any accumulation between the two edges *e* and *e'* being forced up through the openings *d* and out through the top of the shoe.

Instead of casting or otherwise forming the shoe in one piece, as above described, it may, if desired, be constructed as illustrated in Fig. 4—that is, the contacting sides *f* and *f'* of the shoe may be formed separately and of steel or other desired metal, the ends of these plates or blades being dovetailed to retain them in proper position within the casting A'. Further, if desired, they may be properly placed within the mold and the metal of the shoe A' cast on and around the same, such method of course permanently securing them in place.

A shoe constructed as above described is not only cheap and economical to produce, but is very effective in practice in that it will operate to thoroughly remove any ice or snow which may accumulate on the rail B and at all times properly make and maintain electrical contact with the latter.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A shoe of the character described having its sides converging toward one end and beveled in the direction of their height, said sides being provided with an opening extending entirely through the same, substantially as described.

2. A shoe of the character described having its sides converging toward one end and beveled in the direction of their height, the outer contacting edges of said sides being serrated, substantially as described.

3. A shoe of the character described hav-

ing its lower surface hollowed out, its sides converging toward one end and beveled in the direction of their height, said sides having openings formed entirely through the same, substantially as described.

4. A shoe of the character described having its under side hollowed out, its sides converging toward one end and beveled in the direction of their height, and having openings extending entirely through the same, the outer contacting edges of said converging sides being serrated, substantially as described.

Signed at New York, borough of Manhattan, in the county of New York and State of New York, this 16th day of February, A. D. 1906.

THOMAS FILDES.

Witnesses:
M. VAN NORTWICK,
N. B. SMITH.