No. 709,168. Patented Sept. 16, 1902.

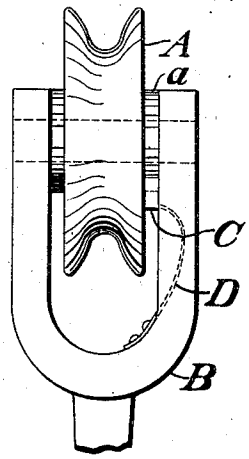
F. A. MERRICK.

TROLLEY.

(Application filed Dec. 30, 1899.)

(No Model.)

Fig. 1.



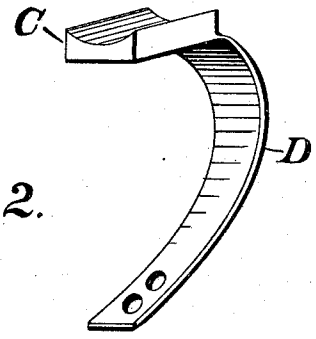


Fig. 2.

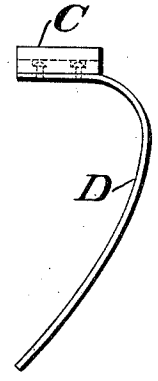
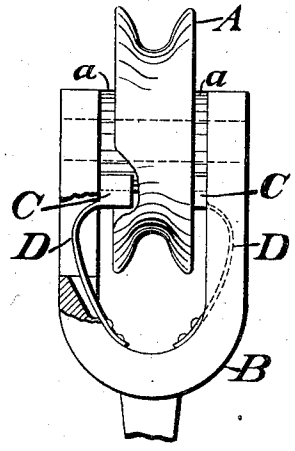


Fig. 3.

Fig. 4.



WITNESSES:

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INVENTOR

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BY

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK A. MERRICK, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

TROLLEY.

SPECIFICATION forming part of Letters Patent No. 709,168, dated September 16, 1902.

Original application filed September 14, 1899, Serial No. 730,437. Divided and this application filed December 30, 1899. Serial No. 742,127. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. MERRICK, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Trolleys, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to certain new and useful improvements in trolleys and is designed to provide means of simple and efficient character for maintaining good electrical connection at all times between the trolley-wheel and the harp or frame.

To this end my invention consists in the combination, with a trolley-wheel and its harp, of one or more collecting and conducting shoes shaped to fit the periphery of the hub or hubs of the wheel and carried each by a spring-arm secured to the trolley-pole or to its harp and pressing the shoe upwardly against said hub.

The invention also consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claim, reference being had to the accompanying drawings, in which—

Figure 1 is an end view of a trolley harp and wheel having my invention applied thereto. Fig. 2 is a detail view of one of the shoes and its spring. Fig. 3 is a detail view showing how the shoes may be secured to the spring-arm; and Fig. 4 is a view similar to Fig. 1, but showing one of the contact devices applied to each side or hub of the wheel, one of the harp-arms being partially broken away to show the manner in which the springs are seated within the opening of the same.

The letter A designates the trolley-wheel; B, the harp in which it is journaled; C, the contact-shoe, and D the upwardly-pressing spring-arm which carries the said shoe. The shoe is concaved to fit the periphery of the hub *a* of the wheel A and may be made to embrace a considerable area of the hub-surface. The spring-arm D consists, preferably, of a thin strip of metal of elastic character, secured at one end to the lower portion of the harp and having the shoe secured to its free end portion. The shoe may be made removable, as shown in Fig. 3, so that it can be replaced when worn out, or it may be made in one piece with the spring and the whole renewed when worn out. If desired, one of the devices may be used at each side of the wheel, as shown in Fig. 4. The harp-arms may be made of the bifurcated or stolled form shown in Fig. 4, in which case the spring may be made with a longer bow and be seated within the arm, as shown. The contact-shoes being on the under side of the hub are entirely protected from stray arcs and are not affected by lubricant from the wheel. They may be made of sufficient thickness to stand a considerable amount of wear, the action of the spring-arms maintaining their contact with the wheel-hubs.

I do not wish to limit myself to the exact construction and arrangement which I have shown and described, as this may be changed in detail without departing from the spirit and scope of my invention.

This application is a division of my pending application, Serial No. 730,437, filed September 14, 1899.

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

The combination with a trolley-harp and a wheel journaled therein, of an upwardly-pressing spring-arm secured to the harp within the fork thereof, and a contact-shoe at the upper end of said arm fitted to and contacting with the under side of the laterally-extending hub of said wheel, said shoe having an elongated longitudinal bearing on said hub, between the dished face of the wheel and the fork-arm, and guarded by its position from the action of stray arcs.

In testimony whereof I have affixed my signature in presence of two witnesses.

F. A. MERRICK.

Witnesses:
MYRTLE E. SHARPE,
H. W. SMITH.