

(No Model.)

W. C. DUNHAM.
TROLLEY GUARD.

No. 585,380.

Patented June 29, 1897.

Fig. 1.

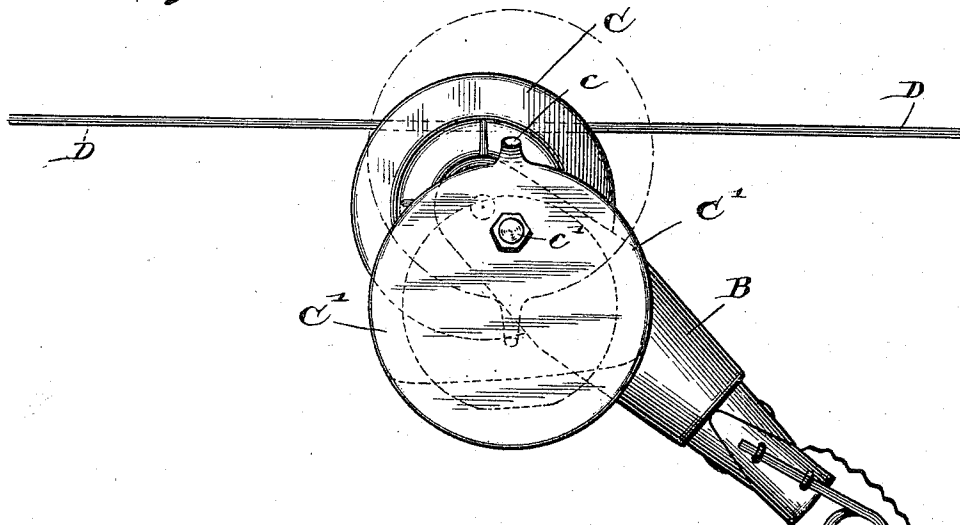


Fig. 2.

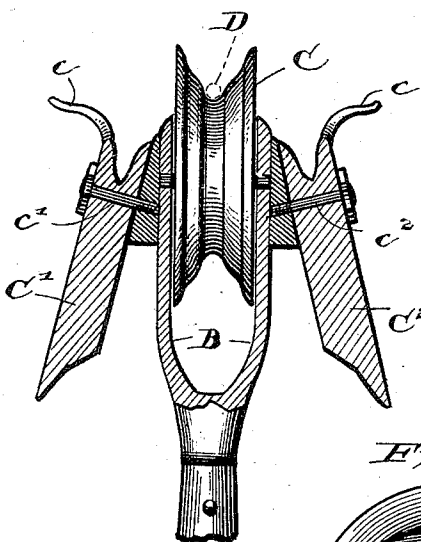


Fig. 3.

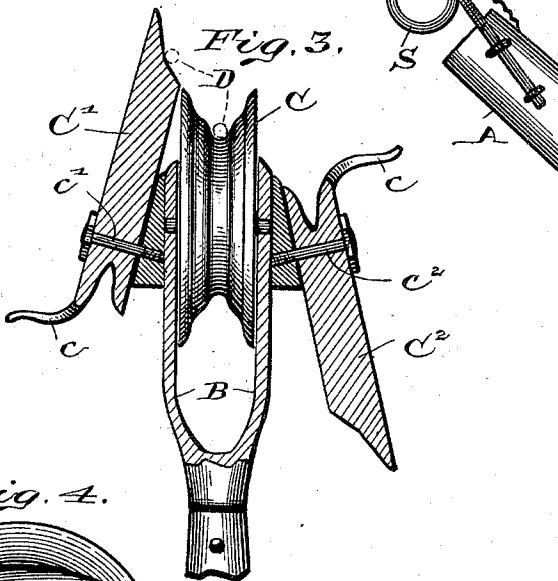
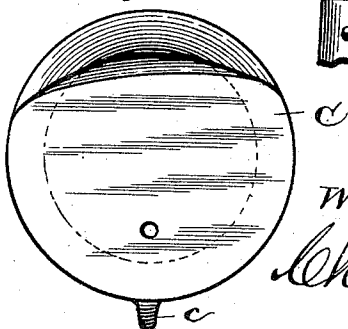


Fig. 4.



WITNESSES:

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TROLLEY-GUARD.

SPECIFICATION forming part of Letters Patent No. 585,380, dated June 29, 1897.

Application filed December 27, 1895. Serial No. 573,446. (No model.)

To all whom it may concern:

Be it known that I, WALLACE C. DUNHAM, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Trolleys, of which the following is a specification.

The object of my said invention is to provide an efficient and unfailing means for catching trolley-wires when they become accidentally displaced from position on the trolley-wheel and restoring them to such position. Said invention will be first fully described, and the novel features thereof then pointed out in the claim.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a trolley structure provided with devices embodying my said invention; Fig. 2, a central sectional view, the trolley-wheel proper being in elevation, with the wire catching and restoring wheels in the position they occupy when the wire is on the trolley in operative position; Fig. 3, a similar view illustrating the operation of my invention in restoring the wire to position on the trolley-wheel, and Fig. 4 an inside elevation of one of the wire catching and restoring wheels.

In said drawings the portions marked A represent the trolley-arm; B, the trolley-arm head; C, the trolley-wheel; C' C², the two wire catching and restoring wheels, and D the trolley-wire.

The trolley-arm A and its head B are or may be in most particulars of any ordinary or desired construction. The means of connecting them is, however, different from those ordinarily employed. They are separated somewhat, as shown in Fig. 1, and the head is carried on the arm by means of one or more interposed springs S. The purpose of this is to permit the head to move downward more quickly and with less momentum than could otherwise be the case for a purpose which will be presently explained.

The trolley-wheel C is or may be of the ordinary form and construction and, as usual, is mounted on its shaft in the fork of the trolley-head.

The wire catching and restoring wheels C'

and C² are mounted, preferably at somewhat of an angle, on stud-shafts c' and c², entering suitable perforations in the cheeks of the trolley-head B. These wheels are eccentrically mounted, so that as ordinarily positioned their upper surfaces are considerably below the upper edge of the trolley-wheel, thus enabling the grooves therein to receive the trolley-wire when (by any means) it becomes accidentally displaced from position on said main trolley-wheel. To aid in catching the wire, I preferably provide fingers or extensions c at a central point, as shown. The grooves may be of the same form and character as the groove in the trolley-wheel, but I prefer that they should be somewhat narrower and taper toward the point, so that when the wire comes in contact therewith there will be greater friction occasioned, which will aid to revolve said catching and restoring wheels as the car travels along. The effect is to revolve whichever of the wheels the wire rests upon to the position shown in Fig. 3, when, the inner side of the flange being at that point cut away, the wire slides down the incline so formed and onto the trolley-wheel proper, being thus restored to position automatically.

The spring connection between the trolley-arm and the trolley-arm head is of importance in effectuating my purpose. The whole trolley-arm as ordinarily constructed is comparatively bulky and the inertia consequently great. As the eccentrically-mounted wire catching and restoring wheel revolves it of course forces the arm or the head downwardly quite suddenly, and were the ordinary construction used, where the arm is solid and consequently all moved, there might not be that quick recovery which lends certainty to the operation of reëngagement and which is secured by the employment of the spring or springs S. Such spring-mounting therefore lends a measure of certainty to the operation of the device and is to that extent valuable.

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

The combination in a trolley structure, of the trolley-arm, a trolley-arm head thereon, the trolley-wheel, an automatically-acting wire catching and restoring device provided

with fingers *c* and located along side said wheel
with its catching-face normally below the
groove in said trolley-wheel and arranged to
rise above said groove by force imparted
5 from contact with the wire after catching it,
substantially as set forth.

In witness whereof I have hereunto set my

hand and seal, at Indianapolis, Indiana, this
23d day of December, A. D. 1895.

WALLACE C. DUNHAM. [L. S.]

Witnesses:

JAMES A. WALSH,

H. D. NEALY: