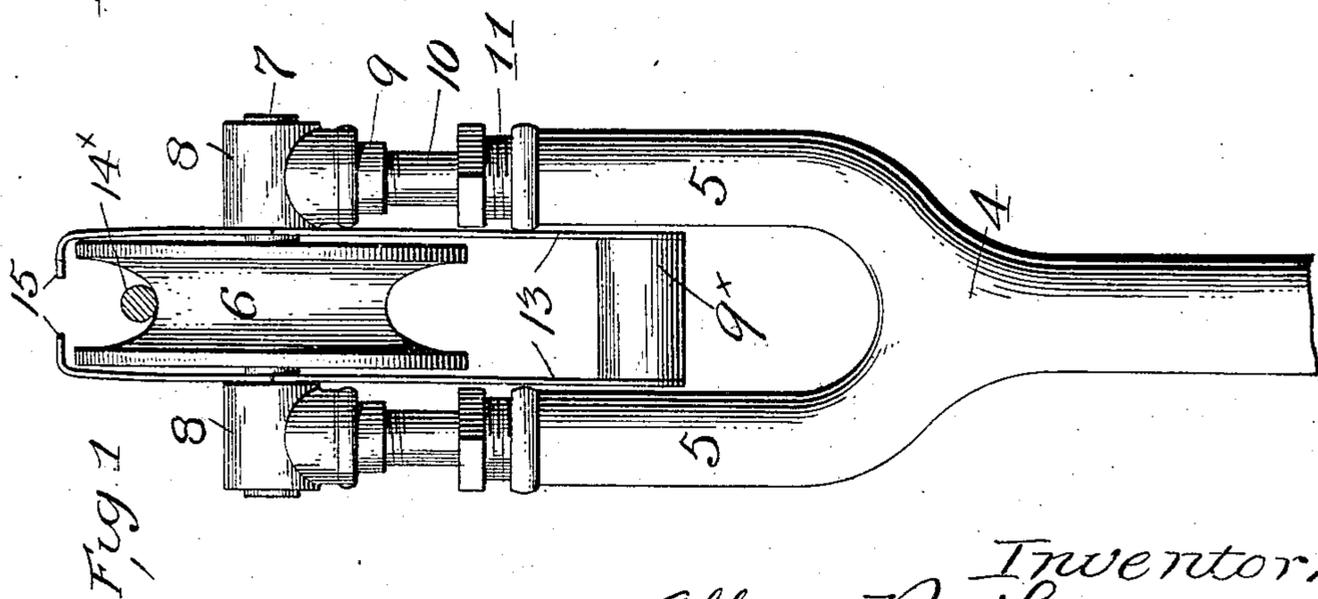
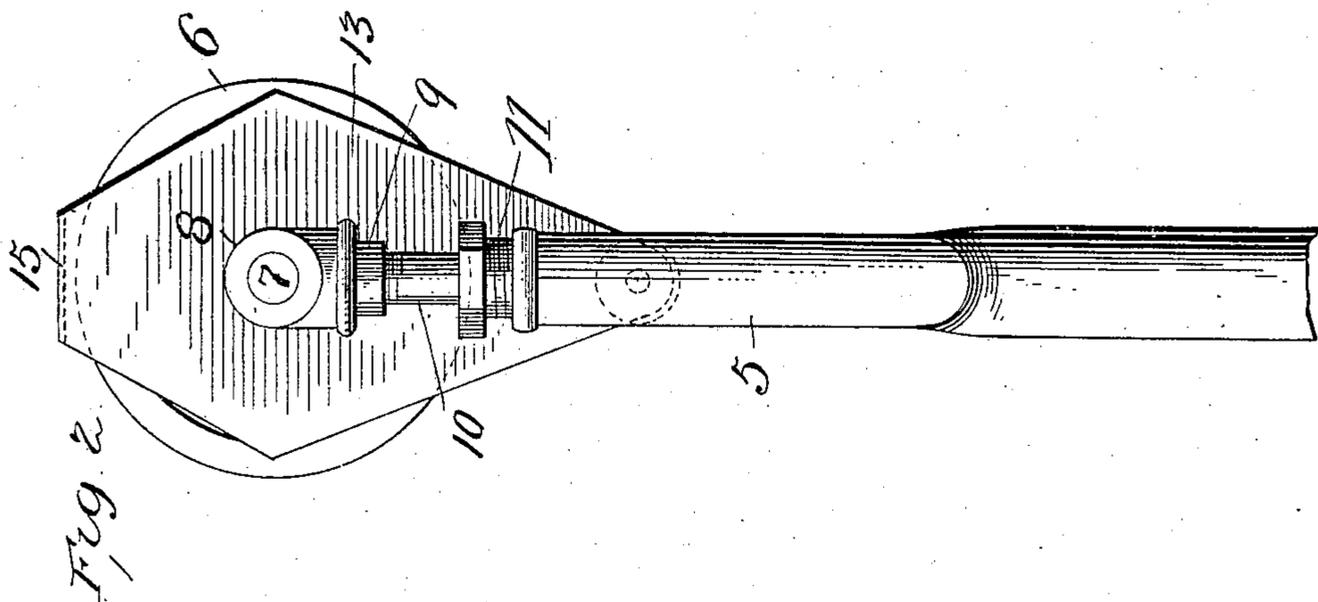
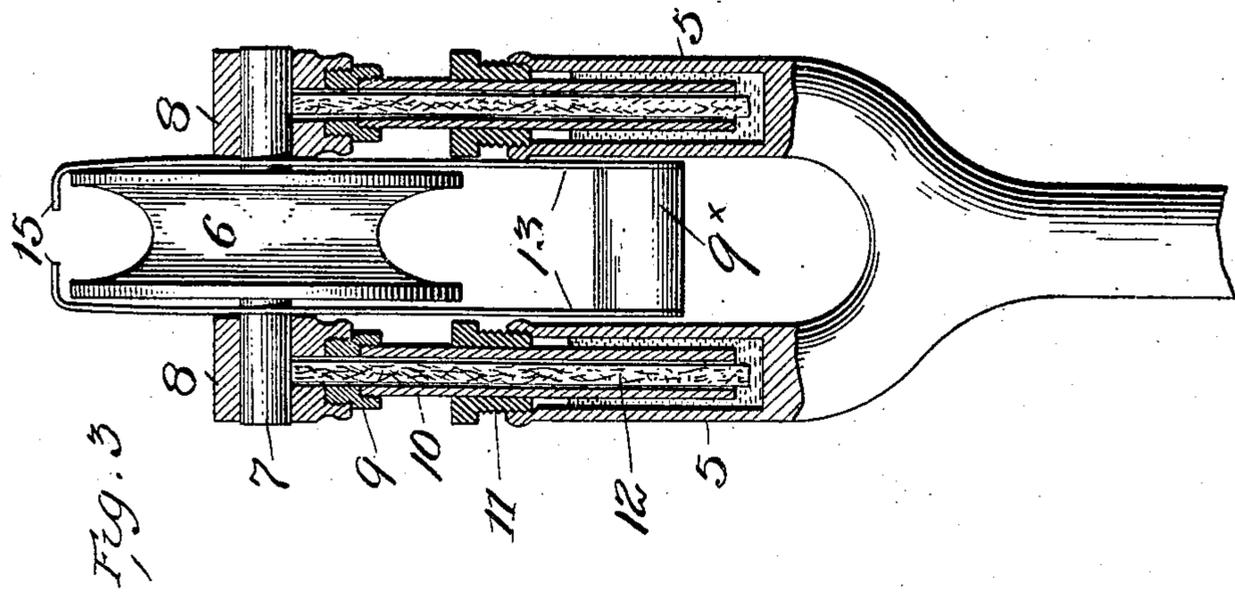


No. 848,382.

PATENTED MAR. 26, 1907.

A. P. LORD & N. WILKINS.  
OVERHEAD TROLLEY.

APPLICATION FILED OCT. 29, 1906.



Attest:  
Edw. H. Sartou

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Attys

# UNITED STATES PATENT OFFICE.

ALLEN P. LORD AND NATHANIEL WILKINS, OF BRADFORD,  
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## OVERHEAD TROLLEY.

No. 848,382.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed October 29, 1906. Serial No. 341,093.

*To all whom it may concern:*

Be it known that we, ALLEN P. LORD and NATHANIEL WILKINS, both citizens of the United States, residing at Bradford, Pennsylvania, have invented certain new and useful Improvements in Overhead Trolleys, of which the following is a specification.

Our invention relates to improvements in trolley heads and wheels and the guards therefor.

We have aimed in devising the present construction to provide an extremely simple, durable, economical, and efficient device which will serve to keep the trolley-wheel in contact with the wire and prevent its becoming accidentally disengaged therefrom, the construction at the same time being such that no parts project into such position that they will contact with and damage the conductor-supports.

We have further aimed to provide a device which will automatically maintain itself in the proper position and which is so shaped and constructed that it will be accurately and correctly guided in passing across the switch-plates.

We have also aimed to provide a construction by which any sized trolley-wheel may be used, thus enabling us to utilize a trolley-wheel of large diameter.

We have also aimed to provide an improved form of fork or trolley head or harp within which the trolley-wheel is journaled or by which it is supported, the same embodying simple and effective means for properly keeping the trolley-wheel bearings properly lubricated.

With these and other objects in view the invention includes the features of construction hereinafter described, and illustrated in the accompanying drawings.

In these drawings, Figure 1 is a front elevation. Fig. 2 is a side elevation, and Fig. 3 is a sectional view at right angles to Fig. 1.

Referring by reference characters to these figures, the numeral 4 designates the shank or socket of the harp, which socket is designed to be secured in a suitable manner upon the upper end of the trolley-pole and is provided with the tubular arms or members 5, which are closed at their lower parts to enable them to hold lubricating material, as shown in Fig. 3. The trolley-wheel 6 is mounted at the upper end on a spindle or axle 7, which is journaled in suitable bearing-

pieces 8. These are connected by screwed coupling members 9 to the upper ends of the tubes 10, which extend down into the hollow arms, where they are removably but firmly clamped by the thimbles on bushings 11.

The bearing-pieces 8 and coupling members 9 are provided with bores or passages in line with the bores of the tubes 10, within which are located suitable capillary wicks 12, which have their lower ends depending into the oil or other lubricating material and their upper ends in contact with the axle 7. This trolley-wheel, by reason of the guard construction described hereinafter, may have a much shallower groove than ordinarily used.

On opposite sides of the trolley-wheel and between it and the arms 5 are located the two swinging guard members 13, which are pivotally mounted upon the shaft or axle 7 and are connected at their lower ends by a pin 9, so as to rock in unison. The trolley wire or conductor is shown at 14, and accidental disengagement of the trolley-wheel from the wire is prevented by the horizontal inwardly-turned flanges 5 of the guard members. These, it will be observed, extend horizontally inward from opposite sides over, but in close proximity to, the peripheral flanges of the trolley and for a certain distance over the groove therein, the slot or opening between the edges of these flanges being just sufficient in width to permit the entrance of the wire or conductor and the passage of the conductor-supports therethrough.

Having thus described our invention, what we claim is—

In a trolley-head, a harp having tubular arms, wick-tubes extending into said arms, bushings detachably holding said tubes to the arms, coupling members at the upper ends of the tubes, bearings carried by said coupling members, a trolley-wheel having its axle journaled in said bearings, said bearings and coupling members having openings in line with the bore of the tubes, and wicks in said tubes extending into contact with the axle substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ALLEN P. LORD.  
NATHANIEL WILKINS.

Witnesses:

RUFUS B. STONE,  
ELIZABETH O'MARA.