

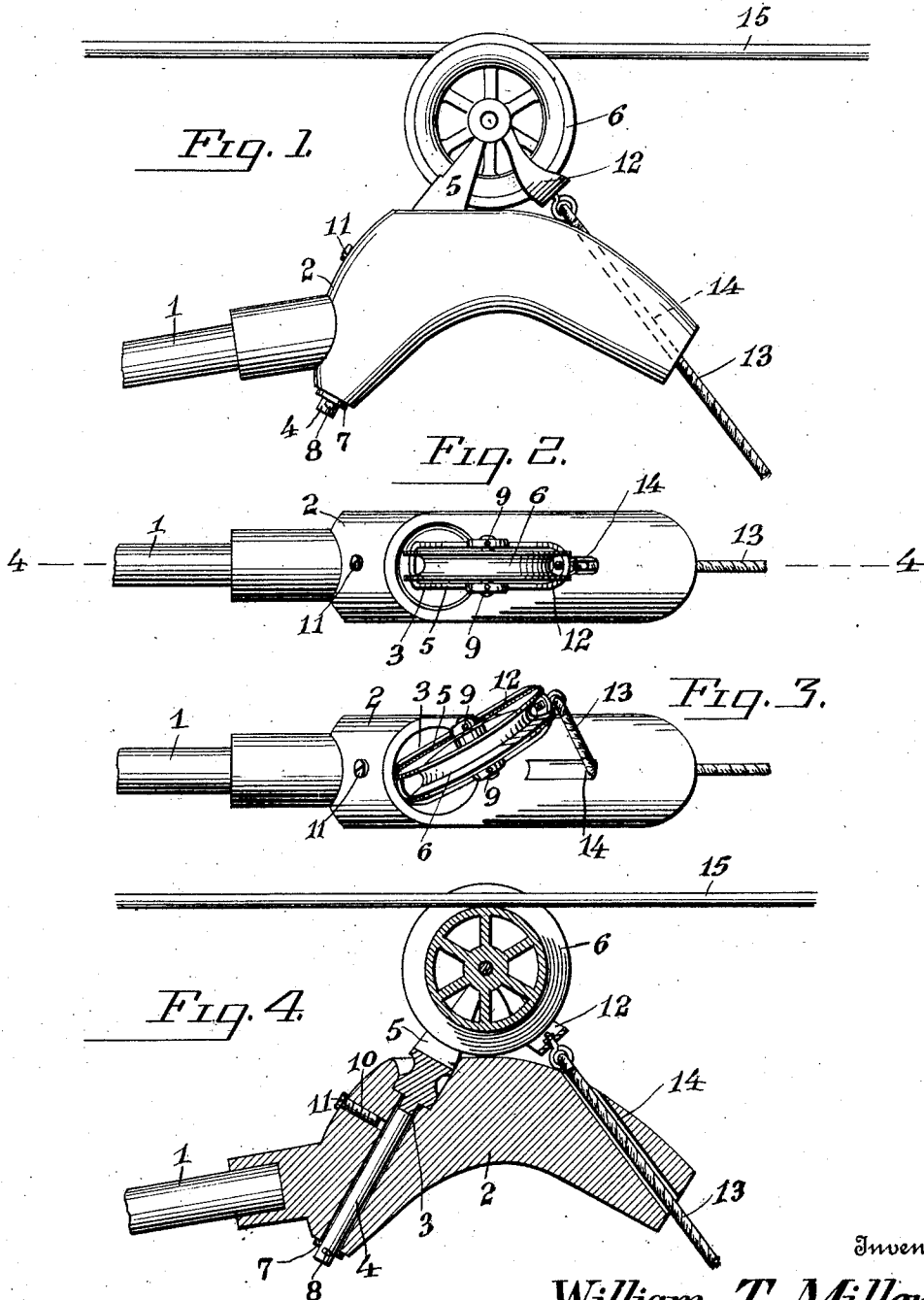
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TROLLEY.

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1,043,023.

Patented Oct. 29, 1912.



Witnesses

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TROLLEY.

1,043,023.

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To all whom it may concern:

Be it known that I, WILLIAM T. MILLER, a citizen of the United States, residing at Winston Salem, in the county of Forsyth and State of North Carolina, have invented new and useful Improvements in Trolleys, of which the following is a specification.

This invention relates to trolleys and more particularly to the head of the trolley pole wherein the trolley wheel that engages the feed wire is mounted, and the invention has for its principal object to mount the wheel in such a manner that it will readily adapt itself to various curves in the road, remaining in engagement with the feed wire when such curves are being turned without the usual tendency to slip or jump from the feed wire.

A further object of the invention is to provide an improved construction whereby the trolley wheel, if disengaged from the feed wire, while on a curve, will be immediately restored to a position in longitudinal alinement with the trolley pole, thereby facilitating the reengagement with the feed wire.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawing,—Figure 1 is a side elevation of a trolley head constructed in accordance with the invention. Fig. 2 is a top plan view. Fig. 3 is a top plan view illustrating the position assumed by the trolley wheel when a sharp curve is being turned. Fig. 4 is a vertical sectional view taken on the line 4-4 in Fig. 2.

Corresponding parts in the several figures are denoted by like characters of reference.

The trolley pole, a portion of which is shown at 1, carries the head 2 which is provided with an obliquely disposed aperture 3 in which a shank 4 is mounted for oscilla-

tion, said shank having at its upper end a fork 5 upon which the trolley wheel 6 is supported for rotation. The shank 4 is retained in the aperture 3 by means of a washer 7 and a cotter pin 8. The arms of the fork are provided with recesses 9 for the reception of lubricant. A lubricating passage 10 through which the shank 4 may be lubricated extends through the head 2, said passage being provided with a screw closure 11. The prongs or members of the fork 5 that supports the trolley wheel are connected by a yoke 12 which is disposed substantially at right angles to the fork. A flexible member, such as a cord 13, connected with the yoke 12 is guided through a passage 14 in the trolley head, said passage being substantially at right angles to the aperture 1 and terminating at the extreme rear end of the head, said cord or flexible member 13 being the operating cord whereby the trolley pole is actuated to place the wheel into or out of engagement with the feed wire, a portion of the latter being indicated at 15.

The trolley pole is to be connected in the usual manner with the roof of a car, suitably arranged springs being utilized to force the wheel carrying end of the pole in an upward direction to maintain the trolley wheel in engagement with the feed wire, but this construction being well understood, it has not been deemed necessary to particularly illustrate the same. It will be noted, however, particularly by referring to Fig. 4, that when the trolley wheel is in a normal position in engagement with the feed wire, which lies in an approximately horizontal plane, the apertures 3 and 14, both of which are obliquely disposed, are inclined about equally in opposite directions.

As will be seen from the foregoing description, taken particularly in connection with Fig. 3 of the drawing, when a curve is being turned and the conductor or feed wire is out of parallel with the direction in which the car moves, the shank 4 carrying the trolley wheel is rocked about its axis by the feed wire contacting with the flanges of the trolley wheel, but said shank being disposed obliquely, as shown, the wheel carried thereby will not merely be rocked, but will be tilted with reference to the feed wire, to the most favorable position for maintaining the trolley wheel in constant engage-

ment therewith. Should the trolley wheel become disengaged from the feed wire while on a curve, either accidentally or by design, strain exercised in a downward direction upon the operating cord 13 will restore the trolley wheel to a position in longitudinal alignment with the trolley pole, thereby greatly facilitating the replacement of the trolley wheel upon the feed wire.

10 Having thus described the invention, what is claimed as new, is:—

1. A trolley head having obliquely disposed passages substantially at right angles to one another, a bifurcated shank supported for oscillation in one of said apertures and having a yoke connected with and extending at right angles to the fork thereof, a trolley wheel supported for rotation upon the fork of the shank, and a flexible operating member connected with the yoke and guided through the other aperture of the trolley head; the oblique passages being oppositely inclined to an approximately equal extent

with reference to a horizontal plane when the trolley wheel is in engagement with a 25 feed wire.

2. A trolley head having obliquely disposed passages at substantially right angles to one another, one of said passages terminating at the rear end of the head, a wheel 30 carrying shank supported for oscillation in the other aperture, a member extending from the wheel carrying shank substantially at right angles thereto, and an operating cord connected with said member and guided 35 through the first mentioned aperture which terminates at the rear of the trolley head; said wheel carrying shank being maintained in an inclined position with reference to a feed wire engaged by the wheel.

In testimony whereof I affix my signature 40 in presence of two witnesses.

WILLIAM T. MILLER.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."