No. 707,338. Patented Aug. 19, 1902.

P. E. LOREE.

TROLLEY.

(Application filed Mar. 31, 1902.)

(No Model.)

Fig. 1.

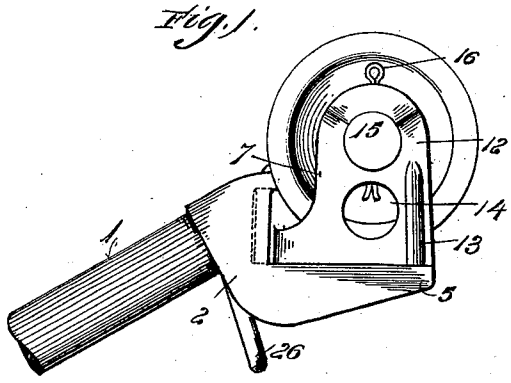


Fig. 2.

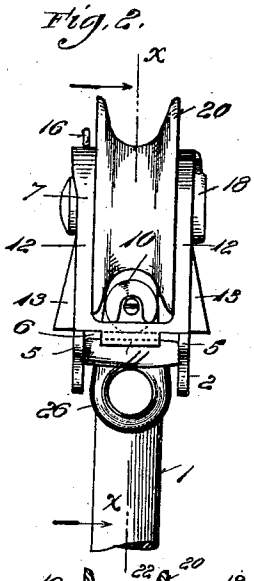


Fig. 3.

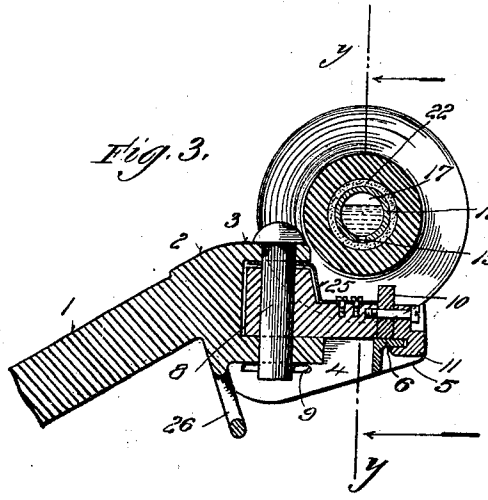
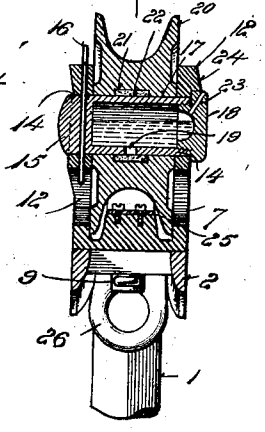


Fig. 4



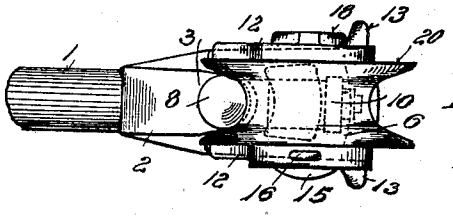


Fig. 5.

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PERRY E. LOREE, OF DAYTON, OHIO.

TROLLEY.

SPECIFICATION forming part of Letters Patent No. 707,338, dated August 19, 1902.

Application filed March 31, 1902. Serial No. 100,745. (No model.)

To all whom it may concern:

Be it known that I, PERRY E. LOREE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Trolleys, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to trolleys, and more particularly to the construction and arrangement of the mounting of the trolley-wheel upon the head provided therefor at the end of the trolley-pole; and it has for its object to provide an improved construction whereby the wear upon the wire and wheel arising from friction of lateral contact on curves and from other causes may be diminished.

To these ends my invention consists in certain novel features, which I will now proceed to describe and will then particularly point out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a structure embodying my invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical sectional view taken on the line $x\ x$ of Fig. 2 and looking in the direction of the arrows. Fig. 4 is a vertical sectional view taken on the line $y\ y$ of Fig. 3 and looking in the direction of the arrows, and Fig. 5 is a plan view.

In the said drawings, 1 indicates the trolley-pole or a projection or arm of the device adapted to be secured thereto, and 2 indicates as a whole the head. This latter is provided with two rearwardly-extending lugs 3 and 4 and also with two flanges 5, extending rearwardly from the sides of the lower lug 4 and connected near their rear ends by a transverse piece 6, which forms a track or way to be hereinafter referred to.

7 indicates as a whole a carriage pivotally mounted on the head between the lugs 3 and 4 by means of a pivot-pin 8, adapted to be secured by a key or cotter 9 or by any other suitable pivotal connection. The pivotal connection between the carriage and head is at the front end of the carriage and in advance of the trolley-wheel spindle or axle, so that the trolley-wheel has a trailing swinging motion relatively to the head. Near the rear end of the base of the carriage 7 there is mounted therein an antifriction wheel or roller 10, which rests upon the tracks 6, and thus relieves the frictional strain between the carriage and head due to the pressure between the trolley wheel and wire. The carriage is also provided with a downward and forward extending lug 11, which engages under the track 6, so as to prevent upward motion of the rear end of the carriage. The rear ends of the flanges 5 lie in the path of the body of this lug 11, and thereby form stops to limit the lateral movement of the carriage on the pivot 8. The carriage 7 is provided with upwardly-extending cheek-pieces 12, provided near their rear edges with outwardly and downwardly inclined projections 13 for preventing the trolley-wire from coming into contact with and engaging the rear ends of the flanges 5 in case the wheel slips from the wire and is thrown to one side or the other. In these cheek-pieces are formed apertures 14 to receive the spindle or axle 15, which may be secured in position by a key 16 or in any other suitable manner. This spindle is hollow, as indicated at 17, to form a reservoir for the lubricant, which is preferably in the form of a grease, the same being introduced through one end of the spindle, which is open for that purpose and which is adapted to be closed by a screw-plug or other suitable closure 18. An aperture 19 is formed in the bottom of the spindle for the escape of the lubricant, and the trolley-wheel, which is indicated at 20, is provided internally with a circumferential groove 21, filled with a packing 22, of asbestos or other suitable absorbent material not liable to be injured by heat. In order to permit the introduction of oil or any other suitable lubricant in case that already in the spindle becomes exhausted under circumstances which renders its renewal difficult or inadvisable, I provide in the closure 18 a filling aperture or passage 23, and the cheek-piece 12 is provided with a projection 24, extending out over the mouth of said aperture in such a way as to protect the same without closing it.

25 indicates a spring-arm secured at one end to the top of the carriage, its other end bearing against the under side of the lug 3 and serving as a brush to insure a proper electrical contact at all times between the carriage and trolley-head.

26 is a loop or eye for the attachment of the controlling-cord.

It will be observed that the trailing carriage in which the trolley-wheel is mounted is capable of swinging laterally to a limited extent sufficient to enable the wheel to accommodate itself to curves and to the changing positions of the car and wire, and thereby diminish the lateral friction between the wire and trolley-wheel, thus increasing the durability of both wire and wheel. It will also be seen that suitable provision is made for retaining the carriage in place both laterally and vertically without excessive friction. Provision is also made to prevent engagement of the wire with the head or carriage in case of accidental displacement.

The heat developed by friction between the wheel and its spindle will melt the lubricant, which latter will pass through the aperture 19 and be absorbed by the asbestos filling in the groove of the wheel and distributed therefrom to the bearing-surfaces of the wheel and spindle. The asbestos, while absorbent, is of such a character as not to be injured by the heat developed.

I do not wish to be understood as limiting myself to the precise details hereinbefore described, and shown in the accompanying drawings, as the same may obviously be modified without departing from the principle of my invention.

I make no claim herein to those features shown and described which relate to the lubrication of the device, as such features form the subject-matter of a separate application filed by me May 31, 1902, and bearing the Serial No. 109,705.

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

1. In a trolley, the combination, with a pole provided with a head having rearwardly-extending lugs and rearwardly-extending flanges connected near their rear ends by a transverse piece or way, of a carriage pivotally mounted at its forward end between said lugs and provided at its rear end with an anti-friction-wheel to bear upon the way and with a lug located between the flanges and extending under the way, said carriage having mounted thereon rearward of its pivot a trolley-wheel, substantially as described.

2. In a trolley, the combination, with a head having rearwardly-extending lugs and rearwardly-extending flanges, of a carriage provided with a trolley-wheel pivotally mounted at its forward end between the lugs and provided near its rear end on opposite sides with downwardly-diverging projections forming guards to prevent the engagement of the trolley-wire with the flanges, substantially as described.

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

PERRY E. LOREE.

Witnesses:
E. O. HAGAN,
F. W. SCHAEFER.