

No. 732,495.

PATENTED JUNE 30, 1903.

G. E. ALLEN & G. ZIMMER.
TROLLEY.

APPLICATION FILED APR. 15, 1903.

NO MODEL

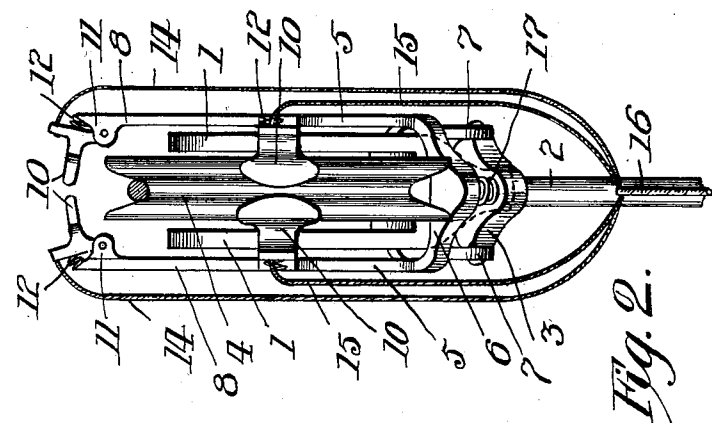


Fig. 2.

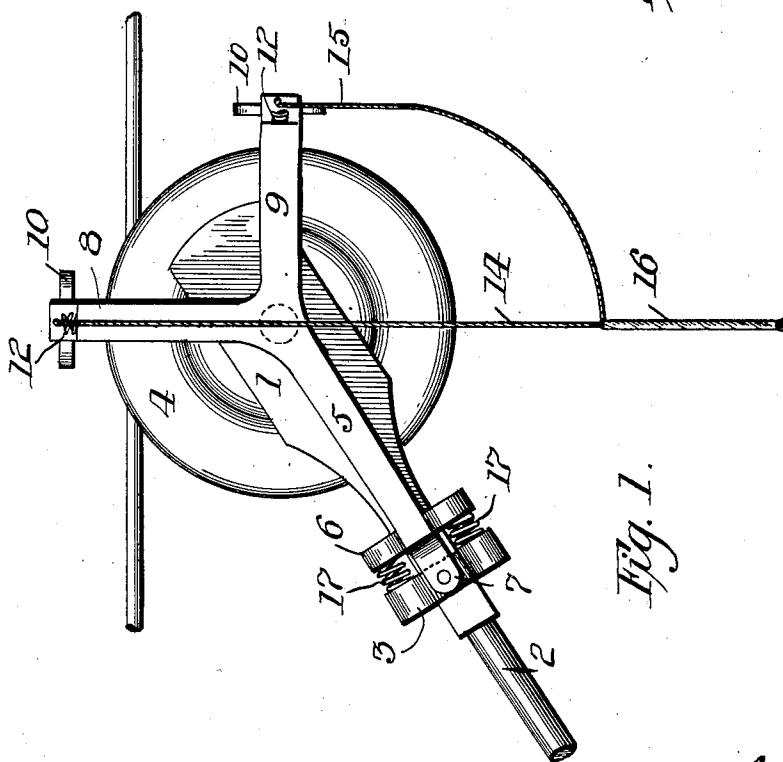


Fig. 1.

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UNITED STATES PATENT OFFICE.

GEORGE E. ALLEN, OF PITTSBURG, AND GEORGE ZIMMER, OF ALLEGHENY,
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TROLLEY.

SPECIFICATION forming part of Letters Patent No. 732,495, dated June 30, 1903.

Application filed April 15, 1903. Serial No. 152,769. (No model.)

To all whom it may concern:

Be it known that we, GEORGE E. ALLEN, residing at Pittsburg, and GEORGE ZIMMER, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, citizens of the United States of America, 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 certain new and useful improvements in trolleys; and the primary object of the invention is to provide novel and effective means for maintaining the trolley-wheel in engagement with the wire during the travel of the car.

Briefly described, our invention embodies an attachment which may be applied to the ordinary trolley pole and harp now generally employed, and it embodies two substantially Y-shaped arms connected together near their lower ends by a yoke, the lower ends of said arms extending below said yoke and being pivotally connected to a collar attached to the trolley-pole. Interposed between the yoke and the collar are springs which tend to retain the arms in the desired position, and each branch of the Y-shaped arms carry at their outer ends spring-pressed guards, which are retracted by means of cords attached thereto.

All of the above construction will be hereinafter more specifically described and then particularly pointed out in the appended claim, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference indicate like parts throughout the different views of the drawings, in which—

Figure 1 is a side elevation showing our improved trolley as it appears when in engagement with the trolley-wire. Fig. 2 is a rear elevation of the same.

As stated, we may employ the ordinary trolley-harp 1 and pole 2. Before attaching the harp to the pole we attach thereto a collar 3. The trolley-wheel 4 is journaled in the harp 1 in the usual manner. In connection with the harp we employ two substantially Y-shaped

arms, the longer legs 5 of which are connected together near their lower ends by means of a yoke 6, the arms or legs having extensions 7 projecting beyond the yoke and being pivotally connected to the collar 3. The branches or legs 8 of the Y-shaped arms each carry pivoted guards 10, which are pivoted in lugs or ears 11, carried by the branches or legs near their outer ends, and these guards are backed by springs 12, interposed between the same and the arms or branches. Cords 14 15 are connected to the respective pairs of guards, and these cords are connected to a common or single cord or rope 16.

Our purpose in employing two pairs or sets of the guards is to have one set of the same always in position to guard the wheel and maintain the same in engagement with the wire, as when the car is running in one direction the branches 8 will be disposed vertically and their guards will lie above the trolley-wire, while if the pole is thrown over, so as to permit the car to run in the reverse direction, the branches 9 will be disposed vertically and their guards will lie over the trolley-wire. Interposed between the collar 3 and the yoke 6 at opposite sides of the pole are steel coil-springs 17, which serve to maintain the desired position of the attachment and retain the legs or branches 5 of the Y-shaped arms in normal alinement with the cheeks of the harp. During the travel of the wheel along the current or trolley wire the guards will spread as they engage a hanger or cross-over, so as to permit the device to readily pass the same.

While we have herein shown and described our invention in detail as it is practiced by us, yet it will be evident that various changes may be made in the details of construction without departing from the general spirit of the invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a device of the character described, the combination with a pole and trolley-harp, the wheel mounted in said harp, of a collar attached to the trolley-pole, a pair of substantially Y-shaped guard-arms pivoted to said

collar, a yoke connecting said arms together
at their lower ends, spring-pressed guard car-
ried by each branch or leg of the Y-shaped
arms, cords connected to said guards for op-
5 erating the same, and springs interposed be-
tween the collar upon the trolley-pole and the
yoke carried by the arms, substantially as
described.

In testimony whereof we affix our signa-
tures in the presence of two witnesses.

GEORGE E. ALLEN.
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Witnesses:

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