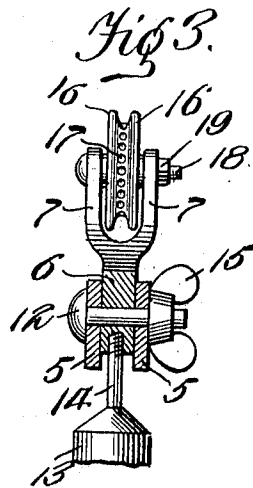
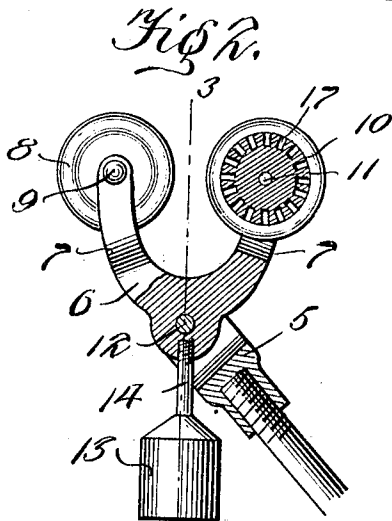
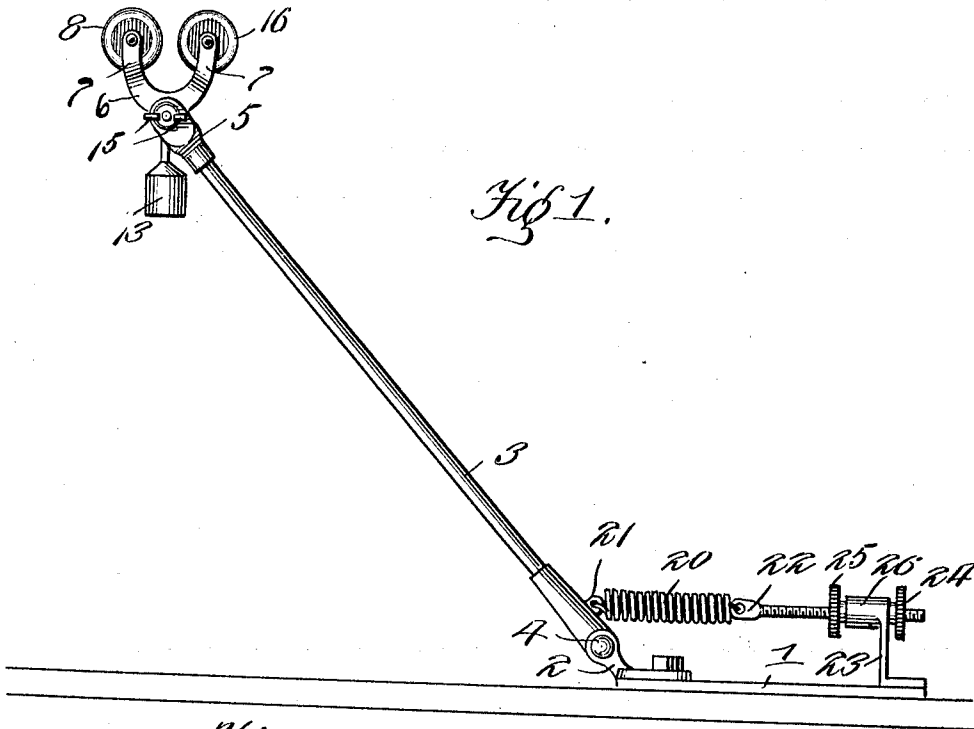


J. GOSCH.
TROLLEY.

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1,053,805.

Patented Feb. 18, 1913.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHANNES GOSCH, OF BUCKLAND, CONNECTICUT.

TROLLEY.

1,053,805.

Specification of Letters Patent.

Patented Feb. 18, 1913.

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To all whom it may concern:

Be it known that I, JOHANNES GOSCH, a citizen of the United States of America, residing at Buckland, in the county of Hartford and State of Connecticut, have invented new and useful Improvements in Trolleys, of which the following is a specification.

This invention relates to trolleys, and one of the principal objects of the same is to provide simple, reliable and efficient means for removing ice from the line wire in advance of the trolley wheel.

Another object of the same is to provide means whereby the ice-removing element and the trolley wheel are yieldingly and pivotally held in true horizontal relation in order that the trolley wheel and cleaner will pass readily over intersecting line wires.

Still another object of the invention is to provide a trolley wire cleaner and a trolley wheel mounted in a harp or yoke provided with a suspended weight, said yoke or harp being pivotally connected to the upper end of the trolley pole so that the weight will always hold the cleaner and trolley wheel in true horizontal relative positions.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which,—

Figure 1 is a side elevation of a trolley made in accordance with my invention. Fig. 2 is an enlarged detail partial sectional view of the trolley harp and ice-removing or cleaner element. Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2.

Referring to the drawing, the numeral 1 designates a base plate provided with a bracket 2 at one end thereof to which the trolley pole 3 is pivotally connected at 4. At the upper end of the trolley pole 3 a bracket 5 is secured, and pivotally mounted between the two arms of this bracket is the U-shaped trolley harp or yoke 6. The yoke 6 is provided with two pairs of spaced arms 7. The trolley wheel 8 is pivoted at 9 between one pair of arms 7, and the cleaner wheel 10 is pivoted at 11 between the other arms 7 of the harp or yoke. The latter is pivoted at 12 to the bracket 5. A counterweight 13 is connected centrally to the harp by means of a shank 14 provided with screw threads at its upper end, said screw threads engaging a socket in the lower end of the trolley harp. Fitted to the end of the pivot

pin or bolt 12 is a winged nut 15 which may be adjusted for holding the harp in position and which can be readily removed when it is desired to withdraw the harp from the pole.

The cleaner wheel is in the form of a grooved pulley having oppositely disposed flanges 16 and in the bottom of the groove a series of perforations 17, said perforations having comparatively sharp open edges at their outer ends to remove the ice from the wire in advance of the trolley wheel. The cleaner wheel is mounted upon the bolt 18 provided with an adjusting nut 19 passing through the arms 7 and through the cleaner.

A spiral spring 20 is secured at one end to an eye 21 at the lower end of the trolley pole, the opposite end of said spring being connected to a threaded rod 22 mounted in a bracket 23. An adjusting nut 24 is mounted on the rod 22, and a lock nut 25 is mounted on said rod upon opposite sides of the boss 26. By means of this construction the trolley pole may be adjusted as to its inclination.

From the foregoing it will be obvious that as the trolley moves under the line wire, the ice cleaner will scrape and break off the ice from the wire before the trolley wheel passes over the same, and that the trolley wheel and cleaner will always be held in horizontal relation one to the other by means of the counterweight 13.

I claim:—

The combination with a trolley pole, of a U-shaped member pivoted to the upper end of the pole, a trolley wheel journaled in one of the arms of said U-shaped member, a cleaner wheel journaled in the other arm in advance of said trolley wheel, said cleaner wheel having its hub provided with a series of relatively small spaced radial openings terminating at the periphery of the hub and having their outer edges sharpened and adapted to remove the ice masses formed on the trolley wire, and a weight adapted to hold said wheels in normally operable position.

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

JOHANNES GOSCH.

Witnesses:

OLIN R. WOOD,
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