

(No Model.)

P. CASSIDY.  
TROLLEY WIRE AND TROLLEY WHEEL.

No. 567,186.

Patented Sept. 8, 1896.

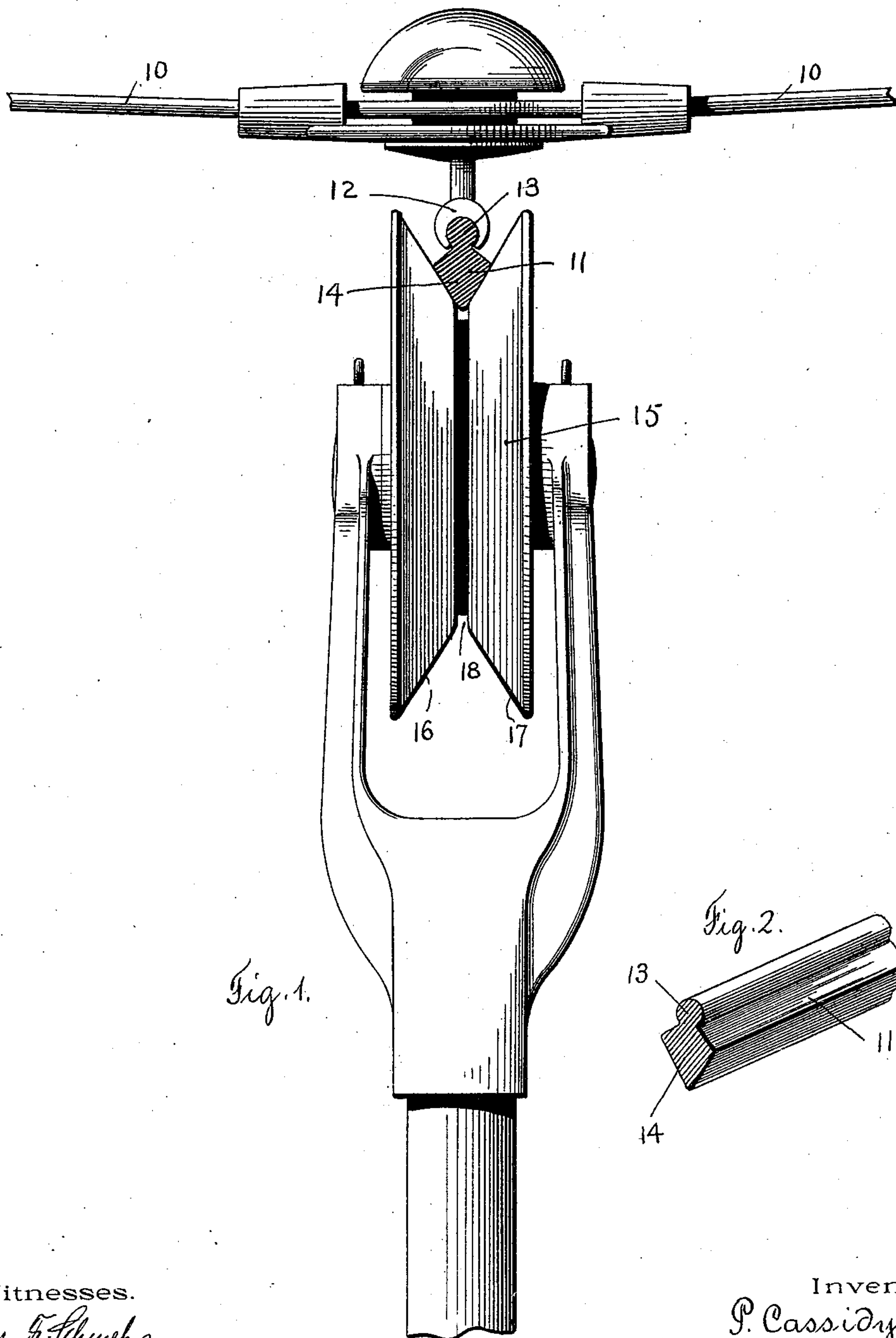


Fig. 1.

Fig. 2.

Witnesses.

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# UNITED STATES PATENT OFFICE.

PATRICK CASSIDY, OF WORCESTER, MASSACHUSETTS.

## TROLLEY-WIRE AND TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 567,186, dated September 8, 1896.

Application filed May 8, 1896. Serial No. 590,672. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK CASSIDY, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Trolley-Wires and Trolley-Wheels Therefor, of which the following is a specification.

The aim of my invention is to provide a trolley-wire which may be easily and firmly secured in position and which will present a large surface of contact to the trolley-wheels, and to provide a trolley-wheel of peculiar construction to accurately engage with said trolley-wire and to run centrally and easily in contact therewith. To these ends I form my trolley-wire with a bead or projection, preferably substantially circular in cross-section, for engagement with the clips or hangers and with a body portion or section, which is tapering or substantially V-shaped, for engagement with the trolley-wheel. To support the wire, I preferably employ clips or hangers which will engage with the grooves between the bead and the body portion of the wire. The trolley-wheel which I preferably employ has a V-shaped groove corresponding with the V-shaped or tapered body portion of the wire, and in practice I preferably provide the trolley-wheel with a small clearance or wearing groove, so that the trolley wheel and wire will wear evenly and a large surface of contact be preserved. The tapering or V-shaped body portion of the trolley-wire will present a large surface of contact to the trolley-wheel, and the corresponding groove in the trolley-wheel will keep the wheel centrally and nicely in contact with the wire, so that the wheel will run very evenly and smoothly.

Referring to the drawings and in detail, Figure 1 shows the manner in which the trolley-wire is preferably supported and the form of wheel which is preferably used, and Fig. 2 is a perspective view of the wire.

Referring to the drawings and in detail, 10 designate the usual stays or cross-wires. Carried by the cross-wires 10 are the hangers or clips 12 for supporting the trolley-wire 11. The trolley-wire 11 is provided with a small bead or rib 13 for engagement with the hangers or clips 12. The bead or rib 13 is prefer-

ably substantially circular in cross-section. The body portion 14 of the wire is made tapering or substantially V-shaped in cross-section. The hangers or clips 12 are formed so that their ends may be mechanically forced or pressed into engagement with the grooves between the bead or rib 13 and the body portion of the wire. The trolley-wheel 15 is provided with a V-shaped or tapering groove, corresponding with the body portion 14 of the trolley-wire 11. By means of this construction it will be seen that the sides 16 and 17 of the wheel 15 will have a large area of contact with the trolley-wire. In practice I preferably form a slight wearing groove or depression 18 in the bottom of the V-shaped groove in the trolley-wheel 15. By means of this construction the trolley wheel and wire will wear down evenly and a large surface of contact will be preserved. The tapered or body portion of the wire is preferably formed substantially at an angle of sixty degrees.

While my construction is particularly adapted for overhead work, it may be used in other locations, and changes and modifications may be made by a skilled mechanic without departing from the scope of my invention as expressed in the claims.

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

1. As an article of manufacture, a trolley-wire comprising a substantially cylindrical rib or bead, and a tapering, substantially V-shaped body portion for engaging the trolley-wheel, the rib and body portions of the wire being separated by substantially V-shaped grooves arranged to engage supporting clips or fasteners, substantially as described.

2. The combination of a trolley-wire comprising a cylindrical bead, and a tapering or substantially V-shaped body portion for engaging the trolley-wheel, the rib and body portion of the wire being separated by substantially V-shaped grooves, and supporting clips or fasteners having flexible arms arranged to be forced into engagement with said grooves, substantially as described.

3. The combination of a trolley-wire having a cylindrical rib, a substantially V-shaped body portion, longitudinal substantially V-shaped grooves between the body portion and



rib, supporting clips or hangers having flexible arms arranged to be forced into engagement with said grooves, and a trolley-wheel having a V-shaped groove for engaging the  
5 body portion of the trolley-wire, and a wearing or clearance groove, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PATRICK CASSIDY.

Witnesses:

PHILIP W. SOUTHGATE,  
LOUIS W. SOUTHGATE.