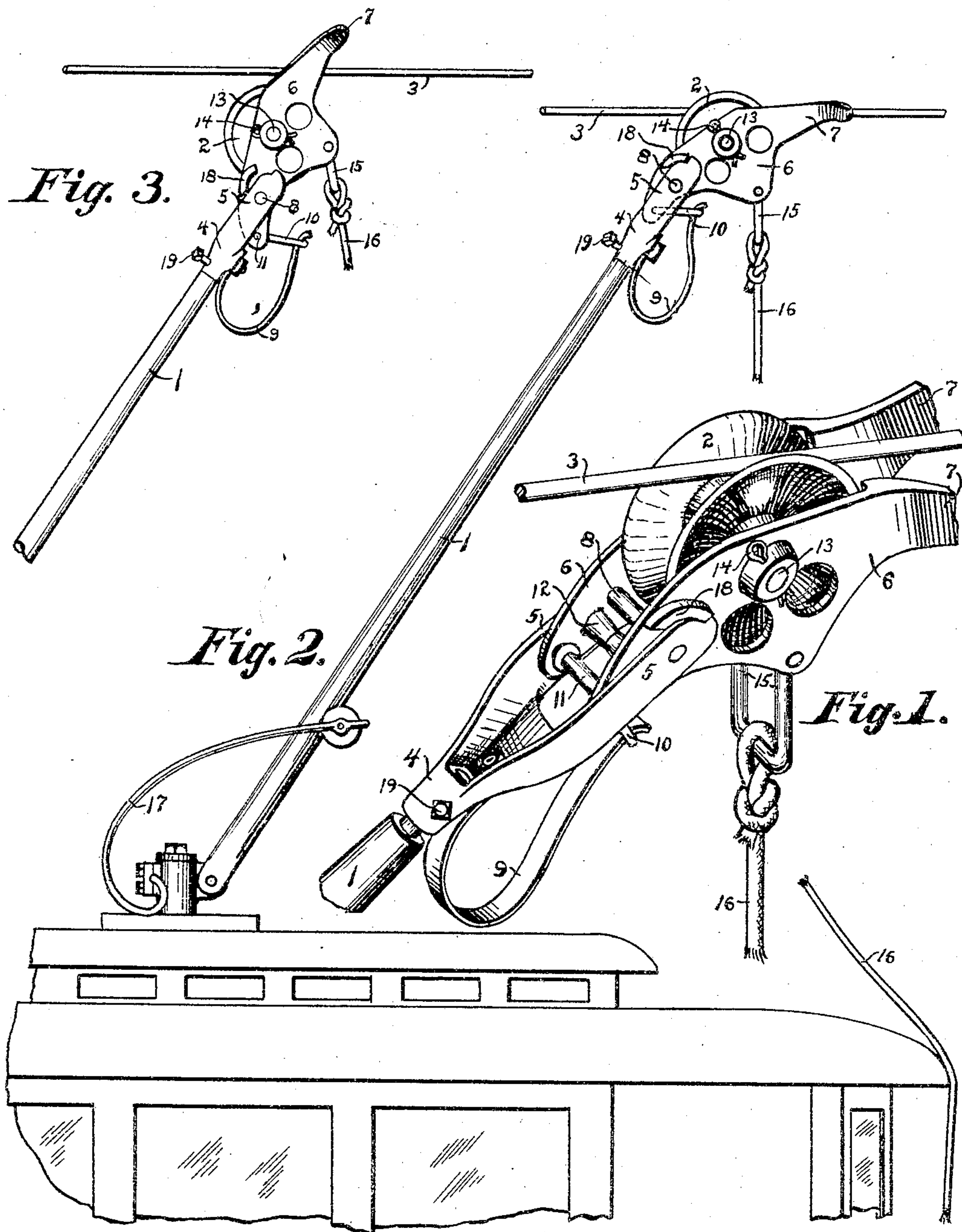


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J. S. WECKMAN.
TROLLEY.

APPLICATION FILED SEPT. 22, 1904.



Witnesses

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TROLLEY.

SPECIFICATION forming part of Letters Patent No. 778,520, dated December 27, 1904.

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To all whom it may concern:

Be it known that I, JOHN S. WECKMAN, a citizen of the United States, residing at Carnegie, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Trolleys; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a view showing the top or upper end of the trolley-pole and illustrating the trolley-head and wheel, showing the wheel in contact with the trolley-wire. Fig. 2 is a side elevation showing a portion of the car and illustrating the trolley-wheel in proper contact with the trolley-wire. Fig. 3 is a view showing a portion of a trolley-wire, the trolley-pole, and head, showing the trolley-wheel disengaged from the seat of the groove of the trolley-wheel.

The present invention has relation to trolleys; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the pole, which may be of the usual construction and of a length sufficient to properly engage the wheel 2 with the trolley-wire 3. To the top or upper portion of the pole is pivotally attached the head 4, which head consists or is provided with the diverging arms 5, to which diverging arms are pivotally attached the spaced plates 6, which spaced plates are continued rearward to provide guard-arms 7, said guard-arms being formed integral with the plates 6. For the purpose of providing a pivotal connection between the diverging arms 5 and the plates 6 the rivet 8 is provided.

To the head 4 is connected the spring 9, which spring is attached to the head 4 at one end and its opposite and free end connected to the link 10, which link is connected to the lower ends of the plates 6 by means of the rivet or cross-bolt 11.

For the purpose of holding the plates 6 in

proper spaced relation with each other the cross-brace 12 is provided.

The trolley-wheel 2 is mounted upon the axle 13, which axle is preferably held in proper place by means of suitable cotters 14.

To the plates 6 is pivotally attached the link 15, to which link the trolley-rope 16 is attached.

The action of the spring is such that it will have a tendency to hold the side plates 6 in the position illustrated in Fig. 3; but when the trolley-wheel 2 is held in proper contact with the trolley-wheel 3 the spring 17 or its equivalent will have a tendency to counteract the spring 9 and depress the side plates 6, together with the trolley-wheel 2.

For the purpose of limiting the movement of the side plates 6 they are provided with the flanges 18, which flanges limit the upward movement of the side plates 6 and the downward movement of said side plates.

The guard-arms 7 when brought into the position illustrated in Fig. 2 will pass under the span-wires or trolley-wire supports, and when the trolley-wheel 2 is in proper contact with the trolley-wire 3 the normal position of the arms 7 is that shown in Fig. 2.

If for any reason the trolley-wheel 2 should become disconnected from the trolley-wire, the spring 9 will automatically move the side plates 6, together with the trolley-wheel 2, into the position illustrated in Fig. 3 and the guard-arms prevent the trolley-wheel from becoming disengaged from the trolley-wire.

It will be understood that as the car is moved forward any contact with the arms 7 will turn the arms into the position illustrated in Fig. 2, thereby allowing said arms to pass under the trolley-wire supports; but in the event the car is running backward the arms when elevated will have a tendency to engage the trolley-wire supports, and for the purpose of overcoming this objection the trolley-rope 16 is connected to the side plates 6, so that a downward pull of the trolley-rope will move the arms 7 downward and allow them to pass under the trolley-wire support, the trolley-wheel 2 remaining in contact with the trolley-wire except at such times when it is desired to entirely disconnect the trolley-wheel

from the trolley-wire, and at such times of course the trolley-pole 1 is pulled down a sufficient distance to entirely disengage the trolley-wheel 2 from the trolley-wires.

5 In use the spring 17 should have a stronger tension than the spring 9, so that the power of the spring 17 will overcome the action of the spring 9, but leave said spring 9 to automatically operate the side plates 6, together with
10 the trolley-wheel 2, so as to overcome any jumping of the trolley-wheel from the wire and at the same time hold the trolley-wheel in proper contact regardless of the slight vertical movements of the trolley-wheel.

15 In some instances it may be desirable to invert the pole 1—that is to say, turn the pole axially—and in order to accomplish this without changing the relative position of the head 4 said head is pivotally attached to the pole
20 and held in fixed relation therewith by means of the set-screw 19.

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

25 1. The combination of a pole, a head secured thereto and provided with arms, plates held in spaced relation to each other, a trolley-axle and

a trolley-wheel mounted thereon, said axle and trolley-wheel carried by the plates, and the plates extended to form guide-arms, flanges 30 formed upon the plates and adapted to limit the movement of the side plates, a spring secured to the head and operatively connected to the side plates having attached thereto the trolley-rope, substantially as and for the pur- 35 pose specified.

2. The combination of a trolley, a head secured thereto, spaced plates pivotally attached and carried by the head, said plates provided with stop-shoulders, a trolley-wheel 40 carried by the plates, a spring secured to the head and operatively connected to the plates and the trolley-rope carried by the plates, and the plates provided with rearward extensions adapted to form guards, substantially as and 45 for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN S. WECKMAN.

Witnesses:

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