

No. 658,243.

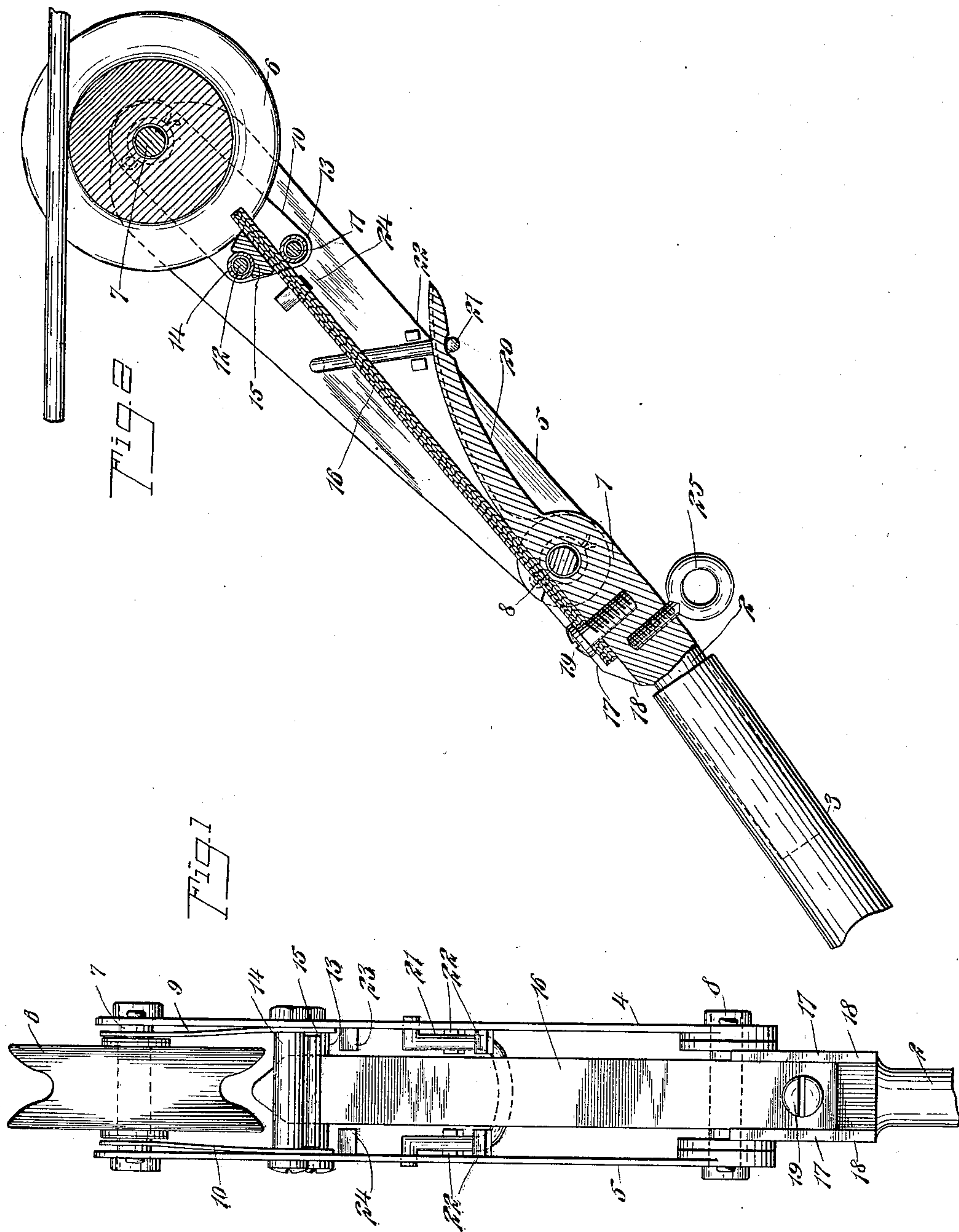
Patented Sept. 18, 1900.

W. A. DAGGETT.

TROLLEY.

(Application filed May 23, 1900.)

(No Model.)



WITNESSES: .

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UNITED STATES PATENT OFFICE.

WILLIAM A. DAGGETT, OF VINELAND, NEW JERSEY.

TROLLEY.

SPECIFICATION forming part of Letters Patent No. 658,243, dated September 18, 1900.

Application filed May 23, 1900. Serial No. 17,662. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. DAGGETT, a citizen of the United States, and a resident of Vineland, in the county of Cumberland and State of New Jersey, have invented a new and Improved Trolley, of which the following is a full, clear, and exact description.

This invention relates to trolleys for electric cars; and the object is to provide a trolley so constructed that it will have a yielding connection with the wire, whereby the usual pounding or jumping is obviated, thus preventing the disconnecting of the trolley from the wire, which cuts out the lights and power.

I will describe a trolley embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a front view of a trolley embodying my invention, and Fig. 2 is a sectional side view thereof.

Referring to the drawings, 1 designates a foot-block having a tang 2 designed to engage in the trolley-pole 3. Having swinging connection with the block 1 are side plates 4 5, between the upper ends of which the trolley 6 is placed, the said trolley being mounted to rotate on a shaft 7, extended through the side pieces. The side pieces 4 and 5 are mounted to swing on a shaft 8, extended through the block 1.

To provide for a lateral yielding motion of the trolley 6 relatively to the side pieces, so as to practically prevent its jumping from the wire by a sudden side jerk, I employ spring-plates 9 and 10, which at their lower ends are attached to the side plates and at their upper ends engage with the ends of the trolley-hub, as plainly indicated in Fig. 1. These spring-plates may be secured to the side plates by means of bolts 11 and 12, which pass through the side plates, and between the side plates sleeves 13 and 14 are mounted on the bolts.

Having rocking engagement with the upper sleeve 14 is a shoe 15, and between this shoe 15 and the lower sleeve 13 a holding-spring 16 is designed to move as the trolley is deflected downward or upward. The lower

end of the spring 16 is attached to the block 1 between side cheek-pieces 17, the lower ends of the upper edges of which are made cam-shaped or inclined, as at 18, so as to prevent them from engaging with cross-wires. As the spring is attached to the block by means of a single screw 19, it is obvious that the cheek-pieces will prevent the spring from swinging thereon. The spring may be made of a single piece of metal. I prefer, however, to make it of several layers, as indicated in Fig. 2, as they are not so liable to crystallize and break, and between the layers I will place a small amount of plumbago mixed with tallow or petroleum, making the spring very sensitive. When the trolley is engaged with a wire and forced downward relatively to the pole, the spring will be bent over an arm 20, which is curved upward and rearward from the block 1, the said arm being a portion of the block. This curved arm will prevent possible breaking of the spring and also will limit the movement of the side plates relatively to the block. When the pole surges down, the spring 16 will straighten and keep the trolley to the wire. Therefore there will be no shock, as is the case when the trolley leaves the wire and suddenly moves again into engagement therewith.

To prevent the side plates or arm carrying the trolley from swinging too far upward relatively to the block, I employ a loop 21, having its ends engaged respectively with the side plates 4 and 5 and passing underneath the arm 20. The side members of this loop 21 pass between lugs 22, extended inward from the side plates, as plainly shown in Fig. 1. As the side plates 4 and 5 are made of metal adapted to yield slightly under lateral pressure, as a means of preventing such lateral movement being too great stop-lugs 23 24 extend inward from the side plates 4 and 5, so as to engage with edges of the spring 16. An eyebolt 25 for the draw-line is attached to the block 1, as shown in Fig. 2.

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

1. In a trolley, a frame comprising side plates, a trolley mounted to rotate in the upper end of said frame, a spring-yielding connection between the frame and the trolley-

pole, and a curved arm extended underneath said spring, substantially as specified.

2. In a trolley, a frame comprising yielding side plates, a block to which the side plates are pivotally connected, a trolley arranged at the upper end of said arm, bolts connecting the side pieces of the frame underneath the trolley, a spring attached at one end to the block and having its other end passed between said bolts, and a curved arm extended from the block underneath the spring, substantially as specified.

3. In a trolley, a block adapted for connection with the trolley-pole, side plates having pivotal connection with said block, a trolley supported by said side plates, a curved arm extended from the block between the side plates, a loop having its side members attached to the side plates and having its horizontal member passing underneath the curved arm, and a spring attached at one end to the block over the arm and having its free end passed between parts supported by the side plates, substantially as specified.

4. In a trolley, a block adapted for connection with the trolley-pole, cheek-pieces on the side of said block having their lower ends

inclined downward, a spring attached to the block between the cheek-pieces, side plates having pivotal connection with the block, parts carried by the side pieces and between which the free end of the spring passes, a shoe engaging with one of the parts and also with the upper surface of the spring, and a curved arm extended from the block underneath the spring, substantially as specified.

5. A trolley, comprising a block, side plates of resilient metal pivotally connected to the block, a spring attached to the block and extended between the plates, means carried by the plates for engaging the upper and lower sides of the spring, lugs extended inward from the side plates to engage with the edges of the spring should the side plates be deflected laterally, and a trolley carried by the plates and having spring-yielding side motion relatively thereto, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM A. DAGGETT.

Witnesses:

DEAN MACGEORGE,
HENRY S. ALVORD.