

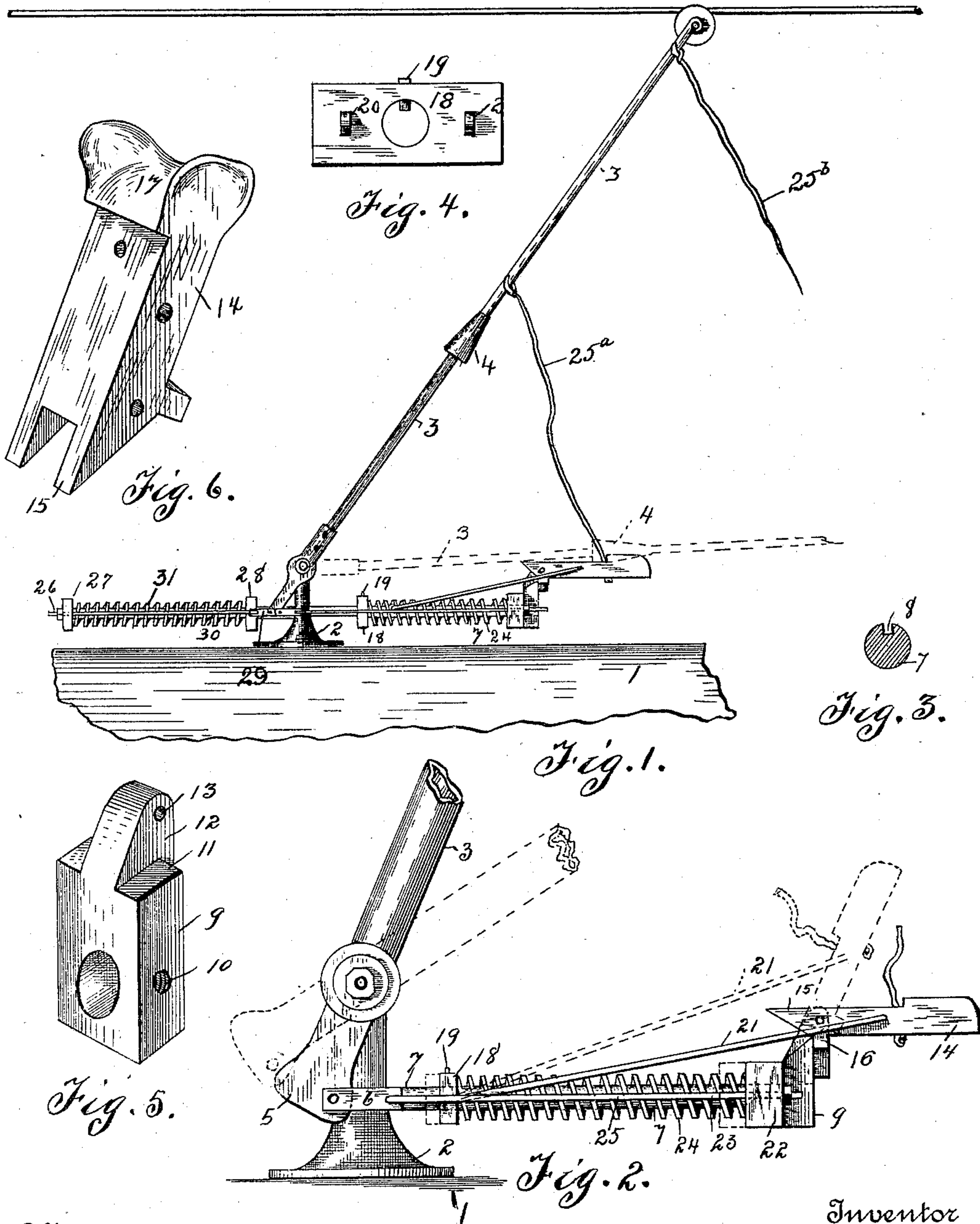
No. 612,875.

Patented Oct. 25, 1898.

W. T. SHRYOCK.  
TROLLEY STAND.

(Application filed July 20, 1897.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM T. SHRYOCK, OF ALLEGHENY, PENNSYLVANIA.

## TROLLEY-STAND.

SPECIFICATION forming part of Letters Patent No. 612,875, dated October 25, 1898.

Application filed July 20, 1897. Serial No. 645,225. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM T. SHRYOCK, a citizen of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Trolley-Stands, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in trolleys for electric cars; and the object I have in view is to provide a trolley which when it leaves the wire will trip itself and lessen the tension on the  
15 spring and permit the pole to descend a sufficient distance so it will be clear of wires and other obstacles overhead.

The invention further aims to provide a device which will be simple in construction,  
20 efficient in its operation, and comparatively inexpensive to manufacture.

The invention consists, further, in the novel construction, combination, and arrangement of parts to be hereinafter more specifically  
25 described, and particularly pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and where-  
30 in like figures of reference indicate similar parts throughout the several views, in which—

Figure 1 is a side elevation of my improved trolley, showing the emergency attachment. Fig. 2 is a side elevation of my improved trolley without the emergency attachment. Fig.  
35 3 is a sectional view of the rod supporting the attachment. Fig. 4 is a front view of the sliding sleeve. Fig. 5 is a perspective view of the support for the tripping mechanism. Fig. 6  
40 is a perspective view of the tripping mechanism.

Referring to the drawings by reference-figures, 1 denotes the top of the car, upon which is secured a rotatable support 2. To this sup-  
45 port is pivotally secured the trolley-pole 3, which may be of the ordinary construction and is provided with extensions or lips 5, the purpose of which, as well as the cone-shaped block 4, which is mounted at a suitable point  
50 on the trolley-pole, will be hereinafter more fully described. Secured to the support 2 is a horizontally-extending rod 7, which is pro-

vided on its upper face with a longitudinal groove or slot 8, extending the length of the rod and adapted to receive the lug 19 formed  
55 on the sliding gland 18. Mounted on the outer or free end of the rod 7 is a block or support 9, which is or may be provided with an opening 10 to receive a pin or screw for fastening the block in position. The upper  
60 end of this block is cut away at each side, as shown at 11, thereby forming a projection 12, which is provided with an opening 13 to receive the pin or shaft which fastens the tripping-block 14 thereto, said tripping-block be-  
65 ing provided with a bifurcated and a beveled lower end 15 to receive the aforesaid projection 12 of the supporting-block 9. This tripping-block 14 is or may be provided on its rear face and near its lower end with a pro-  
70 jecting lug 16, which is adapted to engage the block 9 and prevent the tripping-block from falling below the horizontal position. On its upper end the tripping-block is pro-  
75 vided with a concave face 17, which is adapted to receive the cone-shaped block 4 and permit the easy operation of the same when it comes in engagement therewith. A gland 22  
is also mounted upon the rod 7 near its outer end and acts as a compressor for the tension-  
80 spring 24, which is mounted on the said rod 7 between the two glands 18 and 22. These glands are operated to compress the spring by means of rods 25, attached to the gland 22 at their outer ends and at their inner ends to  
85 arms 6, which are pivotally connected to the extensions 5 of the trolley-pole. The gland 18 is provided with lugs 20, to which are attached rods 21, connected at their rear ends to the tripping-block 14. This tripping-block  
90 is also connected to the trolley-pole by means of a cord or other suitable device 25<sup>a</sup>, attached to the said block and to the pole, preferably at a short distance above the cone-shaped block 4.  
95

In Fig. 1 I have shown the pole constructed with an emergency attachment, which is to be used only when the mechanism shown in Fig. 2 is out of order or if for other reasons  
it is not desired to use the same. This con-  
100 struction is similar to that now used for trolleys and performs no function whatever in the stand heretofore explained as being used. This emergency attachment consists of a rod



26, carrying a sliding gland 27 and a stationary sleeve 28. Arranged between said gland and sleeve is a tension-spring 30, which is compressed by means of the rods 29, attached to the said gland 27 and to the extensions 5, or these rods may be secured to arms connected to these extensions for this purpose. I do not claim anything new in this emergency device, as this is merely shown herewith to illustrate how the trolley may be used in case the stand should be out of order. The emergency device is old and is used on many trolleys at the present time.

I will now describe the operation of my improved stand, which is as follows: Assuming that the parts have been secured in their respective positions and the trolley-pole is in position for its wheel to be in engagement with the current-wire, when in this position the tripping-block 14 will be in the position shown in full lines in Figs. 1 and 2. The placing of the block 14 in this position causes the two rods 21 attached thereto to draw the gland 18 toward the outer end of the rod 7, thereby compressing the tension-spring 24 by means of the rods 25 and causing this spring to exert its tension against the trolley-pole to hold the same in engagement with the wire. In case the trolley-wheel should leave the current-wire the tension of the spring 24 forces the pole upwardly and causes the same to assume a perpendicular position. This action of the pole tightens the cord 25<sup>a</sup> and causes the same to release the tension of the spring by pulling the tripping-block 14 upwardly, and the spring 24 being thereby allowed to relax the trolley-pole falls into engagement with the tripping-block in such a position that the cone-block 4 is in engagement with the concave face 17 of the said tripping-block. To return the trolley-pole so that its wheel will be in engagement with the wire, the operator holds downwardly on the governing-rope 25<sup>b</sup>, thereby causing the pole to return the tripping-block to the horizontal position and through the medium of the rods 21 recompress the spring 24, so as to again cause the same to exert its tension upon the pole in the manner heretofore described.

It will be observed that when the trolley is again set, as heretofore described, so that its wheel will engage the wire the pull-rods 21 are below the center of contact of the supporting-block and the tripping-block, and the said tripping-block is therefore held in this position until the trolley-wheel again leaves the wire and exerts a pull on the tripping-block through the medium of the cord 25<sup>a</sup>, connecting the block to the pole.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a trolley for an electric railway, a support rotatably secured to the top of the car, a trolley-pole pivoted in said support, a rod secured in said support and carrying on one end a supporting-block, a tripping-block pivoted to said supporting-block, a sliding sleeve mounted on said rod engaging rods carried by the tripping-block, rods secured to the trolley-pole and to a sliding block, whereby the trolley-pole is held in engagement with the current-wire, substantially as shown and described.

2. In a trolley for electric railways, a rotatable support secured to the top of a car, a pole pivoted in said support and provided with an extension, a rod secured in said support, and carrying sliding sleeves, a block secured to said rod having a tripping-block pivotally secured thereto, rods secured to said tripping-block and engaging eyes carried by one of said sliding sleeves, a spring held between the sleeves, an arm pivoted to the extension of the trolley-pole, connections between the pivoted arm and the sliding sleeve 22, and means carried by the trolley-pole to operate the tripping-block, when the wheel leaves the wire whereby the tension of said spring is released allowing the pole to assume a position below and out of contact with the supply-wire.

3. In a trolley for electric railways, a rotatable support secured to the top of the car, a trolley-pole pivoted in said support, a rod secured in said support and carrying on one end a tripping-block, sliding sleeves mounted on said rod, a spring mounted on said rod and operating between said sliding sleeves, connection between the trolley-pole and one of the sliding sleeves, connections between the tripping-block and the other sliding sleeve, said sliding sleeves being drawn toward each other when the tripping-block is set, substantially as herein shown and described.

4. In a trolley-pole for electric railways, a support secured to the top of the car, a rod secured to said support, a tripping-block carried by said rod, sliding sleeves mounted on said rod, a spring engaging said rod and operating between the sliding sleeves, means carried by the tripping-block, and the trolley-pole whereby the sliding sleeves are drawn toward each other, thereby compressing the spring to hold the wheel in engagement with the feed-wire, substantially as herein shown and described.

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

WILLIAM T. SHRYOCK.

Witnesses:

JOHN NOLAND,

THOS. M. BOYD, Jr.