

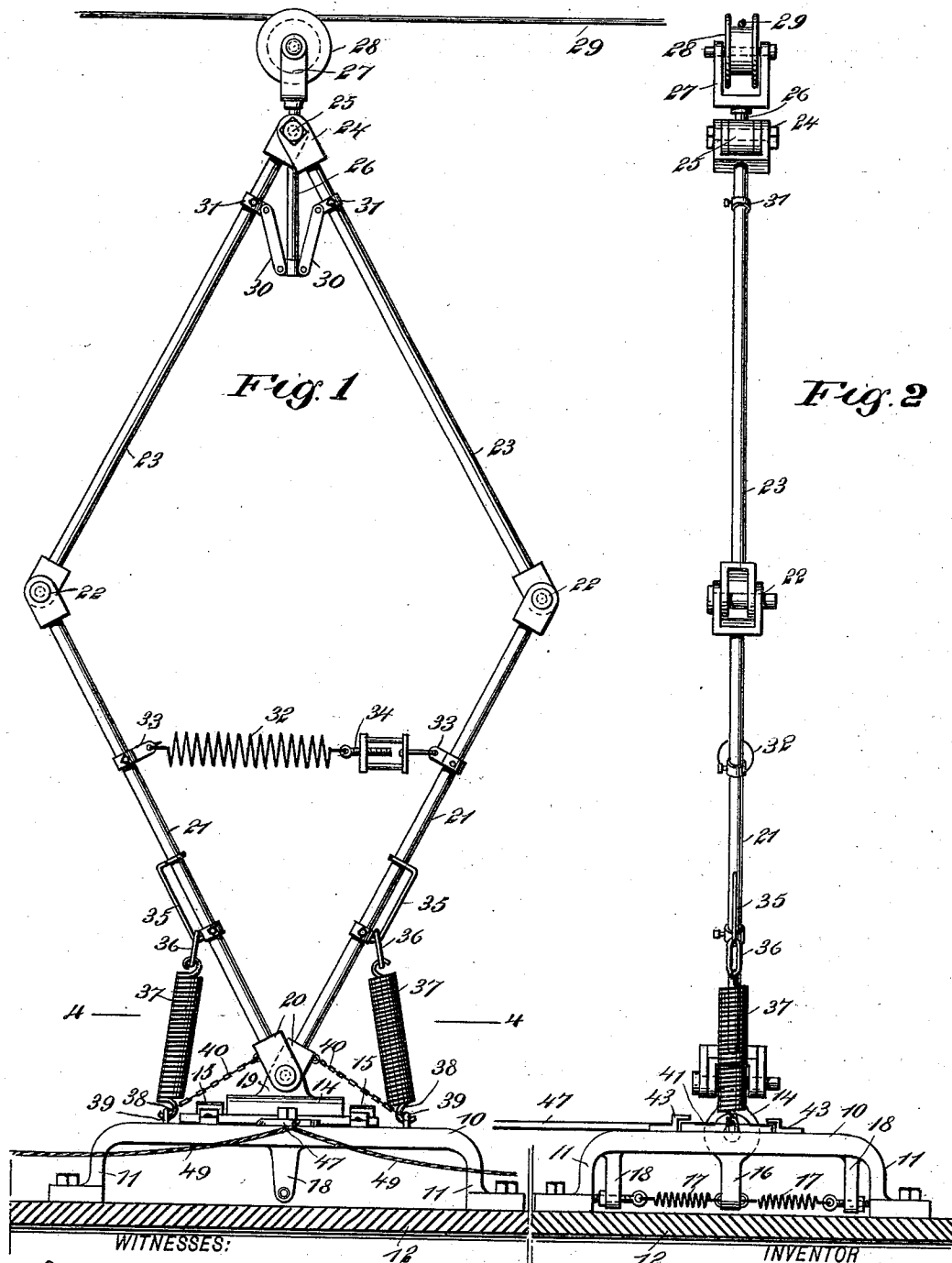
(No Model.)

2 Sheets—Sheet 1.

L. C. SEELYE.
TROLLEY STAND AND POLE.

No. 543,271.

Patented July 23, 1895.



WITNESSES:
John Bergstrom
H. B. Hutchinson

INVENTOR
L. C. Seelye
BY
Munn & Co
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

L. C. SEELYE.
TROLLEY STAND AND POLE.

No. 543,271.

Patented July 23, 1895.

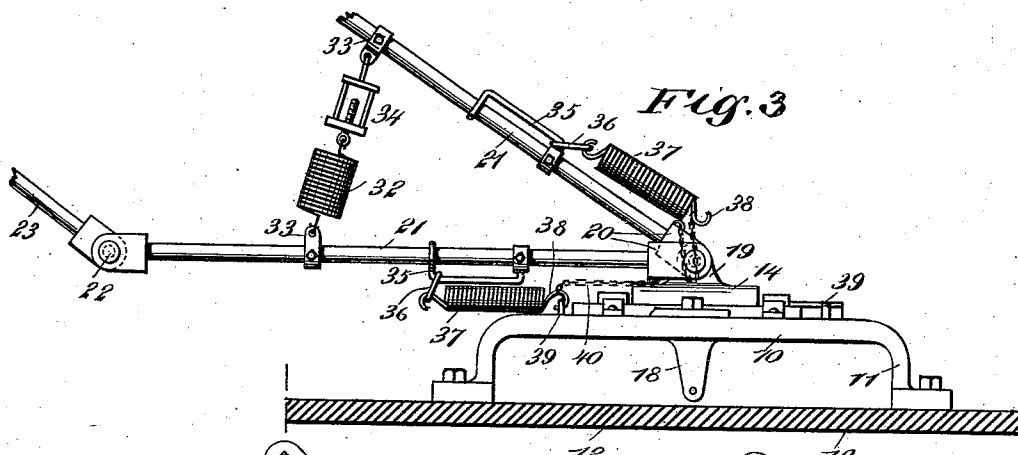


Fig. 4

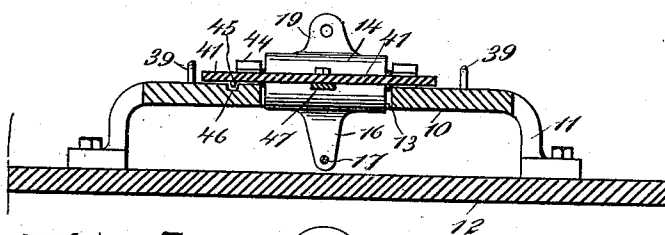
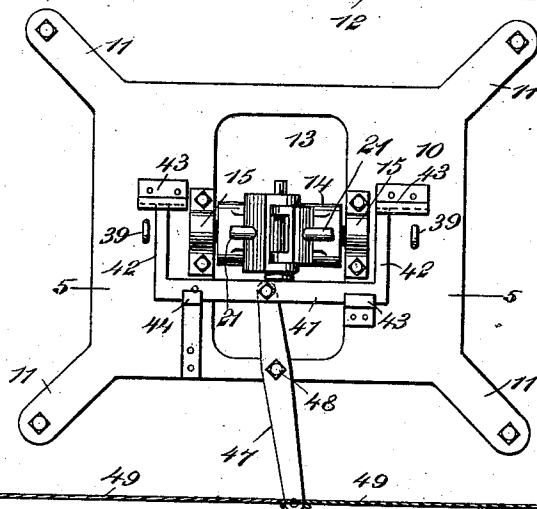


Fig. 5

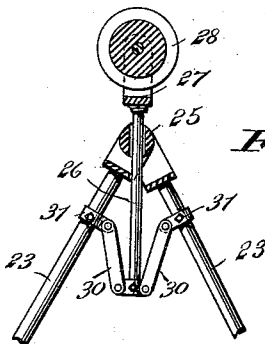


Fig. 6

WITNESSES:

John A. Begetown
H. P. Hutchinson

INVENTOR

L. G. Seelye
BY
E. Mann & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

LAWRENCE C. SEELYE, OF FORT EDWARD, ASSIGNOR OF ONE-HALF TO
GEORGE W. BURNHAM, OF LUZERNE, NEW YORK.

TROLLEY STAND AND POLE.

SPECIFICATION forming part of Letters Patent No. 543,271, dated July 23, 1895.

Application filed January 2, 1895. Serial No. 533,604. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE C. SEELYE, of Fort Edward, in the county of Washington and State of New York, have invented a new and Improved Trolley Stand and Pole, of which the following is a full, clear, and exact description.

My invention relates to improvements in trolley stands and poles such as are used with the overhead system of electric railways. The usual trolley-poles are pressed against the trolley-wire in such a way that when the trolley leaves the wire the poles project upward over the wire and are likely to come into injurious contact with the cross-arms which support the trolley-wire.

The object of my invention is to produce a trolley stand and pole which is arranged in such a way that the pole is pressed vertically against the wire, as it has been found more desirable to have a vertical than an oblique pressure, which has means for automatically dropping the pole in case the trolley leaves the wire, which has a device controlled from the ends of the car by which the pole may be made to drop toward the rear end of the car in the event above referred to, and which is arranged and constructed in such a way that the trolley easily follows the curves of the wire, rises and falls according to the height of the wire, and holds the trolley-wheel against the wire with an even pressure.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

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

Figure 1 is a side elevation of my improved trolley stand and pole, showing the trolley-wheel in position against the trolley-wire. Fig. 2 is a front elevation of the same. Fig. 3 is a broken side elevation of the apparatus, showing the trolley-pole in its lower or dropped position. Fig. 4 is a broken plan view of the apparatus. Fig. 5 is a cross-section on the line 5 5 of Fig. 4, and Fig. 6 is a

detail sectional view showing particularly the manner in which the trolley is hung on the trolley-pole.

The trolley-stand is provided with a suitable base 10, which has legs 11 adapted to be secured to the top 12 of a car, and the base has a central opening 13, in which is journaled a supporting cross-bar 14, the bar being journaled in boxes 15, and the length of the bar is parallel with the car. The cross-bar 14 is provided with a depending-arm 16, to opposite sides of which are secured springs 17, which at their outer ends are fastened to lugs 18 on the base 10, as shown clearly in Fig. 2, and the tension of the springs is such as to hold the cross-bar normally level and maintain the pole which it carries in an upright position; but the springs will yield when necessary, so that the oscillations of the car will not cause the pole to be removed from beneath the trolley-wire.

The cross-bar 14 has on its upper side a lug 19, to which are pivoted the forked lower ends 20 of the lower toggle-arms 21, which at their upper ends are pivoted, as shown at 22, to the upper toggle-arms 23, and these at the top are pivoted together, as shown at 24, and have as their pivot a bolt 25, through which extends vertically the shank 26 of the fork 27, in which is journaled the trolley-wheel 28, which runs in the usual way on the trolley-wire 29. The shank is at its lower end pivotally connected with the lower ends of the links 30, which at their upper ends are pivoted to collars 31 on the toggle-arms 23.

The lower toggle-arms 21 are normally pressed together so as to lift the upper toggle-arms and hold the trolley-wheel against the wire 29 by a spring 32, which is arranged between collars 33 on the toggle-arms 21, and is provided with a turnbuckle 34 or equivalent device by means of which its tension may be regulated. It will be noticed that the tension of the spring 32 will serve to pull the elbows of the toggle-arms together so as to lift the trolley-arm, and this tension is sufficient to cause the trolley-wheel to shoot high above the trolley-wire in case it leaves the wire, and this action releases certain supports to be de-

scribed presently, and permits the whole trolley-pole to fall over the rear end of the car, thus throwing it out of the way of any cross-arms or other overhead obstructions.

5 The lower toggle-arms 21 have near their lower ends elongated staples or slideways 35, on which are slide-rings 36, which connect with springs 37, and these have at their lower ends hooks 38, which engage staples or catches
10 39 on the base 10. The tension of the springs 37 serves to hold the trolley-pole in a vertical and central position, and also steadies the movement of the pole and at the same time permits it to yield forward or backward to a
15 necessary extent; but in case either spring 37 is released the other spring will pull the trolley-pole over. The hooks 38 are connected by chains 40 with the forks 20 of the trolley-arms 21, and so in case the pole is suddenly
20 extended upward as described, the chains 40 are pulled upon, and the hook 38, which is not locked, is pulled from its staple 39.

The hooks 38 are alternately locked in a staple 39 by means of a slide 41, which moves
25 on the base 10, and has arms 42 arranged opposite the staples 39, as shown clearly in Fig. 4. The slide 41 moves beneath suitable guides 43, and is held down at one corner by a flat spring 44, which holds a pin 45 on the under
30 side of the slide in engagement with a recess 46. (See Fig. 5.) When the slide 41 is moved to the right to lock the other hook 38 the spring 44 will yield and the pin 45 will engage the wall of the central opening 13 of the base 10.
35 Any suitable catch or lock may be substituted for the slide 41 without departing from the principle of the invention. The slide 41 is adapted to be moved backward and forward, so as to lock either of the hooks 38 in its staple 39, and the slide is moved by a lever 47,
40 which is fulcrumed in the base 10, as shown at 48, and is provided with operating-cords 49 which extend lengthwise of the car to the ends thereof, and by pulling on one or the
45 other of the cords 49 the lever may be swung and the slide moved.

When the trolley pole and stand are used, the slide 41 is moved so as to lock the rear spring 37 to the staple 39 and unlock the forward spring, so that in case the trolley-wheel leaves the wire 29, and the trolley-pole is extended upward the chains 40 will be pulled upon, but only the forward hook 38 will be released, and when this occurs the rear spring
50 37 pulls down the trolley-pole to the position shown in Fig. 3.

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

60 1. The combination of the vertically extensible trolley pole, the trolley carried at the upper end thereof, and a device actuated by

the upward extension of the trolley pole to pull the pole over, substantially as described.

2. The combination, with the trolley pole, 65 comprising oppositely arranged spring-pressed toggle arms, the trolley wheel carried at the upper end of the toggle arms, and a device actuated by the upward extension of the trolley pole to pull the pole over, sub- 70 stantially as described.

3. The combination with the trolley pole, comprising the oppositely arranged spring-pressed toggle arms, of the springs secured to opposite toggle arms and to an adjacent sup- 75 port, a device actuated by the swinging of the toggle arms to disengage the springs, and a lock to alternately fasten the springs, substantially as described.

4. The combination, with the oppositely 80 arranged toggle arms pivoted together at top and bottom, of the trolley wheel, the supporting fork of the same having its shank extending downward through the upper pivot of the toggle arms, and the links pivotally 85 connected to the shank and to the toggle arms, substantially as described.

5. The combination, with the extensible trolley pole, of the base supporting it, the springs connected with the opposite sides of 90 the pole and with the base, releasing chains connecting the lower ends of the springs with the trolley pole, and a slide to alternately lock the springs, substantially as described.

6. The combination, with the base, the os- 95 cillating cross bar thereon and the trolley pole mounted on the cross bar and comprising oppositely arranged spring-pressed toggle arms, of the springs connected with the opposite toggle levers and hooked to staples on 100 the base, and the slide mounted on the base and adapted to alternately lock the hooks to the staples, substantially as described.

7. The combination, with the base and the trolley pole comprising oppositely arranged 105 spring-pressed toggle arms, of the springs secured to opposite toggle arms and hooked to staples on the base, the chains connecting the spring hooks with the toggle arms, and the slide movable on the base and adapted to 110 alternately lock the springs to the staples, substantially as described.

8. The combination, with the trolley pole, its supporting base, the springs secured to the pole and connected to the base, of the slide to 115 lock the springs to the base, of the lever fulcrumed on the base and connected with the slide, and the oppositely extending cords to work the lever, substantially as described.

LAWRENCE C. SEELYE.

Witnesses:

CICERO W. BARBER,
ASABEL R. WING.