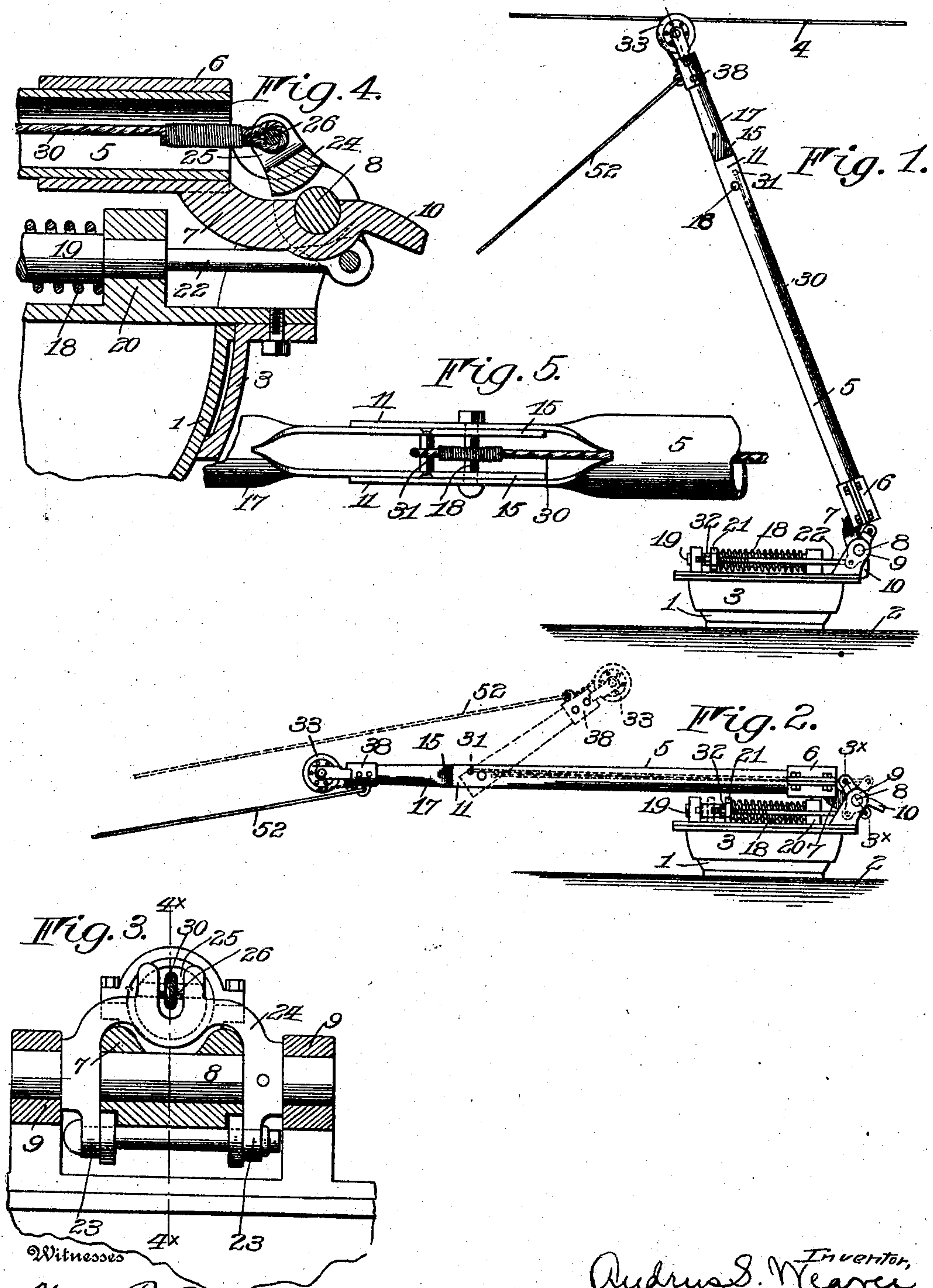


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A. S. WEAVER.
TROLLEY POLE.

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ANDRUS S. WEAVER, OF SODUS, NEW YORK.

TROLLEY-POLE.

No. 815,991.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANDRUS S. WEAVER, of Sodus, in the county of Wayne and State of New York, have invented new and useful Improvements in Trolley-Poles; and I do hereby declare the following to be a clear, full, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention has for its object to provide a trolley-pole for electric-railway vehicles comprising generally a supporting-section having a movable portion carrying a contact device and means for yieldingly holding the supporting-section in operative position and the movable portion in its normal position thereon and in engagement with the current-wire whereby when the contact device is accidentally disengaged from the wire the pole will be shortened and allowed to fall into an inoperative position.

To these and other ends the invention consists in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings, Figure 1 is a side elevation of a trolley-pole embodying my invention, showing the parts in the operative position. Fig. 2 is a similar view showing the pole in the inoperative position. Fig. 3 is a cross-sectional view on the line 3 \times 3 \times of Fig. 2. Fig. 4 is a similar view on the line 4 \times 4 \times of Fig. 3. Fig. 5 is a detail plan view of the joint between the pole-sections.

Similar reference-numerals in the several figures indicate similar parts.

In illustrating my invention I have shown a trolley-pole mounted upon a base 1, adapted to be located upon the roof or deck 2 of a vehicle, and supported thereon is a head 3, carrying the operating mechanism and revolvable so that the pole may turn in one direction or another relatively to the car to enable the contact member thereon to follow the overhead electrical conductor or current-wire 4. The base or supporting section 5 of the pole is tubular, and its lower end is secured in a clamping-head 6, having a downwardly and forwardly extending arm 7, journaled on a pin 8, supported in upwardly-extending lugs 9 and provided with an extension or finger 10, adapted to engage the forward edge of the head 3 to limit the movement of the

pole. The outer end of the tube forming the section 5 is split, and the side portions are flattened to form parallel arms 11, as shown in Fig. 5. Overlapping these are arms 15, which are journaled on a pin or bolt 18, and similarly formed on a movable contact-section 17, carrying the contact device or member which engages with the wire 4.

The pivotal connection between the sections 5 and 17 of the pole permits the latter to be folded on the former, and my present invention comprehends means for operating the contact-section relatively to the supporting-section whenever the contact member is accidentally disengaged from the current-wire and also to normally operate the supporting-section 5 upwardly to hold said member in operative position, which means is further adapted to be released to permit the parts of the pole to fall automatically into the inoperative position, as shown in Fig. 2. This object is accomplished by employing a counterbalancing-spring 18, surrounding a stationary guide-rod 19, held between lugs 20 on the head 3 and operating against a plate 21, guided on said rod and connected at its ends by rods 22 with the ends 23 of a lever member 24, journaled on the pin 8 at each side of the arm 7. The upper end of the lever member is in alinement with the aperture in the tube 5 and is provided with a recess 25, in which is located a pin 26. Attached to this pin is a cable 30, extending through the tube 5 and attached to a pin 31, secured to the member 17, and preferably arranged between the arms 15 thereon at a point above the journal or bolt 16, as shown in Fig. 1. In applying the connection or cable 30 its length is such that when the contact-section 17 is in normal position in alinement with the supporting-section the spring 18 will be compressed sufficiently to cause the outer end of the trolley-pole to be revolved upwardly with sufficient force to hold the contact member at its upper end in engagement with the current-wire, as shown in Fig. 1. To facilitate the adjustment of the spring, the connecting-rods 22 are threaded at their rear ends and provided with nuts 32, engaging the rear side of the plate 21.

The contact member which I employ on the pole is a wheel comprising the rim 33, trough shape in cross-section to receive the current-wire, as will be understood, and supported by a head 38, having arms extending at opposite sides thereof.

From the foregoing description it will be seen that if the contact member on the pole is accidentally disengaged from the wire 4 the tension on the cable 30 will cause the section 17 to be revolved forwardly on its pivot 16, releasing the lever member 24 and relieving the tension on the spring 18 and permitting the pole to fall to the position shown in dotted lines in Fig. 2. If the operator desires to reset the pole, the section 17 is drawn rearwardly by means of the usual cord 52 to the position shown in full lines in Fig. 2, when the spring 18 being compressed will elevate the pole to its normal position.

A trolley-pole embodying my invention consists of few parts which are simple in construction and readily assembled. Further, devices heretofore constructed can be altered to embody the invention without a needless waste of material.

I claim as my invention—

1. In a trolley-pole, the combination with a base, a supporting-section pivoted thereon and a contact-section journaled on the supporting-section, of a spring supported on the base and a lever attached to the spring and connections between it and the contact-section for operating the latter in one direction.

2. In a trolley-pole, the combination with a base, a supporting-section pivoted thereon at its lower end and a contact-section journaled at its outer end, of a spring supported on the base, a lever pivoted to the base and having one of its ends connected to the spring and a connection between the other end of said lever and the contact-section.

3. In a trolley-pole, the combination with a pivoted tubular supporting-section split at the end to form side arms and a similar split contact-section having arms pivoted on those of the supporting-section and means for moving the outer end of the supporting-section upwardly and also operating the contact-section upwardly on its pivot.

4. In a trolley-pole, the combination with a pivoted supporting-section composed of a tube having a bifurcated end forming parallel arms and a contact-section having similar arms, of pivoted connections between said arms, a pin secured between the arms on the contact-section and means connected to said pin for revolving said section in one direction on its pivot.

5. In a trolley-pole, the combination with a base, a supporting-section and a contact-section pivoted thereto, of a journal on the base carrying the supporting-section, a lever also carried on the journal, a spring attached to the lever and connections between the latter and the contact member for revolving the lat-

ter upon its pivot and operating the supporting-section in one direction on its journals.

6. In a trolley-pole, the combination with a base having a spring mounted thereon, a hinged supporting-section and a contact-section pivoted thereon, of a pivoted lever arranged in alinement with the supporting-section, having one arm connected to the spring and the other connected to the contact-section.

7. In a trolley-pole, the combination with a base, a supporting-section pivoted thereon and a contact-section journaled on the supporting-section, of a pivoted lever having one end connected to the contact-section, rods connected to the other end of the lever, guides movably supporting the rods on the base and a spring located between the rods and operating them in one direction.

8. In a trolley-pole, the combination with a base, a supporting-section and a contact-section pivoted thereon, of a lever having one arm connected to the contact-section, a guide on the base, a movable member thereon, a spring operating said member in one direction, and connections between the latter and the other arm of the lever.

9. In a trolley-pole, the combination with a base, a supporting-section and a contact-section pivoted thereon, of a lever located in alinement with the supporting-section having one arm connected to the contact-section, a guide on the base and a movable member thereon, a spring operating the member in one direction and adjustable rods connecting said member with the other arm of the lever.

10. In a trolley-pole, the combination with a base, a supporting-section pivoted thereon and a contact-section journaled on the supporting-section, of a spring supported on the base, a lever attached to the spring, connections between it and the contact-section for operating both sections upon their pivots and a stop for limiting the movement of the supporting-section in one direction.

11. In a trolley-pole, the combination with a base, a supporting-section pivoted thereon and a contact-section journaled on the supporting-section, of a spring supported on the base, a lever attached to the spring, connections between it and the contact-section for operating both sections upon their pivots and a stop formed by an extension on the supporting-section adapted to engage the base to limit the movement of said supporting-section in one direction.

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