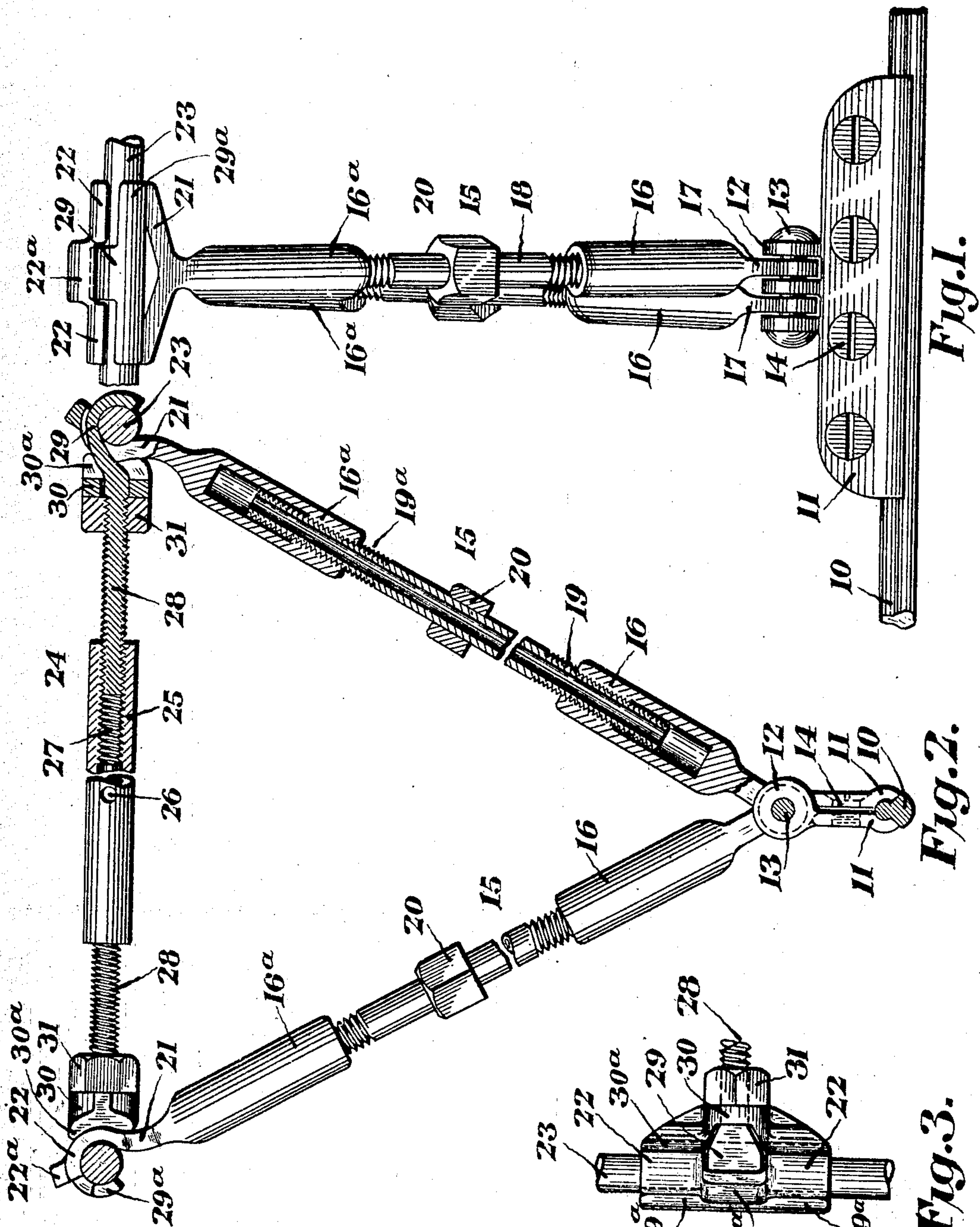


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PATENTED JULY 16, 1907.

W. G. CLARK.
TROLLEY WIRE HANGER.
APPLICATION FILED JUNE 20, 1906.



WITNESSES:

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TROLLEY-WIRE HANGER.

No. 860,526.

Specification of Letters Patent.

Patented July 16, 1907.

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To all whom it may concern:

Be it known that I, WALTER G. CLARK, of the city, county, and State of New York, have invented a new and Improved Trolley-Wire Hanger, of which the following is a full, clear, and exact description.

My invention relates to improvements in hanging or suspending devices for overhead trolley wires, and particularly to that class of hangers known as the double catenary construction.

Heretofore it has been the practice, to a certain extent, to carry out this construction by supporting triangular hangers from parallel messenger wires, but the structures generally used have been difficult to adjust, and have had to be made practically to fit different conditions before being attached to the messenger wires.

The object of my invention is to produce a hanger of the class named, in which the side bars and spreader bar of the hanger are easily adjustable, so that the hanger can be quickly and easily made to fit varying conditions, spread to any necessary extent, or adjusted on either or both sides, so as to bring the wire into the right position. These devices are also particularly adapted to enable the hangers to be readily and accurately adjusted to fit curves.

Another object of my invention is to produce a structure of this kind, which, while adjustable, is particularly strong, and in which all the parts can be securely locked, and further, to adapt the device to be securely fastened to the messenger wires.

Still another object is to make the structure practicable and reasonably cheap.

To these ends my invention consists of a trolley wire hanger for double catenary construction, which will be hereinafter clearly described and its novel features claimed.

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

Figure 1 is a cross section through the messenger wires and shows my improved hanger partly in elevation and partly in vertical section. Fig. 2 is a side elevation of the hanger as attached to the wires, and Fig. 3 is a detail plan view of a part of the invention.

The trolley wire 10 can be of any usual construction but is preferably provided with the side channels in order that it may be securely gripped by the clamping jaws 11, which are somewhat elongated so that they can have a good grip on the wire, and which have at the upper edges interlocking ears 12, so that the jaws can be supported on a single pivot bolt 13. The jaws are clamped to the wire 10 by means of screws 14, or

equivalent fastenings. The jaws 11 are supported by two side bars 15, which diverge as they extend upward, and each of which comprises the lower and upper sockets 16 and 16^a, and the connecting rod 18. Each of the sockets 16 and 16^a are internally screw threaded, but the threads are of opposite pitch and each lower socket is thinned and flattened at its lower end, as shown at 17, so that the said lower ends can receive the pivot bolt 13. Each rod 18 is threaded at the ends, as shown at 19 and 19^a, the threads being of opposite pitch and the rod to make it light is preferably hollow. Each rod is also provided with a nut 20, or some equivalent gripping means, so that the rod can be turned, and it will be readily seen that by turning the rod 18 the length of the side bar 15 can be increased or diminished as desired. Each upper socket 16^a merges at its upper end in a fork 21 the prongs 22 of which are spaced well apart and formed into hooks, connected by the cross piece 22^a and are adapted to fit over the messenger wires 23.

The spreader bar 24 of the hanger has a central rod 25 which is preferably hollow, and is provided with a transverse hole 26, in which a key can be inserted to turn it, though obviously any usual means can be employed for this purpose. The rod 25 is internally screw threaded at the ends, as shown at 27, the threads being of opposite pitch, and the threaded parts receive the correspondingly threaded rods 28, which at their other ends terminate in hooks 29, each adapted to enter between the prong hooks 22 and fit over the messenger wires 23, each hook 29 being widened at its extremity, as shown at 29^a in Fig. 2, so that it will lock beneath the prongs 22. On each rod 28 is a washer or collar 30 having wings or extensions 30^a which straddle the hook 29 and press against the prongs 22 of the fork 21 and this collar is pushed snugly to place so as to prevent any disengagement of the hooks 29 and 22 by a nut 31 which fits the thread 28.

From the foregoing description it will be readily seen that the side bars or rods 15 and the spreader bar 24 can be elongated or shortened at will; that if desired, one of the side bars can be made longer than the other, to adapt the hanger to curves, that a trolley wire can be securely gripped and held by the jaws 11, that the device can be easily and securely attached to the messenger wires 23, and that therefore it is well adapted to hold a trolley wire in the right position under all the usual varying conditions attendant on trolley construction.

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

1. A hanger of the kind described comprising longitudinally adjustable side bars having a wire holding means at

their lower extremities and hooks at their upper extremities, and a longitudinally adjustable spreader bar having hooks at its extremities adapted to aline with the hooks of the side bars.

- 5 2. A hanger of the kind described comprising longitudinally adjustable side bars having a wire holding means at their lower extremities and forked hooks at their extremities, and a cross bar having hooks at the end to aline with the hooks of the side bars.
- 10 3. A hanger of the kind described comprising longitudinally adjustable side bars, a wire gripping device suspended from the lower ends of the side bars, and a longitudinally adjustable spreader bar having terminal hooks interlocking with the hooks of the side bars.
- 15 4. A hanger of the kind described comprising wire gripping jaws, side bars supporting the jaws, each side bar comprising a lower socket internally screw threaded and pivoted to the jaws an upper socket internally screw threaded and terminating in a hook the threads of the
- 20 sockets being of opposite pitch and a threaded rod connecting the two sockets, in combination with a longitudinally adjustable spreader bar having hooks at the ends to aline with the hooks of the side bars.
- 25 5. In a hanger of the kind described the combination with the longitudinally adjustable side bars carrying means for supporting a trolley wire and having hooks at their upper ends, of the spreader bar having hooks at its ends, and nuts on the spreader bar to secure the hooks of the side bars.
- 30 6. In a hanger such as described, the combination with the side bars carrying wire gripping means and having forked hooks at their upper ends, of the longitudinally adjustable spreader bar having hooks to aline with the

hooks of the side bars, and nuts on the spreader bar to engage the hooks of the side bars. 35

7. In a wire hanger such as described, the combination of the side bars and spreader bar, having interlocking hooks at their intersections, nuts on the spreader bar to fit against the hooks of the side bars, and wire gripping means at the lower ends of the side bars. 40

8. In a hanger such as described, the combination with the side bars having hooks at their upper ends, of the spreader bar comprising an internally threaded middle portion having threads of opposite pitch, rods fitting the said middle portion and having hooks at the ends, sleeves on the said rods, nuts on the sleeves to fit against the hooks of the side bars, and a wire gripping device at the lower extremities of the side bars. 45

9. A trolley wire hanger, comprising longitudinally adjustable side bars having wire clamping means at their lower ends, and messenger wire hooks at the upper ends, a longitudinally adjustable spreader bar having hooks at its ends to engage the messenger wires, and means for fastening the adjacent hooks to the wire. 50

10. A trolley wire hanger of generally triangular shape, having its three sides longitudinally adjustable, a wire gripping device at one corner of the hanger, hooks at the other corners of the hanger, the said hooks on each corner being independent and carried by the top and side bars of the hanger, and means for fastening the adjacent hooks. 55

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Witnesses:

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