G. W. CRAVENS.

TROLLEY WIRE SUPPORTING DEVICE.

APPLICATION FILED SEPT. 28, 1908.

**1,019,764.** Patented Mar. 12, 1912.

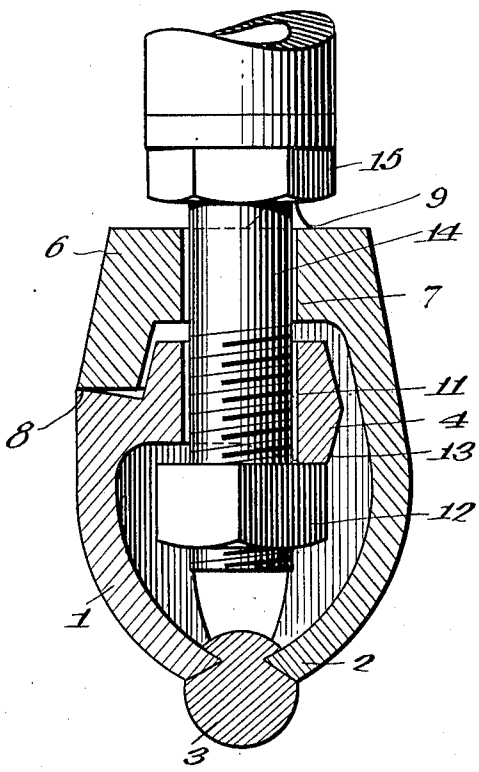


Fig. 2.

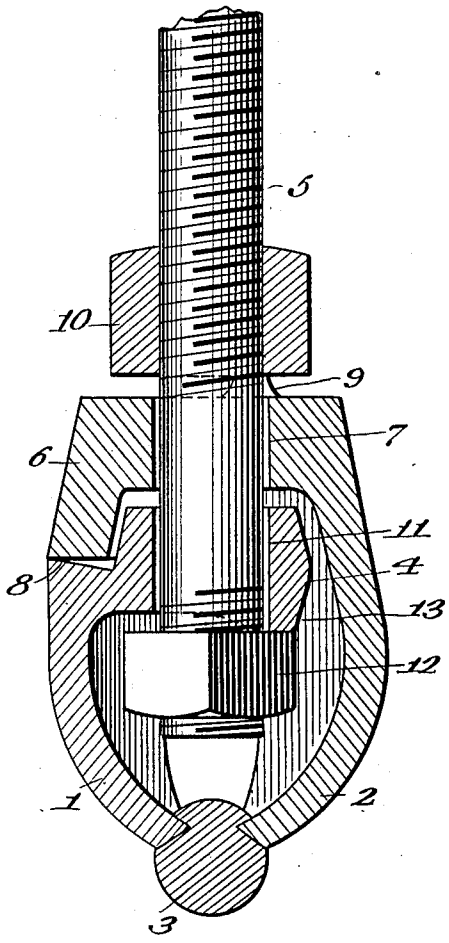


Fig. 1.

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# UNITED STATES PATENT OFFICE.

GEORGE W. CRAVENS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ELECTRIC SERVICE SUPPLIES COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

## TROLLEY-WIRE-SUPPORTING DEVICE.

1,019,764. Specification of Letters Patent. **Patented Mar. 12, 1912.**

Application filed September 28, 1908. Serial No. 454,962.

*To all whom it may concern:*

Be it known that I, GEORGE W. CRAVENS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Trolley-Wire-Supporting Devices, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to suspending devices for trolley wires or the like, its object being to provide a suspension device which shall be simple, composed of few parts, and which shall be capable of firmly engaging the trolley wire.

A further object of my invention is to provide a suspending device in which the clamp is adjustable on its support, whereby the trolley wire may be supported in proper alinement.

I have illustrated in the accompanying drawings, for the purpose of disclosing my invention, certain forms which the same may take.

In such drawings—Figure 1 is a transverse section of my device; and Fig. 2 shows a modified manner of supporting the clamp.

In the embodiment of my invention illustrated the clamp consists of a pair of jaws 1 and 2, the lower ends of which are adapted to engage the trolley wire 3. The jaw 1, at the upper end, is provided with a transversely extending portion 4 having a central opening 11 formed therein to permit the rod 5 to pass therethrough and receive a nut 12 which supports this jaw. This jaw is also provided with a downwardly extending projection 13 on its outer end, which projection bears on the nut 12 to form a fulcrum point for the jaw 1. The jaw 2 is also provided with a transversely extending portion 6 having a central opening 7 to permit the supporting rod 5 to pass therethrough and is adapted at its outer end to engage and rest on a shoulder 8 formed on the jaw 1. The jaw 2 is also provided with an upwardly extending projection 9 which is adapted to be engaged by the nut 10 screwed on the rod 5.

In the modification illustrated in Fig. 2 the clamp instead of being supported on the rod 5 is supported on the end of an insulated bolt 14. In this form instead of providing a nut on the support, the support is provided with a shoulder 15 which bears on the projection 9, the shoulder preferably having flat sides to permit engagement of a wrench for turning the bolt.

In the operation of the structure illustrated in Fig. 1, when the nut 10 is screwed downwardly on the rod 5, it engages the projection 9, moving the jaws 1 and 2 together, the jaw 1 being fulcrumed on the nut 12 and the jaw 2 fulcrumed on the jaw 1.

In the operation of the modification shown in Fig. 2 the entire bolt 14 is turned, thereby drawing the clamping members up on the bolt.

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

1. The combination with a support, of a pair of clamping members, one of said members being fulcrumed on the support and the other of said members being fulcrumed on the first member, and means for moving said members on their fulcrums to cause the same to grip the wire.

2. The combination with a support, of a pair of clamping members, one of said members being adjustably fulcrumed on the support, the other of said members being fulcrumed on the first member, and means for moving said members on their fulcrums to cause the same to grip the wire.

3. The combination with a supporting member, of a pair of clamping jaws each having a transverse extension, one of said extensions arranged to fulcrum on the support and the other extension arranged to fulcrum on the first extension, and means for moving said members on their fulcrums to cause the jaws to grip the wire.

4. The combination with a supporting member, of a pair of clamping jaws having overlapping extensions, the end of one of said extensions being arranged to swingingly bear upon the support and the end of the other extension being arranged to swingingly bear upon the opposite member, and means for moving said jaws on their bearing points to cause them to grip the wire.

5. The combination with a pair of clamping jaws having overlapping transverse extensions provided with openings, a sup-

porting rod extending through said openings, a head on the end of said rod, the end of one of said extensions being swingingly supported on said head and the end of the other extension being swingingly supported on the first extension, and means for moving said jaws to cause them to grip the wire.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

GEO. W. CRAVENS.

Witnesses:
M. R. ROCHFORD,
W. PERRY HALM.