H. P. DAVIS.

TROLLEY CLAMP.

APPLICATION FILED OCT. 5, 1907.

**931,391.** Patented Aug. 17, 1909.

*Fig. 1.*

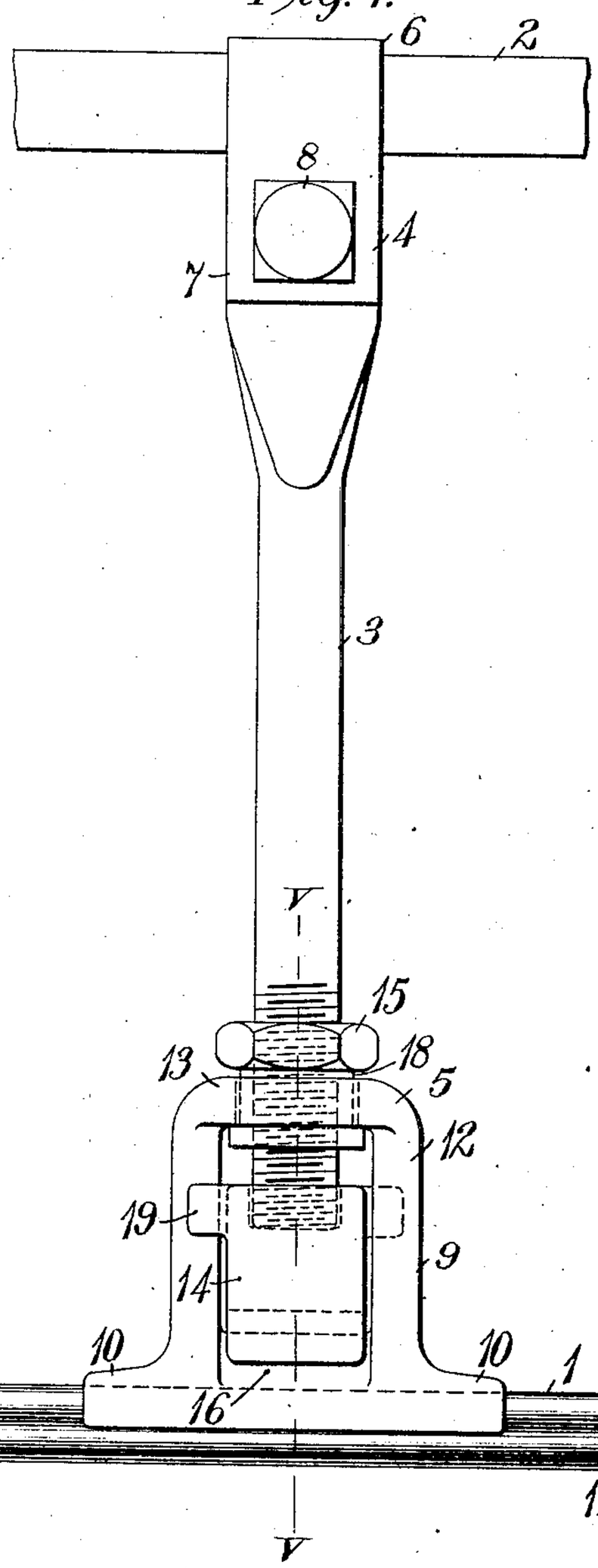



*Fig. 2.*

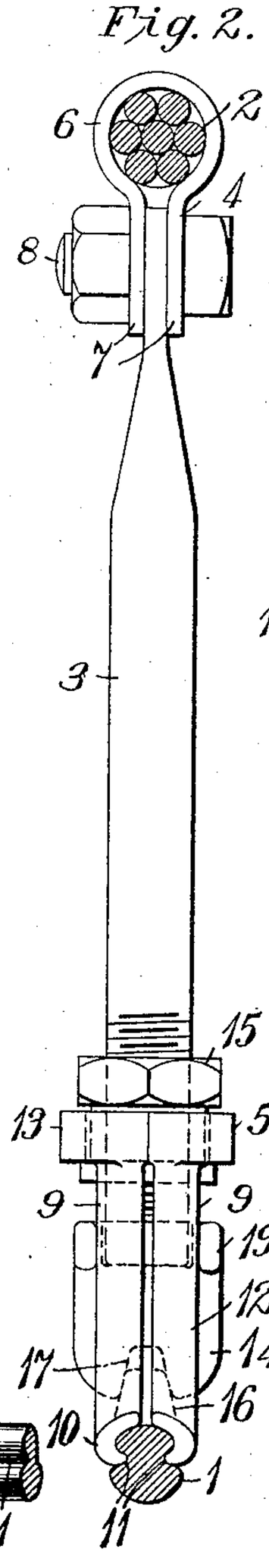



*Fig. 3.*

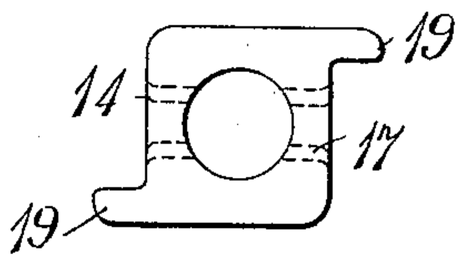



*Fig. 4.*

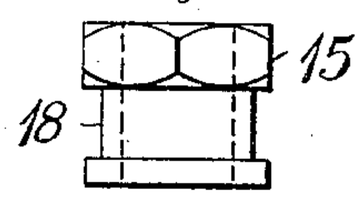
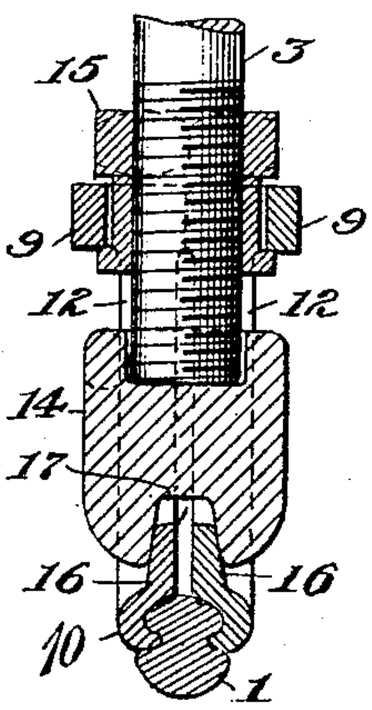



*Fig. 5.*

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HARRY P. DAVIS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

## TROLLEY-CLAMP.

No. 931,391. Specification of Letters Patent. Patented Aug. 17, 1909.

Application filed October 5, 1907. Serial No. 396,027.

*To all whom it may concern:*

Be it known that I, HARRY P. DAVIS, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Trolley-Clamps, (Case No. 1959,) of which the following is a specification.

My invention relates to means for suspending electric line conductors, and it has for its object to provide a simple and readily applied clamping device for use in so supporting trolley conductors or other wires or cables as to be free from danger of accidental displacement.

My clamping device is specially adapted for use with grooved trolley conductors that are suspended from messenger wires or cables, but it may be employed in connection with conductors of circular cross-section that are supported from bracket arms or cross-wires, in accordance with a well known practice for low potential lines.

Figure 1 of the accompanying drawings is a front elevation, and Fig. 2 is an end elevation, of a trolley-conductor hanger having a clamp constructed in accordance with my invention. Figs. 3 and 4 are detail views of the trolley-conductor clamp shown in Figs. 1 and 2, and Fig. 5 is a sectional view on line V—V of Fig. 1.

Referring to the drawings, a trolley conductor 1 is suspended from a messenger wire or cable 2 by means of a hanger rod 3, a cable clamp 4 and a trolley-conductor clamp 5. The cable clamp 4 comprises a loop 6 which surrounds the cable 2 and is provided with a pair of ears 7, the upper end of the connecting rod 3 being flattened to fit between the ears 7 and being secured in position by means of a bolt 8.

The trolley-conductor clamp 5 comprises two interchangeable members 9, a clamping block 14 and a nut 15. Each member 9 comprises a jaw 10 which engages a groove 11 in the trolley conductor 1, parallel side bars 12 and a semi-annular collar segment 13. The lower end of the rod 3 is screw-threaded to receive the nut 15 and the upper end of the clamping block 14 is provided with a recess to receive the extremity of said rod. The members 9 are provided with complementary projections 16 having inclined outer faces which are engaged by the walls of a V-shaped groove 17 in the lower end of the clamping block 14 when the parts of the clamp are assembled. The jaws 10 of the members 9 are preferably made of considerable length in order to avoid kinking the wire 1 and the collar segments 13 are adapted to engage an annular groove 18 in the nut 15. The clamping block 14 is provided with guide projections 19 which extend in opposite directions from opposite sides to engage the respective side bars 12 and thereby hold the block in position.

In assembling the clamp members, the jaws 10 are held in engagement with the grooves 11 in the trolley conductor, with the members 9, 14 and 15 located as above indicated and a clamping action is produced between the jaws by turning the nut 15 and thus forcing the members 9 and the block 14 in opposite directions The downward movement of the block 14 causes the walls of the groove 17 to force the projections 16 toward each other and thus seat the jaws 10 securely against the conductor 1.

It will be observed that the length of the hanger or the distance between the cable and the trolley conductor may be varied by using blocks 14 of different lengths or having recesses of different depths, since the lower end of the hanger rod is screw-threaded for a considerable distance, and, furthermore, the trolley conductor may be released from the hanger without disturbing the messenger clamp. These features are of special advantage in practice.

I desire it to be understood that variations in size and arrangement of details are within the spirit and scope of my invention.

I claim as my invention:

1. A trolley-conductor hanger comprising a rod, interchangeable jaw members having wedge projections adjacent to the lower ends and upwardly projecting side bars, a clamping block located between said side bars and having laterally projecting arms to engage the outer side faces thereof and means to engage the outer faces of the wedge projections, and means coöperating with the hanger rod to effect opposing vertical movements of the jaw members and the clamping block.

2. A trolley-conductor hanger comprising a rod, interchangeable members having jaws and complementary wedge projections contiguous to the jaws, a clamping block having a groove to engage the wedge projec-

tions, and means for drawing the wedge projections into the groove to produce a clamping action between the jaws.

3. A trolley-conductor hanger comprising a rod, the lower end of which is screw-threaded, interchangeable body members having jaws at their lower ends and complementary collar segments at their upper ends and provided with complementary projections having inclined outer faces, a clamping block having a groove the walls of which engage the inclined faces of said projections, and provided with guide projections to engage the sides of the body members, and a nut on the hanger rod having an annular groove to receive the collar segments of the body members.

4. A trolley-conductor hanger comprising a rod, interchangeable body members the upper ends of which embrace the lower end of said rod and the lower ends of which have jaws to engage the trolley conductor and wedge projections, a clamping block having arms for holding the body members in position, and means for engaging said wedge projections, and means for forcing the clamping block and the body members in opposite directions to clamp the jaws to the trolley conductor.

5. The combination with a hanger rod having a circumferentially grooved nut on its lower end, and body members the upper ends of which engage the groove in said nut and the lower ends of which are provided with clamping jaws, of a clamping block in position to be engaged by the end of the hanger rod and having means for drawing the jaws toward each other when moved longitudinally downward.

6. A conductor hanger comprising a rod, a pair of interchangeable body members having wedge projections and jaws at their lower ends, a clamping block having arms for supporting the body members, and means for forcing said block into engagement with the wedge projections.

In testimony whereof, I have hereunto subscribed my name this 27th day of September, 1907.

HARRY P. DAVIS.

Witnesses:
CAROLINE E. SMYERS,
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