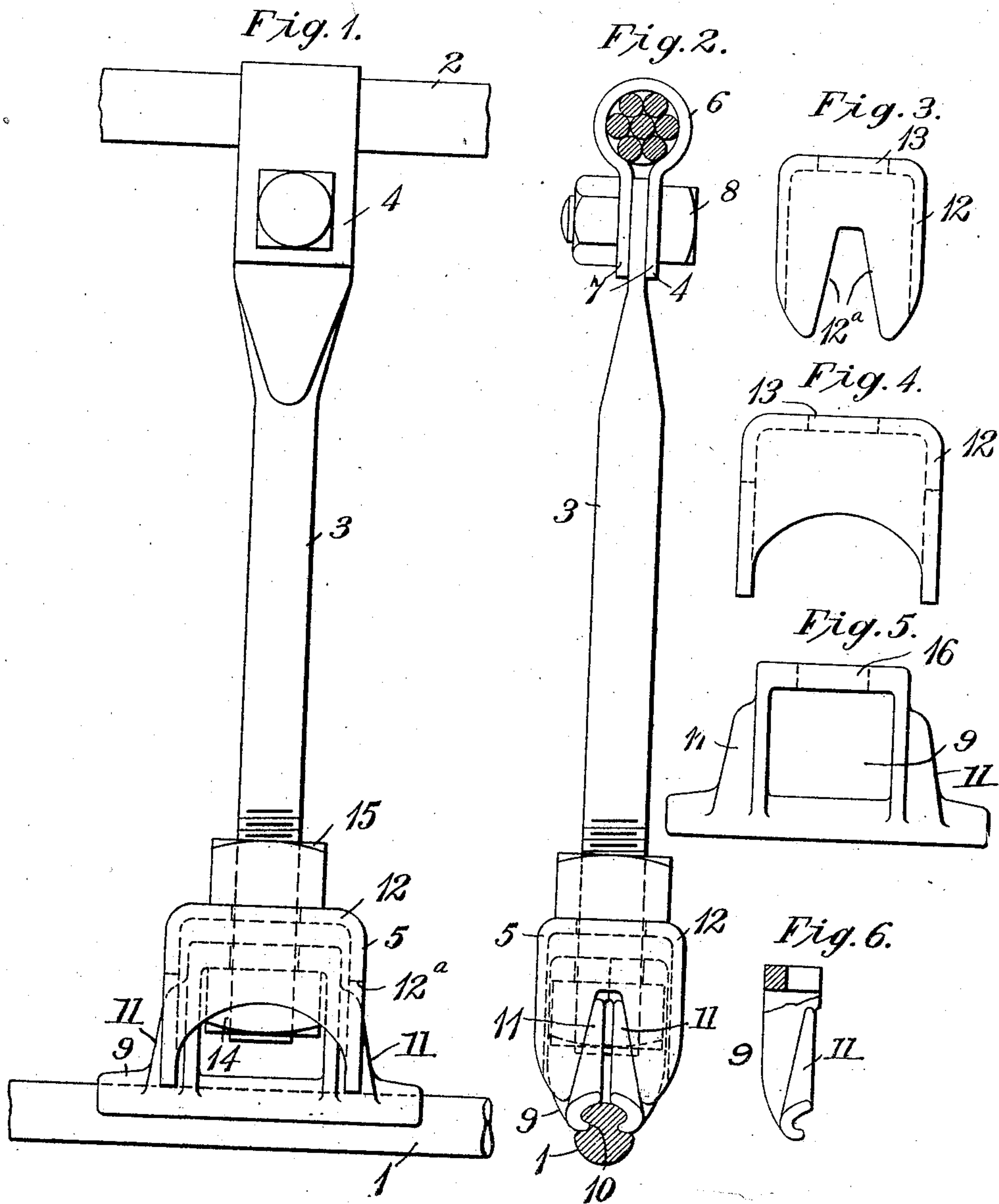


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CLAMP FOR TROLLEY CONDUCTORS.  
APPLICATION FILED SEPT. 9, 1907.

931,368.

Patented Aug. 17, 1909.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

## CLAMP FOR TROLLEY-CONDUCTORS.

No. 931,368.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed September 9, 1907. Serial No. 392,043.

*To all whom it may concern:*

Be it known that I, CHRISTIAN AALBORG, a citizen of the United States, and a resident of Wilkesburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Clamps for Trolley-Conductors, 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 an improved clamping device whereby a trolley conductor may be simply and durably secured to a suitable support.

My improved clamping device is specially adapted for use with grooved trolley conductors that are suspended from messenger wires or cables, but its use is not limited in this regard and 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 hanger and clamp constructed in accordance with my invention. Figs. 3, 4, 5 and 6 are detail views of the clamps shown in Figs. 1 and 2.

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 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 clamp 5 comprises a pair of interchangeable jaw members 9 the lower ends of which are of hook-shape to engage grooves 10 in the trolley conductor 1. Each of the parts 9, which are illustrated in detail in Figs. 5 and 6, is provided with shoulder projections 11 having inclined outer faces. The clamp also comprises a member (illustrated in Figs. 3 and 4) which is adapted to fit over the members 9 and is provided with wings 12<sup>a</sup> to engage the inclined surfaces of the projections 11. The lower end of the rod 3 is screw-threaded and extends through a hole 13 in one end of the member 12 to receive a nut 14 and is also provided

with a nut 15 above said member. The jaw members 11 are so formed as to provide a space for the nut 14 and a hole 16 for the end of the rod 3.

In assembling the clamp, the two jaw members are first assembled, with their hook-shaped ends in engagement with the groove in the trolley conductor, and the member 12 is then fitted over them. The nut 14 is then placed in the opening formed in the body of the clamp, the rod 3, having the nut 15 thereon, is thrust through the holes 13 and 16 and screwed into the nut 14. The nut 15 is then screwed against the outer end of the member 12 to force the wings 12<sup>a</sup> against the projections 11 and thus lock the jaw members in position with the trolley conductor clamped between the lower ends.

One of the principal advantages of the clamp of my present invention lies in the fact that the jaw members are interchangeable and that they are entirely free from either externally or internally threaded portions. It will also be observed that the construction of the hanger is such as to admit of an adjustment of its length and that the trolley wire may be disengaged from the hanger without disturbing the cable clamp.

I desire that variations in size and arrangement of details which do not depart from the spirit of my invention shall be included within its scope.

I claim as my invention:

1. A trolley clamp comprising a hanger rod, interchangeable jaw members provided with complementary end projections having inclined outer surfaces, a clamping member having side wings to engage said inclined surfaces, and means for drawing the jaw members and the clamping member toward each other to produce a clamping action between the jaws.

2. A trolley clamp comprising a hanger rod, interchangeable jaw members having hook-shaped ends adapted to engage the grooves in a trolley conductor and provided with complementary shoulder projections having inclined outer surfaces, a clamping member having a hole in one end through which the end of the hanger rod projects, and side wings that engage the shoulder projections, and set nuts which engage the extremity of the hanger rod and draw the inclined surfaces of the jaw member projec-



tions against the wings of the clamping member to produce a clamping action between the jaws.

3. A trolley clamp comprising a hanger  
5 rod, interchangeable jaw members having a hollow body portion and hook-shaped ends and provided with complementary shoulder projections having inclined outer surfaces, a  
10 clamping member having a hole through which the end of the hanger rod projects and wings that engage the shoulder projections of the jaw members, and set nuts which

engage the extremity of the hanger rod and draw the shoulder projections of the jaw members against the wings of the clamping member to produce a clamping action between the jaws. 15

In testimony whereof, I have hereunto subscribed my name this 29 day of August, 1907.

CHRISTIAN AALBORG.

Witnesses:

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