

Oct. 3, 1933.

L. E. HENDEE

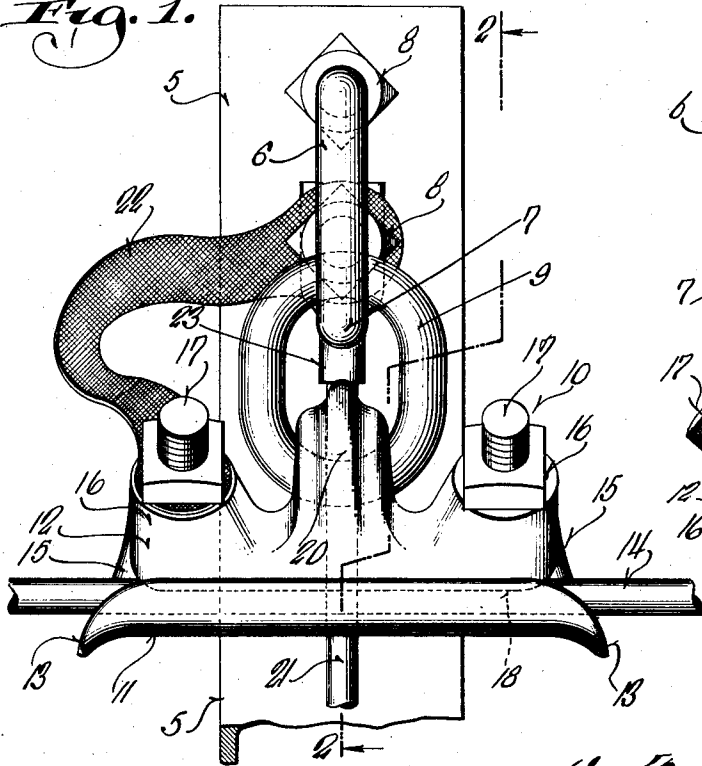
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CONDUCTOR AND GROUND WIRE SUPPORT

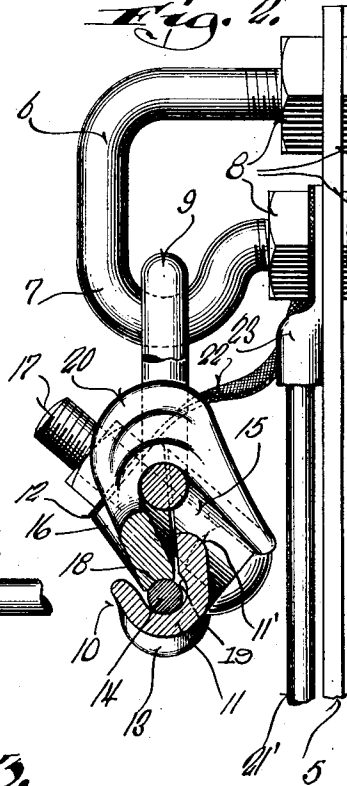
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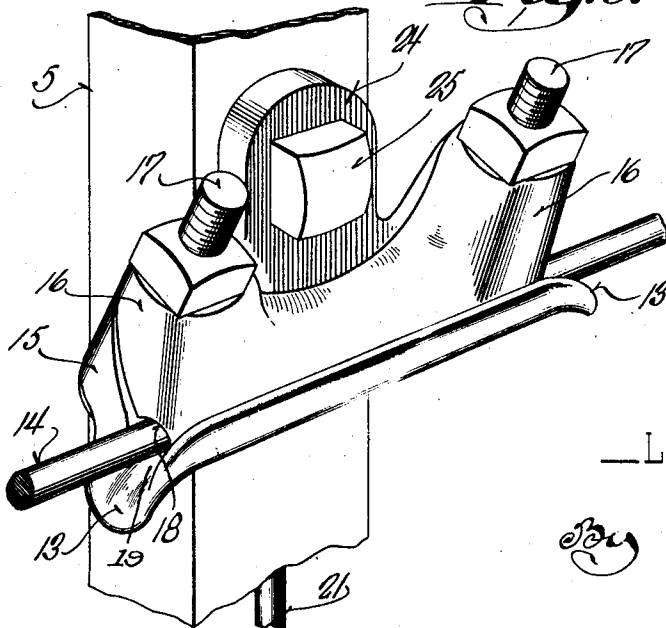
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Emendok*

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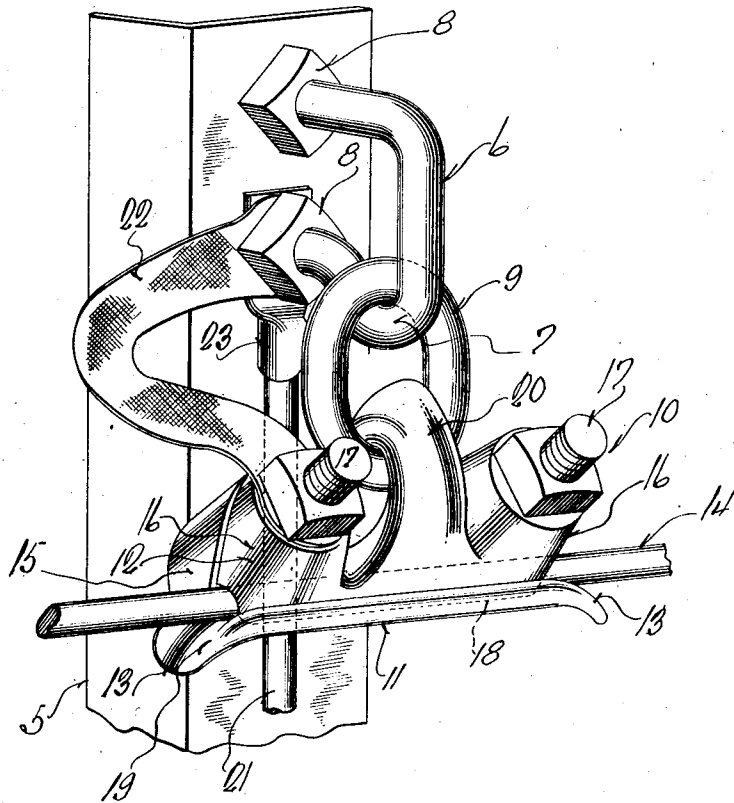
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*Fig. 4.*



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# UNITED STATES PATENT OFFICE

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## CONDUCTOR AND GROUND WIRE SUPPORT

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Application November 5, 1927. Serial No. 231,298

7 Claims. (Cl. 173—251)

This invention relates to certain new and useful improvements in conductor and ground wire supports, and has as an object the provision of an improved device wherein longitudinal movement of the conductor is accommodated without disrupting or in any wise interfering with the support.

Another object of this invention resides in the provision of an improved support of the character described which permits the connection of a conductor therewith without necessitating dismantling of the support and without requiring the cutting of the conductor.

And a further object of this invention resides in the provision of an improved support of the character described having a high conductivity connection between the conductor and the ground wire running down the pole.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated two complete examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a front plan view of an improved conductor support or clamp of the flexible type embodying my invention;

Figure 2 is a view, partly in side elevation and partly in section, taken through Figure 1 on the plane of the line 2—2;

Figure 3 is a perspective view of the conductor support; and

Figure 4 is a perspective view of a slightly modified clamp embodying this invention.

Referring now more particularly to the accompanying drawings, in which like numerals designate like parts throughout the several views, 5 designates a pole or other support, shown in the present instance as of metal construction, adapted to have a U-bolt 6, having a loop 7 in its lower outer end portion, secured thereto by clamping nuts 8 engaging opposite sides of the support. A link 9 is engaged in the loop or recess 7 and pivotally supports a conductor clamp device 10.

The clamp device consists of a lower member 11 and an upper member 12, the lower member

being of substantially approximately U-shape with the ends or lips 13 of its trough or channel 19 turned down to eliminate the presentation of sharp corners to a conductor 14 passed there-through. The rear longitudinal edge portion of the member 11 is extended upwardly and has a pair of diagonally disposed bored ears or lugs 15 which register with a pair of similar lugs or ears 16 carried by the top member 12 so that clamping bolts 17 which pass through the bores of the adjacent ears 15 and 16 force the lower longitudinal edge portion 18 of the top member against the conductor to secure it within the channel 19 of the member 11, the edge of the upper member engageable with the conductor being grooved, as illustrated in Figure 2, to insure a firm clamping action.

The inclination of the bores in the lugs 15 and 16, as illustrated in Figure 2, insures the movement of the edge 18 of the upper member into the channel or trough 19 of the lower member as the bolts 17 are tightened. This construction, as will be evident, permits a universal movement on the part of the conductor to thus eliminate its crystallization by movement of the conductor at the point of entrance between the clamps and allows longitudinal movement of the conductor within a limited range.

The clamp proper is suspended from the link 9 by a hook 20 formed on the upper member between its lugs 16 and which engages in the link, as best illustrated in Figure 2, this arrangement causing the clamp to spread of its own accord as the bolts 17 are loosened to facilitate the insertion or removal of the conductor as will be evident. Disengagement of the hook from the link 9 is prevented after the bolts 17 have been drawn tight, by the restriction of the space between the outer portion of the hook 20 and the medial portion 11 of the lower clamping member, see Figure 2.

A ground conductor 21 may be connected with the main conductor 14 by a lead 22 secured in electrical engagement with the clamp by one of the bolts 17 and with a terminal 23 by one of the clamping nuts 8 between which and the support 5 the terminal is secured, the ground wire being electrically connected with the terminal.

In that form of my invention illustrated in Figure 4, a rigid type of support is illustrated in which a lug or ear 24 is formed on one of the clamp members to provide means for securing the support to the pole 5 by means of a bolt 25, the ground wire 21 being connected thereto by a terminal similar to terminal 23 confined be-

tween the inner surfaces of the pole 5 and the nut threaded on the bolt 25.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in the art to which an invention of the character described pertains, that I have provided an improved conductor and ground wire support which will facilitate the mounting of a conductor and which will accommodate the movements of the conductor due to the contraction and expansion and which will insure the highest possible conductivity between the conductor and ground wire.

What I claim as my invention is:

1. A device of the character described, comprising a support, a freely movable supporting member carried thereby, a clamp, means connecting the clamp with the freely movable supporting member, a conductor wire secured in the clamp, a ground wire engageable with said support, and a flexible conductor electrically connecting the conductor wire with the support.

2. A device of the character described, comprising a support an elongated channel member adapted to receive a conductor wire in said channel, a clamping member carried by said support, means for drawing the clamping member toward the channelled member to impinge the conductor wire therebetween, a ground wire clamped under said support, and flexible means electrically connecting the conductor wire with said support.

3. A device of the character described comprising a support, a member having an elongated channel of substantially uniform cross section in which a conductor wire is adapted to be supported, a second member having an elongated conductor engaging edge portion, clamping bolts connecting the members and disposed diagonally with respect to the vertical axis of the members to draw the second mentioned member inwardly and downwardly into the channel of the first mentioned member to securely clamp the conductor between the members, a support engaging means carried by one of said members, and means carried by the other said member cooperating with said support engaging means to prevent disengagement of said support engaging means from said support.

4. A device of the character described comprising a pair of cooperating members, one of which has a conductor supporting channel and the other a portion adapted to enter the channel, clamping means for drawing the members toward each other to clampingly secure a conductor in the channel, a support, and means carried by the second mentioned member and engageable with the support whereby the cooperating mem-

bers become separated by gravity upon loosening of the clamping means to facilitate insertion and removal of a conductor from the channel, and means on said first mentioned member cooperating with said support engaging means to prevent disengagement of the support therefrom.

5. A device of the character described, comprising an upper and a lower clamping member, the lower clamping member having an elongated unitary conductor receiving channel of substantially uniform cross section and the upper clamping member having a portion adapted to enter the channel to clamp a conductor received therein, clamping means for drawing the members toward each other to effect a clamping action, a support, and means carried by the upper clamping member and engageable with the support, means on said lower clamping member cooperating with said clamping means to prevent disengagement of the support therefrom, whereby the clamping members are automatically separable by loosening the clamping means and whereby a conductor may be engaged and disengaged from the channel without removing the clamping members from their support.

6. A device of the character described comprising an upper and a lower clamping member, the lower clamping member having an elongated wire receiving channel and the upper clamping member having a portion movable inwardly and downwardly into the channel to clamp a wire received therein, means for drawing the clamping members toward each other to effect a clamping action, a support, a hook carried by the upper clamping member and engageable with the support, and means carried by the lower clamping member for retaining the hook over the support when the clamping members are in cooperative clamping relation.

7. A device of the character described, comprising a member having an elongated unbroken channel-like groove adapted to receive a conductor wire to be supported, a second member having a portion movable inwardly and downwardly into said groove for engagement with the wire therein throughout the length of the groove, clamping means for drawing the wire engaging portion of said second mentioned member inwardly and downwardly into said grooved member to clamp the wire between the members, mounting means, a hook carried by one of the members and engageable with the mounting means to support the device, and means for retaining the throat of said hook over said mounting means while drawing the members into clamping relation.

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