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INSULATED BRACKET

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Fig. 1

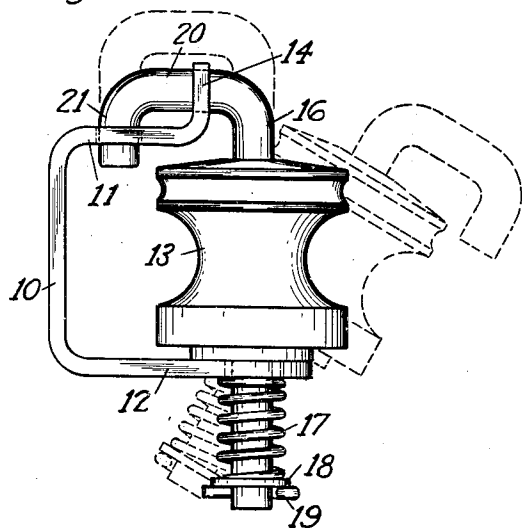
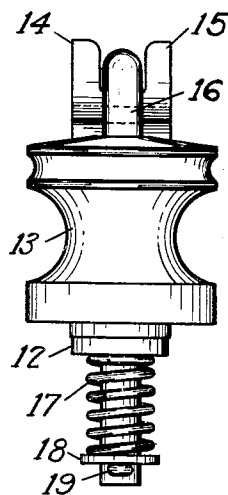


Fig. 2



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INSULATED BRACKET

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4 Claims. (Cl. 174-161)

The present invention relates to insulated brackets for use in supporting electrically energized conductors on poles or other structures.

It is desirable in brackets of this character to tie the conductor to the insulator in such a position that the conductor will be supported by a portion of the bracket in the event of loosening or failure of the tie wire used in fastening the conductor to the insulator, in order to prevent the conductor from falling to a position in which it may be a hazard to life or property. At the same time it is desirable to support the insulator-retaining member of the bracket at its respective ends, to provide maximum strength with a minimum of material, and therefore lowest cost.

Among the objects of the present invention may be noted (1) the provision of a bracket so arranged and constructed that a conductor may be positioned at the base side of the insulator without threading the end of the conductor through the bracket, this being accomplished through an organization in which the insulator-retaining member may be unlatched from engagement with a portion of the base, and subsequently tilted or swung away from the base along with the insulator to permit the desired positioning of the conductor, following which operation the insulator-retaining member and insulator may be restored to the latched position with respect to the base; and (2) the provision of means for holding the insulator-retaining member of the bracket in a normal position with respect to the base and insulator when the member is in the latched or normally used position.

The present invention relates to improvements on the bracket forming the subject matter of our co-pending application Serial No. 357,578, filed September 20, 1940.

With the above and other objects in view which appear as the description proceeds, our invention resides in the form, arrangement and organization of the parts, and the scope of the present invention, which relates particularly to improved means for holding the insulator-retaining member of a bracket of this character in the normal position, will be pointed out in the appended claims.

In the drawing Figs. 1 and 2 are respectively side and front elevational views of the invention.

Referring in detail to the drawing, the metal base 10 has a vertically extending portion for providing a mounting surface adapted to abut a pole or other supporting structure, and upper and lower arms 11 and 12 respectively extending outwardly from the vertical portion in spaced sub-

stantially parallel relationship, the lower arm 12 preferably being somewhat longer than the upper arm 11. An insulator-retaining member 16, preferably formed from a metal rod of round section, extends upwardly from a point below the lower arm 12 through an opening through the latter and vertically through an opening through the insulator 13 to a point above the horizontally extending portion of the upper arm 11, the portion 20 of the insulator-retaining member extending inwardly and substantially horizontally from the upper end of the vertically extending portion to a point over the outwardly extending upper arm 11, and the portion 21 of the insulator-retaining member 16 extends downwardly from the inner end of the portion 20 through the upper arm 11.

In the position just described, the insulator-retaining member 16 is latched to the base, and for normally maintaining latched engagement, a helical spring 17, through which the lower end of the insulator-retaining member 16 extends, is interposed between the lower surface of the lower arm 12 and the washer 18, the latter being normally spaced from the lower arm 12 and held in this position at the lower end of the insulator-retaining member by the pin 19.

This arrangement is such that the spring 17 normally urges the insulator-retaining member 16 downwardly, and thereby normally maintains the portion 21 in latched engagement with the upper arm 11. The insulator 13 is preferably fitted loosely over the member 16, and limited in its upward movement through engagement with the outer end of the upper arm 11, thereby preventing the unlatching of the insulator-retaining member 16 in response to an upward movement of the insulator.

It will be seen that the insulator-retaining member 16 may be readily moved to the unlatched position shown by the broken lines in Fig. 1 by urging the member upwardly against the bias of the spring 17, and that the insulator 13 and its retaining member may then be swung or tilted laterally to permit the lateral insertion of a conductor between the insulator and the base, also that the elements may then be restored to the normal position indicated by the solid lines of the drawing.

It may be observed that the insulator-retaining member 16 remains fastened to the lower arm 12 when in the unlatched position, for the reason that the pin 19 prevents its removal in an upward direction, while the engagement of the hori-

zontal portion 20 with the insulator 13 prevents its removal in a downward direction.

Due to the fact that the insulator-retaining member 16 engages the arms 11 and 12 at points not in axial alignment, a couple is formed in response to a horizontal force applied to the insulator 13 in a direction normal to the portion 20 of the member, such a force, when the bracket is in service, being possibly due to unbalanced tension in the conductor, or a broken conductor. To resist any force tending to move the upwardly extending portion which passes through the insulator from its normal vertical position when latched, the spaced end portions 14 and 15 are bent upwardly to provide a seat for the horizontally extending portion 20, and thereby provide means for holding the insulator-retaining member 16 in the normal position when latched.

Other embodiments of the invention are possible, and it is therefore intended that the description and illustrations herein be interpreted as illustrative rather than limiting.

We claim, as our invention:

1. An insulated bracket comprising a base having arms of unequal length extending outwardly therefrom in spaced substantially parallel relationship, an insulator-retaining member spanning said arms, an insulator positioned between said arms through which said insulator-retaining member normally extends in a direction normal to the outwardly extending arms, means for removably latching said insulator-retaining member to the shorter of said arms, means including said insulator for fastening said insulator-retaining member to the longer of said arms, and means including a pair of spaced, outwardly bent portions of the shorter arm between which said insulator-retaining member passes for holding the latter in the normal position when latched.

2. An insulated bracket comprising a base having an upper arm and a relatively longer lower arm, said arms extending outwardly from the base in spaced substantially parallel relationship, an insulator positioned between said arms, an insulator-retaining member having a first portion extending normally upwardly through said insulator from the outer end of said lower arm in a direction substantially normal to said lower arm to a point above said upper arm, a second

portion extending inwardly to a point over said upper arm, and a third portion extending downwardly to said upper arm, and means including a pair of spaced upwardly bent portions of said upper arm between which said second portion of said insulator-retaining member extends for holding said member in the normal position.

3. An insulated bracket comprising a base having an upper arm and a relatively longer lower arm, said arms extending outwardly from the base in spaced substantially parallel relationship, an insulator positioned between said arms, an insulator-retaining member having a first portion extending normally upwardly through said insulator from the outer end of said lower arm in a direction substantially normal to the lower arm to a point above said upper arm, a second portion extending inwardly to a point over said upper arm, and a third portion extending downwardly to said upper arm, means including said insulator for fastening said insulator-retaining member to the lower arm, and means including a pair of spaced upwardly bent integral portions of said upper arm between which said second portion of said insulator-retaining member extends for holding said member in the normal position.

4. An insulated bracket comprising a base having an upper arm and a relatively longer lower arm, said arms extending outwardly in spaced substantially parallel relationship, an insulator positioned between said arms, an insulator-retaining member extending normally upwardly through said insulator from the outer end of said longer and lower arm in a direction substantially normal to said lower arm to a point above said upper arm and thence inwardly and downwardly to said upper arm, means for removably attaching said insulator-retaining member to said upper arm, means including said insulator for fastening said insulator-retaining member to said lower arm, and means including a pair of spaced upwardly bent portions of said upper arm between which the inwardly extending portion of said insulator-retaining member passes for holding said member in the normal position when attached to said upper arm.

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