

March 7, 1944.

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2,343,576

SUPPORT FOR ELECTRIC CONDUCTORS

Filed Dec. 28, 1942

Fig. 1

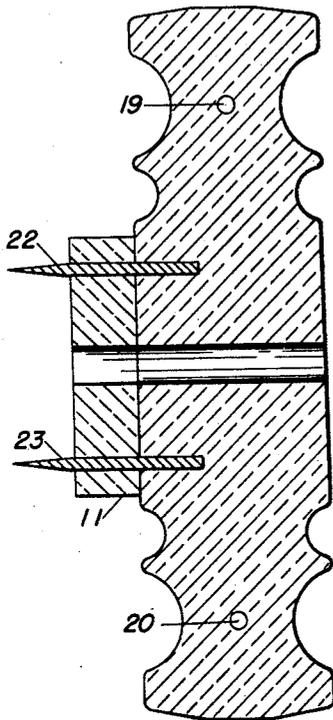


Fig. 2

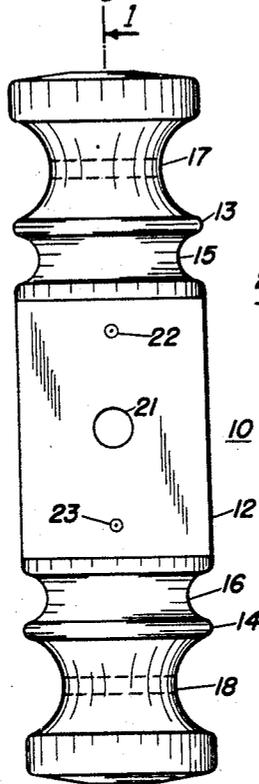


Fig. 3

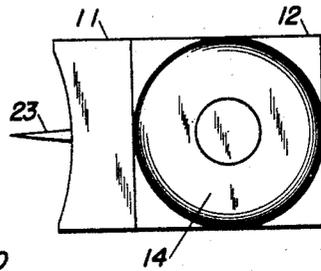
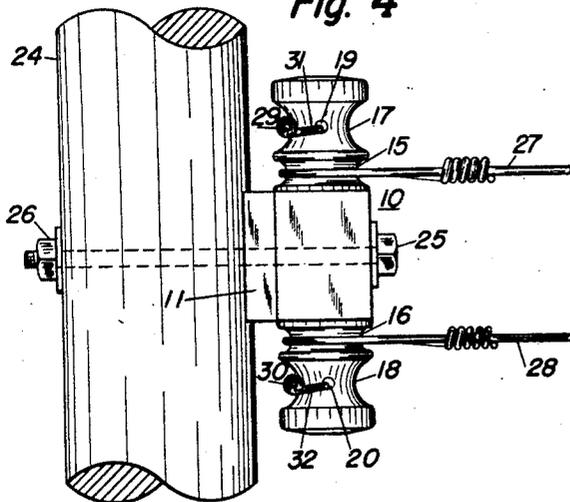


Fig. 4



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2,343,576

SUPPORT FOR ELECTRIC CONDUCTORS

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Application December 28, 1942, Serial No. 470,423

6 Claims. (Cl. 174—164)

This invention relates generally to conductor supports for overhead electric conductors, and more particularly to a support for conductors between which the potential difference is less than about 600 volts.

The objects of this invention include the provision of (1) a support for two or more overhead conductors which can be satisfactorily fastened to a pole or other above-ground structure by means of a single attaching-bolt or fastener; (2) a support embodying in a single piece of insulating material a body portion including oppositely extending end portions to which a conductor may be tied with a shorter tie wire than has heretofore been required, at the same time providing an improved fastening; (3) a support having a base adapted for mounting on a wood structure so that angular displacement due to unbalanced pull on the conductors is prevented, the support-restraining elements cooperating with the base and body portions to compress them and at the same time preventing rotative movement jointly or separately of the base portion and the body portion; (4) in general an inexpensive support of a construction providing efficient use of each portion of the device and advantages over articles for the same purpose heretofore available. Other objects will appear as the description proceeds.

With the above objects in mind, my invention resides in the features of construction and arrangement and form of the parts, to be exemplified in the description to follow, and the scope of the invention will be pointed out in the appended claims.

In the drawing of the embodiment of the invention herein described: Fig. 1 is a side elevational view of the support, shown in section; Fig. 2 is a rear elevational view; Fig. 3 is an end view of the support; and Fig. 4 is a side elevational view of the support when mounted in the service position.

Referring to the several figures of the drawing, it may be noted that the support includes the longitudinally upstanding body portion 10, and the base portion 11. The body portion 10 comprises the central or intermediate portion 12, of rectangular or square section, from which the end or conductor-receiving portions 13 and 14, of circular section, respectively coaxially upwardly and downwardly extend. The upper conductor-receiving portion 13 is provided with two horizontally positioned axially spaced conductor-receiving grooves 15 and 17, and similarly the lower conductor-receiving portion 14 is provided with the conductor-receiving grooves 16 and 18.

The upper and lower grooves 15 and 16 are for the purpose of supporting conductors extending laterally from the support, as the conductors 27 and 28 of Fig. 4, such conductors exerting the

greatest stress upon the support. They are therefore positioned as nearly as practicable to the central portion 12. The upper and lower grooves 17 and 18 are only for the purpose of supporting tangentially extending conductors, so that the only stress imposed on these portions is the weight of the extended conductors. Having provided the grooves 15 and 16 for accommodating dead-ended conductors, the lateral strength of the body portion 10 at the grooves 17 and 18 is not an important consideration, and for this reason they may be made relatively deeper and wider than the grooves 15 and 16, to accommodate tangentially extending conductors of large diameter.

To reduce the length of tie wire required, and in addition to provide an improved tie-wire arrangement, the end portions 13 and 14 are provided, at the elevations of the grooves 17 and 18, with the horizontally positioned openings 19 and 20. As shown in Fig. 4, these openings accommodate the tie wires 31 and 32, for supporting the tangentially extended conductors 29 and 30. This feature of the invention is particularly valuable in connection with the support of the lower conductor 30, since the tie wire may become loosened in service, but will not permit releasing of the conductor, such as might occur in the event the conventional tie-wire arrangement in which the wire is wrapped around the groove 18 is employed, as has been common practice heretofore.

The support of the present invention may be conveniently and inexpensively constructed of wood, for example, and the base 11 made integral with the body portion 10. In some situations it may be desired to reduce end-grain exposure, and construct the support with minimum amount of material. In such situations, the base 11 may be separately formed, to register with one side of the square central portion 12, and positioned to extend outwardly therefrom in a direction normal to the vertical plane in which the tie wire openings 19 and 20 are positioned.

A pair of vertically spaced prongs 22 and 23 are arranged to extend outwardly from points within the central portion 12 through and beyond the base 11, and it is in this manner that the base 11 may be fastened to the body portion 10. An attaching-bolt opening 21 extends horizontally, preferably through the midpoints of both the body portion 10 and the base 11, and, as shown in Fig. 4, the attaching-bolt 25 extends therethrough and through the pole 24. As the nut 25 is tightened on the attaching-bolt 25, the prongs 22 and 23 enter the pole. In this condition, the prongs extend on each side of the base respectively into the body portion 10 and the pole 24, thereby effectively preventing rotation of

either the base 11 or the body portion 10 in the event of unbalanced tension of the tangentially extended conductors 29 and 30.

From the above description, it will appear that the construction exemplified herein provides a high degree of use of the material involved, resulting in an efficient, simple and inexpensive structure for the purpose stated.

I claim:

1. A support for electric conductors comprising a longitudinally extending body portion having a central portion of rectangular cross-section and respective end portions of circular cross-section, a small horizontally positioned groove extending around each of said respective end portions adjacent to the respective ends of said central portion and a relatively large horizontally positioned groove extending around each of said respective end portions adjacent to the respective ends of said body portion, an opening extending through each of said end portions at the elevation of the large grooves, the respective openings lying in a plane which is parallel to one side of said central portion, a base portion secured at said one side of and extending laterally from said central portion, and an attaching-bolt opening extending coaxially through the respective midpoints of said central portion and said base portion.

2. A support for electric conductors comprising a body portion having a central portion and a pair of conductor-receiving portions extending respectively coaxially upwardly and downwardly from said central portion, a horizontally positioned groove extending around each of said conductor-receiving portions adjacent to the respective ends of said central portion, a relatively wider and deeper horizontally positioned groove extending around each of said conductor-receiving portions respectively above and below the first-mentioned grooves, an opening extending transversely through each of said conductor-receiving portions at the elevation of said wider and deeper grooves, said openings lying in a vertical plane, a base portion secured at one side of said central portion and extending outwardly therefrom in a direction normal to the plane in which the openings are positioned, and an attaching-bolt opening extending coaxially through the respective midpoints of said central portion and said base portion.

3. A support for electric conductors comprising a body portion having a central portion and a pair of conductor-receiving portions extending respectively coaxially upwardly and downwardly from said central portion, a horizontally positioned groove extending around each of said conductor-receiving portions adjacent to the respective ends of said central portion, a relatively wider and deeper horizontally positioned groove extending around each of said conductor-receiving portions respectively above and below the first-mentioned grooves, an opening extending transversely through each of said conductor-receiving portions at the elevation of said wider and deeper grooves, said openings lying in a vertical plane, a base portion positioned at one side of said central portion and extending outwardly therefrom in a direction normal to the plane in which said openings are positioned, an attaching-bolt opening extending coaxially through the respective midpoints of said central portion and said base portion, and a pair of vertically spaced prongs

extending in parallel relationship with each other and with the direction of said attaching-bolt opening from points within said body portion through and beyond the surface of said base portion, said prongs providing means for fastening said base portion to said body portion.

4. A support for electric conductors comprising a body portion having a central portion and a pair of conductor-receiving portions extending respectively coaxially upwardly and downwardly from said central portion, a horizontally positioned groove extending around each of said conductor-receiving portions adjacent to the respective ends of said central portion, a relatively wide and deeper horizontally positioned groove extending around each of said conductor-receiving portions respectively above and below the first-mentioned grooves, an opening extending transversely through each of said conductor-receiving portions at the elevation of said wider and deeper grooves, said openings lying in a vertical plane, a base portion positioned at one side of said central portion and extending outwardly therefrom in a direction normal to the plane in which said openings are positioned, an attaching-bolt opening extending coaxially through said central portion and said base portion in a direction normal to said vertical plane, and a pair of spaced prongs extending in parallel relationship outwardly from points within said body portion through and beyond the surface of said base portion, said prongs providing means for attaching said base portion to said body portion.

5. A support for electric conductors comprising in a single piece of insulating material a body portion having a central portion and a pair of conductor-receiving portions extending respectively coaxially upwardly and downwardly from said central portion, a horizontally positioned groove extending around each of said conductor-receiving portions adjacent to the respective ends of said central portion, a relatively wider and deeper horizontally positioned groove extending around each of said conductor-receiving portions respectively above and below the first-mentioned grooves, an opening extending transversely through each of said conductor-receiving portions at the elevation of said wider and deeper grooves, said openings lying in a vertical plane, a base portion extending outwardly from one side of said central portion in a direction normal to the plane in which said openings are positioned, and an attaching-bolt opening extending coaxially through the respective midpoints of said central portion and said base portion.

6. A support for electric conductors comprising a vertically extending body of insulating material having an intermediate portion, a base portion extending laterally from one side of said intermediate portion, and end portions merging with the respective upper and lower ends of said intermediate portion, a horizontally positioned groove extending around each of said end portions adjacent to the respective ends of said intermediate portion, a relatively wider and deeper horizontally positioned groove extending around each of said end portions respectively above and below the first-mentioned grooves, and an attaching-bolt opening extending coaxially through the respective midpoints of said intermediate portion and said base portion.

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