April 8, 1952 D. D. HARDING 2,592,031

SUPPORTING STRUCTURE FOR INSULATORS

Filed March 14, 1949

Fig. 1

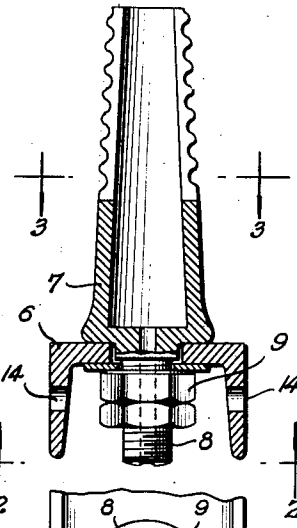
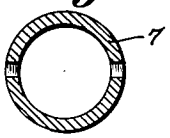


Fig. 3



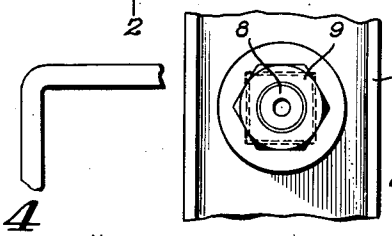


Fig. 2

Fig. 4

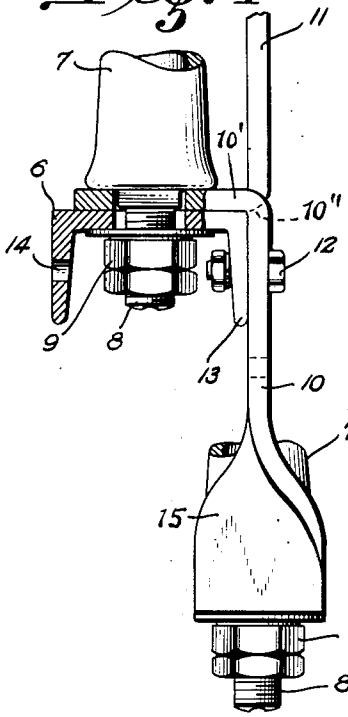
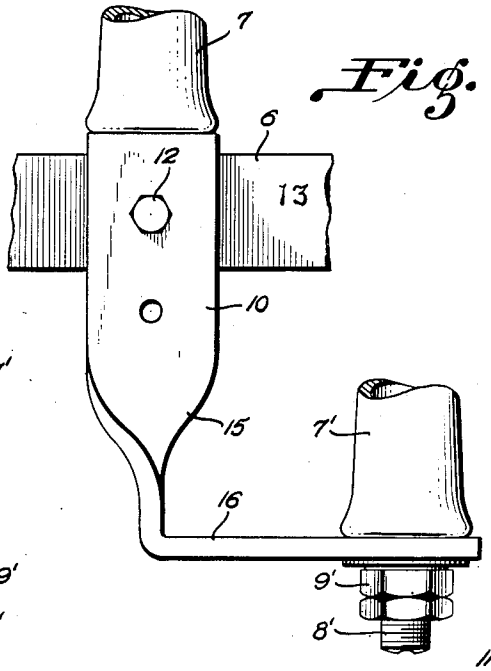


Fig. 5



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SUPPORTING STRUCTURE FOR INSULATORS

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1 Claim. (Cl. 248—220.5)

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This invention relates to improvements in a supporting structure for insulators upon which electric wires are strung.

Ordinarily, insulators upon which electric telephone and telegraph wires are strong have support on cross-arms mounted upon poles or secured on brackets attached to other supporting structures.

In the instant invention there are provided insulator pins mounted on cross-arms secured to ordinary poles (not shown) in the usual manner, and there is also included other brackets in connection with the cross-arm for the support of insulators other than those mounted on the cross-arm, thus providing a cluster of supported insulators suitably spaced apart from each other so the wires strung on the several insulators are likewise held apart.

An object of the invention is to afford supports for a group of insulator pins arranged in connection with a cross-arm, so constructed as to be readily attached to or removed from the cross-arm, thus to permit stringing of additional electric wires or their removal from the general group of wires supported by the pole.

Another object of the invention is to afford an added facility for stringing additional wires to an established system of wires.

Other objects and advantages of the invention appear in the following description.

An illustrative embodiment of the invention is shown in the accompanying drawings, in which:

Fig. 1 is an end elevational view of a cross-arm and insulator pin supported thereon, shown in cross-section through the mid-portion of an insulator pin;

Fig. 2 is a fragmentary bottom plan view of the cross-arm projected from Fig. 1 and showing the securing means for an insulator pin;

Fig. 3 is a cross-section of Fig. 1 on the line 3—3 of Fig. 1;

Fig. 4 is a fragmentary end elevational view of the cross-arm including an insulator pin mounted thereon and auxiliary brackets secured to the cross-arm for support of additional insulator pins, the view being partially in section; and

Fig. 5 is a fragmentary side elevational view projected from Fig. 4 in a plane at right angles thereto.

The illustrative embodiment of the invention consists of a cross-arm 6 preferably in the form of a metal channel, the flanges of which extend downwardly when the cross-arm is secured to a pole (not shown) in the usual manner.

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Upon the channel are secured numerous insulator pins 7, preferably formed of hollow castings of aluminum or the like, which have threaded stems 8 that extend downwardly through the channel and are provided with nuts 9 thereon by which the stems are held in place.

There are provided auxiliary brackets 10—11 one end 10′ of which is bent at right angles adapted to overlie the top of the cross-arm, the bent portion being perforated to permit insertion of the stem 8 therethrough when said bent portion is interposed between the cross-arm and a corresponding pin 7, so that the bracket is held firmly in position on the cross-arm by said pin when the nuts 9 on the stem are tightened. The bracket 10 is further secured to the cross-arm by means of a bolt 12 that extends through the bracket and the adjacent flange 13 of the cross-arm, there being openings 14 in the cross-arm flanges for reception of securing bolts 12.

The midportion of each bracket 10 has a bend 15 made therein and the distal end portion of the bracket is bent at right angles to provide a shelf 16 which is perforated for the reception of the stem 8′ of a secondary insulator pin 7′. When the nuts 9′ on the stem are tightened the secondary pin is held in place. The brackets are made of any desired length and the bends 15 are made at suitable angles so as to afford clearance for insulation on the secondary insulator pins from the cross-arms. Turning of the brackets to suitable angles may be performed in the factory where produced or at the place of installation according to prepared plans or as may be later necessary during insulation to suit the requirements of locating the secondary pins in the most advantageous position.

Operation

In utilizing the invention, the cross-arms are mounted on any suitable support and the insulator pins 7 are assembled thereon before or after the cross-arms are mounted in place. The brackets 10 are then secured on the cross-arms, if additional insulators are required, by placing their bent ends 10′ over the top of the corresponding cross-arms and inserting the stems 8 of the insulator pins 7 therethrough. The assemblage of said brackets and the insulator pins on the cross-arms are then fixedly held together by tightening the nuts 9 on the stems of the insulator pins. The brackets 10 are further secured in place by bolts 12. The lower end portions of the brackets 10, if not previously shaped, are then bent so their shelves will extend into

selected positions in order that the secondary insulator pins 7' and the insulators supported thereon are held in desired positions.

The brackets 11 are secured on the cross-arm by adjacent insulator pins in a similar manner to the previous instance by inserting the stems of the pins through the bent ends 10'' on the lower ends of the brackets and clamping them in place by tightening the nuts on the stems.

Variations from the particular construction above disclosed may be resorted to by the exercise of skill in the art, without departure from the spirit or scope of the invention.

What I claim is:

A mount for an insulator consisting of a cross-arm provided with opposite flanges, an auxiliary bracket having parts one of which is secured to one of said flanges and another part that overlies said cross-arm, and an insulator supporting pin

provided with a stem that extends through said overlying part of said bracket and the cross-arm, and provided with securing means therefor, whereby the auxiliary bracket is clamped in place on the cross-arm, another part of said auxiliary bracket being adapted for support of another insulator pin.

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The following references are of record in the file of this patent:

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