Sept. 13, 1932. A. O. AUSTIN 1,876,578

INSULATOR

Filed Nov. 22, 1927

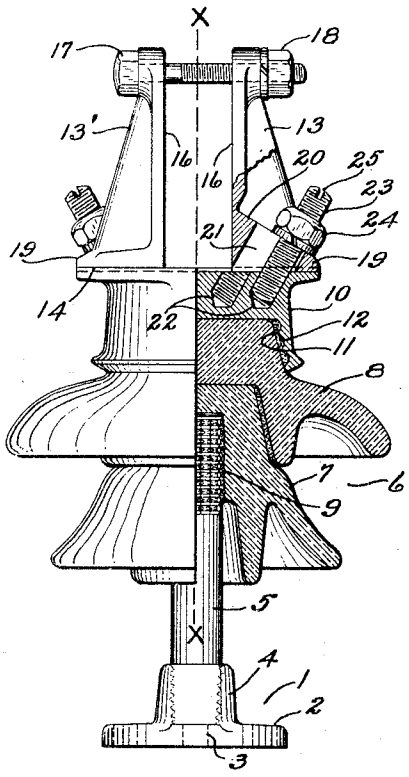


FIG. 1.

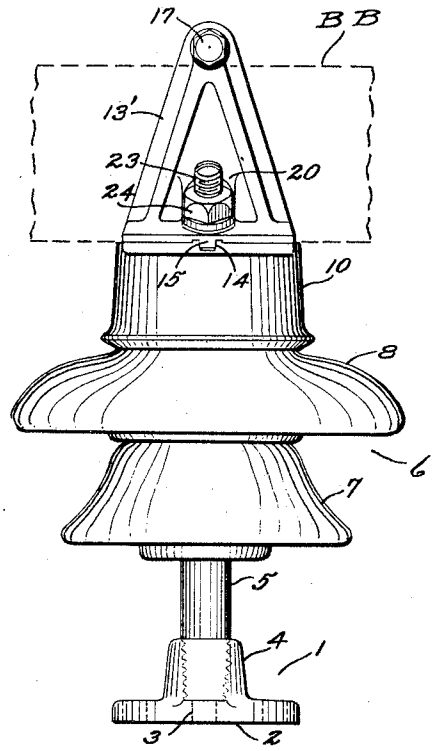


FIG. 2.

Witness!
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Patented Sept. 13, 1932 1,876,578

UNITED STATES PATENT OFFICE

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INSULATOR

Application filed November 22, 1927. Serial No. 234,966.

My invention relates to electrical insulators and particularly to that type used for supporting and insulating bus bars.

The object of my invention is to provide a device which will not only support and insulate the bus bars, but also provide means for clamping the bus bars in position, and adjusting the position of the bus bars with respect to a vertical center line or axis through the insulator.

Other objects will be disclosed as the invention is further described and set forth.

My invention resides in the new and novel construction, combination and relation of the various parts hereinafter described and shown in the drawing accompanying this specification.

In the drawing:

Fig. 1 is an edge view in elevation and partial section of my invention.

Fig. 2 is a side view in elevation of Fig. 1.

In the preferred embodiment of my invention I employ a base member 1 which has a base flange 2, which can be of any shape or size desired and provided with holes 3 therethrough for the application of securing bolts. A receptacle portion 4 is mounted on the base portion 2 and interiorly threaded on a taper to receive the supporting pin 5, which is likewise threaded on the lower end to cooperate with the threads within the receptacle 4.

Mounted upon the upper end of the pin 5 is an insulator 6, preferably of porcelain, but which may be made of other insulating material and of any suitable design which will meet the requirements.

I have shown the insulator as comprising two members 7 and 8 cemented together and the member 7 secured to the upper end of the pin 5 by means of a cemented joint 9.

Mounted upon the upper end of the member 8 is a cap member 10, providing an inverted receptacle which fits over the end 11 of the member 8 and is secured thereto by the cemented joint 12. The parts 1, 5 and 10 are composed of metal suitable for the requirements.

Mounted upon the upper face of the cap 10 are upright clamping members 13 and 13'. The upper face of the cap 10 is provided with a transverse groove 14 and the clamps 13 and 13' provided with a projecting guide 15 which is slidably positioned in the groove 14, thereby permitting the clamping members to be moved toward or away from each other, but prevent movement of the clamping members in a longitudinal direction with respect to the bus bar BB shown dotted.

The clamping members 13 and 13' are provided with faces 16 which engage with the current carrying bus bars. The clamping members are also provided with registering transverse holes at their upper ends to receive the bolt and nut 17 and 18 respectively, whereby the upper ends of the clamping members 13 and 13' are drawn and held in clamping relation with the bus bars positioned between the faces 16.

The lower ends of the clamping members 13 and 13' are provided with lugs 19, each having a tapered bearing face 20 and a transversely disposed slot 21 therethrough.

The cap 10 is provided with a plurality of threaded openings 22 to receive a threaded stud 23 and nut 24 thereon. The openings 22 are disposed in a transverse alinement and are formed at an angle to the upper face of the cap 10 such that the axis of the stud 23 positioned therein will be substantially at right angles to the angularly disposed face 20 on the clamping members 13 and 13'. The stud 23 can be positioned in either of the two adjacent threaded openings 22, as desired, in order to permit of adjusting the spacing of the clamping members 13 and 13'. Also, it is possible to aline the faces 16 of the clamping members with respect to the vertical axis x—x such that if the bus bar does not aline with the axis x—x, then the members 13 and and 13' may be transversely adjusted with respect to the cap 10 to meet the requirements. It will be noted that with this arrangement a very considerable transverse adjustment of the clamping members with respect to the cap 10 is permitted, in that the studs 23 may be placed in the outer openings 22, as shown in the drawing, thereby permitting of the widest separation of the clamping faces 16 or the studs 23 may be placed in the inner threaded openings 22, thereby permit-

ting the clamping faces 16 to practically meet, or one stud can be positioned in the outer opening 22 and the other stud in the inner opening 22, thereby permitting the bus bar to be supported other than in alinement with the axis x—x, if conditions so require.

The tapered lug 19 has a tendency to co-act with the nut 24 to force the clamping members 13 and 13′ toward each other or into engagement with the bus bar, and also tend to automatically wedge the clamping member into tighter engagement with the cap and nut 24, if there is a tendency for the clamping members to move outwardly or away from each other, and this arrangement of the lug 19 and stud and nut 23 and 24 is superior to a construction in which the lug 19 has a flat upper surface parallel with the upper surface of the cap 10.

The studs 23 are provided with slots 25 for convenience in removing or applying the studs to the openings 22.

The bus bar can first be placed, by temporary means, in its final position and the bus bar support then placed in permanent position after which the clamping members 13 and 13′ are brought into clamping engagement with the bus bar and the cap 10, or the bus bar support can first be placed in permanent position and the bus bars then placed in position upon the support and the clamping members 13 and 13′ adjusted to grip the bus bar and secured it to the cap.

There are, of course, modifications to my construction herein disclosed, and which will be obvious to those skilled in the art, and which will fall within the scope of my invention, therefore I wish to be limited only by my claim.

I claim:

An insulator support for bus bars comprising a base, a dielectric member mounted on said base, a cap having an upper bearing surface carried by said dielectric member, a guide way formed on the upper surface of said cap, a pair of clamping members mounted to slide toward and away from each other on said guide way, said clamping members having upright clamping surfaces facing each other for engaging opposite sides of a bus bar and having outwardly extending lugs at the bases thereof provided with elongated slots and with upper inclined faces, bolts extending through said slots and having heads thereon engaging said upper inclined faces and acting to exert force on said clamping members tending to move said clamping members toward each other and to press said clamping members on the bearing face of said cap, said cap having a plurality of spaced inclined sockets therein for receiving each of said bolts to permit said bolts to be secured to said cap in adjusted positions, and a bolt connecting the upper ends of said clamping members to press the upper ends of said clamping members against a bus bar held between said members.

In testimony whereof I affix my signature.

ARTHUR O. AUSTIN.