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1,625,645

L. FORT

INSULATOR

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Fig. 1,

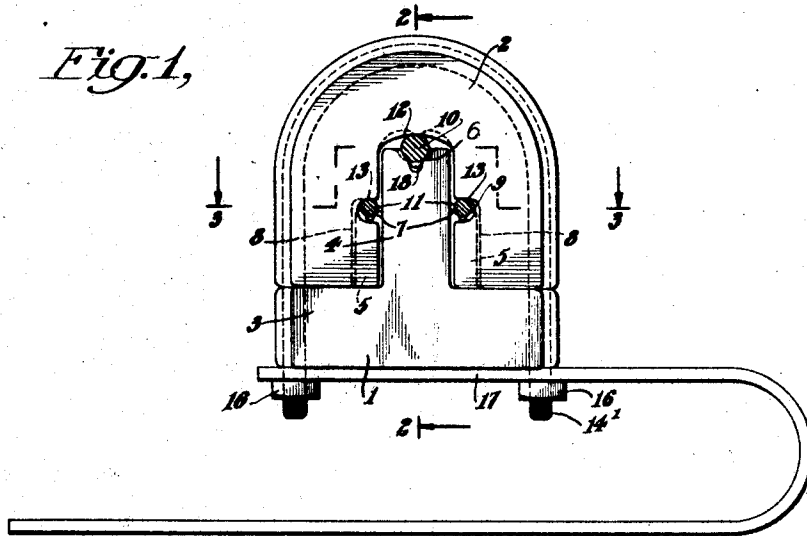


Fig. 2,

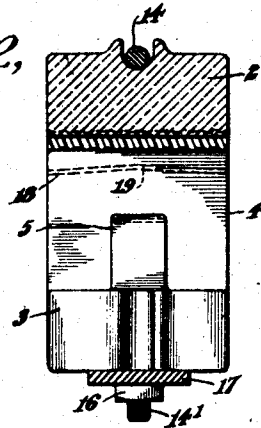
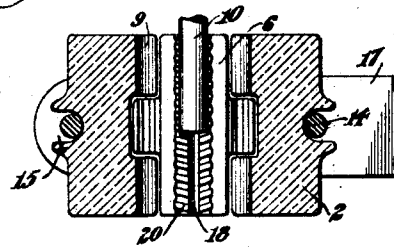


Fig. 3,



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INSULATOR.

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The invention relates to improvements in insulators. An object of the invention is the provision of improved forms of insulators which shall be efficient in operation, comparatively inexpensive to manufacture and easy to assemble and install. The insulators are also devised with a view to preventing or diminishing surface leakage of electrical current and with a view to improving the mechanical construction and strength of the parts.

Other objects of the invention consist in the provision of various combinations of parts and elements of construction, all as will appear more fully in the following specification.

In order that the invention may be more clearly understood attention is hereby directed to the accompanying drawings forming part of this application, and illustrating certain embodiments of the invention. In the drawings—

Fig. 1 represents a front elevation of one form of insulator comprised within the invention; and

Figs. 2 and 3 are sectional views taken respectively on lines 2—2 and 3—3 of Fig. 1.

Referring first to Figs. 1 to 3 inclusive of the drawings, the insulator there illustrated comprises a base member 1 and a cap member 2, these two members being adapted to fit together in what may be termed a telescoping relation. The base member, represented generally by the reference character 1, is provided with a base portion 3, a standard or rib 4 extending vertically upwards, in the embodiment of the invention illustrated, from the central portion of the upper surface of the base portion 3. Base portion 3 accordingly provides horizontal base flanges or arms, one on either side of the central vertical standard 4.

Lugs 5, 5, are provided one on either side of the standard 4, these lugs extending upwardly from the base portion 3 for a desired part of the height of standard 4, such for example as a distance somewhat more than half the height of standard 4, lugs 5, standard 4 and base portion 3 all being integral, formed of a suitable insulating material.

In the preferred form of the invention the upper surface of standard 4 is provided with a seat 6 for a conductor or cable, while

the upper surfaces of lugs 5, 5, are provided with seats 7, 7, for additional cables or conductors.

The cap member 2 is formed of suitable insulating material and is adapted to fit around standard 4, above the base portion 3 of base member 1. The cap member preferably takes the form of a yoke or inverted U-shaped piece, the side legs of which are provided, on their inner surfaces, with recesses 8, 8. Recesses 8 extend upwardly from the bottoms of the side legs of the cap member for a distance somewhat greater than the height of the side lugs 5 on the base member, recesses 8 also being somewhat greater in depth and width than the corresponding dimensions of lugs 5. Accordingly the cap member may be positioned by dropping the same in place over standard 4 so that lugs 5 will enter recesses 8.

The side legs of cap member 2 are provided with channels or openings 9, 9, which extend from front to rear of the cap member and are open at the inside surfaces of the legs of the cap member.

A cable or conductor 10 may be positioned on seat 6 and cables or conductors 11, 11, may be positioned on seats 7. When the cap member is in position conductor 10 will be secured between seat 6 and the surface 12 of cap member 2, intermediate the two legs of the cap member, surface 12 pressing upon conductor 10 on the side thereof opposite to that which is engaged by seat 6. Correspondingly the conductors 11, 11, will be secured between seats 7, 7, and the surfaces 13, 13, of the cap member, surfaces 13, 13, comprising the upper surfaces of the transverse channels 9.

Members 1 and 2 may be secured together with one or more of the conductors 10, 11, 11, secured in place, by suitable means, preferably by the U-bolt 14, which is adapted to rest in a suitable channel 15 extending about the top and the outer side walls of cap member 2. The end walls of the base portion 3 of member 1 are provided with vertical channels which align with the channels 15 of cap member 2, the legs of the U-bolt extending through the vertical channels of the base member referred to. The lower ends of the U-bolt will be threaded, as is indicated at 14', nuts 16 thereon being adapted to be tightened to secure members 1 and 2 together. A

supporting bracket 17 is adapted to be secured between nuts 16 and the bottom surface of base member 1. This supporting bracket 17 may be used for securing the insulator in position upon any desired support, such as a post or a wall, by means of any suitable securing devices (not shown).

It will be noted that the lugs 5 in the construction described perform a double function, namely of interlocking with the recesses 8 to prevent relative movement of the parts in the lengthwise direction of the conductors, and in serving to provide seats for the conductors 11, 11. The lower end of the side legs of cap member 2 will be raised more or less above the upper surface of the base flanges of member 1, when the parts are adjusted in position, in accordance with the diameters of the conductors which are clamped in position, that is to say, the device may be adjusted to carry conductors of different diameters or thicknesses. It will be noted that the parts are of substantial design and that danger of breaking the cap member under the strain of clamping the parts together is greatly decreased because of the arched construction of the cap member.

It will be noted that one or two or three conductors, as desired, may be carried by the construction in the form illustrated, conductors 10, and 11, 11, preferably being carried at different heights. It will likewise be noted that the device may be mounted in the vertical position shown or in a horizontal or inclined position, if desired.

It is preferred to form the seat 6 with a channel 18 extending throughout the length of the same and opening into the portion of the seat intermediate the side edges thereof. This channel is preferably inclined upwardly from each end thereof to the central point 19 thereof, as is indicated in Fig. 2. With this construction channel 18 will act efficiently as a drip channel when the insulator is mounted horizontally. Also when the insulator is mounted vertically, as shown, the tapered arrangement of channel 18 will prevent any water which may get therein from standing therein.

Also preferably the surfaces of seat 6 slant downwardly from each side edge of standard 4 to channel 18, the surfaces of the seat between the side edges and channel 18 being provided with inclined grooves 20, 20. These grooves 20 are inclined from the side edges of the seats towards the channel and open into the same. All of the grooves on one side of the channel are preferably parallel with each other and all of the grooves on the other side of the channel are preferably parallel with each other. The direction of inclination of these grooves is such that when the insulator is mounted in horizontal position grooves 20 will slant inwardly and

downwardly so that any water therein will be delivered thereby to channel 18.

Grooves 20 thus serve as water conducting channels and also to provide ridges intermediate the same which form efficient gripping surfaces for gripping the conductors. The seats 7 of lugs 5 may be provided with channels similar to the channel 18 and similarly tapered and with seating surfaces provided with inclined grooves similar to the grooves 20. The seats 12 and 13, 13, of cap member 2, adapted to press against the opposite surfaces of the conductors, may be provided with similar channels and grooved surfaces.

In the construction described, it will be noted, comparatively long paths are provided for any surface leakage of current from conductor 10 or conductors 11, to the support or the outer surface of the insulator.

It should be understood that the invention is not strictly limited to the details and construction which have been particularly described but that the same is as broad as is evidenced by the accompanying claims.

What I claim is:

1. In an insulator, the combination of a base member having a base flange and a central rib upstanding therefrom and shoulders of lower height than said rib on opposite sides of the same, with seating surfaces extending substantially straight across said rib and shoulders, a cap member of U-shape adapted to fit about said rib, and having guiding grooves adapted to interlock with said shoulders, and clamping means comprising a strap adapted to be secured about said cap member and base flange to secure the same together with conductors extending between said rib and shoulder seating surfaces and the adjacent surfaces of said cap member, said cap and base members being movable relatively to each other transversely of the conductors and while still interlocked prior to tightening said clamping means to accommodate the thickness of the conductors secured between them.

2. In an insulator, the combination of a base member with an upstanding portion surmounted by conductor seating means for receiving the conductors to be insulated, two sides of said portion being formed with substantially parallel tenons, and a cap member straddling said upstanding portion for clamping the conductors thereon and formed with mortises fitting said tenons, ribs on said cap member being formed at the sides of said mortises and extending down around and beneath certain of the conductors and preventing removal of the cap member independently of the removal of such conductors.

In testimony whereof I have signed my name to this specification.

LOUIS FORT.