March 11, 1930. J. F. PHILLIPS 1,750,352

ELECTRIC INSULATOR

Filed March 31, 1928

Fig. 1.

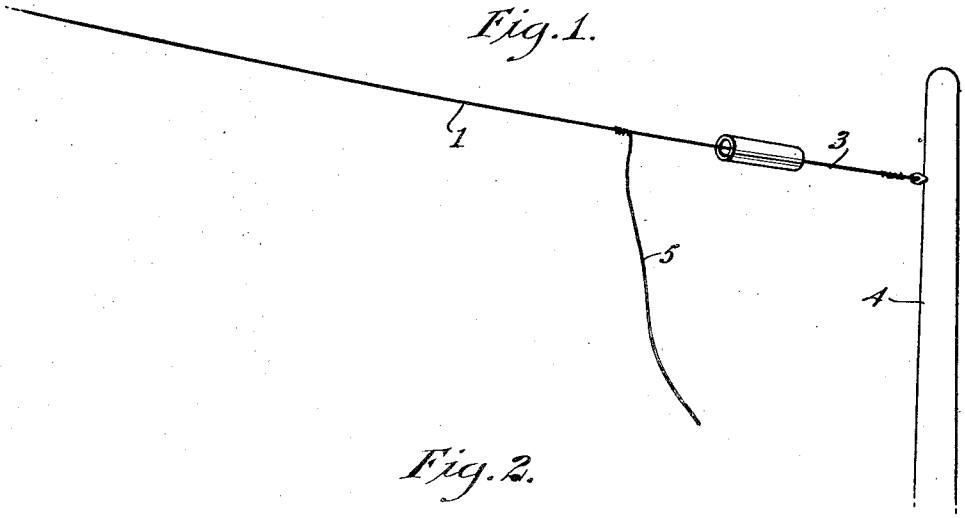



Fig. 2.

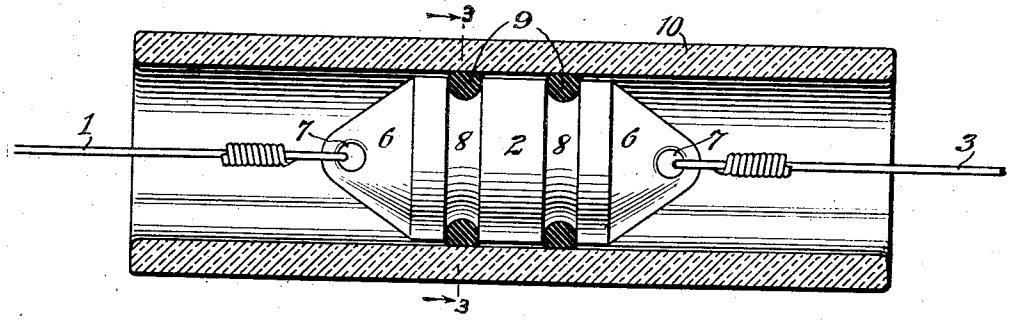
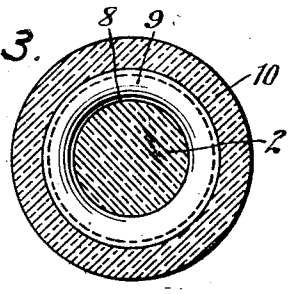



Fig. 3.




WITNESSES

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# UNITED STATES PATENT OFFICE

JOHN F. PHILLIPS, OF NEW YORK, N. Y.

## ELECTRIC INSULATOR

Application filed March 31, 1928. Serial No. 266,246.

This invention relates to electric insulators, an object of the invention being to provide an insulator which is protected from the formation of ice, snow and water which might tend to bridge the gap of the insulator and electrically connect the wires connected to the ends of the insulator.

My invention is especially adapted for use in connection with outdoor aerials of radio receiving sets. By the employment of the same, noises, due to moisture of the insulator or other causes, are, to a great extent at least, eliminated because the insulator is located in a casing which protects the same from inclement weather conditions.

The invention therefore includes not only an insulator per se but a casing to surround the same, and consists in certain novel features of construction and combinations and arrangements of parts which will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings—

Figure 1 is a perspective view showing my improved insulator in connection with the outside aerial of a radio receiving set;

Figure 2 is a view in longitudinal section through the cylinder casing showing the insulator and the connected wires in elevation;

Figure 3 is a view in transverse section on the line 3—3 of Figure 2.

1 represents an outside aerial or antenna wire, which is connected to one end of an insulator 2, and the other end of the insulator is connected by a wire 3 with a post or other support 4 constituting a support for one end of the antenna or aerial. 5 represents a wire leading to the receiving set. The insulator 2, illustrated in Figures 2 and 4, is preferably of porcelain or other analagous material, is of general cylindrical form and has tapering or horizontal ends 6, perforated as shown at 7, forming eyes to receive wires 1 and 3. The cylindrical intermediate portion of the insulator 2 has any desired number of annular grooves 8 in which resilient or flexible rings or gaskets 9 are located.

10 represents a cylindrical casing in which the insulator 2 is normally located, and this casing 10 may be of glass or any other suitable material and is preferably slightly larger in internal diameter than the external diameter of the insulator 2, so that the rings or gaskets 9 maintain the insulator and the casing spaced apart.

This casing 10 is open-ended and of a suitable diameter and shaped to accommodate the insulator and both the wires 1 and 3 without any contact of the wires with the casing.

When an insulator is employed, such as above described, and enclosed in a casing 10, ice, snow and water cannot enclose the insulator so as to electrically connect the wires, and the connection is assured and protected so that noises are eliminated and a better reception possible when my improved invention is employed.

Various changes and alterations might be made in the general form of the parts described without departing from my invention and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

I claim:

A device of the character described, including an insulator, a tubular casing open at both ends and adapted to receive the insulator and of greater length than the insulator, said insulator having annular grooves around the same and removable compression rings in the grooves engaging the inner face of the casing and spacing the insulator therefrom, and eyes at the ends of the insulator for the connection of wires thereto.

Signed at New York in the county of New York and State of New York this 30th day of March, A. D. 1928.

JOHN F. PHILLIPS.