J. F. MALTHANER.

INSULATOR.

APPLICATION FILED MAY 29, 1909.

965,723.

Patented July 26, 1910.

Fig. 1

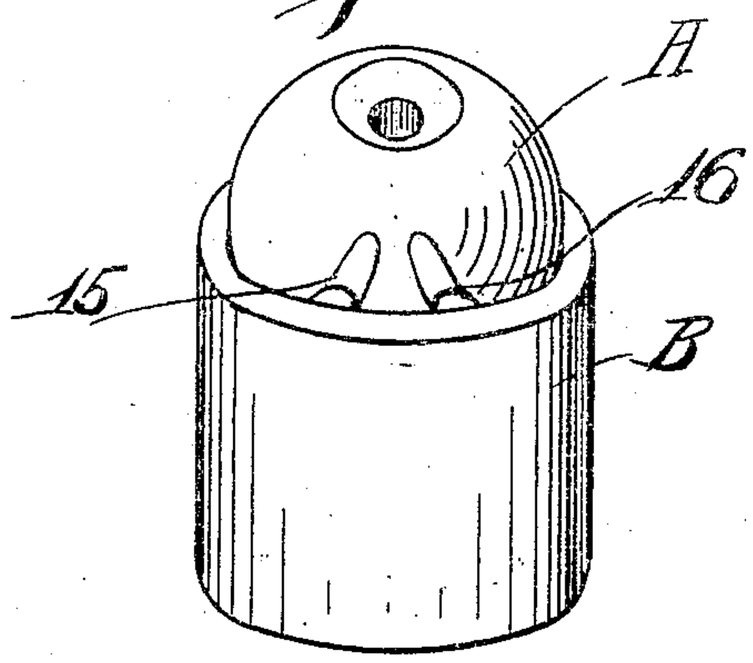


Fig. 2

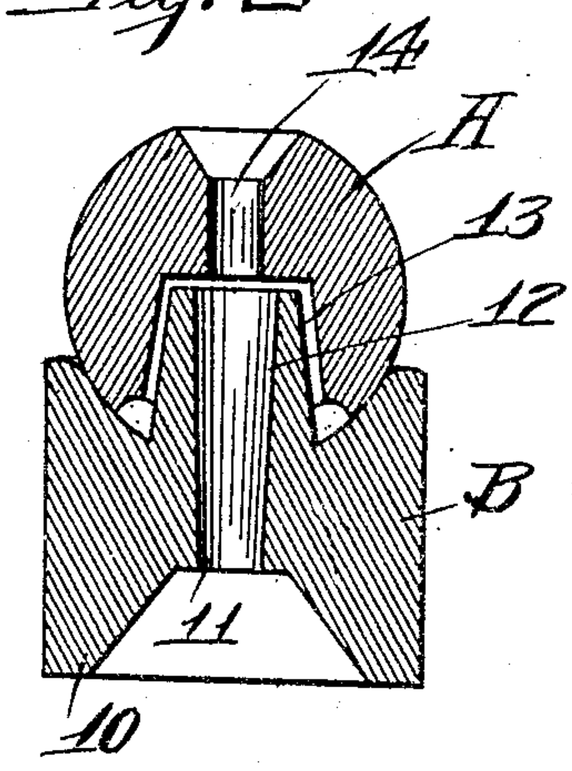


Fig. 3

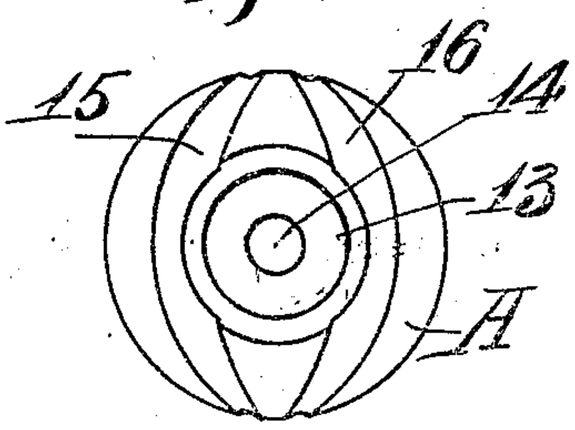
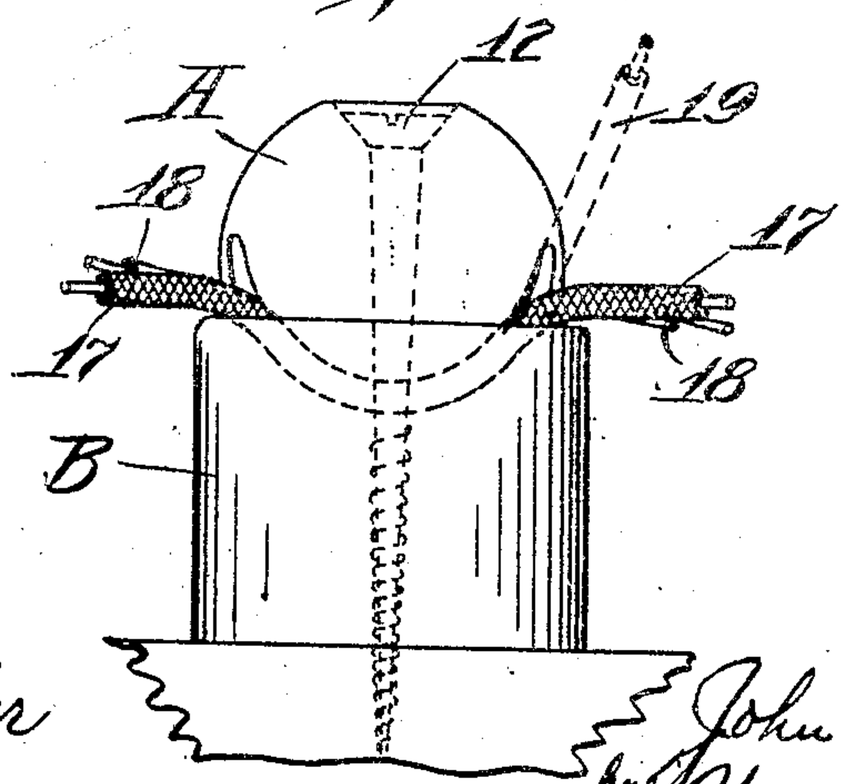


Fig. 4



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UNITED STATES PATENT OFFICE.

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INSULATOR.

965,723. Specification of Letters Patent. Patented July 26, 1910.

Application filed May 29, 1909. Serial No. 499,078.

To all whom it may concern:

Be it known that I, JOHN FRED MALTHANER, a citizen of the United States, residing at Chillicothe, Livingston county, Missouri, have invented certain new and useful Improvements in Insulators, of which the following is a specification.

The present invention relates to insulators for use in supporting and securing electric wires, and relates more particularly to that type in which two clamping members are arranged so as to hold the wire or wires between them. In devices of this sort heretofore in use, the arrangement of these members has always been such as to require that the wires extend substantially in one and the same direction from the insulator, otherwise sharp turns and bends are made in the wire which deteriorate and often cause it to break.

The principal object of the present invention is to devise a simple insulator of the type specified, in which the wires may be run off at various angles from the insulator.

Although the invention is capable of use with wires for use in various arts, it is particularly adapted to the holding of telephone wires and especially what are sometimes called "drop" wires, that is, those wires which lead from the telephone line laterally to the subscriber's instrument in an adjacent building. With my invention, it is possible to run these laterals in various directions from the pole from which the lead is taken, without causing injury to the wire.

In the accompanying drawing, I have illustrated a preferred form of my invention in four figures, of which—

Figure 1 is a perspective view of the two clamping members without the attaching screw; Fig. 2 is a vertical central section of the same; Fig. 3 is a bottom view of the ball clamping member; and Fig. 4 is a side elevation of the complete device illustrating the manner of its support and the arrangement of the attached wires.

Throughout these figures, like characters refer to like parts.

The insulator, as before indicated, comprises two clamping members, a ball member A, and a socket member B. The latter is preferably cylindrical in shape and is recessed on its under side so as to provide a preferably circular rim 10 which enables the member to conform readily to the curved surface of a telephone pole, in case it is attached to such a support. This member is also provided with a central bore 11 for the passage of a retaining screw 12. Obviously, there are many equivalents for the screw 12 which will readily occur to those skilled in this art. I therefore do not wish to be limited to a screw for the purpose of binding clamping members together and I have used the term in the claims with this understanding of equivalency. The socket member is also provided with a truncated conical projection 12 extending from the center of its socket. This projection coöperates with a similar recess 13 in the ball A, and the cooperation of the two gives rigidity to the whole device and removes undue pressure from the screw 12. The ball A is also provided with a central bore 14, which is reamed out at its upper end so as to bring the head of the screw 12 flush with, or slightly below, the upper face of the ball.

As clearly illustrated in Fig. 3, the under face of the ball A is provided with two grooves 15, 16, which extend throughout that portion of the surface of the ball which lies within the socket of the member B and terminate at points slightly beyond the same. Obviously, these grooves may be variously positioned and many equivalents will suggest themselves to those skilled in this art.

As illustrated in Fig. 4, the wires 17, 18, by reason of the easy curves provided by the ball-and-socket arrangement, are free from sharp bends, and as clearly illustrated by the dotted line position 19, they may be readily run off from the insulator at various angles.

In assembling the parts and placing the wire or wires in position, either member A or B may be readily rotated about the screw 12, before the same has been screwed home, until the right position is obtained, and then upon screwing down the screw 12, all the parts are firmly held in the desired position.

In carrying out my invention, it will be apparent that many alterations and modifications may be made in the arrangement of the parts without departing from the spirit and scope of my invention. Thus, as before pointed out, the grooves may be variously arranged, or equivalent grouping surfaces may be provided for the engagement of the wire or wires, the degree of curvature of the two members may be varied as well as the extent of the curved surface, and other

changes may be made, all within the scope of the person skilled in the art.

What I claim as new and desire to secure by Letters Patent of the United States is:—

1. An insulator comprising ball and socket clamping members having oppositely disposed wire engaging surfaces, and means for drawing said members toward each other into clamping position and for securing the socket member to a suitable support.

2. An insulator comprising ball and socket clamping members, one of said members having a groove in its clamping face disposed so as to engage the wire to be clamped and press it into engagement with the opposing face of the other member, and means for drawing said members toward each other into clamping position and for securing the socket member to a suitable support.

3. An insulator comprising ball and socket clamping members, the ball member being grooved on its clamping face so as to engage the wire to be clamped and press it into engagement with the opposing face of the socket member, and means for drawing said members toward each other into clamping position and for securing the socket member to a suitable support.

4. An insulator comprising ball and socket clamping members, the ball member being grooved on its clamping face so as to engage the wire to be clamped and press it into engagement with the opposing face of the socket member, and a screw extending through said members at substantially right angles to the clamping faces of said members and operative to draw them together and to secure said socket member to a support.

In witness whereof, I hereunto sign my name this 24th day of May, 1909.

JOHN FRED MALTHANER.

Witnesses:
F. DOUGHERTY,
C. L. WAITE.