Feb. 24, 1925. 1,527,318

E. LEWIS

INSULATOR

Filed Aug. 10, 1921

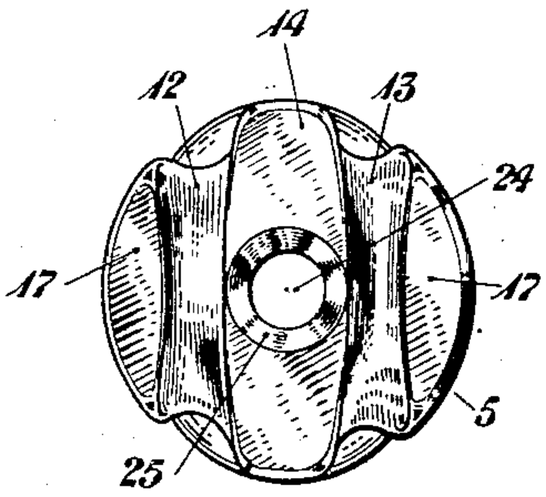

Fig. 1

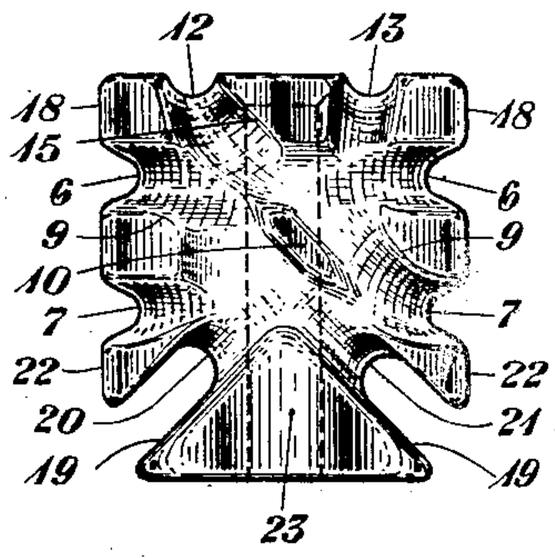

Fig. 2

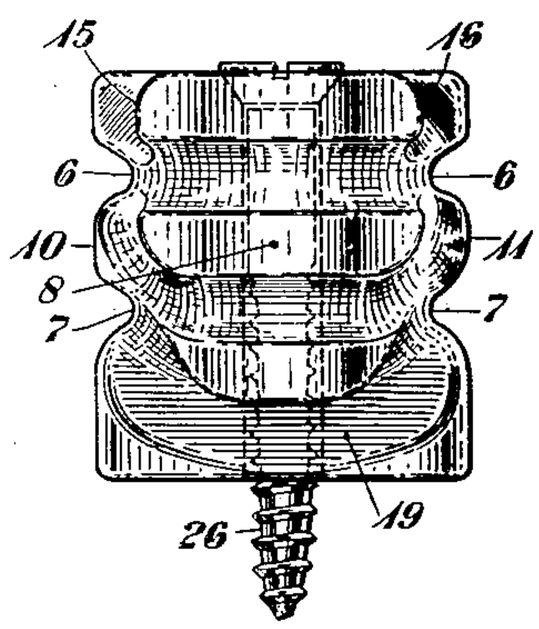

Fig. 3

Inventor
Edwin Lewis
By his Attorney

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UNITED STATES PATENT OFFICE.

EDWIN LEWIS, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY, A CORPORATION OF NEW YORK.

INSULATOR.

Application filed August 10, 1921. Serial No. 491,189.

To all whom it may concern:

Be it known that I, EDWIN LEWIS, residing at New York, in the county of New York and State of New York, have invented certain Improvements in Insulators, of which the following is a specification.

This invention relates to insulators, and more particularly to that class used in connection with wires for the transmission of electrical currents.

For the purpose of connecting electrical conductors in buildings with electrical transmission conductors carried on poles, drop wires are connected with the transmission conductors at the poles and strung to insulators affixed to the outer building walls. The drop wires are then carried along said walls on other insulators to entering points in said buildings, and connected with the interior wiring in a well-known manner. In many cases it is necessary that the insulators be mounted on supports to permit the connection of the drop wires therewith because of the angular position of the poles with respect to the insulators, and it is customary practice to employ such supports as L-shaped brackets, or the like, in order to properly position the insulators to receive the drop wires. This practice involves considerable expense in the use of such brackets or other equipment in connection with the insulators, as well as time-consuming operations required for their installation. Accordingly, it is an object of this invention to provide an insulator adapted for the direct attachment of the drop wires thereto without the aid of brackets or other equipment, and regardless of the position of the pole with respect to said insulator. Other and further objects of the invention will hereinafter appear.

In the accompanying drawing, in which is illustrated one embodiment of the invention, Figure 1 is a top-plan view of the improved insulator, Fig. 2 is a side elevation thereof, and Fig. 3 is also a side elevation of the device turned at an angle of 90 degrees from the view shown in Fig. 2.

Referring to the drawing, 5 represents an insulator which may be composed of any suitable insulating substance, such as porcelain, glass, or the like. The insulator 5 has a pair of grooves 6, 7, which are adapted to receive a pair of conductors or drop wires. The grooves 6 and 7 extend circumferentially about the surface of said insulator, and a separating wall 8 is provided between said grooves. The wall 8 extends only partly about the surface of the insulator and is divided into two segments, the terminating edges of said segments being parallel to each other and cut on angles of approximately 45 degrees, as indicated at 9, 9. Lugs 10, 11 are provided on the surface of the insulator and disposed thereon at a distance of 180 degrees from each other. These lugs are positioned between the edges 9, 9 of the segments of wall 8 and their edge surface conforms to the angular surface of the edges 9, 9. The lugs afford spacing means between a pair of conductors in their passage from grooves 6 and 12 to grooves 21 and 7, respectively.

A pair of grooves 12 and 13 are formed on the top surface of the insulator 5 and between said grooves is provided a surface 14, in the present instance being indicated as of a general elliptical form, as shown in Fig. 1. The ends of the surface 14 are cut away at an angle as indicated at 15 and 16, to correspond to the edges 9, 9 of the wall 8 and also the edges of the lugs 10 and 11. Formed at the outer edges of the grooves 12 and 13 are semi-elliptical surfaces 17, 17 from which vertical walls 18 extend downwardly and terminate at the upper portions or edges of the groove 6.

The lower portion of the insulator 5 is provided with surfaces 19, 19, which extend upwardly at an angle of approximately 45 degrees and terminate in a pair of grooves 20 and 21, said grooves being separated from the grooves 7, 7 by walls 22, 22. The grooves 20 and 21 are adapted to co-operate with the grooves 12 and 13, respectively, while the grooves 6 and 12 are adapted to co-operate with the grooves 21 and 7, respectively, in connecting or seating and retaining electrical conductors or drop wires. Formed at the ends of the surfaces 19, 19 are shoulders 23 which serve to position the drop wires under certain conditions. An aperture 24, extending through the center of the insulator 5 and terminating in a countersunk portion 25 on the surface 14, is provided for the reception of a screw 26 which serves to secure the insulator in position.

In practice, the insulator is secured to the building wall in an obvious manner and the drop wires are strung from the pole and

attached to said insulator. The arrangement of the grooves on the insulator is such that regardless of the location of the pole with respect to said insulator, the drop wires may be attached to the grooves lying at the angle corresponding to the inclination of the drop wires.

It will be seen that the use of this improved insulator eliminates the need of supplementary equipment in connection therewith and thereby effects considerable saving.

While there is shown and described herein one preferred form of the invention by way of illustration, it is understood that it is not limited or confined to the precise details of construction herein described and detailed, as modification and variation may be made within the scope of the claims without departing from the spirit of the invention.

What is claimed is:

1. An insulator having a pair of grooves extending circumferentially thereof, a second pair of grooves extending across one end of said insulator, a third pair of grooves extending across the opposite end of said insulator in the same direction as said second pair of grooves, one of the pair of said circumferential grooves and one of the pair of second mentioned grooves being adapted to co-operate with one of the pair of the third mentioned grooves and one of the pair of the said second mentioned pair of grooves respectively for the connection of electrical conductors, the pair of said second and said third mentioned grooves being also adapted to co-operate with each other for the connection of conductors.

2. An insulator having a pair of grooves extending circumferentially thereof, a second pair of grooves extending across one end of said insulator, a third pair of grooves extending across the opposite end of said insulator in the same direction as said second pair of grooves, said circumferential grooves being adapted for the connection of electrical conductors thereto at an angle of 90° with respect to the axis of said insulator, one of the pair of circumferential grooves and one of the pair of said second mentioned grooves co-operating respectively with one of the pair of the third mentioned grooves and one of the pair of the circumferential grooves for the connection of conductors thereto at an angle of 45°, and the pairs of said second and said third mentioned grooves being adapted to co-operate with each other for the connection thereto of conductors extending parallel to said axis.

In testimony whereof, I have signed my name to this specification this fifth day of August, 1921.

EDWIN LEWIS.