(No Model.)

T. T. ECKERT.

MEANS FOR SUPPORTING AND INSULATING ELECTRIC CONDUCTORS.

No. 554,664. Patented Feb. 18, 1896.

Fig. 3,

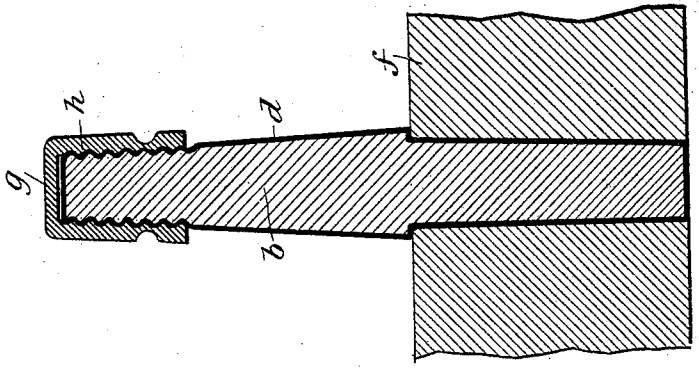


Fig. 2,

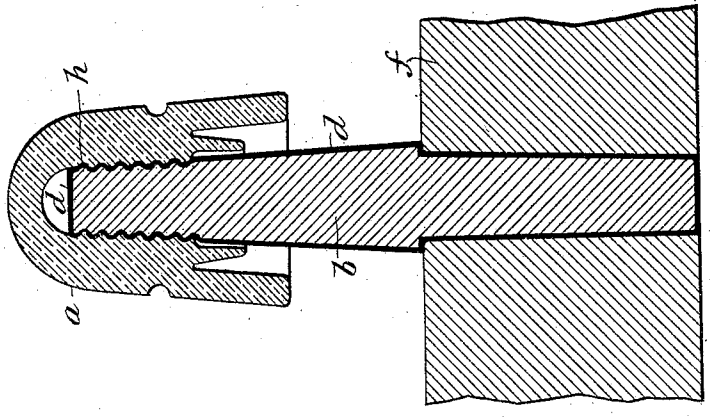
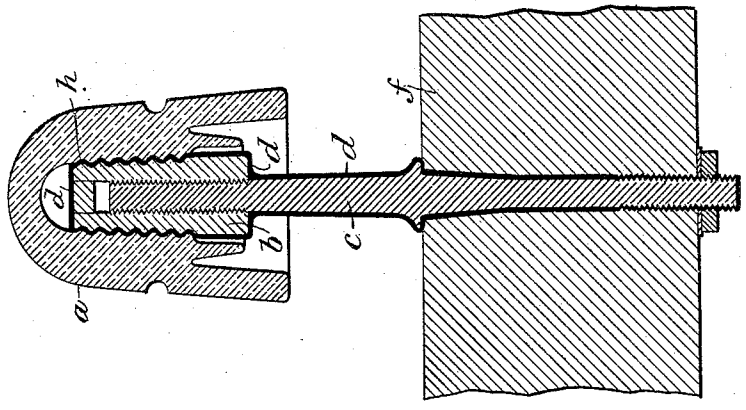


Fig. 1.



Witnesses
C. E. Ashley
H. W. Lloyd.

Inventor
Thomas T. Eckert
By his Attorney
C. L. Burkinbine

UNITED STATES PATENT OFFICE.

THOMAS T. ECKERT, OF NEW YORK, N. Y.

MEANS FOR SUPPORTING AND INSULATING ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 554,664, dated February 18, 1896.

Application filed December 8, 1894. Serial No. 531,193. (No model.)

To all whom it may concern:

Be it known that I, THOMAS T. ECKERT, a citizen of the United States, residing in the city, county, and State of New York, have made a new and useful Invention Relating to Means for Supporting and Insulating Electric Conductors, of which the following is a specification.

An insulating-support for wires, as commonly constructed, consists of a glass hood to which the electrical conductor is attached, the hood being placed upon the end of a pin of iron or wood which is set in a cross-arm, pole, bracket or other support. Under ordinary conditions the electrical conductor will be insulated from the earth or other conductor not only by the glass hood, but as well by the cross-arm, its support, and the pin, all of which, when dry, are partial insulators; but in wet weather such auxiliary insulation is practically destroyed by moisture from the atmosphere, and even the glass hood at such times loses its insulating qualities by the moisture collecting upon its surface.

The object of my invention is to produce a support having an extended surface between the wire and cross-arm upon which water cannot collect or remain, and which shall also be impervious to moisture. To this end I preferably form an integral structure consisting of an iron pin and a wooden thimble, and this structure I completely cover with a thick, tightly-adhering, tenacious coating of a substance having a molecular repulsion for water which is also an insulator of electricity. This I accomplish by a japanned or enameled covering, or by such other means and substances as are known to the arts for producing a smooth, tenacious, impervious and water-repelling surface.

In carrying out my invention I employ a pin or other support, with or without a glass hood, and which shall itself act as a partial insulator, and which at the same time shall prevent electrical escapes through moisture upon its surface, the essential feature being that the support shall be given an insulating capacity by thickly covering its entire outer surface, for a suitable distance from the wire which it carries, with a substance which is an electrical insulator that cannot be readily removed, and which shall be impervious to water and at the same time molecularly repulsive to moisture. A thick japanned surface is best, since it may be made smooth and applied to wood and metal alike; but, as already noted, similar surfaces may be made from a variety of substances under methods of treatment well known in the arts.

A wooden pin or support of itself, if kept dry, is a good insulator; but if wet it is of but little value. By my invention, the wooden thimble or a pin entirely of wood is practically sealed from atmospheric moisture, and by an insulating substance upon which dirt will not collect, and which cannot even carry moisture upon its surface.

In the accompanying drawings, Figure 1 represents an iron pin and a thimble of wood, paper or other insulating substance sealed within a smooth, tenacious covering of insulating material whose surface is a water-repellant. Fig. 2 represents a wooden pin, with a like coating, for holding the glass hood, while in Fig. 3 I have shown an iron cap in place of a glass hood.

In Fig. 1 the arrangement is that shown and claimed in the United States Patent of Dennis Doren, No. 472,529, dated April 12, 1892, with the addition of my improved envelope. The iron pin *c*, carried by cross-arm *f*, is screwed within the wooden thimble *b*, and upon the outer surface of *b* is worked a spiral thread *h*, which is turned within the female screw of the hood *a*; but before inserting the thimble within the hood its outer surface, screw and all, as well as the exposed surface of pin *c*, are thickly covered with a japanned coating or other covering *d*, as above described.

By employing an iron pin, water is prevented from reaching the thimble *b* from the cross-arm or other support by capillary attraction, while the coating which I apply prevents rain or atmospheric moisture from reaching the wood or remaining upon the surface either of the thimble or the pin. By this means, therefore, I secure a nearly perfect line of insulation through the space between the wire carried by the hood and the cross-arm.

A wooden pin will afford a good insulation if kept thoroughly dry, which may be done by japanning its entire surface, as above stated. Such a support is shown in Fig. 2. In Fig. 3 I show a pin of wood or iron whose sur-

face is entirely japanned or otherwise coated, upon one end of which is placed a cap *g*, of iron or other suitable material, to which the wire may be secured. Even the iron cap might be omitted, but some expedient of the kind may better be used, as without it the japanned coating would be quickly worn away.

What I claim, and desire to secure by Letters Patent, is—

1. In a support for an electric conductor, the combination of a glass hood having an interior screw-thread, an iron pin and a wooden thimble as described, the latter having a male screw-thread, said thimble and pin being covered with a water-tight casing of insulating material whose surface is formed by japanning, enameling or other means for producing a tenacious, tightly-adhering, smooth surface of insulating material.

2. In an insulating-support for electrical conductors, the combination of a metallic pin with a cap of wood, paper or other insulating material, the whole being covered with a casing of insulating substance, substantially as described.

THOS. T. ECKERT.

Witnesses:
WM. ARNOUX,
JOHN C. SANDERS.