

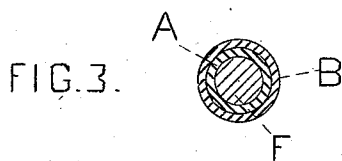
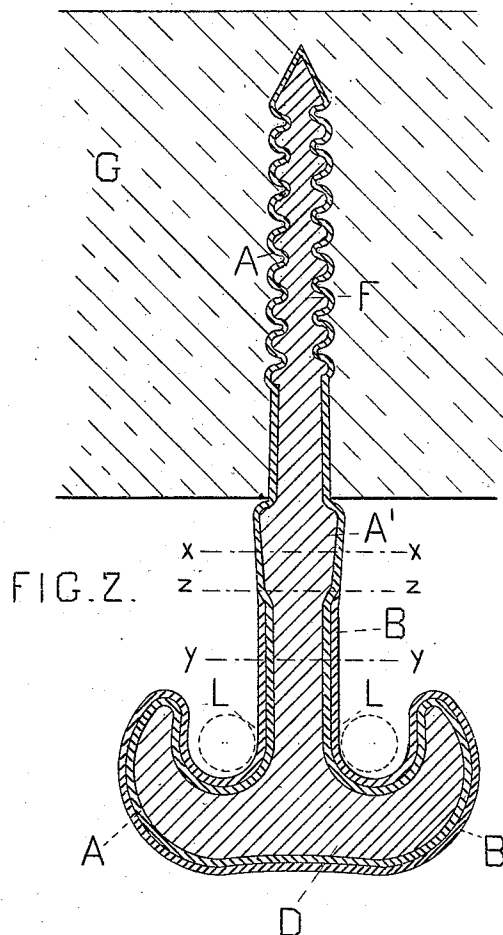
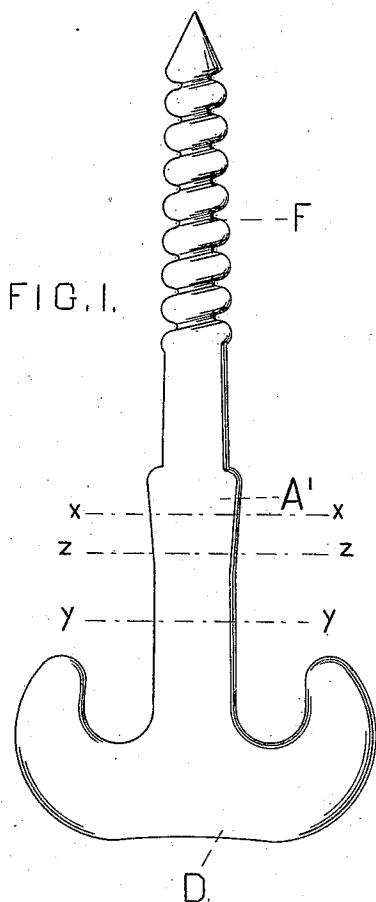
(No Model.)

A. W. HALE.

INSULATOR FOR ELECTRIC CONDUCTORS.

No. 294,384.

Patented Mar. 4, 1884.



WITNESSES:

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INVENTOR

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ALBERT W. HALE, OF PLAINFIELD, NEW JERSEY.

INSULATOR FOR ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 294,384, dated March 4, 1884.

Application filed May 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT W. HALE, a citizen of the United States, residing at Plainfield, Union county, New Jersey, have invented a new and useful Improvement in Insulators for Telegraph, Telephone, Electric-Light, and other Kinds of Electric Wires or Conductors, as a new article of manufacture, of which the following is a full, clear, and exact specification and description.

The object of my invention is, first, to protect the insulating-coating on glazed metallic insulators from fracture and wear by means of a jacket of metal or alloy, covering as well that part of the insulator with which the wire is in contact, as also whatever part may be exposed to blows, which, while it is less brittle than the glaze underneath, is sufficiently hard and tough to withstand blows and abrasion; second, to obtain by this means a metallic insulator which offers less resistance to or impedes the electric current less than insulators in which the wire is brought directly in contact with the body of the metal; and, third, by this means to reduce the amount of leakage of the electric current produced by dampness.

The metallic coating may be of any suitable metal or alloy—such, for example, as copper or zinc, or of both—that is, a layer of one and then of the other—and may be applied by electro-deposition or by fusing and casting. The insulators to which this protecting-jacket may be applied are all those metallic insulators of which the outer surface is composed of a vitreous glaze, which may be fractured by hammering or rough usage while they are being fixed to their supports.

In the drawings accompanying and forming a part of this specification, Figure 1 shows one form of insulated support for a telegraph-wire, and Fig. 2 shows a section thereof infixed in a supporting-body, G. In both figures, D is the head, showing the usual hooks to support the wire. F is the shank, showing a screw whereby it may be fastened in the usual support.

In Fig. 2 the hatched line A around the outside of the section and in contact with the metal is a coating of insulating glaze. The hatched line B around the section of the head in Fig. 2 outside the line A and up to the point *z z* is the protecting metallic jacket.

In Fig. 2 A' is a shoulder to prevent the shank from being inserted too far in its sup-

port, and also to protect the edge of the metallic jacket from injury at *z z*, the jacket and glaze presenting at their conjunction a smooth surface, as shown in elevation in Fig. 1, *z z*.

Fig. 3 is a cross-section of Fig. 1 at the point *y y* of the shank F, (shown also in Fig. 2,) and exhibiting the coating of glaze A as the inner hatched line, and the protecting-jacket B as the outer hatched line.

Fig. 4 is a cross-section of Fig. 1 at the point *x x* of the shank F, (shown also in Fig. 2,) and exhibiting only the insulating-coating A.

In Fig. 2 L is any point of contact between the wire and the insulator.

The deposited coating may be of any suitable metal—such as copper or zinc—and of any thickness desired, preferably about one thirty-second of an inch.

The jacket may be cast in a mold upon the glazed insulator as a matrix by well-known methods, and may be of any suitable metal or alloy the fusing-point of which is below the fusing-point of the glaze—as, for example, zinc or type metal. So much of the glaze is covered by the jacket of metal as it is desired to protect from contact with the wire and from blows and abrasion. In the Figs. 1 and 2 this jacket is shown as covering the hooks entirely, and extending nearly up to the supporting-body G—viz., to the shoulder A'.

I do not, however, claim in this application metallic insulators coated wholly or partly with enamel alone, for the purposes either of insulating the wire or of protecting the metal from oxidation, as I have already made application for Letters Patent therefor, dated May 17, 1883, (serial number 95,239.)

I therefore claim and desire to secure by Letters Patent—

1. The combination herein described of the metallic support for the wire, the insulating-glaze, and the outer re-enforcing jacket of metal or alloy, arranged and operating as and for the purposes set forth.

2. As a new article of manufacture, glazed metallic supports for electric conductors, having the coating of glaze re-enforced by a coating of metal or alloy, substantially as and for the purposes set forth.

Witnesses: ALBERT W. HALE.

ALBERT GALLUP,
J. J. SULLIVAN.