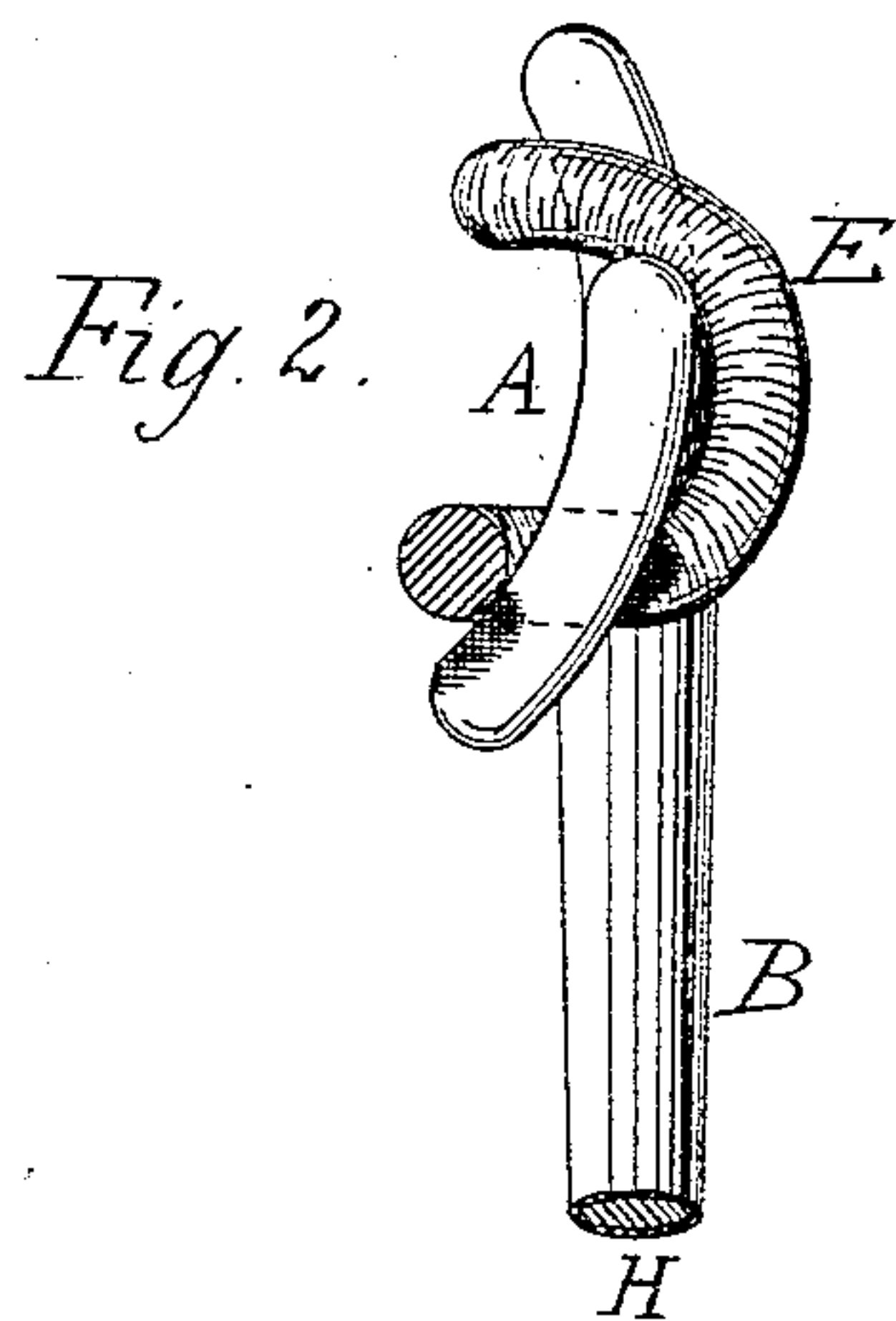
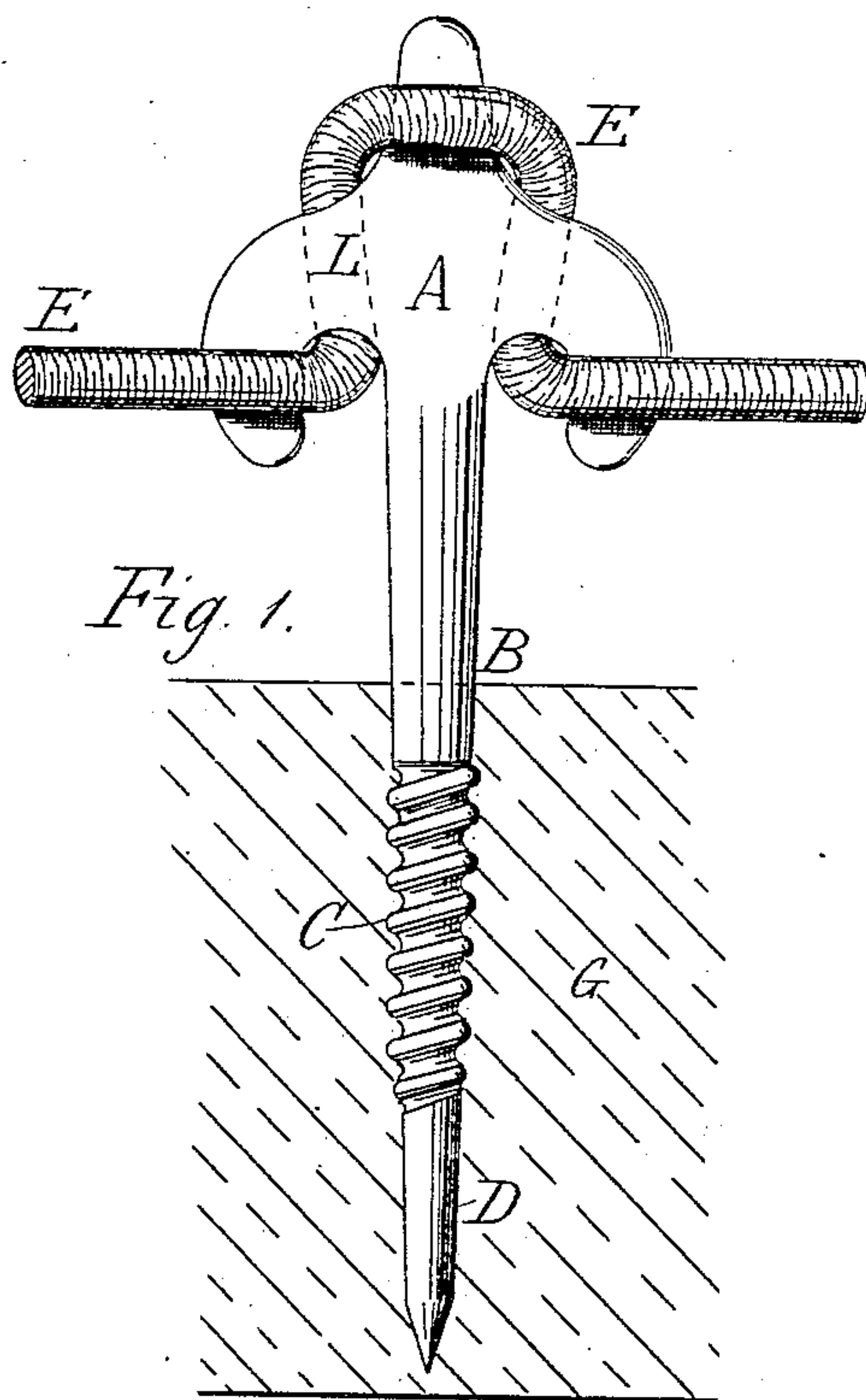


(No Model.)

A. W. HALE.
INSULATOR FOR ELECTRIC WIRES.

No. 293,242.

Patented Feb. 12, 1884.



WITNESSES:

Wm. S. Lowe
Albert Gallup

INVENTOR

Albert W. Hale

UNITED STATES PATENT OFFICE.

ALBERT W. HALE, OF PLAINFIELD, NEW JERSEY.

INSULATOR FOR ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 293,242, dated February 12, 1884.

Application filed May 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT W. HALE, a citizen of the United States, and a resident of the city of Plainfield and State of New Jersey, have invented a new and useful improvement in insulated supports for telephone, telegraph, electric light, or any kind of electric wires, and a new article of manufacture, of which the following is a full, clear, and exact specification and description.

My invention consists in insulating metallic supports for electric wires by covering them with such a complete coating of insulating glaze that they are wholly protected from the atmosphere as well as from contact with the wire and with their supports, and thus making them insulators, by which I avoid the necessity of using glass or porcelain, or expensive rubber insulators, and my supports are stronger and more durable, and do not require any auxiliary protection from injury by friction. The importance of thus completely coating a metallic insulator with glaze arises from the fact that when an edge of glaze is left exposed the surface of the metal is attacked by the oxygen or other corroding atmospheric agents, and the corrosion thus produced penetrates under the edge of the glaze and causes it to flake off, and thus destroy the insulation.

A form of my new insulated support is shown in the accompanying drawings, forming a part of this specification. I do not, however, confine myself to this form, for the necessity of protecting the metal from dampness and from other corroding atmospheric agents is equally urgent in all cases, whether the support be upheld by insertion into the upholding body or by inserting a projection of the supporting body in it.

Figure 1 represents such a glazed insulator. A is the head with prongs or horns to fasten the wire. B C D is the shank, consisting of a spike and screw, to be inserted in a suitable

support—such as a telegraph-pole or cross-arm—represented by G. E is the wire.

Fig. 2 is a side elevation of Fig. 1, showing a cross-section of the shank, with the coating of glaze H, represented by the black line. The metal base for the glaze may be cast or wrought in the form desired, and the whole insulator may be made in a single piece. The glaze may be of any composition in the nature of a glaze or frit that will insulate, the fusing-point of which is below the fusing-point of the metal to which it is to be applied.

One composition may be as follows: Two hundred and sixty parts of flint-glass, forty-one parts of carbonate of soda, and twenty-four parts of boracic acid are ground and mixed and fused, and the resulting mass or frit reground by such methods as are well known in the arts. It may be applied by laying it on the surface to be glazed by means of a brush or any other convenient method, after it is ground and mixed with water to form a paste, and after being dried may be fused on in a suitable muffle or furnace.

I therefore claim and desire to secure by Letters Patent—

1. As a new article of manufacture, metallic insulators for electric wires, combining in a single piece a bearing for the wire and a means of attachment to the support, insulated and made insulating by a complete covering of glaze, substantially as and for the purposes set forth.

2. As a new article of manufacture, metallic insulators for electric wires, protected from atmospheric influences, and also insulated from both the wire and the support for such insulators by a complete covering of glaze.

ALBERT W. HALE.

Witnesses:

ALBERT GALLUP,
J. J. SULLIVAN.