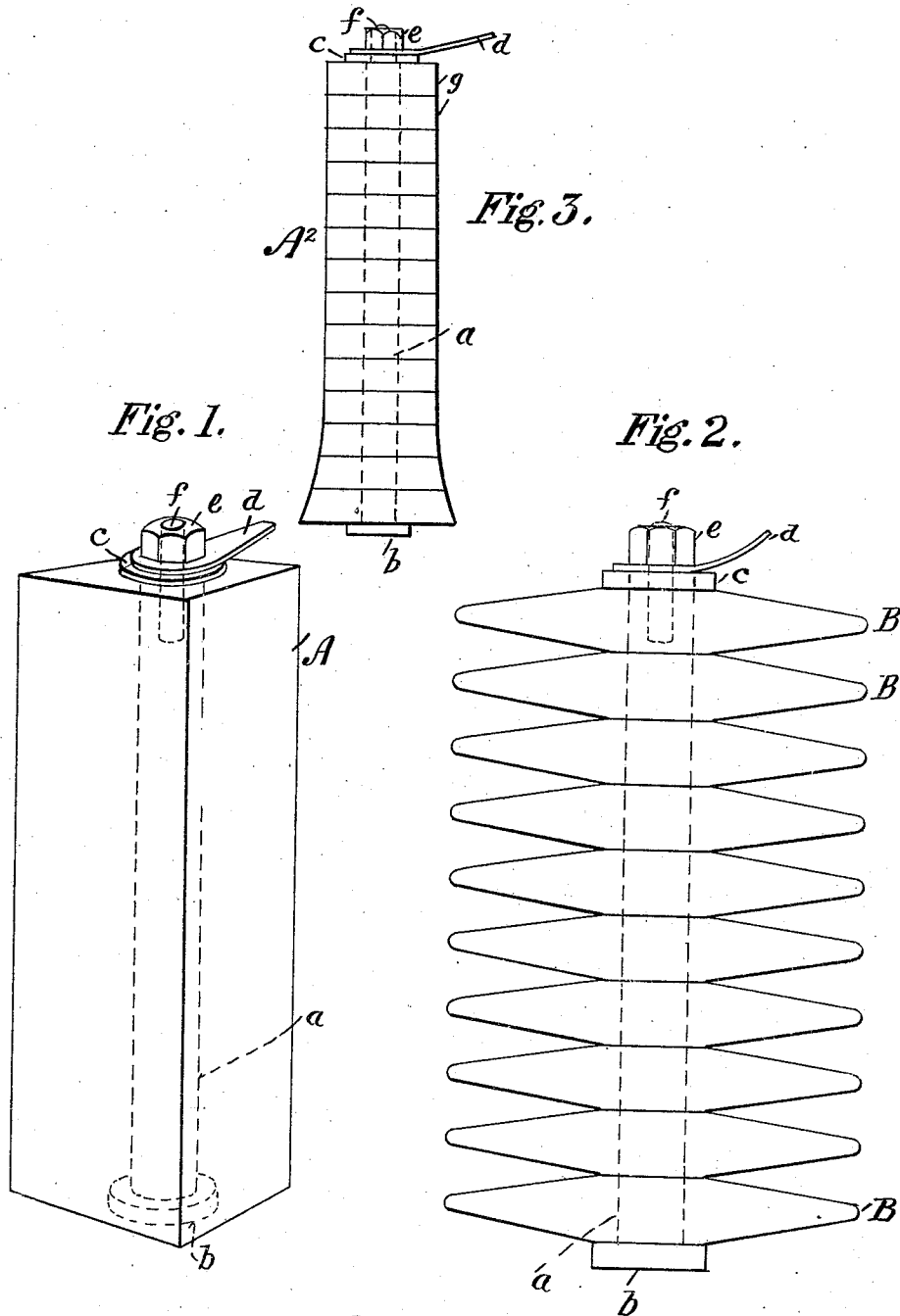


W. R. GARTON.  
GROUNDING DEVICE OR TERMINAL FOR LINE WIRES.  
APPLICATION FILED NOV. 12, 1908.

938,471.

Patented Nov. 2, 1909.



Witnesses  
Nathaniel J. Dodd  
Charles W. Kneath

Inventor  
William R. Garton  
By Geo. Willis Pierce  
Attorney

# UNITED STATES PATENT OFFICE.

WILLIAM R. GARTON, OF BROOKLYN, NEW YORK.

GROUNDING DEVICE OR TERMINAL FOR LINE-WIRES.

938,471.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed November 12, 1908. Serial No. 462,187.

*To all whom it may concern:*

Be it known that I, WILLIAM R. GARTON, residing at Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Grounding Devices or Terminals for Line-Wires, of which the following is a specification.

The invention about to be described relates to grounding devices or terminals for line wires. Such ground terminals are commonly made from metal plates or rods, and their efficiency depends upon being placed where the earth is moist or practically so, when the resistance to the passage of current is comparatively low, but it is found in practice that there is a great variation in the moisture during the year, and therefore a variation in the resistance to the flow of the current.

The present invention aims to provide a hygroscopic ground terminal which shall attract moisture to itself and retain the same indefinitely and at the same time keep the surrounding earth moist, and be of low resistance always.

The invention provides a ground terminal which is practically non-electrolytic, of low resistance and large capacity, and consists of a member or body molded in any suitable form, composed of a combination of chlorid of potassium and chlorid of sodium, or other similar materials, and suitable binding powders, with which may be mixed granulated coke or charcoal to extend the body into a sort of honeycomb or sponge in so far as having a cellular structure is concerned, which would to a certain extent accommodate moisture. When the above mixture is pressed in a mold, a chemical action takes place which eventually causes the combination to assume a hard and solid form, and be highly absorbent.

I will now proceed to describe the invention in detail, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the invention and Figs. 2 and 3 are side elevations of modifications.

Referring to Fig. 1, A represents a body or member in the shape of a square block, through which extends a supporter bolt *a* of conducting material, preferably of lead as this metal is less acted upon chemically or electrolytically than other metals, provided

at the bottom with a head *b*, and at the top with a screw *f* over which is placed a washer *c* to bear upon the end of the body, a tang piece *d* to which the line wire may be soldered, and the nut *e* which holds the parts together and secures them to the mass of material. The support may be in the form of a cylinder.

In Fig. 2, a bolt *a* passes through a plurality of ovoid-shaped disk units B B provided with a head *b*, a screw *f*, nut *e*, tang piece *d*, and washer *c*, and the several parts are held together by the bolt and nut, including the disks which thus constitute a mass of material whose surfaces are designed to be in contact with the earth. And in Fig. 3, a body *A*<sup>2</sup> is made of a series of ring units *g* held loosely together by the bolt *a* so that moisture may extend between them and provided as in the other figures and for the same purposes with a head *b*, nut *e*, tang piece *d* and collar *c*.

It is a desideratum in line terminals that as much surface as possible be exposed to the surrounding earth, which is obtained by the disk form described.

In the several figures the members A A<sup>2</sup> and B are composed of a molded mixture of chlorid of potassium and chlorid of sodium, a mechanical binder as asbestos or other suitable material in a fibrous form, a chemical binder as cement or plaster of paris, and granulated coke or charcoal, all in suitable proportions. In the preparation of the mixture water is supplied to cause the same to assume a plastic form in which it is placed in a mold and allowed to harden. By this combination the chlorids and coke are held in a structure composed of the cement and fiber which supports the same and prevents the inclosed moisture from being dissipated and also permits the absorption of moisture from the earth in which it is to be embedded.

Before such a line terminal as is herein described is placed in the earth, it is soaked in water until it is thoroughly saturated, and constituting as it does a mass of non-conducting and conducting material, when connected to a line wire and in the path of an electric circuit, it readily permits the passage of currents to the surrounding earth. It will be seen that the current from the line passes down the metal rod *a* and from

thence outward through the moisture-laden substance composing the members A, A<sup>2</sup> and B to the moist earth surrounding the same.

I claim as my invention—

5 1. The combination in a grounding device or terminal of a mass of hygroscopic and of non-hygroscopic material, and granulated coke or charcoal, constituting a hard and cellular substance, with a metal rod extending  
10 into and secured in the mass, provided with means of attachment to a line wire.

2. The combination in a grounding device or terminal of a body or member built up of a plurality of separate units, each unit com-  
15 posed of hygroscopic and of non-hygroscopic material, the latter holding the former in a structure, with a metal rod extending through the units and uniting them, and provided with means of attachment to a  
20 line wire.

3. The combination in a grounding device or terminal of a body or member built up of

a plurality of separate units, each unit com- posed of hygroscopic and of non-hygroscopic material and granulated coke or charcoal, 25 constituting a hard and cellular substance, with lead rod extending through the units and uniting them, and provided with means for connection with a line wire.

4. The combination in a grounding device 30 or terminal of a body or member built up of a plurality of separate circular units, each composed of hygroscopic material, with a rod extending through the units and holding them together, and provided with means of 35 connection with a line wire.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this 27 day of October 1908.

WILLIAM R. GARTON.

Witnesses:

VIOLET E. LEIST,  
EDWARD KIRKHAM.