(No Model.)

A. L. JOHNSTON.

INSULATOR.

No. 491,890. Patented Feb. 14, 1893.

Fig. 1.

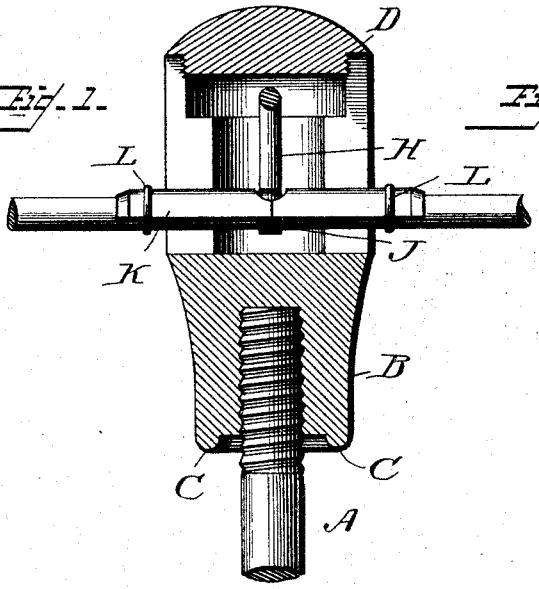


Fig. 2.

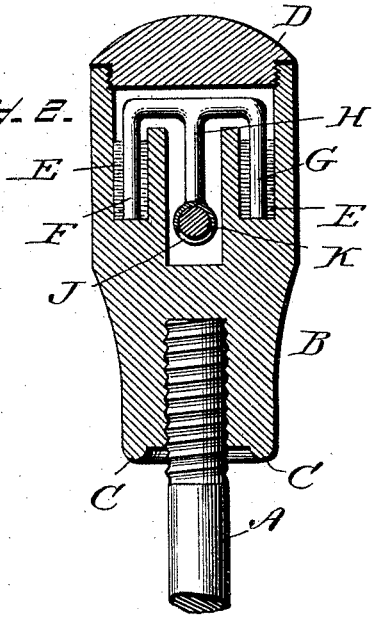


Fig. 3.

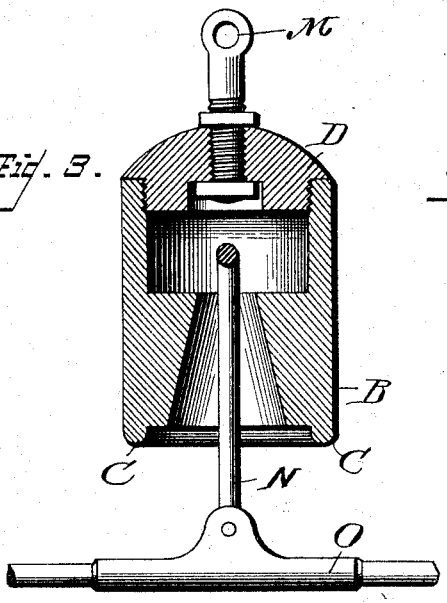
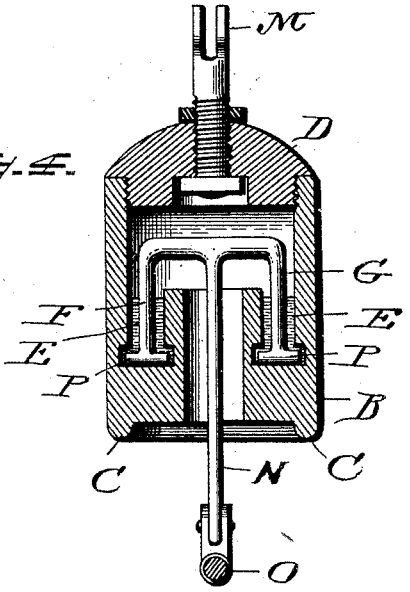


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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INSULATOR.

SPECIFICATION forming part of Letters Patent No. 491,890, dated February 14, 1893.

Application filed May 4, 1892. Serial No. 431,771. (No model.)

To all whom it may concern:

Be it known that I, ANDREW LANGSTAFF JOHNSTON, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Insulators for Electric Conductors, of which the following is so full, clear, and exact a specification as will enable those skilled in the art to which this invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to certain new and useful improvements in insulators for all kinds of electric conductors, the object being to produce an insulator which will properly support the wire, and yet at the same time will present perfect insulation.

In the accompanying drawings forming a part of this specification, and on which similar letters of reference indicate the same or corresponding features, Figure 1, is a vertical sectional view of the form of insulator used for the ordinary telegraph pole. Fig. 2, is a cross-section thereof. Fig. 3, is a vertical sectional view of a modified form of insulator to be used more especially for the holding of the trolley wire of electric railroads, and Fig. 4, is a cross-section thereof.

The letter A, represents a pin extending upwardly from one of the arms of a telegraph pole and the letter B, the body of the insulator, constructed of some insulating material in the present instance of wood and having its lower end terminating in a downwardly extending tip C so that in moist or wet weather the water will collect at these points and drip off. The body B, is provided at its upper end with a cap D the top of which is made round so that the moisture will run off at the sides.

The interior of the insulator is cut out as shown in Fig. 2, and the body, (in the present instance,) constructed of wood, I boil in paraffine or other suitable material so as to make the insulation more perfect and the wells E E I fill with oil or other non-conducting liquid.

The wire-hanger or holder proper for the line wire has three legs F, G, and H, the two former or those upon which it stands in the wells and which support the weight of the wire, and the latter H, is the one which carries or holds the line wire, said latter terminating in an eye J, through which the wire passes. As shown in Fig. 1, I provide a semicircular strip K, which fits over the leg H, and is fastened to the line wire by the bands L, L.

Fig. 4, shows a modified form of my insulator, which is the form constructed especially for the use of those electric railroads which use the trolley or overhead system. The letter M, in this figure refers to an eye by which the insulator is held or suspended and the letter N, to the extended leg (being an extension of the leg H in Figs. 1, and 2); this extended leg is pivotally connected by a bolt at its lower end to the tubular fastener or holder O, and this latter is what immediately supports the trolley wire. It will be observed in this modification, I have shown the short legs as provided with feet P, which feet are made just so large that they can be slipped into the wells E, E, by pushing them down side-wise but it would be impossible to extract or push them out of place by a direct upward movement, and for this reason in some instances it is found desirable.

The body of my insulator is shown of a somewhat different configuration in Figs. 3 and 4, and it is found in this form to be somewhat cheaper to manufacture.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is;—

1. In an insulator the combination with the body thereof provided with a well for the reception of a non-conducting liquid, of a wire-hanger suspended therein, said hanger having three legs, two of which fit in the well and the third of which carries the wire.

2. In an insulator the combination with the body thereof provided with a well for the reception of a non-conducting liquid, of a wire hanger or holder suspended therein, said hanger having three legs, two of which fit in the well, and the third of which is extended and carries the wire at its lower end.

3. In an insulator the combination with the body thereof terminating at its lower end in a sharply rounded edge from which the moisture can drip, provided with an interior well for the reception of a non-conducting liquid, of a wire hanger suspended therein and a cap to cover the same.

4. In an insulator the combination with the

body thereof terminating at its lower end in a sharply rounded edge from which the moisture can drip, and provided with an interior well for the reception of a non-conducting liquid, of a wire hanger suspended therein, said hanger having three legs, two of which fit in the well and the third of which carries a wire, and the detachable cap to fit over the well and inclose the same.

5. In an insulator the combination with the body thereof of a wire hanger suspended therein, said hanger having three legs, two of which fit in the body and the third of which carries the wire.

In testimony whereof I affix my signature in the presence of two witnesses.

ANDREW LANGSTAFF JOHNSTON.

Witnesses:

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