

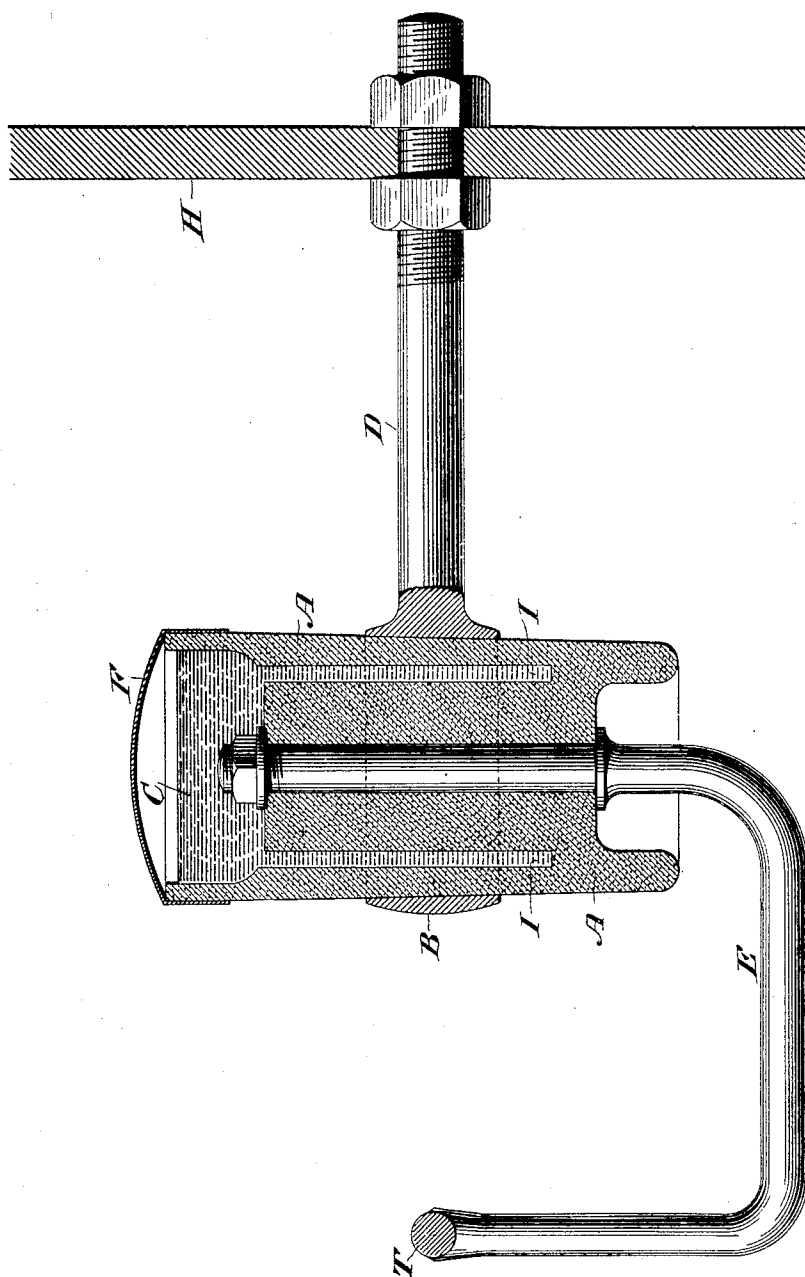
(No Model.)

R. J. HEWETT.

INSULATING SUPPORT FOR ELECTRIC CONDUCTORS.

No. 461,631.

Patented Oct. 20, 1891.



Witnesses

C. E. Ashley
S. J. Macquak

Inventor

Robert J. Hewett
By his Attorney
Franklin L. Pope

UNITED STATES PATENT OFFICE.

ROBERT JOSEPHUS HEWETT, OF ST. LOUIS, MISSOURI.

INSULATING-SUPPORT FOR ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 461,631, dated October 20, 1891.

Application filed July 30, 1891. Serial No. 401,138. (No model.)

To all whom it may concern:

Be it known that I, ROBERT JOSEPHUS HEWETT, a citizen of the United States, and a resident of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Insulating-Supports for Electric Conductors, of which the following is a specification.

Suspended electrical conductors are attached to and supported upon insulators which prevent the escape of the electric current to the earth at such points of support. Such insulators have been usually made of glass, porcelain, or other substances which are non-conductors of electricity; but the surface of such materials nevertheless frequently becomes coated with the film of moisture containing particles of carbon and other extraneous substances, which form a conducting path over the surfaces of the insulator and permit the current to escape. Efforts have been made to avoid this difficulty by forming grooves or receptacles upon the surface at some point between the conductor and the supporting-pin of the insulator and filling the same with a non-conducting liquid, such as paraffine-oil, which is at the same time repellent of moisture. Experience has shown, however, that the surface of such liquid in time becomes more and more coated with dirt and foreign substances, whereby its insulating properties undergo constant deterioration, making it necessary to renew the material from time to time, and thereby occasioning considerable trouble and expense.

The object of my invention is to provide for the constant and automatic renewal of a film of non-conducting liquid upon the surface of such an insulator, so that its capacity to prevent the escape of the current cannot become impaired by reason of exposure to dirt and moisture, even under the most unfavorable conditions.

The accompanying drawing is a vertical transverse section of an insulator embodying my invention.

In the drawing I have shown my invention as especially adapted to the insulation of a trolley-wire in the subterranean conduit of an electric railway. The body of the insulator

is shown at A, and is preferably made of wood, unglazed porcelain or earthenware, or other porous material. It is cylindrical and slightly tapering in form, and is held and supported within a metallic ring or collar B, integral with a shank D, which forms a support for the insulator, and is shown as provided with a threaded end, so that by means of suitable nuts it may be secured to the side of the conduit H or other convenient support. The insulator A is made concave at its upper end, so as to form a cup or reservoir C for containing a supply of a suitable liquid non-conducting material, which is at the same time repellent of moisture—such, for example, as paraffine or resin oil. The conducting-wire T is supported by means of a clip or other suitable fastening upon the end of a hook or wire-holder E, which may be secured centrally in the body of the insulator A, as shown.

In an insulator of the form here shown or of any of the forms in ordinary use the leakage or escape of electricity takes place over the surface of the body of the insulator from the wire-holder E to the ring B by reason of the accumulation of moisture and dirt upon the surface, which forms a conducting path for the current. In order to keep this surface covered with a film of the liquid non-conducting material, which shall be constantly renewed, ducts I I are formed within the body of the insulator, which are at all times filled with the liquid from the reservoir C, which liquid percolates slowly through the porous material of the insulator, flows in a thin stratum along the external surface and drips off at the lower edge, thereby keeping the films constantly renewed with fresh material and carrying away any particles of dirt or conducting substance which may have found a lodgment thereon, thus maintaining the surface as well as the body of the insulator in a condition to effectually prevent the escape of the electric current from the conductor T to the earth.

The reservoir C at the top of the insulator is preferably covered with a cap F, whereby foreign substances are prevented from entering. It may be replenished with fresh liquid from time to time, as may be required.

I claim as my invention—

1. The method, substantially as hereinbefore set forth, of preserving the non-conducting properties of an insulator for supporting
5 electrical conductors, which consists in coating the exterior surface of the body of such insulator with a film of non-conducting liquid and automatically maintaining a constant supply of said liquid, whereby said film is
10 continually renewed.
2. An insulator for supporting electric conductors, provided with a receptacle or reservoir for containing a non-conducting liquid, and means, substantially such as described,
15 for automatically conveying a constant sup-

ply of said liquid from said reservoir to the surface of said insulator, as and for the purpose set forth.

3. In an insulator for electric conductors, the combination of the non-conducting body 20 A, the support or bracket D, the wire-holder E, the reservoir C, and the ducts I I, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name this 27th day of July, A. D. 25 1891.

ROBERT JOSEPHUS HEWETT.

Witnesses:

JAMES JOSEPH HAMMOND,
HOMER A. CANFIELD.