(No Model.)

E. CLARK.

INSULATOR.

No. 306,718. Patented Oct. 21, 1884.

Fig. 1.

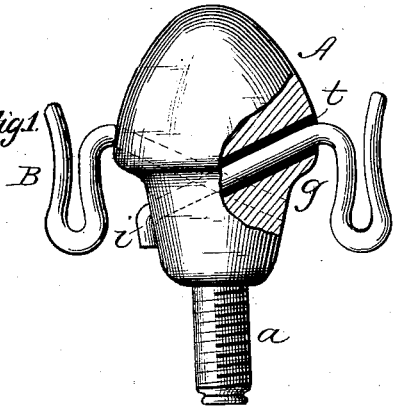


Fig. 3.

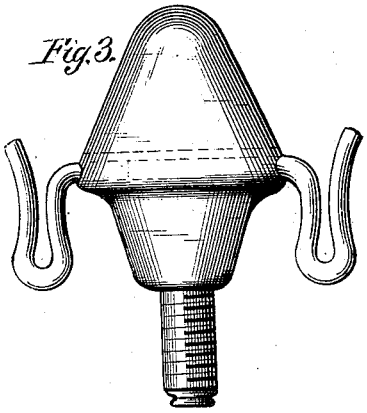


Fig. 2.

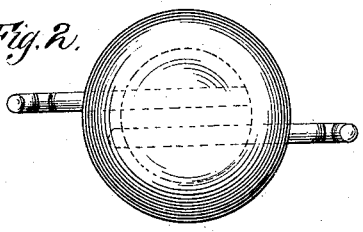


Fig. 4.

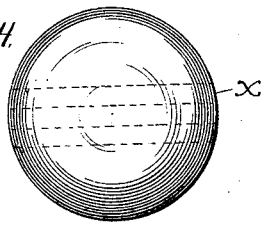


Fig. 5.

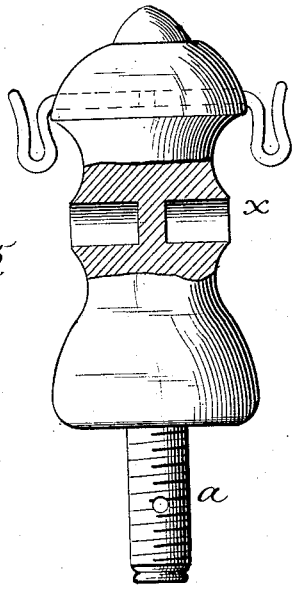
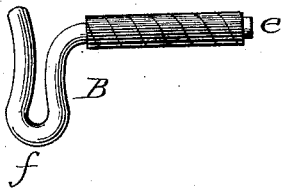


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDUARD CLARK, OF JERSEY CITY, NEW JERSEY.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 306,718, dated October 21, 1884.

Application filed July 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDUARD CLARK, of Jersey City, Hudson county, State of New Jersey, have invented certain new and useful Improvements in Insulators, of which the following is a specification.

My invention is an insulating-holder for electrical conductors, consisting of a socketed block and certain metallic supports adapted thereto, and certain insulating means, as fully described hereinafter, whereby to secure the conductors so as to permit longitudinal adjustment without allowing of their escape from the supports and maintain a perfect insulation between the support and the block.

In the drawings, Figure 1 is an elevation in part section of my improved insulating-holder. Fig. 2 is a plan of Fig. 1. Fig. 3 illustrates a modified form of holder. Fig. 4 is a plan of Fig. 3. Fig. 5 is a part sectional view showing another modification. Fig. 6 is a detached view of one of the metallic supports.

The body A of the insulator is a wooden block, preferably of a generally cylindrical form, and with sockets or perforations *x*, which are axially in line, as in Fig. 5, or side by side, as in Figs. 1 to 4. In any case the said sockets are separated from each other. The block is contracted below the outer ends or mouths of the sockets, and the shoulder *g*, formed by this contracting of the block, is inclined from the wide to the contracted portion, so that any moisture collecting on the block, instead of accumulating and hanging in drops on the shoulder and affording an electrical conducting-surface, will run readily off to the support to which the block is attached.

The attachment may be effected in any suitable manner. Preferably the block is turned with a stem, *a*, adapted to an opening in the support, and in some cases threaded to secure a more effective attachment, or it may be perforated to receive a pin to fasten it.

The supports B for the electrical conductors consist of rods or wires with stems *e*, adapted to be inserted in the sockets *a*, and bent at the outer ends to form loops *f*, spread at the curve to receive the conducting-wire, but closer together above this point, so as to spring open to admit the wire and then close over it, thus permitting it to be drawn longitudinally to make all proper adjustments, but also holding it securely against any tendency to jump or be drawn from its place.

The sockets *x* preferably extend completely through the block, either on horizontal lines, as in Figs. 3 and 4, or inclined in opposite directions, as in Figs. 1 and 2, and the stems *e* may be bent laterally at the ends to form hooks *i*, which securely hold the supports in place.

In place of using hard and expensive wood for the holder A, I may employ as cheap and porous wood as I can procure, and impregnate it with a non-conducting and water-repellent material. Thus the blocks, after being turned, are soaked in tar, paraffine, or other material or composition which will penetrate the pores, improve the non-conducting qualities of the block, and make it water-repellent, so that moisture will not adhere to and collect on the surface and afford a means for the escape of the electric current from the conductors.

To secure a better opening of the pores and a more thorough penetration of the blocks by the material, I prefer to put the blocks in a material solution or mixture, which is maintained in a hot state, thus increasing its fluidity and its penetrating qualities and opening the pores for its admission.

To more thoroughly insulate the supports B from the block, I form the sockets *x* larger in diameter than the stems *e* and surround the latter with a non-conducting or insulating material or composition, *t*. This insulation may be of any suitable character. I prefer, however, to use a composition consisting, mainly, of corundum and a suitable vehicle, as asphalt, tar, rubber solution, paraffine, &c. This composition may be inserted in the socket or applied to the stem as a paste, as shown in Fig. 1, or a strip of fabric may be coated with said composition and wrapped round the stem before its insertion in the socket, as shown in Fig. 6. The stem may be dipped in the material and then inserted in the socket, or the latter may be filled with the material and the stem then inserted.

The use of the surrounding insulating material *t* is specially serviceable when the stems do not extend through the block, as shown in Fig. 5, as the insulator serves to hold the sup-

ports in place and prevent them from slipping out of the sockets.

To secure a better insulation the block may be coated or painted with the above-described insulating composition.

Without limiting myself to the precise construction of block or supports shown, I claim—

1. An insulator or support for electrical conductors, consisting of a block of wood recessed to receive the shanks of metallic supports, said recesses containing insulating material around the supports and contracted below the recesses to form an inclined shoulder, *y*, for the purpose set forth.

2. The wooden block A, having recesses containing supports embedded in insulating material adapted to hold the supports of electrical conductors and saturated with an insulating and water-repellent material or composition, substantially as described.

3. The insulator-block A, having sockets *x*, in combination with metallic supports B, arranged on opposite sides of the block, and having shanks adapted to said sockets, substantially as described.

4. The combination of the socketed wooden block A, supports B, having shanks adapted to the sockets, and an intervening body, *t*, of the insulating material, consisting of corundum and a suitable vehicle, substantially as described.

5. The combination of the wooden block A, and metallic supports secured thereto and bent to form supporting-loops *f*, the sides of which are nearer together above the looped portion, substantially as described.

6. The combination of the block A, having sockets extending through the same, and metallic supports having shanks extending through the sockets and bent at the ends, substantially as described.

7. The combination of the socketed wooden block A, impregnated with an insulating material, and the supports having shanks extending into said sockets, and an intervening body, *t*, of insulating material, substantially as described.

8. An insulating support consisting of a wooden block having an insulating coating composed of corundum, and a suitable vehicle, as set forth.

9. An insulating support consisting of a wooden block having a securing pin or projection integral therewith, and line-supporting hooks embedded in the block.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDUARD CLARK.

Witnesses:

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