

(No Model.)

H. H. LUSCOMB.
INSULATOR.

No. 520,602.

Patented May 29, 1894.

FIG. 1.

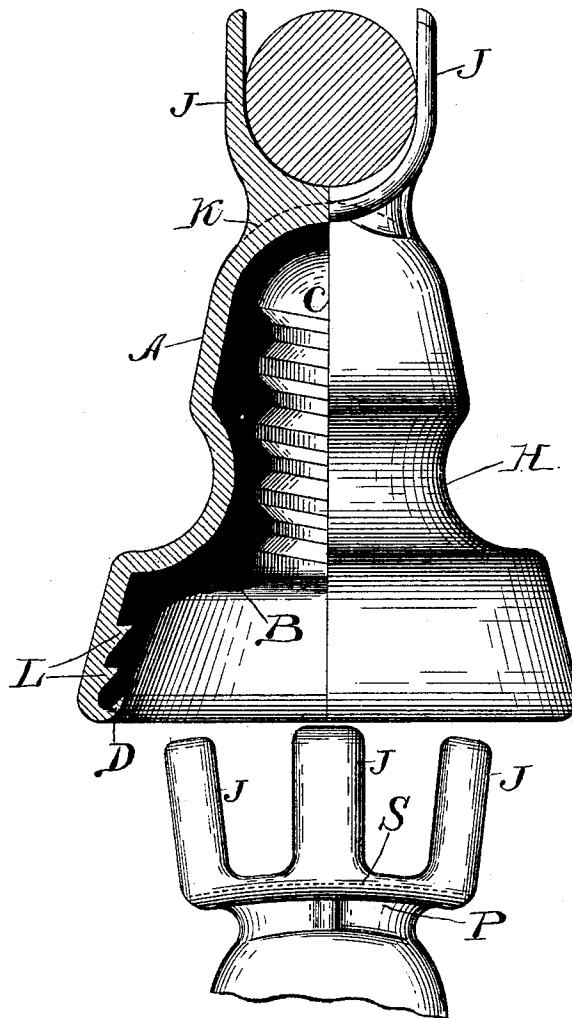


FIG. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY HERBERT LUSCOMB, OF HARTFORD, CONNECTICUT.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 520,602, dated May 29, 1894.

Application filed March 19, 1894. Serial No. 504,335. (No model.)

To all whom it may concern:

Be it known that I, HENRY HERBERT LUSCOMB, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Insulators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to electrical insulators, and more particularly to insulators of the kind employed in the equipment of electric railways for insulating and supporting line-conductors and the like.

The invention consists in an insulator embodying the improved construction hereinafter more fully set forth, and the novel features of which are pointed out in the claims which are appended hereto and made a part hereof.

My invention will be fully understood from the following description, reference being had to the accompanying drawings, which shows a side view of an insulator embodying my invention, one half of the insulator being in elevation and the other half in section to more clearly show the construction.

In insulators of the class referred to it is highly desirable that the interior parts should be wholly protected, not only from the weather and moisture, but also from accidental blows, which latter in case the exterior of the insulator is not strong and durable, are apt to result in an impairment of the insulation. It is highly desirable, not only that the top and sides of the insulator should be protected in this manner, but also that the bottom or under side thereof be similarly protected, so that a blow, such, for example as that received from a misplaced trolley may be successfully withstood without cracking or otherwise damaging the insulation. These objects I obtain by the employment of a continuous outer shell or casing of metal, which, being integral throughout, and without perforation, completely excludes moisture, while at the same time it is of sufficient strength to perfectly protect the insulator from damage resulting from an accidental blow. Also, by forming the lower edge of the shell or casing with an inturned lip which is in contact with and forms a protection for the lower

edge of the insulating material. It will be obvious that the precise outward form of the insulator, as also the precise construction of the interior parts, are not essential to my present invention.

I have shown in Figure 1 of the accompanying drawings one form of insulator embodying my invention, said form being that of an insulator which may be employed either as a trolley wire insulator or as a pole insulator. Fig. 2 is a side view of the upper portion thereof.

A is the outer metallic shell or casing which is formed integral throughout and is continuous, entirely covering the interior portions which latter comprise the insulating material and the wooden or metallic parts which are insulated from the case A by means of said insulating material. The entire surface of the case A is in contact with a mass or layer B of insulating material, preferably of one of the well-known plastic compositions, which may be molded into shape in the interior of the casing. The precise character of the insulation employed is not material, however, and therefore, I do not desire to limit myself to the employment of a plastic composition, as any well-known form of insulating material may be employed. As above stated, the insulating material indicated at B is preferably a plastic composition and may be provided with an interior cavity shown at C which is molded therein and which is provided with internal threads, thus forming a screw-socket into which the insulator connection or support, not shown, may be screwed. The lower edge of the case or bell A is formed with a tapering lip D, integral with the case A and projecting inwardly, as indicated by the dotted lines. After the insulating material B is in place the free edge of the lip D is turned upwardly slightly as shown by the full lines, so as to form a perfect protection for the edge of the insulating material and prevent the insulation from being cracked or impaired by a blow from a misplaced trolley or the like. The inturned lip D extends entirely around the lower edge of the casing or bell A and thus forms a complete protection for the insulation. The annular groove in the casing A which is shown at H is intended to receive a wire or yoke of well-known con-

struction for securing the insulator in place. If the insulator is employed as a pole insulator, the upwardly projecting top of the pole or of the insulator supporting piece may be
 5 screwed into the socket C in the insulating materials. The case A may be formed either with upward projections J at the top thereof for the reception of a conductor, or, if these are not desired, they may be omitted and the
 10 top may be rounded as indicated by the dotted lines K. When the projections J are used they are preferably formed on a cross piece or base P which is secured to or is integral with the top of the casing A. Three projec-
 15 tions J are placed in line on each side of the base P as shown. The cable to be supported is placed between the lines of projections and the projections are then turned in over
 20 the cable to securely hold it in place. It will be noted that the floor of the space between the lines of projections is curved slightly as indicated by the dotted line S. This is desirable to lessen the danger of the cable cover-
 25 ing being cut or abraded by contact with the support.

By my invention an insulator is produced having a continuous metal outer case with an upturned lip at the lower edge, said case and
 30 lip being in contact with and serving as a protection for the layer or mass of insulating material which is placed within the case and which serves to insulate the case from the metal or other connections which lie within
 the same.

35 When a plastic composition is employed as

an insulating material it is preferable to provide the inner surface of the lower portion of the case or bell A with one or more annular retaining projections or flanges L which serve to retain the molded composition securely in 40 place.

What I claim is—

1. An insulator comprising a metallic case, and insulating material within said case, and said case having an inturned lip at the lower 45 edge thereof in contact with and forming a protection for the lower edge of the insulating material, substantially as set forth.

2. An insulator comprising a continuous metallic case, a mass of insulating material 50 within said case and in contact with the interior surface thereof, said case being provided with an inturned lip at the lower edge thereof to cover and protect the lower edge of the insulation, substantially as set forth. 55

3. An insulator comprising a metallic case and insulating material within said case, said case having at the top thereof and secured thereto a cable-support, consisting of a base 60 portion and arms projecting upwardly therefrom and adapted to be bent inwardly over the cable to secure it in place, substantially as set forth.

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

HENRY HERBERT LUSCOMB.

Witnesses:

WM. A. MACLEOD,

ROBT. WALLACE.