(No Model.)

W. BARBOUR.

ELECTRICAL INSULATOR.

No. 592,505. Patented Oct. 26, 1897.

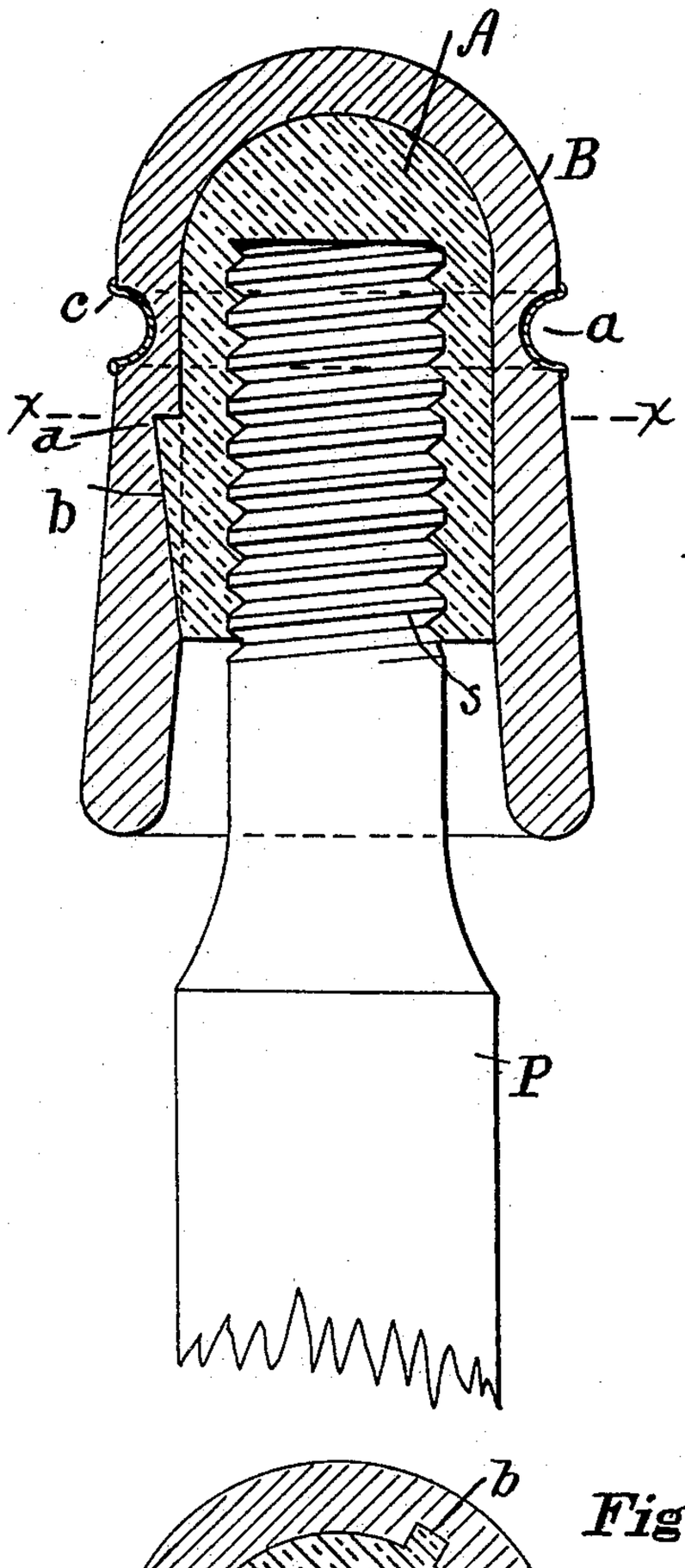

Fig. 1.

Fig. 2.

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WELLINGTON BARBOUR, OF BAR HARBOR, MAINE.

ELECTRICAL INSULATOR.

SPECIFICATION forming part of Letters Patent No. 592,505, dated October 26, 1897.

Application filed August 28, 1897. Serial No. 649,794. (No model.)

To all whom it may concern:

Be it known that I, WELLINGTON BARBOUR, residing at Bar Harbor, in the county of Hancock and State of Maine, have invented certain Improvements in Electrical Insulators, of which the following is a specification.

The present invention relates to improvements in insulators, such as are employed in overhead-line construction; and its especial object is to provide an insulator which shall prevent leakage of the electric current from the wire fastened thereto and at the same time be of such construction as not to be broken by stones thrown by malicious persons or by shot or bullets from guns and pistols. In the telegraph and telephone lines traversing long lonely roads through woods and uninhabited sections of the country a very serious loss is occasioned by the wilful breakage of insulators, to the detriment of electric transmission of telegrams and telephony.

The purpose of this invention is to provide an insulator of glass or other material provided with an internal screw which will fit the pins in common use and to place over the said glass insulator a covering which shall be elastic in its nature and waterproof, preference being given to such substances or materials as are in themselves electrical insulators in a fair degree. The glass insulator is provided with flanges or projections on its outer surface which tend to hold and retain the covering in its place, which covering is applied in a plastic state or, if of sufficiently elastic nature, may be drawn over the glass insulator while in a green or undried state. I provide a groove upon the outer surface of the covering for the retention of the line-wire or the bridle-wire which secures the insulator to the line-wire, and I place in this groove a metal lining to prevent the bridle and line-wire from wearing or abrading the same, all of which I will now proceed to describe, and point out in the appended claims.

Figure 1 of the drawings is a section of the insulator and its covering according to my invention secured to a wooden supporting-pin, and Fig. 2 is a section on line *x x* of Fig. 1.

P represents a wooden pin whose lower end is secured to a cross-arm in a well-known manner and whose upper end is provided with a coarse screw-thread *s*. Over the pin P is an insulator A, which may be of glass or any other good insulating material, provided with an internal screw to fit the screw-thread *s* of the pin. It is to be provided with projections upon its outer surface. In the drawings three are shown, *b b b*, in shape like wedges extending inward toward the center of the insulator and having a square shoulder *d*. Other projections may be substituted for those shown.

B is a covering over the insulator A, which may be of any suitable elastic material capable of assuming a plastic state, as some of the forms of rubber, pulp, or felt, and which may be applied to the insulator A, shaped and afterward treated to a heating process to in a suitable degree harden the same, so that it will retain its shape for the purposes needful and retain its elasticity, especially upon its outer surface. A ring or depression *a* would be formed in the material, over which a metal band *c*, curved to fit the same, would be fastened, or the band *c* could be made beforehand and slipped over the material before it was applied to the insulator or in any other suitable way. The projections *b* serve to retain the covering in place upon the insulator and prevent its displacement. The covering preferably extends downward below the inner insulator A to form a petticoat.

Other elastic material may be employed for the covering—for instance, felt treated with rubber or other preservative and waterproof substance may be used. The covering in such a case could be made after the manner of felt hats in the shape desired and drawn over the insulator very tightly when fresh or very flexible and allowed to dry thereon. A groove and metal band can be applied, as previously described.

Various elastic substances will suggest themselves to inventive minds for a suitable covering.

The special object of the construction shown is to provide an insulator which will resist stones and other missiles and at the same time produce effective insulation.

The inner insulator A would of itself insulate the line-wire, and the elastic covering B deadens the force of any blow from a missile and prevents the breakage of the insulator,

and the covering is preferably of insulating substances, so that altogether a very efficient insulator is produced.

Having described the invention, I claim—

1. In an insulator for line-wires, the combination of an inner cylinder of glass or other suitable insulating material provided with an internal screw, and external projections; with an outer covering of elastic material provided with a groove, as set forth.

2. In an insulator for line-wires, the combination of an inner insulator provided with an internal screw and external projections; with an outer covering of elastic material extending in the form of a petticoat below the said inner insulator, and provided with a groove, as set forth.

3. In an insulator for line-wires, the combination of an inner insulator of glass provided with an internal screw and external projections; with an outer covering of elastic material extending in the form of a petticoat below the said inner insulator, and provided with a groove lined by a ring of metal, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 21st day of August, 1897.

WELLINGTON BARBOUR.

Witnesses:
JOHN E. BUNKER, Jr.,
GRACE G. HAYNES.