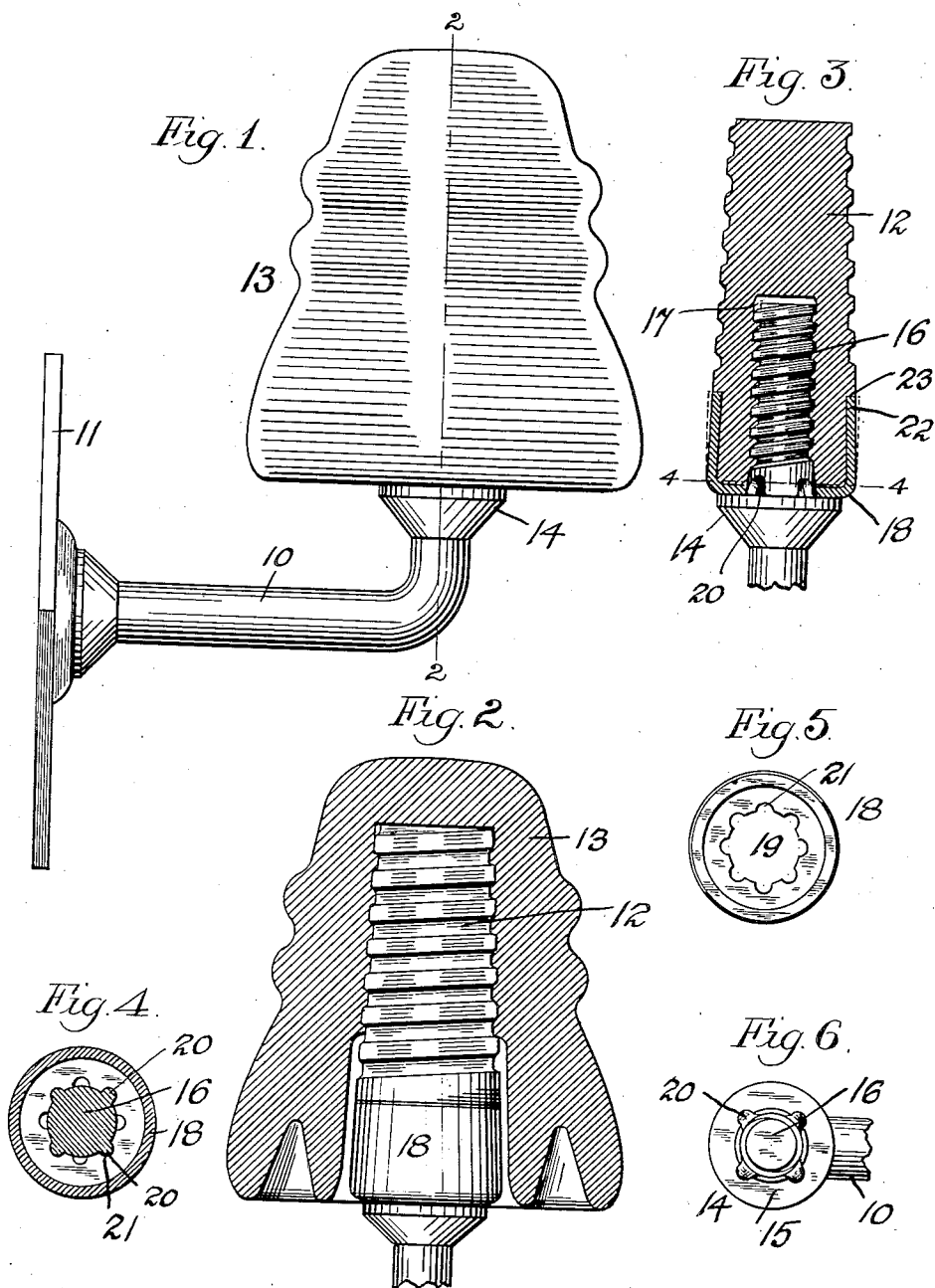


P. M. BENEDICT.
INSULATOR BRACKET.
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1,286,207.

Patented Dec. 3, 1918.



WITNESSES:
J. S. Coleman

INVENTOR.
P. M. Benedict
BY *[Signature]*
ATTORNEY

UNITED STATES PATENT OFFICE.

PAUL M. BENEDICT, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE BARNES & ROBERT MANUFACTURING COMPANY, OF MILLDALE, CONNECTICUT, A CORPORATION OF CONNECTICUT.

INSULATOR-BRACKET.

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Specification of Letters Patent

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To all whom it may concern:

Be it known that I, PAUL M. BENEDICT, a citizen of the United States, residing in the city and county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Insulator-Brackets, of which the following is a full, clear, and exact description.

This invention relates to insulator brackets or supports such as used in connection with insulators for telegraph, telephone and other electric wires, and it relates more particularly to a device in which an insulator of glass or the like, usually of the petticoat type, is secured to and supported on a pin or so-called "cob" of non-conducting material. In the preferred form, an insulator body of glass has a threaded socket by which it can be screwed on to a wooden cob projecting upward from a suitable bracket or other support, but my improvements are also applicable to other types of insulators.

One of the primary objects of the invention is to provide means for effectively securing the pin or cob on the bracket or other support. More particularly, it is aimed to furnish a construction in which the cob is interiorly reinforced. Very often the insulator is under considerable strain, which tends to snap off the cob at or near the lower part thereof, but my improved insulator support is so constructed that the cob is strongly reinforced and supported at the lower part so that it will not break off under any ordinary strain.

Another object of my invention is to provide means for preventing the loosening of the cob on the bracket. Devices of this character are subjected to such hard usage that in many cases the cob works loose from the bracket as a result of strain or vibration. This defect is avoided in the construction hereinafter described.

To these and other ends, the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawing,

Figure 1 is a side elevation of an insulator bracket embodying my improvements;

Figure 2 is a section of the insulator proper on line 2—2 of Fig. 1, showing the cob and its support in elevation;

Fig. 3 is a longitudinal section through the cob;

Fig. 4 is a section on line 4—4 of Fig. 3;

Fig. 5 is a top plan view of the cup detached; and

Fig. 6 is a top plan view of the threaded supporting shank on the bracket.

In the drawing, I have shown my improvements applied to an insulator comprising an L-shaped bracket arm 10 adapted to be screwed or otherwise secured to a vertical surface by means of an attaching plate 11. The vertically extending portion of the bracket arm 10 supports a wooden cob 12 supporting a glass insulator 13 of the petticoat type, said insulator having an interiorly threaded socket by which it is screwed on to the cob 12. However, my improvements are not limited to this specific type of insulator.

In order to support the cob 12 firmly on the bracket or other supporting member, my construction is preferably as follows: At the upper end of the bracket, a shoulder 14 is provided having a flat upper surface 15, as shown in Fig. 6. The diameter of this shoulder will preferably approximate that of the lower end of the cob. A shank 16 formed integral with the bracket extends upward from the shoulder 14 and engages a socket 17 in the lower end of the cob. The shank 16 is provided with screw threads which engage corresponding screw threads on the wall of the socket 17, so that the cob may be tightly screwed on to the shank. In the particular form shown, the supporting shank 16 extends upwardly to about the middle of the cob, as the point of greatest strain is usually below the center of the cob, but in some cases a different construction may be employed. In order to prevent the cob from becoming loose on the shank 16, suitable locking means is interposed between the cob and the bracket, and in the particular form shown, I seat the lower end of the cob in a cup-like sheet metal member 18, which has an opening 19 whereby it may be placed over the shank 16, the lower surface of said cup-shaped member being engaged by the shoulder 14, whereby the cup is firmly supported from beneath. Rotation of the cup relatively to the support is prevented by suitable means which, in the form shown, comprises a number of locking projections

20 extending radially out from the lower part of the shank 16 and adapted to engage correspondingly shaped recesses 21 in the edge of the opening 19 of the cup bottom. 5 It will be seen, therefore, that as the cup is slipped over the shank 16 and placed on its supporting shoulder or seat 14, the projections 20 will engage the recesses 21, so as to prevent the cup from turning on its axis. 10 The lower end portion of the cob extends into the cup and is compressed therein so that the cup is in turn tightly locked to the cob as well as to the bracket. In assembling the device, the cup may be readily placed 15 over the threaded supporting shank 16, so as to rest on its supporting shoulder in engagement with the locking means associated with said shoulder around the periphery of the shank. The cob is next screwed on to the 20 shank, and the lower end of the cob will then pass down to the bottom of the cup. The device is then placed in an appropriate machine for swaging or compressing the cup in a lateral direction so that its side wall is 25 tightly pressed against the outer surface of the cob. In the particular form shown, the lower end of the cob is provided with a portion 22 of reduced diameter, which is initially of cylindrical form, there being a 30 shoulder 23 at the upper boundary of said reduced portion. When the lower extremity of the cob reaches the bottom of the cup, the upper edge of the cup will take up against the shoulder 23, and the outer side 35 surface of the side wall of the cup will be approximately flush with the outer surface of the lower part of the cob. The cob initially makes a rather tight fit with the cup, but in order to make a still tighter fit and 40 prevent turning movement of the cob relatively to the cup, the cup is swaged or compressed in the manner stated. In this operation, most of the bending or swaging effect is produced near the upper edge of the cup; 45 which is thereby caused to compress the cob to a certain degree and grip it firmly. It will therefore be seen that the cup-like member 18, in addition to preventing the pin or cob 12 from rotating relative to the shank 50 16, serves also as means for surrounding and reinforcing the lower end of the cob 12 to prevent the same from becoming split or broken. The cup-like member 18 thus serves the function of the well-known ferrule with which wooden handles and similar 55 devices are commonly provided.

Owing to the fact that the cup is non-rotatively engaged with the bracket on the one hand, and with the cob, on the other 60 hand, the cob is absolutely prevented from any turning movement, which would tend to loosen it from its interiorly threaded supporting shank.

While I have described in considerable 65 detail the particular embodiment of my in-

vention selected for illustration, I wish to have it understood that various modifications of the construction may be adopted without departing from the scope of my invention as defined in the claims. 70

What I claim is:

1. In an insulator support, the combination of a supporting rod having a lateral shoulder, an integral upstanding projection located centrally of said shoulder, a sheet 75 metal cup having an aperture in the bottom thereof clearing said projection, said cup supported on said shoulder around said projection, and a pin extending into and supported by said cup, the side wall of the 80 latter being compressed on the pin, whereby the cup is firmly secured to the lower end of the pin and the pin is reinforced thereby; substantially as described.

2. In an insulator support, the combination of a supporting member, a threaded 85 shank rigid with said supporting member, a pin having threaded engagement with said shank, and means comprising a ferrule for reinforcing the pin and for preventing relative 90 turning movement of the pin and said supporting member; substantially as described.

3. In an insulator support, the combination of a supporting member, a threaded 95 shank rigid with said supporting member, a cob having threaded engagement with said shank, and means for preventing the cob from splitting and for preventing relative 100 turning movement of the cob and said supporting member, including a ferrule member locked to the cob and to said supporting member; substantially as described.

4. In an insulator support, the combination of a threaded shank, a cob having an 105 interiorly threaded socket engaging said shank, and a cup fitting over the cob and non-rotatively engaged with both the cob and the shank, whereby the cob is prevented from splitting and from rotating relatively 110 to said shank; substantially as described.

5. In an insulator support, the combination of a threaded shank, a cob having an interiorly threaded socket engaging said 115 shank, a reinforcing cup fitting over and non-rotatively engaged with the lower part of the cob, and means for preventing rotation of said cup relatively to the shank; substantially as described.

6. In an insulator support, the combination 120 of a bracket having a shoulder with a flat upper face, a threaded shank projecting upward centrally from said shoulder, said shank having radial projections at the lower 125 part thereof, a cup seated on the shoulder and having recesses engaged by said projections, and a member having a threaded socket engaging said shank, the lower end of said member entering said cup and compressed therein; substantially as described. 130

7. In an insulator support, the combination of a bracket having a seat, a cup supported on said seat, a cob entering said cup and compressed therein, whereby the end of the cob is reinforced to prevent splitting, and a shank on the bracket extending upward into a socket in the cob; substantially as described.

8. In an insulator support, the combination of a bracket having a shoulder, a cup supported on said shoulder, a cob supported in said cup and compressed therein, whereby the end of the cob is reinforced to prevent splitting, a shank on the bracket extending upward from said shoulder through said cup and on to which said cob is screwed, and means for preventing turning movement of the cup relatively to the bracket; substantially as described.

9. The combination of a member having a seat, a cup on said seat, a cob seated in said cup and reinforced thereby, and a shank integral with said member extending upwardly from said seat into a socket in the cob through an opening in the cup; substantially as described.

10. In a device of the character described, the combination of a member having a seat, a cup on said seat, a cob seated in said cup and reinforced thereby, and a shank extend-

ing from said seat into a socket in the cob and engaging the cob throughout at least a third of the length of the cob; substantially as described.

11. In a device of the character described, the combination of a base member, a shank member projecting upwardly therefrom, an insulating member screwed on said shank member, and means for reinforcing said insulating member and for preventing the unscrewing of the same comprising a part frictionally compressed thereon, and having locking engagement with the base member.

12. In an insulator support the combination of a bracket having a shoulder with a flat upper face, a threaded shank projecting upward centrally from said shoulder, said shank having radial projections at the lower part thereof, a ferrule member seated on the shoulder and having recesses engaged by said projections, and a member having a threaded socket engaging said shank, the lower end of said member being seated in said ferrule member and compressed therein, whereby the lower end of said member is reinforced and prevented from turning relatively to said support.

In witness whereof, I have hereunto set my hand on the 7th day of March, 1916.

PAUL M. BENEDICT.