

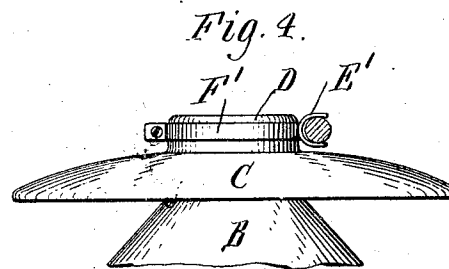
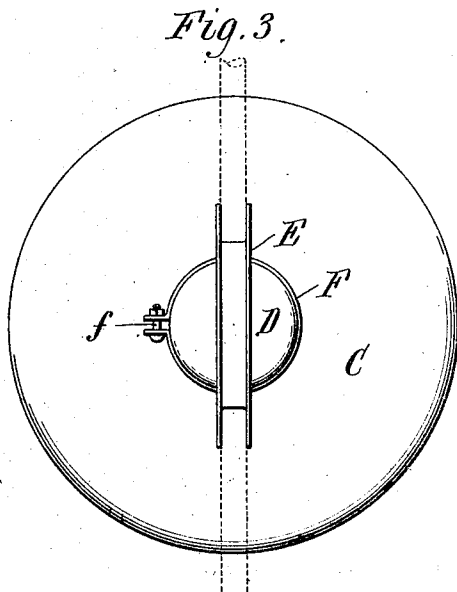
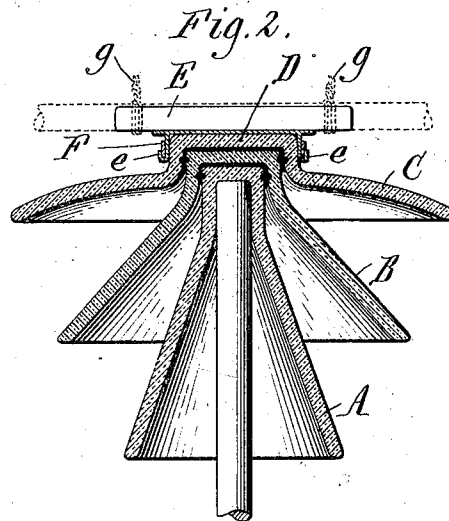
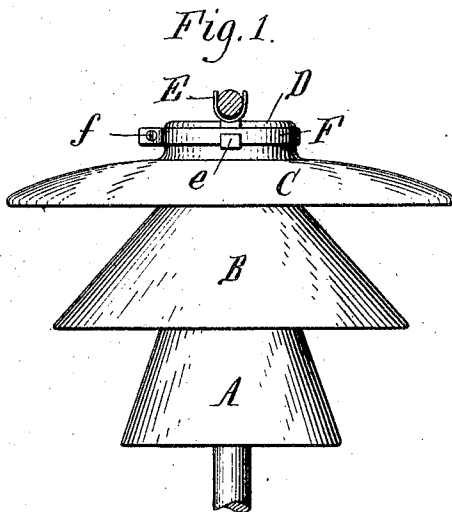
No. 829,646.

PATENTED AUG. 28, 1906.

W. T. GODDARD.

INSULATOR.

APPLICATION FILED JAN. 7, 1905.



Witnesses:

E. A. Vock.

R. W. Rumer.

Inventor.

W. T. Goddard.

By William Parker Ward,

Attorneys.

UNITED STATES PATENT OFFICE.

WALTER T. GODDARD, OF VICTOR, NEW YORK, ASSIGNOR TO LOCKE INSULATOR MANUFACTURING COMPANY, OF VICTOR, NEW YORK.

INSULATOR.

No. 829,646.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed January 7, 1905. Serial No. 239,995.

To all whom it may concern:

Be it known that I, WALTER T. GODDARD, a citizen of the United States, residing at Victor, in the county of Ontario and State of New York, have invented a new and useful Improvement in Insulators, of which the following is a specification.

This invention relates more particularly to insulators for high-potential electrical conductors. Such insulators are ordinarily made of porcelain and have one or more petticoats or bell-shaped flanges to increase their surface area and prevent surface leakage to the pin or support and are provided with retaining-grooves in which the conductor is secured by tie-wires. The heads or crowns of the insulators must be relatively thick to afford the necessary depth of groove for the conductor and strength to withstand the great strains to which the insulators are subjected in use, while the petticoats are preferably made thin to decrease the weight and cost of the insulators, which are often very large, weighing many pounds each. Great practical difficulties are encountered in making this type of insulators on account of the difference in thickness of the different parts thereof, and weak and faulty insulators often result. For this reason, therefore, the several petticoats are ordinarily made separately of uniform thickness throughout and glazed or cemented together; but a strong cap or top piece containing a sufficiently deep conductor-groove cannot be made of uniform thickness, and it is this part which is the most difficult to make.

The objects of the invention are to produce a light, strong, and practical insulator which can be made at a reduced cost and affords a secure support for the conductor and to provide the insulator with a separate metallic seat or retainer in which the conductor can be readily and securely fastened, which will not lessen the electrical efficiency of the conductor, and which enables the insulator-cap to be made of uniform thickness throughout.

In the accompanying drawings, Figure 1 is a side elevation of an insulator embodying the invention. Fig. 2 is a transverse sectional elevation thereof. Fig. 3 is a top plan view thereof. Fig. 4 is a fragmentary elevation showing a conductor-seat of modified form.

Like letters of reference refer to like parts in the several figures.

The insulator shown in the drawings is made of porcelain or analogous insulating material and has a plurality of petticoats A and B and a cap C, which, as usual, are formed by separate bell-shaped pieces arranged one within the other and glazed or cemented together. There may be one or more petticoats, as found necessary, or the cap may form the only flange. The crown D of the insulator is made integrally with the upper piece or cap C, which, like the petticoat-pieces A and B, is made of substantially uniform thickness throughout, and is not, as is ordinarily the case, thicker at its central portion and provided with a retaining-groove for the conductor.

The retaining-groove for the conductor is formed in a seat or saddle-piece E, which is separate from and secured, preferably detachably, to the cap-piece. The conductor-seat preferably consists of a trough-shaped piece of metal or other suitable material of the requisite strength, having a groove or concaved bearing for the conductor. In the construction shown in Figs. 1 to 3 the conductor-seat extends diametrically across the crown of the insulator, projecting laterally out therefrom at its opposite ends, and has attaching legs e, which straddle and are secured to the crown D by a split clamping band or collar F encircling the crown and provided with a tightening screw or bolt f. The conductor can be retained in the seat or groove by the usual tie-wire or by tie-wires, (indicated by dotted lines at g,) twisted around the conductor and projecting ends of the seat.

The seat E', (shown in Fig. 4,) which is intended for securing the conductor at the side of the insulator, is permanently attached to or formed integrally with a split securing band or collar F', which is clamped about the crown of the insulator. The conductor can be tied in this seat by wires in the same manner as in the other construction or by the usual tie-wire.

The conductor-seat in either form shown affords a deep groove for the conductor and a very strong and secure attachment. The insulator with the separate conductor-seat is lighter than an all porcelain insulator and can be manufactured at much less expense.

There is very little material in the seat and if made of non-magnetic metal its effect in dissipating the charge of the conductor by induction is negligible, thus keeping the time-charging current to a medium. The metallic seat avoids the danger of nicking or abrading the conductor during the operation of tying the conductor, and this is important because a nick or scratch on hard drawn copper is liable to cause breakage, and the metallic seat also greatly simplifies the tying operation.

I claim as my invention—

1. An insulator having a cap-piece of substantially uniform thickness throughout, and a separate conductor-seat secured to said cap-piece, substantially as set forth.

2. An insulator having a porcelain cap-piece of substantially uniform thickness throughout, and a separate conductor-seat secured to said cap-piece and consisting of a narrow strip having a retaining-groove for the conductor, substantially as set forth.

3. An insulator comprising a cap-piece of substantially uniform thickness throughout, a separate conductor-seat having a retaining-groove for the conductor, and a split securing band for the conductor-seat clamped about the crown of the cap-piece, substantially as set forth.

4. An insulator provided with an insulating cap-piece, a separate conductor-seat, and a securing-band for said conductor-seat clamped about said cap-piece, substantially as set forth.

5. An insulator comprising a non-conducting body, a separate substantially trough-shaped conductor-seat secured directly to said non-conducting body with its ends projecting beyond the body to form securing extensions for the conductor, said conductor-seat being materially narrower than said body, and a narrow securing-band for said conductor-seat encircling said body and connected to said seat at separated parts thereof, whereby said seat and securing band cover only a relatively small portion of the body, substantially as set forth.

6. An insulator comprising a non-conducting body having an insulating cap-piece, a separate conductor-seat extending across the crown of said cap-piece, and a narrow securing-band for said conductor-seat secured about said crown, substantially as set forth.

Witness my hand this 30th day of December, 1904.

WALTER T. GODDARD.

Witnesses:

W. A. HIGINBOTHAM,
C. A. MOORE.