

(No Model.)

2 Sheets—Sheet 1.

F. A. ROSS.
INSULATOR.

No. 460,448.

Patented Sept. 29, 1891.

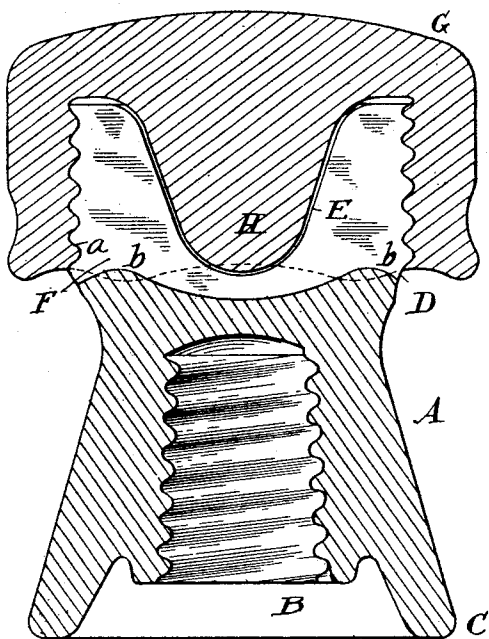


Fig. 1.

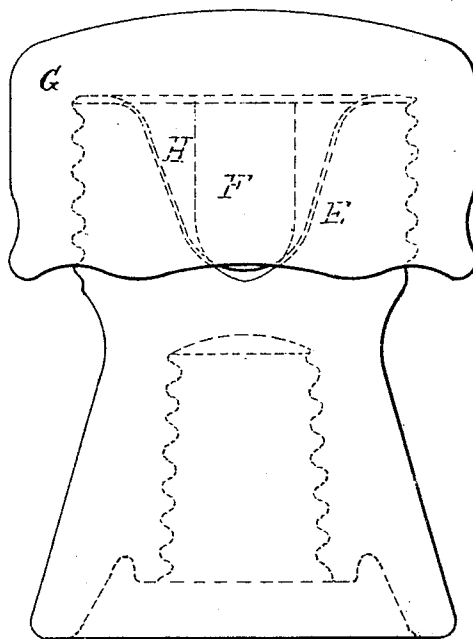


Fig. 2.

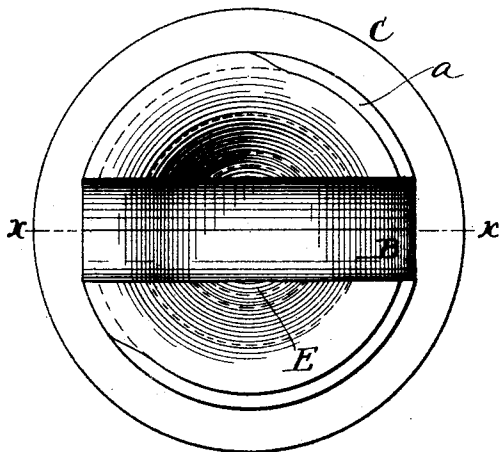


Fig. 3.

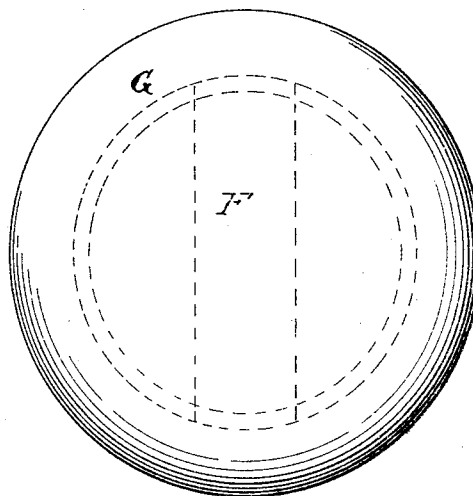


Fig. 4.

WITNESSES:

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INVENTOR:

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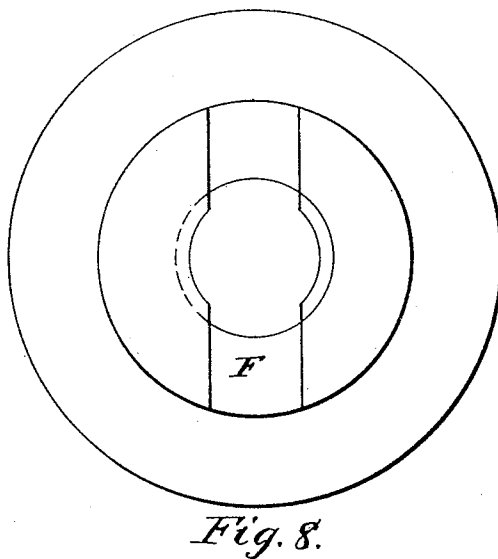
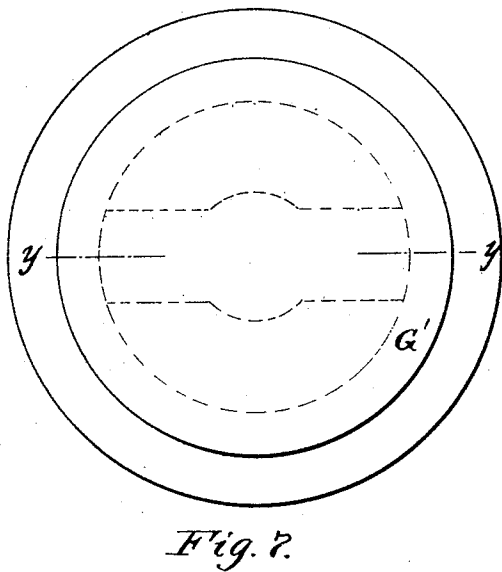
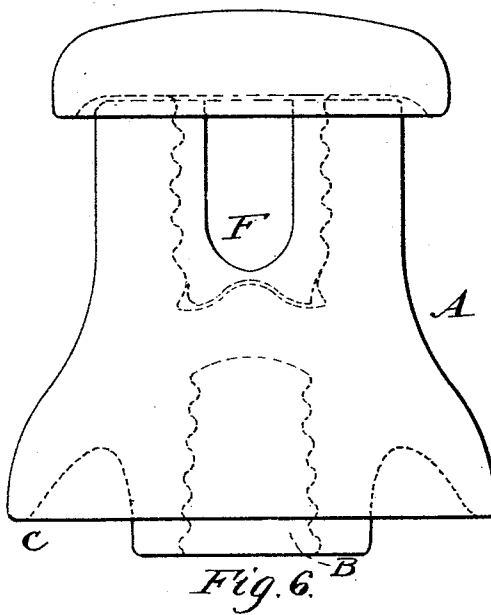
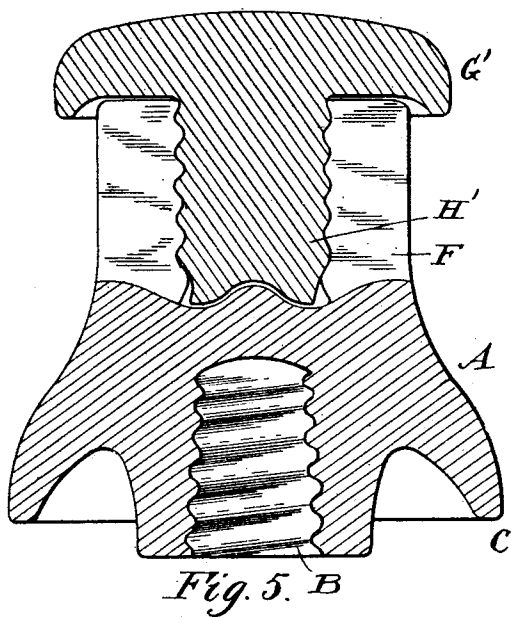
(No Model.)

2 Sheets—Sheet 2.

F. A. ROSS.
INSULATOR.

No. 460,448.

Patented Sept. 29, 1891.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANK ATHERTON ROSS, OF LIVINGSTON, MONTANA.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 460,448, dated September 29, 1891.

Application filed December 16, 1890. Serial No. 374,854. (No model.)

To all whom it may concern:

Be it known that I, FRANK ATHERTON ROSS, of Livingston, in the county of Park and State of Montana, have invented a new and Improved Insulator, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a vertical transverse section, taken on the line $x x$ in Fig. 3, of my improved insulator. Fig. 2 is a side elevation showing the internal construction in dotted lines. Fig. 3 is a plan view with the screw-cap removed. Fig. 4 is a plan view of the completed insulator. Fig. 5 is a vertical transverse section of a modified form of the insulator, taken on the line $y y$ of Fig. 7. Fig. 6 is a side elevation showing the internal construction in dotted lines. Fig. 7 is a plan view of a modified form, and Fig. 8 is a plan view of the same with the screw-cap removed.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to provide an insulator for electric wires in which the use of binding-wires will be avoided, and in which the conductor may be securely clamped without injury to the insulation or the wire itself.

My invention consists in an insulator threaded internally to receive a supporting-pin and provided with a water-shed at its lower end and at its upper end with a screw-threaded transversely-slotted part for receiving the wire, the insulator at the bottom of the transverse slot being concaved or corrugated to antagonize a screw having a similar surface, and a screw adapted to the threaded portion of the insulator for clamping the wire upon the corrugated surface of the insulator, all as will be hereinafter more fully described.

In the form of insulator shown in Figs. 1 to 4, inclusive, the insulator-body A is provided with a central internally-threaded opening B for receiving an insulator-pin and with a water-shed C, both of which are of the usual description. The upper end D of the insulator is of cylindrical form, and is furnished with an external thread a . In the top of the insulator is formed a conical cavity E and a transverse slot F. The floor of the slot F is concave at the center of its length and provided

with rounded projections b near its ends. To the upper part of the insulator is fitted an internally-threaded cap G, which is provided with a conical projection H, adapted to extend downwardly into the conical cavity E of the upper part of the insulator.

In the modification shown in Figs. 5 to 8, inclusive, the upper end of the insulator is bored and threaded internally, and a cap G', provided with a screw-threaded extension H', is inserted in the top of the insulator. The lower end of the extension H' is concaved to adapt it to the corrugated floor of the transverse slot F. In other respects this insulator is like that already described.

The method of using my improved insulator is as follows: In the form shown in Figs. 1 to 4, inclusive, the cap G being removed, the wire to be supported is carried through the slot F and the said cap G is screwed down upon the insulator-top, bringing the conical projection H into contact with the wire between the projections b , thus slightly bending the wire and giving it a hold upon the insulator without in any way injuring the insulation or the wire. The lower edges of the cap G are corrugated, as indicated in dotted lines in Fig. 1 and full lines in Fig. 2, the object being to bring the edges of the cap into contact with the wire in such a way as to prevent the cap from unscrewing accidentally.

In the modification shown in Figs. 5 to 8, inclusive, the wire is held in place in the slot in the insulator by the screw-extension H' of the cap G', which clamps the wire upon the corrugated floor of the slot in a manner similar to that already described.

The advantages claimed for my improved insulator are as follows: The tie-wire commonly used is dispensed with and the liability of cutting the insulation on the wire and thus causing a leakage of the current is avoided. The insulation of the line is improved and a more perfect shedding of water is secured by reason of the projection of the cap over the whole of the insulator. My improved insulator also greatly facilitates the construction of the line.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the insulator-

body having a vertical cavity in its top and a vertical slot intersecting the cavity and having a transversely-corrugated bottom, of a rotary cap having a screw-threaded connection with the said body and having an integral depending projection turning in the said cavity and having its lower end shaped to the corrugated bottom of the slot to bend the wire, substantially as set forth.

2. The combination, with the body A, having a cavity E in its top and a vertical slot intersecting said cavity and provided with a concavity in its bottom and rounded projections *b b* near its ends, of the cap G, having a screw-threaded connection with the body, and a central integral projection H of a length to bend the wire in said concavity, the lower

edge of the cap extending down to engage the wire at the ends of the slot and bend it over the projections *b b*, substantially as set forth.

3. The combination, with the insulator-body A, provided with a screw-threaded upper portion and a transverse slot having a curved or corrugated floor, of a screw-cap fitted to the insulator-body and adapted to clamp the wire in the insulator, the said cap being furnished with corrugations around its edges for engagement with the wire, substantially as specified.

FRANK ATHERTON ROSS.

Witnesses:

JEROME WILLIAMS,
J. W. M. TINLING.