(No Model.)

W. H. & E. A. ECKERT & J. A. SEELY.

COMBINED INSULATOR, LIGHTING ARRESTER AND CONNECTOR.

No. 262,210. Patented Aug. 8, 1882.

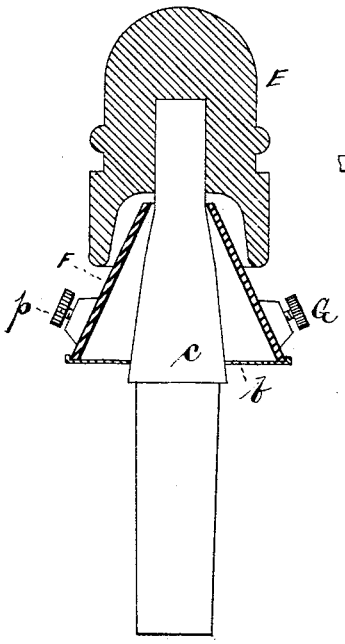

Fig. 1.

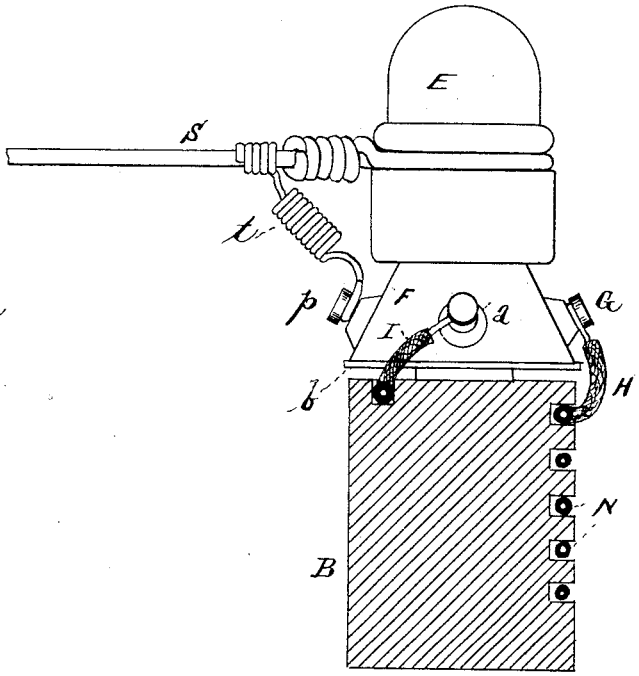

Fig. 2.

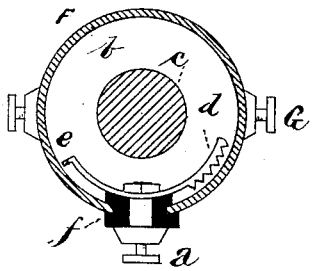

Fig. 3.

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WILLIAM H. ECKERT, EDWARD A. ECKERT, AND JOHN A. SEELY, OF CINCINNATI, OHIO.

COMBINED INSULATOR, LIGHTNING-ARRESTER, AND CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 262,210, dated August 8, 1882.

Application filed January 6, 1882. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. ECKERT, EDWARD A. ECKERT, and JOHN A. SEELY, of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Combined Insulator, Lightning-Arrester, and Connector for Electrical Conductors, of which the following is a specification.

In the accompanying drawings, Figure 1 is a vertical section of the device; Fig. 2, an elevation, and Fig. 3 a horizontal section through the box.

This device is designed to be placed on a pole, as is usual with common insulators, B in Fig. 2 being a vertical section of a common cross-arm.

B is the cross-arm or other fixture which is to sustain the insulators.

c is the usual wooden pin, and E is the glass fixed on the pin, as usual.

F is a closed metallic box set over the pin before the glass E is put in place. The box, as shown, is conical, fitting well up into the under cavity of the glass.

p is a binding-post forming a part of the box F. G is a similar binding-post. Both are in electrical connection with the metal forming the box F.

e d is a lightning-arrester fixed inside the box F, its serrated part being set close to, but not in contact with, the interior surface of the metal of the box.

a is a binding-post in electrical connection with the lightning-arrester *e d*, but, like it, insulated from the metal of the box, as by the gutta-percha bushing-washer *f*.

The removable bottom *b* of the box F adds to the convenience of interior manipulations. This bottom fits snugly onto the shank or tapered portion of the pin *c*, and thus prevents the box dropping down upon the cross-arm.

S is the main naked line-wire attached to the glass, as usual, in this case, however, terminating at the glass.

H and N are the insulated wires from such cable as may terminate at the cross-arm, as when naked line-wires are to be focused at a pole or fixture and continued in cable. One of these cable-wires, H, is connected up to the binding-post G, and is therefore electrically connected with the metal of the box F.

t is a curled wire connecting up the line-wire S with the binding-post *p*, and thus placing the line-wire in electrical connection with the box F and cable-wire H.

I is a wire connected up with the binding-post *a*, and consequently with the lightning-arrester *e d*. This wire I should be well connected with earth.

The lightning-arrester *e d* is well protected and brought close to the dry inner surface of this mass, and the curled connection *t* prevents vibrations of the line-wire during repairs from disturbing the adjustment of the lightning-arrester.

In case the line-wire does not connect with a cable-wire at the pole, the binding-post G will of course not be needed, the line-wire S, or such wire as may be connected to it, continuing onward. During damp weather the bottom of the box, standing as it does close to the top surface of the pole, will act in a measure as a lightning-arrester.

To combine a lightning-arrester with an insulator is not new, and is not claimed by us as of our invention.

We claim as our invention—

1. The combination of the insulator, the insulating-pin supporting the same, and the metallic mass supported on said pin and provided with means, substantially as described, whereby it may be made a portion of the line-circuit, substantially as and for the purpose set forth.

2. The combination of the insulator, the insulating-pin supporting the same, and the hollow metallic box supported by the pin and provided with means whereby it may be made a portion of the line-circuit, and a lightning-arrester within said box, provided with means whereby it may be connected with an earth-wire, substantially as and for the purpose set forth.

3. The combination of the insulator having a bottom cavity, the insulating-pin supporting the same, the hollow metallic box reaching up into said cavity and supported by the pin and provided with means whereby it may be made a part of the line-circuit, and a lightning-arrester within said box, provided with means whereby it may be connected with an earth-wire, substantially as and for the purpose set forth.

4. The combination of the insulator, the insulating-pin supporting the same, the hollow metallic box supported by said pin and provided with means whereby it may be made a portion of the line-circuit, the separable bottom to said box, and the lightning-arrester within said box, provided with means whereby it may be connected with an earth-wire, substantially as and for the purpose set forth.

5. The combination of the insulator, its pin of insulating material having a tapering part below the insulator, the hollow metallic box fitting on and supported by the tapering portion of the pin and provided with means whereby it may be made a portion of the line-circuit, and the lightning-arrester within said box provided with means whereby it may be connected with an earth-wire, substantially as and for the purpose set forth.

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Witnesses:
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