(No Model.)

J. L. FINN.

Lightning Arrester.

No. 240,901. **Patented May 3, 1881.**

Fig. I.

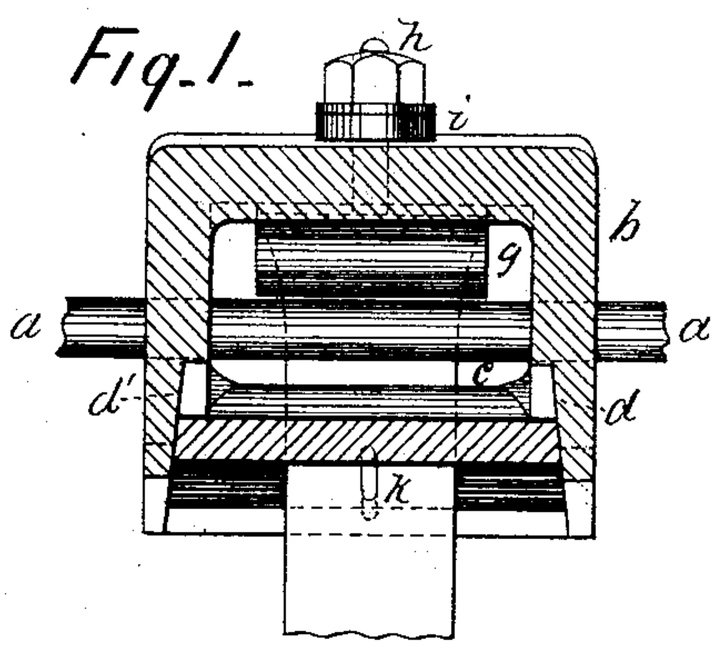


Fig. II.

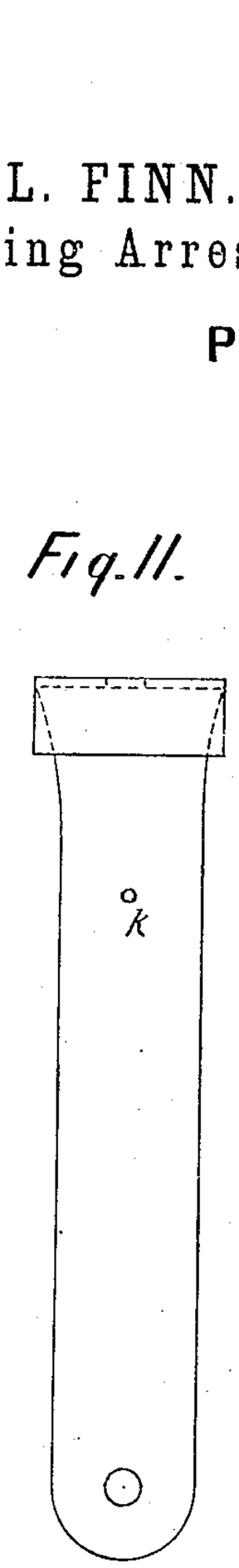


Fig. III.

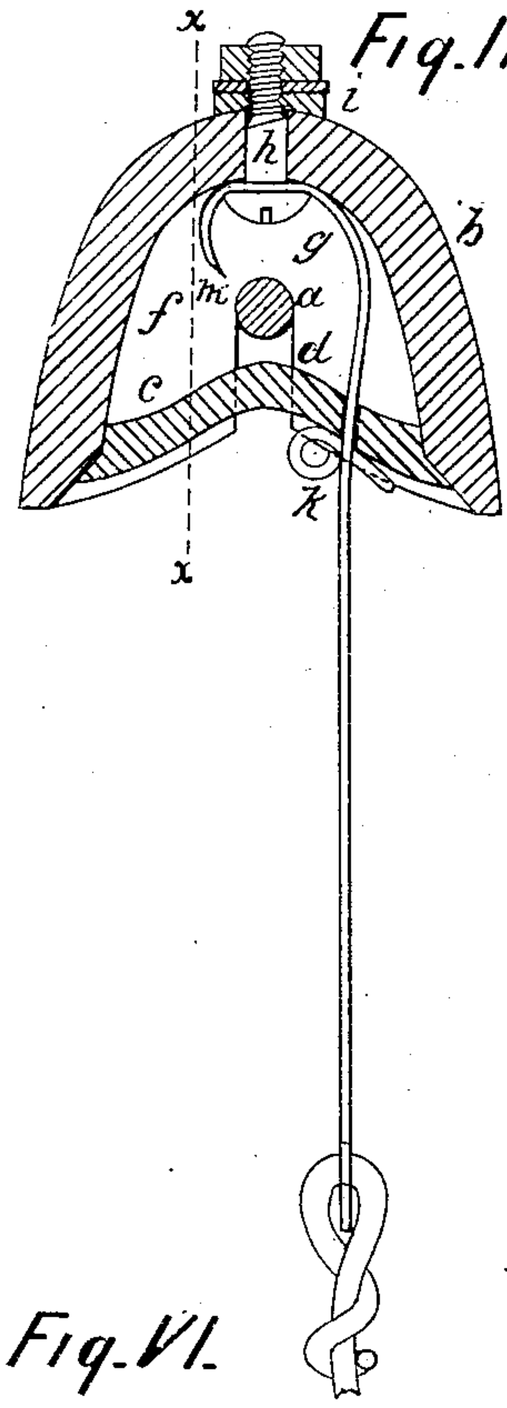


Fig. IV.

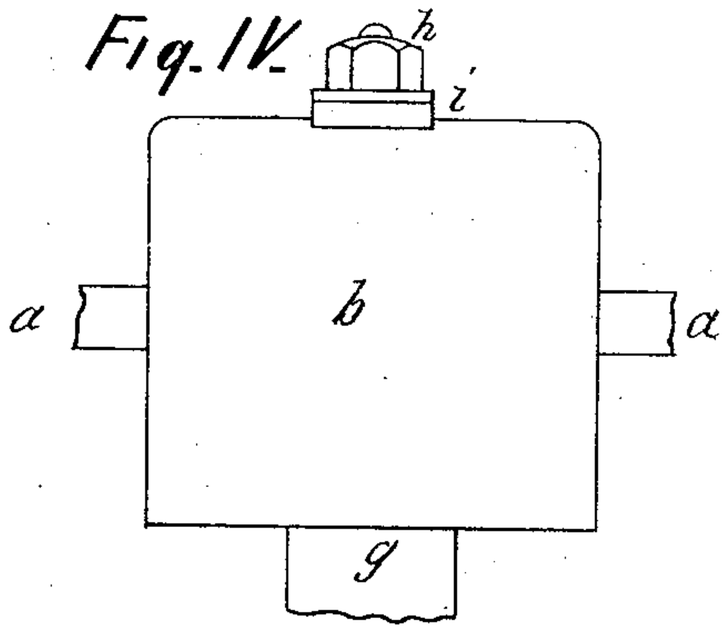


Fig. V.

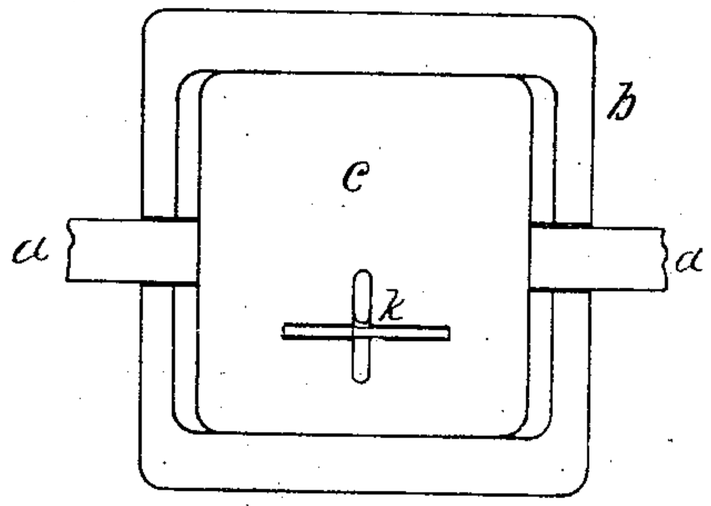
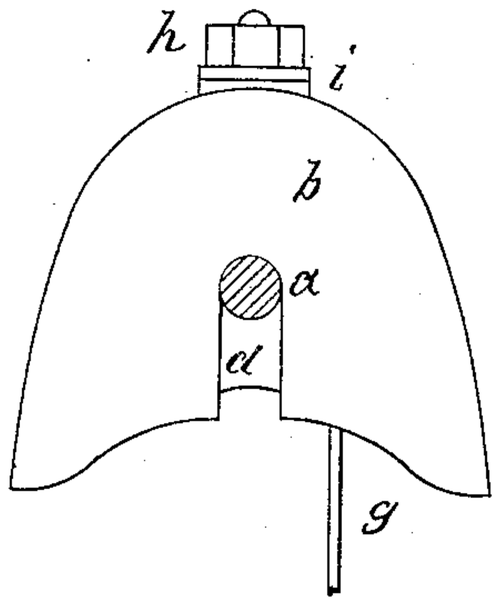


Fig. VI.



Witnesses.
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JOHN L. FINN, OF ELYRIA, OHIO.

LIGHTNING-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 240,901, dated May 3, 1881.

Application filed March 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. FINN, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented a new and useful apparatus to be used on telegraph-wires for the purpose of arresting free or local electricity and conducting it thence into the ground, of which the following is a specification.

My invention relates to the method of constructing said apparatus, which renders it capable of being readily applied to any wire at any point by simply suspending it thereon; also, to so inclose the wire and other apparatus within a chamber formed by any suitable non-conducting material that it will be fully protected from all extraneous influences, such as water, ice, insects, or dust and leaves, and also to entirely insulate the different parts of the apparatus. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure I is a vertical section taken in dotted line *x x*, Fig. III. Fig. II is a detached side view of the lightning-arrester proper. Fig. III is a vertical section transverse to Fig. I. Fig. IV is a side elevation. Fig. V is an inverted plan view. Fig. VI is an end elevation.

Similar letters refer to similar parts throughout the several views.

In the drawings, *a* represents the wire used for telegraphing purposes.

b represents a shell or case constructed substantially in the form seen in the drawings, and is made of glass or any other suitable non-conducting material.

c represents a removable curved plate, which is placed in the position seen in Figs. I, III, V, and is provided with suitable lugs, *d d'*, which follow into and close up the cavity around and under the wire to such an extent as to practically exclude water, insects, or dust from the chamber *f*. Within said chamber *f*, and directly over wire *a*, I secure a thin metallic strip, *g*, by means of a screw and nut, *h*, said screw passing through metallic strips *g*, the case *b*, and a rubber washer, *i*. Said rubber washer being compressed by the nut renders the cavity through which the screw passes air and water tight. Said metallic strip *g* is curved into the form seen in Fig. III, bringing its upper end sufficiently near the wire to receive all of the free electricity that may chance to be passing on the wires. Said plate is of sufficient width to give it the required conducting capacity, and it extends downward sufficiently to be attached to a connecting-wire which passes into the earth. In passing downward it passes through a suitable aperture in plate *c*, where a pin, *k*, is inserted through said strip for the purpose of supporting and holding said plate *c* in position.

I am aware that an apparatus has been used for the same purpose, in combination with an insulator fastened to a rigid post which was stationary, while at the same time the working parts were exposed to atmospheric and mechanical influences. I do not therefore claim a lightning-arrester presenting these devices; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a lightning-arrester, of the insulating-case *b* with the metallic strip *g*, electrically connected with the ground, the whole adapted to be suspended on a telegraph-wire to protect it from destructive influences, substantially as described.

2. The insulating-case *b* and the removable plate *c*, constructed as described, in combination with the metallic strip *g*, which is firmly fixed to case *b*, as described, and pin *k*, thus forming a suitable chamber, *f*, impervious to all extraneous influences, for the purpose of preventing the space *m* between the end of metallic strip *g* and the wire *a* from being filled up by any foreign substance which would impair the utility of the wire by conducting the working-current into the ground.

J. L. FINN.

Witnesses:
H. F. WILLSON,
J. C. HOUGHTON.