

(No Model.)

C. S. SHEPARD.
LIGHTNING ARRESTER.

No. 287,875.

Patented Nov. 6, 1883.

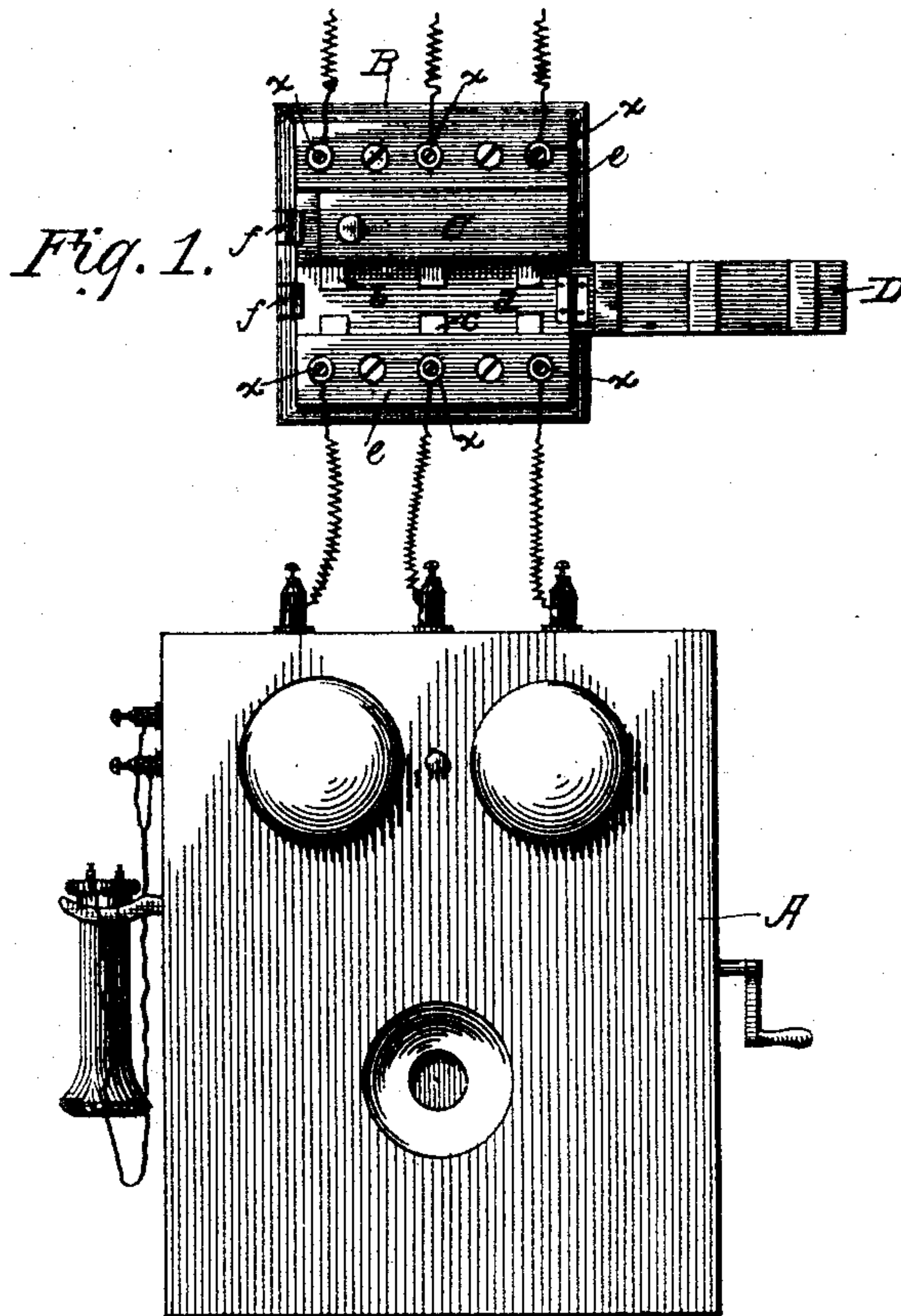
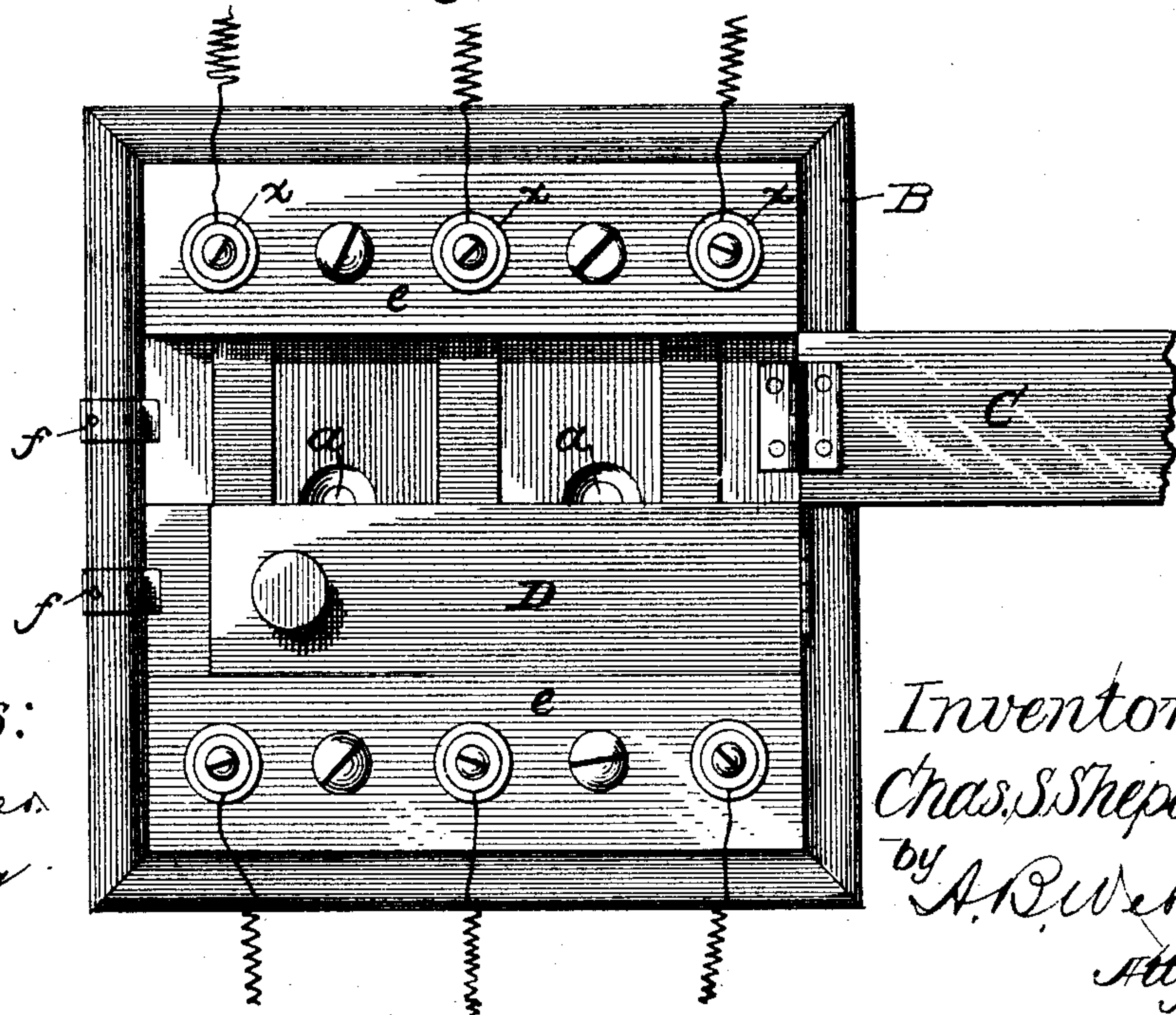


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES S. SHEPARD, OF RAYMOND, NEW HAMPSHIRE.

LIGHTNING-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 287,875, dated November 6, 1883.

Application filed July 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. SHEPARD, a citizen of the United States, residing at Raymond, in the county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Lightning-Arresters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in lightning-arresters, or means for arresting atmospheric electricity which may be conducted by the wires.

My invention may be used in telephone and telegraph stations, but is more especially adapted for use in connection with private telephones.

The invention has for its object to provide a cheap and simple means whereby lightning passing over insulated wires may be arrested and directed to the earth. This object is accomplished by the devices shown and illustrated in the accompanying drawings, in which—

Figure 1 is a representation of a face view of my device, showing the same arranged above a telephone with the wires insulated, and Fig. 2 is an enlarged view of the device with the wires grounded.

In the drawings, A indicates a telephone, which may be secured in the walls of a room, and B the lightning-arrester, which may be located at any suitable distance from the telephone, but is preferably secured to the wall, about three feet above the telephone.

The arrester consists of a frame or block of suitable material, which is provided with transverse perforations *a*, whereby the same may be held by screws or other suitable means to a wall or the like. The upper face of the frame is provided with copper or other suitable metallic strips *b* and *c*. These strips are placed vertically and parallel with relation to one another, and they are not to ex-

tend over the face of the frame, but form an interspace, as shown at *d*, the object of which will be hereinafter explained. Above these metallic strips, and transversely thereto, are strips *e*, of wood. These strips are perforated, as shown, to receive the binding-posts for both the line-wires and ground-wires, the middle posts being for the ground-wires. The lower ends of all the posts are in engagement with the metallic strips on the face of the frame.

C and D indicate, respectively, strips which are hinged to one side of the frame, the upper one of which has its under face entirely covered with copper or other suitable metal, and the lower one with transverse strips of homogeneous metal, which, when let down, will bear upon the strips secured to the face of the frame communicating therewith, and closing the interspace *x*.

During a storm, when the telegraphic insulated conductors may become charged by lightning, the operator or owner of the machine, by closing the bar entirely covered with copper, which connects the line-wire with the ground-wire, and by leaving open the lower bar with three strips of copper, disconnects the machine from the line, whereby the wires are grounded, and prevents any accidental danger.

By this construction it will be seen that the arrester is under direct control of the operator or owner, and the passage of the electric or induced currents prevented from entering the ground-wire when desired.

Having now described my invention, what I claim is—

1. In a lightning-arrester, the combination of a frame having upon its face metallic strips divided by an interspace, the binding-posts being in engagement with the upper face of the strips, and a hinged bar carrying metallic strips adapted to fold over the interspace and make connections between the line-wires and ground-wires, substantially as specified.

2. In a lightning-arrester, the combination, with the main frame, of the edge-strips carrying binding-posts, the upper face of the

frame provided with metallic strips arranged
across the face of the frame with an inter-
space, and two bars hinged to the side of the
frame, the upper one of which has its under
5 face entirely covered with suitable metal, and
the lower one with metallic strips to cover
the interspace of the frame, all substantially
as and for the purposes specified.

In testimony whereof I affix my signature in
presence of two witnesses.

CHARLES S. SHEPARD.

Witnesses:

CHARLES A. SHEPARD,
TRUE M. GOULD.