No. 749,426. PATENTED JAN. 12, 1904.

W. E. CONE.

LIGHTNING ARRESTER.

APPLICATION FILED MAY 28, 1903.

NO MODEL.

Fig. 1.

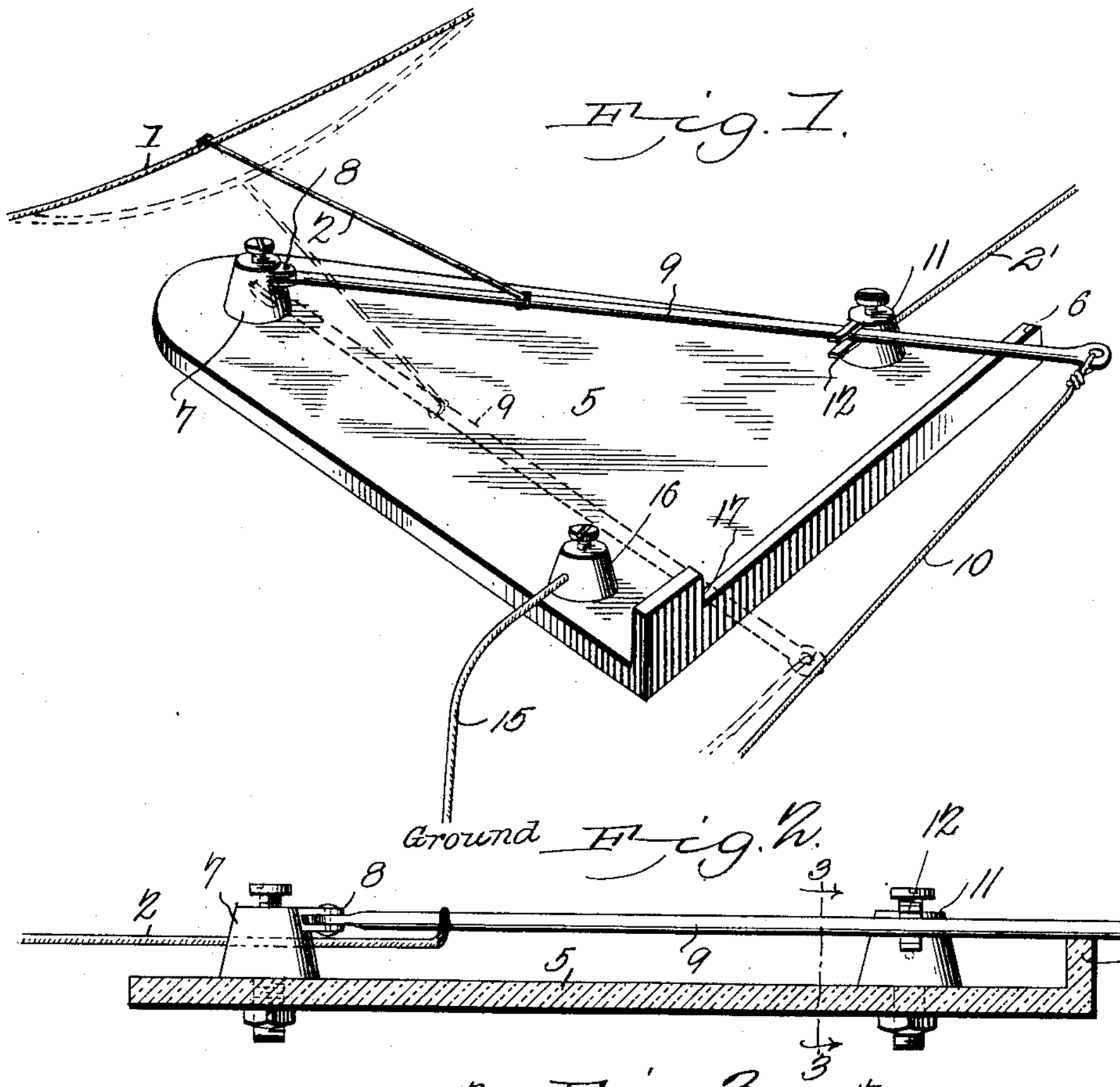


Fig. 2.

Fig. 3.

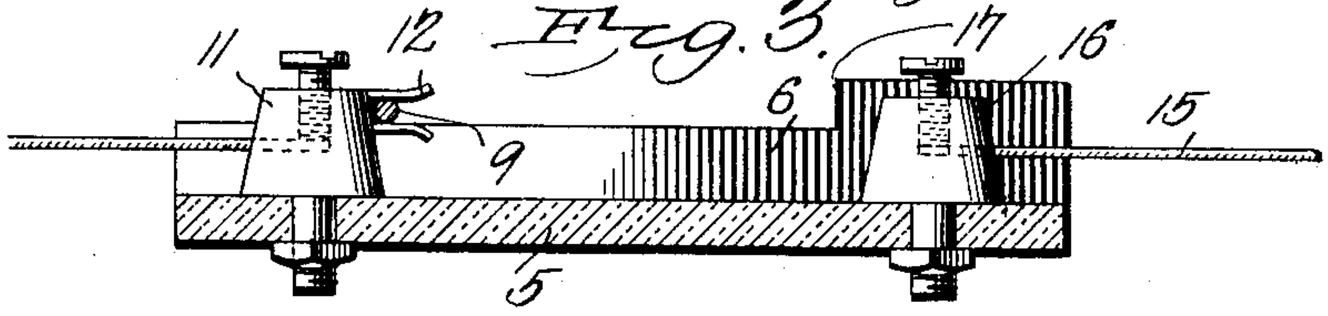
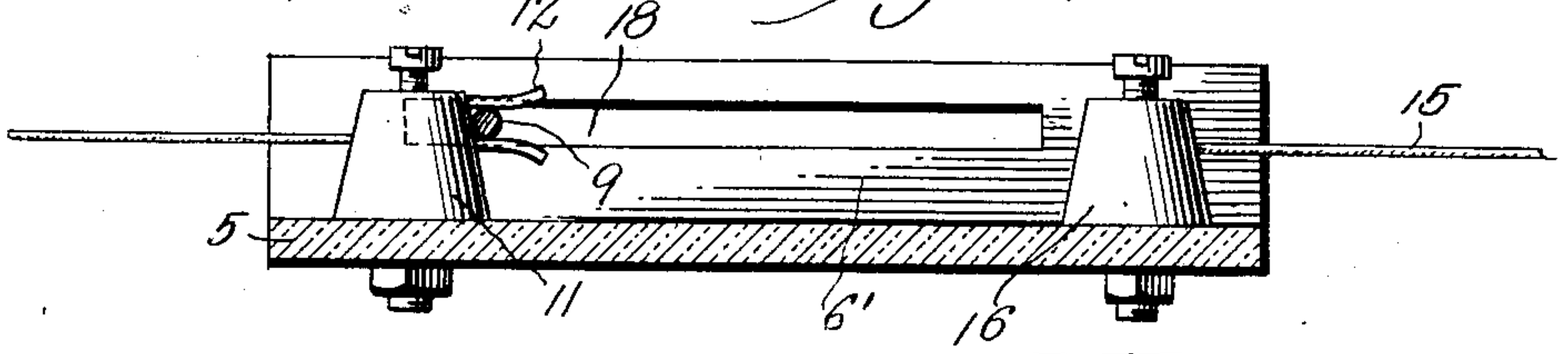


Fig. 4.



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No. 749,426. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM E. CONE, OF MEMPHIS, MISSOURI.

LIGHTNING-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 749,426, dated January 12, 1904.

Application filed May 28, 1903. Serial No. 159,192. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. CONE, a citizen of the United States, residing at Memphis, in the county of Scotland and State of Missouri, have invented a new and useful Lightning-Arrester, of which the following is a specification.

This invention relates to certain improvements in telephone-protecting devices of that general class employed for the grounding of the line during electrical storms in order to prevent injury to the telephone or other mechanism and lessen the liability of damage to the house or other building in which the telephone is situated.

The principal object of the invention is to provide a device of this character which may be used on party-lines where a number of subscribers are connected by a single-line wire and in which the return is made by ground to the end that the operation of the device by a particular subscriber will not interfere with the use of the line by other subscribers.

A further object of the invention is to provide a device of this character which may be readily operated by the subscriber from a point within the house or other building through the medium of a flexible non-conductor, the construction being such that when tensional strain of the conductor is relieved the line will be restored to normal condition.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of a lightning-arrester constructed in accordance with the present invention, showing the same in normal position. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view of the device on the line 3 3 of Fig. 2. Fig. 4 is a similar view illustrating a slight modification.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the drawings, 1 indicates a main-line wire which may be connected by local wires 2 to subscribers, a separate local wire being employed for each subscriber and the return to central or the connections between any desired subscribers being through the ground or in some cases through the metal return-wire.

The device forming the subject of the present invention comprises a base 5, having a transversely-disposed flange 6 at one end thereof. The base 5 is secured in any suitable manner to a post or other support adjacent to the building and has a post or stud 7, provided with ears or lugs 8, to which is pivoted a switch-arm 9, connected to a flexible non-conductor 10, leading within the building at a point convenient for manipulation in case of a storm. The local wire 2 is connected to the switch-arm 9 and by its weight or stress serves normally to maintain the switch-arm in circuit-closing position. At a point near one end of the flange 6 is a binding-post 11, connected to a wire 2′, leading to the telephone or other instrument in the building, and said post carries a pair of metal tongues 12 to form a catch for the reception of the metal switch-arm 9 and insure electrical contact between said arm and the telephone. The switch-arm is adapted to move into engagement with the telephone-line connection by the weight or stress of the line-wire 2. The free end of the switch-arm is provided with an eye, to which is attached the flexible connecting device 10, preferably formed of cord or similar non-conductor.

15 designates a ground-wire which is connected to a binding-post 16 on the base, and at a point adjacent to this post the flange 6 is continued upward in order to form an abrupt shoulder 17, and thus prevent any contact between the switch-arm and the ground-wire. When said switch-arm is drawn up to the dotted-line position shown in Fig. 1, there will be a slight space between the arm and the binding-post 16, and thus prevent grounding of the line at this point and permit the operation of the remaining telephones in the usual manner. The switch-arm is adapted to be

moved to a point adjacent to the ground-wire by pulling the flexible cord, and as the parts are separated but a short distance any high-potential current which may find its way to the wire, as in an electrical storm, would pass to the wire 15 and thence to the ground without injuring the telephone or other instrument to which the local wire is normally connected.

In Fig. 4 is illustrated a slight modification of the invention, in which the flange 6′ is provided with a slot 18 to prevent accidental displacement of the switch-arm.

Having thus described the invention, what is claimed is—

1. In a lightning-arrester, a base-plate, a pivoted switch-arm carried by the base-plate and normally held in circuit-closing position by the weight of the current-conducting wire to which it is attached, a binding-post for a local wire, said binding-post having switch-arm-engaging means, a second binding-post for a ground-wire, and means carried by the base-plate for preventing direct contact between said switch-arm and the second binding-post.

2. In a device of the class specified, a flanged base, a switch-arm carried by the base and having a main-line connection, a local telephone-line having a terminal near one end of the flange and adapted to be engaged by the switch-arm, a ground-line having a terminal adjacent to the opposite end of the flange, and a shoulder or stop arranged adjacent to the ground-line terminal to thereby prevent contact between the latter and the switch-arm.

3. In a device of the class specified, the combination with a flanged base, of a pivotally-mounted switch-arm carried by the base, a flexible switch-operating device connected to said switch-arm, a local telephone-line having a terminal disposed near one end of the flange and normally engaging the switch-arm, a ground-line terminal near the opposite end of the flange, and a stop or shoulder for limiting the movement of the switch-arm in the direction of the ground-line terminal.

4. In a device of the class specified, a flanged base, a post carried thereby, a switch-arm pivoted to the post, binding-posts for the local and ground wires, metal clips carried by one of the binding-posts for engaging the switch-arm, and a shoulder formed on the flange for limiting movement of the switch-arm in the direction of the ground-wire binding-post, and means for normally maintaining the switch-arm in engagement with the clips of the local-wire binding-post.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. CONE.

Witnesses:
WALTER B. SCOTT,
THOMAS A. REES.