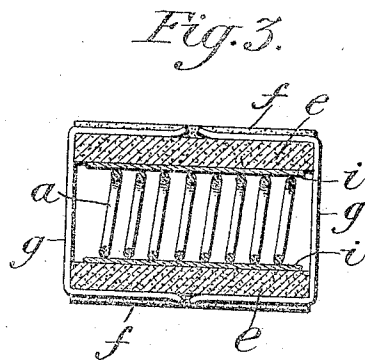
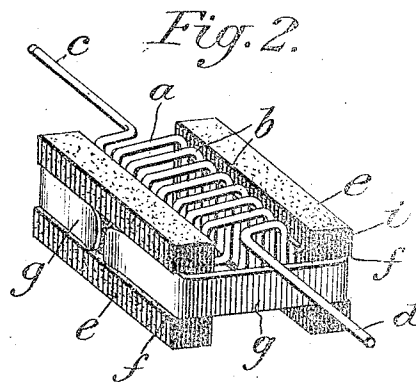
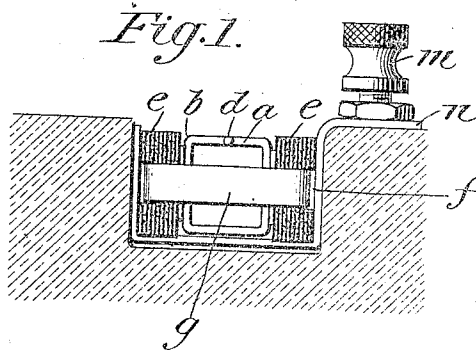


940,176.

C. T. MASON.
LIGHTNING ARRESTER.
APPLICATION FILED MAY 1, 1908.

Patented Nov. 16, 1909.



Witnesses
N. W. Edeline.
[Signature]

Inventor:
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UNITED STATES PATENT OFFICE.

CHARLES T. MASON, OF SUMTER, SOUTH CAROLINA, ASSIGNOR TO THE SUMTER TELEPHONE MFG. CO., OF SUMTER, SOUTH CAROLINA, A CORPORATION OF SOUTH CAROLINA.

LIGHTNING-ARRESTER.

940,176.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed May 1, 1908. Serial No. 430,331.

To all whom it may concern:

Be it known that I, CHARLES T. MASON, a citizen of the United States, residing at Sumter, county of Sumter, State of South Carolina, have invented certain new and useful Improvements in Lightning-Arresters; and I do hereby 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.

The invention relates to improvements in lightning arresters and more particularly to lightning arresters adapted to be employed for the protection of electric circuits and instruments therein, such as telephonic circuits.

The object of the invention is to provide a simplified form of arrester adapted to be inserted in a line circuit, to be readily renewed or replaced, and to interpose at all times a choke coil which will serve to divert heavy voltage currents to a grounding medium located exteriorly to said choke coil and separated therefrom by a dielectric, the passage of the current of heavy voltage from the coil to the grounding medium being materially assisted by means of sharp turns or angles which are provided in the coil adjacent to the grounding medium.

In the accompanying drawings, Figure 1 is a vertical end elevation of a lightning arrester involving the features of this invention. Fig. 2 is a perspective view of the arrester separated from its supporting block or base. Fig. 3 is a horizontal longitudinal section through the arrester.

Referring to the drawings, *a* indicates a coil of wire which is formed with flat sides and sharp or abrupt turns or angles *b*, the ends of said coils being extended longitudinally to afford suitable connection for the line circuit. Exteriorly of the coil and preferably at two sides thereof, are located blocks of grounding material *e* which may be made of carbon or any other suitable conducting medium and which are separated from the adjacent flat sides of the coil by a suitable dielectric. A convenient arrangement contemplates the provision of strips of insulating material *i*, such as mica, fiber board or the like, which is preferably cemented or otherwise attached to the inner faces of the blocks *e*. Preferably the strips

are made sufficiently narrow to allow the sharp turns or angles of the coil to lie adjacent the inner faces of the grounding medium *e*, but separated therefrom by an air space.

In order to secure the parts of the arrester together to constitute a unitary structure adapted to be inserted in or removed from a supporting base, suitable spring clips as *g* are slipped over the ends of the blocks *e*, as indicated in Figs. 2 and 3. In order to hold the clips *g* in position, the outer faces of the blocks *e* may be grooved as at *f*.

As thus constructed, the arrester is adapted to be supported by a base of any appropriate character to admit of the terminals *c* and *d* being connected in the line circuit. In order to connect the grounding medium *e* with the ground circuit, the base may be provided with a binding post *m* which is connected with the grounding medium *e* or with the spring clips *g* connecting the same by means of a conductor *n*, as illustrated in Fig. 1, said conductor forming an open spring clip into which the arrester is adapted to be inserted.

Although the invention has been described with particular reference to the convenient form of the apparatus illustrated in the drawings, it is to be understood that said invention is not limited to this form, but contemplates the generic construction of an arrester involving the choke coil having abrupt turns or angles associated with an exteriorly disposed grounding block or blocks, together with an insulator or dielectric between the coil and each grounding block.

What I claim is:—

1. A lightning arrester comprising a coil having abrupt turns or angles and a flat face or side, a grounding block arranged exteriorly of the coil and extending along and in close proximity to the flat face or side thereof, and means for securing said block directly to the coil.

2. A lightning arrester, comprising a coil to be inserted in the line circuit and having abrupt turns or angles, grounding blocks arranged exteriorly of and on opposite sides of said coil and adjacent said abrupt turns, insulating strips inserted between the coil and the grounding blocks, and means for removably securing the blocks to the coil.

3. In a lightning arrester, the combination

with a coil having abrupt turns or angles and a flat face or side, of a grounding block arranged exteriorly of the coil and extending along the flat face or side thereof, and means for detachably clamping said block to the coil.

4. In a lightning arrester, the combination with a coil having abrupt turns or angles and a flat face or side, of a grounding block arranged exteriorly of the coil and extending along the flat face or side thereof, and a clip to clamp the block on the coil.

5. A lightning arrester, comprising a coil having flat sides and abrupt turns or angles, a grounding medium disposed exteriorly of said coil, insulating material interposed between the coil and the grounding medium, and spring clips adapted to secure the several parts together.

6. In a lightning arrester, the combination with a coil having abrupt turns or angles and flat sides, of separate grounding blocks arranged exteriorly of the coil at opposite sides and extending along the flat faces or

sides of the coil, and means to detachably secure the blocks on the coil.

7. In a lightning arrester, the combination with a coil having abrupt turns or angles and flat sides, of separate grounding blocks arranged exteriorly of the coil at opposite sides and extending along the flat faces or sides of the coil, and a clip which clamps both blocks on the coil.

8. In a lightning arrester, the combination with a coil having abrupt turns or angles and flat sides, of separate grounding blocks arranged exteriorly of the coil at opposite sides and extending along the flat faces or sides of the coil, and spring clips at opposite ends of the coil each of which clamps both blocks on the coil.

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

CHARLES T. MASON.

Witnesses:

H. R. VAN PLOSUTER,
E. M. HALL.