No. 793,325. PATENTED JUNE 27, 1905.

A. STILES.

NOISE AND LIGHTNING ARRESTER FOR TELEPHONE WIRES.

APPLICATION FILED NOV. 10, 1903.

Fig. 1.

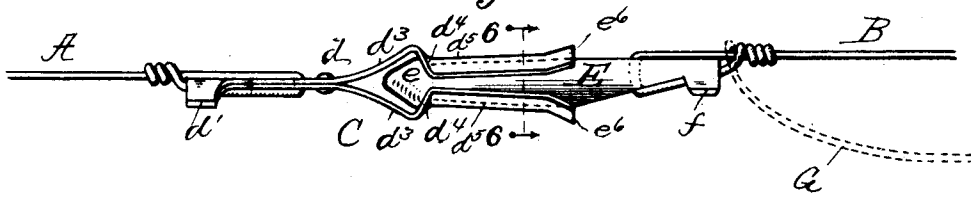


Fig. 2.

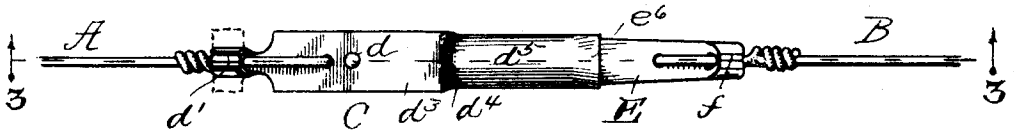


Fig. 3.

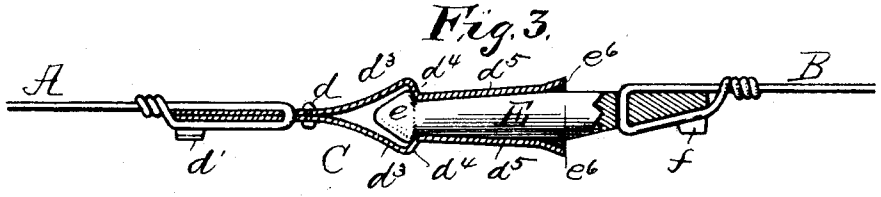


Fig. 4.

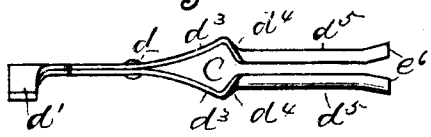
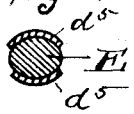


Fig. 5.



Fig. 6.



Witnesses;

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No. 793,325. Patented June 27, 1905.

UNITED STATES PATENT OFFICE.

ALEXANDER STILES, OF MARTINSVILLE, INDIANA.

NOISE AND LIGHTNING ARRESTER FOR TELEPHONE-WIRES.

SPECIFICATION forming part of Letters Patent No. 793,325, dated June 27, 1905.

Application filed November 10, 1903. Serial No. 180,517.

To all whom it may concern:

Be it known that I, ALEXANDER STILES, a citizen of the United States, residing at Martinsville, in the county of Morgan and State of Indiana, have invented certain new and useful Improvements in Noise and Lightning Arresters for Telephone-Wires, of which the following is a specification.

This invention relates to improvements in telephone-lines; and the object is to arrest the vibrations of the wires due to wind and other noise-producing causes and to provide means for breaking the circuit outside of the building where the telephone is located, so as to prevent damage from lightning during thunder-storms.

This invention is an improvement over that patented to me August 11, 1903, No. 735,839, and is specially adapted for the utilization of phosphor-bronze metal sheets of commercial thickness in the formation of the clasp to receive a soft-copper plug in order to prevent corrosion of the parts.

I accomplish the objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my invention in operative position in a closed circuit; Fig. 2, a top view of same; Fig. 3, a longitudinal section on the line 3 3 of Fig. 2; Fig. 4, a side view of the clasp with plug removed; Fig. 5, a like view of the plug removed from the clasp, and Fig. 6 a cross-section on the line 6 6 of Fig. 1.

Like characters of reference indicate like parts throughout the several views of the drawings.

A and B represent the ends of a divided telephone-line wire which are to be connected by means of my invention.

C is a clasp which is made out of sheet phosphor-bronze, the latter being cut into strips of the requisite length and width and two strips being taken, one for each of the jaws of the clasp. These two pieces are riveted together by means of the rivet d. The edges of the pieces between the rivet and the outer end are notched to form the tongues d', which are bent toward the same side of the clasp around the wire A to hold the two plates of the clasp in register with each other and to hold the clasp in line with the wire. The end A of the telephone-wire is passed in a loop through a perforation of the clasp and the end twisted around the body of the wire in the manner shown to make a durable fastening. Then the tongues d' are bent around a member of the loop. The ends of the two pieces forming the clasp are spread apart at d^3 d^3 and are then bent in at a suitable distance from the holding-rivet to form the shoulders d^4 d^4, which engage and hold a head e on the end of a plug E. The latter tapers from its middle toward said head, as shown in Fig. 3, and is elliptical in cross-section, as shown in Fig. 6. The material of which it is made will preferably be soft copper.

The jaws d^5 d^5 of the clasp from the shoulders to their ends are approximately parallel before the insertion of the plug, so that by the insertion of the latter they will closely engage the plug. They are curved transversely to fit the sides of the plug, and their extreme ends are flared, as shown at e^6, to facilitate the insertion of the plug. The end of the latter opposite the head e is perforated to receive the wire B, which is threaded through the perforation and bent back to form a loop similar to that which joins end A to the clasp. Lateral tongues f f, between which the loop is placed, are bent over to secure the fastening.

In the device patented to me in my Patent No. 735,839 the plug has no head at its end to hold it in the clasp, the strength of the jaws of the clasp being relied on to hold the plug; but to make the clasp of phosphor-bronze, as it is my desire to do, and to make it in a commercial way I am limited to the thickness of sheet metal of that material which can be obtained on the market, and the limited thickness of that material compels me to provide a head on the plug and holding-shoulders on the clasp to engage the head and hold it after the manner shown in the accompanying drawings.

One of the parts, as B, of the divided wire has a cable G, (shown in dotted lines in Fig. 1,) which may be carried from the outside of the house where the above-described separable connection is used in through the wall or window-casing and held inside of the house

within easy reach of a person therein, who can readily and quickly isolate or cut out his telephone when the occasion requires.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent, is—

A divided wire, a tapering plug of soft copper having rounded corners terminating with a head or knob at one end and having a transverse perforation at the other through which one end of the divided wire is threaded and looped back and secured to the body of the wire, said plug having lateral wings to be bent over to engage and hold the loop, and a clasp comprising two metal plates or strips riveted together with a single rivet near their centers and perforated near one end through which the looped end of the other divided wire is passed and fastened, said plates having side notches to form wings which are bent laterally over the wire, and the said plates beyond the rivet from the looped wire being spread and then bent inwardly and then outwardly to form shoulders to engage the head of the plug, and having jaws to fit the contour of the plug.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 7th day of November, A. D. 1903.

ALEXANDER STILES. [L. S.]

Witnesses:

JOHN B. SHERWOOD,

J. A. MINTURN.