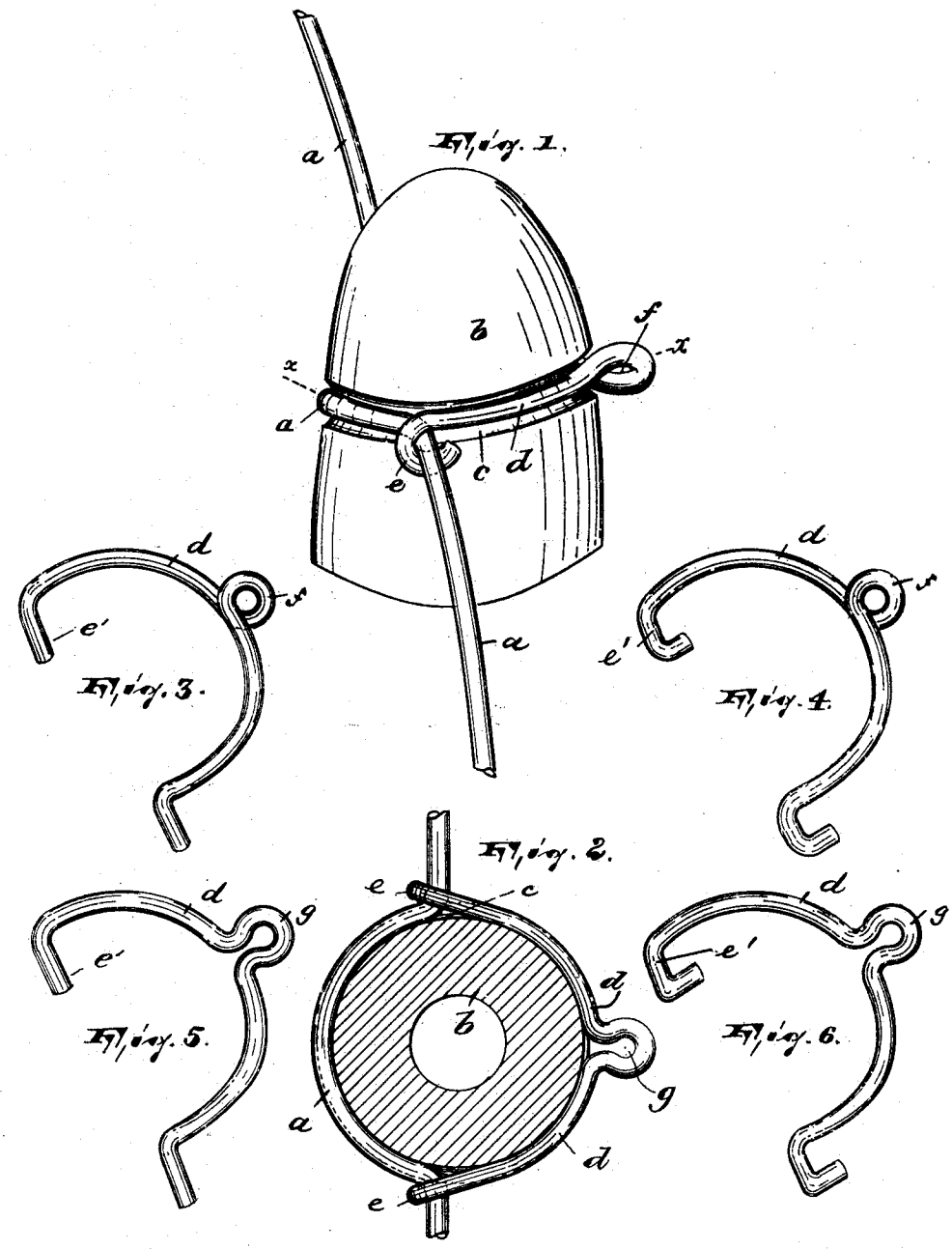
No. 619,915. Patented Feb. 21, 1899.

F. W. WENTWORTH.

TIE WIRE OR CLASP FOR INSULATORS.

(Application filed Dec. 12, 1898.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRED W. WENTWORTH, OF PATERSON, NEW JERSEY, ASSIGNOR TO THE INVENTOR'S NOVELTY MANUFACTURING COMPANY, OF SAME PLACE.

TIE-WIRE OR CLASP FOR INSULATORS.

SPECIFICATION forming part of Letters Patent No. 619,915, dated February 21, 1899.

Application filed December 12, 1898. Serial No. 698,959. (No model.)

To all whom it may concern:

Be it known that I, FRED W. WENTWORTH, a citizen of the United States, residing in Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Tie-Wires or Clasps for Insulators; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to means for securing a line of wire on its supports, and it has particular reference to the application of such means to telephone, telegraph, or other line-wires.

The object of the invention is to provide such a securing means as shall be simple and cheap in construction and effective in operation, and which may be readily placed in operative engagement with or readily disengaged from the wire.

The invention consists in the securing device proper, in the combination of the same with a specific form of insulator, to which the wire is affixed and upon which it is secured to the pole or other support, and in the combination of the wire with said device and the insulator.

The invention is fully illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the wire, the insulator, and one form of the device for securing said wire to the insulator. Fig. 2 is a sectional view of the insulator, showing a slight modification of said securing device. Figs. 3, 4, 5, and 6 are views of certain other modifications of the invention.

In said drawings, *a* indicates the wire to be supported, and *b* represents the insulator, having a continuous channel *c* formed in and surrounding it and adapted to receive the wire which extends around the insulator for a short distance. The channel *c* should have a width but slightly greater than that of the thickness of the wire and it should be of appreciable depth, for a reason hereinafter to be shown. *d* is the securing device for said wire. In the form of this device shown in Fig. 1 it consists of a bent wire substantially of the thickness of the line-wire to be supported and curved to fit the insulator, the ends of said wire being bent into the form of curved hooks *e* and its intermediate portion being formed into a twist *f*.

In the modification shown in Fig. 2 the device is similar to that shown in Fig. 1, with the exception that instead of a twist the intermediate portion of the bent wire is formed into a loop *g*.

In the modifications shown in Figs. 3 and 4 the device is substantially like that shown in Fig. 1, with the exception that its hooked ends are angular, as shown at *e'*, instead of curved, there being but one bend to form the hook at each end of the device shown in Fig. 3, and the ends of the device in Fig. 4 being rebent—that is to say, bent twice.

In the device as shown in Figs. 5 and 6 the hooked ends are substantially of the forms shown in Figs. 3 and 4, respectively, but the intermediate portion is formed into a loop *g* instead of the twist *f*.

In securing the line-wire *a* to the insulator the hooked ends *e* or *e'* of the clasp are hooked upon the said line-wire on both sides of the insulator, and afterward the curved portion of the clasp is forced over the top of the insulator into the channel *c*, which latter prevents the clasp from disengaging the insulator and at the same time draws the hooked ends of the clasp into firm engagement with the line-wire.

When the clasps are used in their unfinished forms, they are mounted upon the insulator and connected with the line-wire in the manner heretofore described, when afterward the ends of the clasp are bent into proper shape by a suitable tool or implement.

By providing the clasp with the intermediate loop or twist elasticity in the clasp is materially increased.

What I claim as new is—

1. A securing device for a line of wiring consisting of a bent wire having hooked ends and a bend intermediate said ends, said wire being adapted to extend around one side of a

support for, and engage with its hooked ends, said line of wiring, substantially as described.

2. The combination of a suitable support having a surrounding channel therein, a line of wiring engaging said channel on one side of said support, and a securing device consisting of a bent wire extending around the other side of said support and in said channel and having hooked ends engaging said line of wiring, and a deflection or bend intermediate its ends, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of December, 1898.

FRED W. WENTWORTH.

Witnesses:

ALFRED GARTNER,

JAMES B. NEWTON.