

G. W. CRAWFORD, JR.
 WIRE RETAINER AND INSULATOR GUARD.
 APPLICATION FILED APR. 25, 1910.

980,495.

Patented Jan. 3, 1911.

Fig. 1.

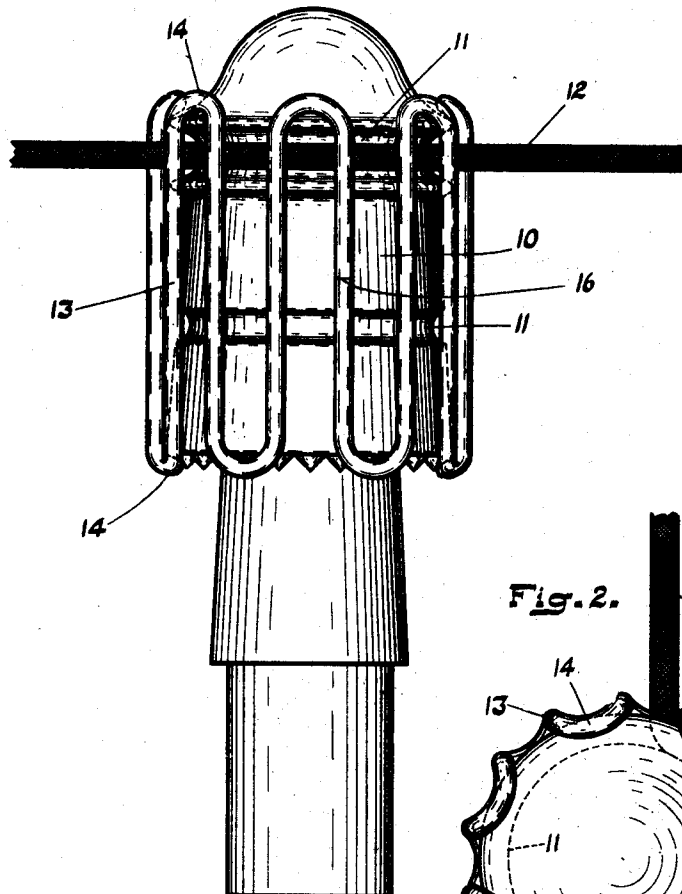
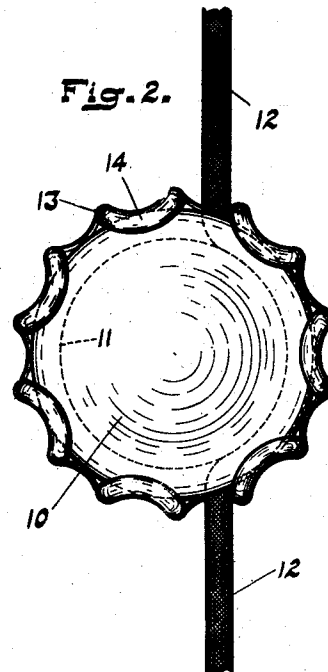


Fig. 2.



Witnesses
 Walter Troemel.
 Thomas H. McMeas

Inventor
 George W. Crawford, Jr.

By *Bradford & Hood*
 Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE W. CRAWFORD, JR., OF MORGANTOWN, INDIANA.

WIRE-RETAINER AND INSULATOR-GUARD.

980,495.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed April 25, 1910. Serial No. 557,620.

To all whom it may concern:

Be it known that I, GEORGE W. CRAWFORD, Jr., a citizen of the United States, residing at Morgantown, in the county of Morgan and State of Indiana, have invented a new and useful Wire-Retainer and Insulator-Guard, of which the following is a specification.

The object of my invention is to produce a simple device, which may be easily and cheaply manufactured, by means of which wires, such as telegraph and telephone wires may be readily connected to glass insulators in such manner that slack in the wires may be readily taken up without disturbing the connection with the insulator, and also such as to form a guard or protector for the insulator to prevent breaking.

The accompanying drawing illustrates my invention.

Figure 1 is an elevation of my device in position upon an insulator and wire, and Fig. 2 a plan.

In the drawings, 10 indicates an ordinary insulator having one or more wire-receiving grooves 11 adapted to receive a wire 12.

My retainer and guard consists of a cylindrical serpentine of wire 13, the tip 14 of each convolution being bent inward slightly as shown. The ends of the wire, from which the serpentine 13 is conveniently formed, may be secured together at 16 in any suitable manner, either by welding, as shown, or by interlocking hooks and eyes. The guard is diametrically expansible and longitudinally so dimensioned that its tips

14 will underlap a projection or end of the insulator 10 so as to retain the guard in position. It will be readily apparent, therefore, that, by slightly expanding the guard diametrically it may be readily slipped to and from position on the insulator and that wire 12 may be readily inserted by springing one or more of the convolutions outwardly to admit the wire, any desired rigidity of connection between the wire and insulator being obtained by carrying it beneath any desired number of convolutions of the guard. It will also be readily apparent that, by pulling lengthwise upon wire 12, any slack may be taken up between insulators without the necessity of disconnecting any retaining parts as is now necessary where the wire is retained upon the insulator by tie wire.

The structure, when in place, thoroughly protects the insulator against breakage by articles thrown against it.

I claim as my invention:

1. A retainer and guard for insulators consisting of a cylindrical serpentine.
2. A retainer and guard for insulators consisting of a cylindrical serpentine having inwardly bent tips.

In witness whereof, I have hereunto set my hand and seal at Morgantown, Indiana, this 21st day of April, A. D. one thousand nine hundred and ten.

GEORGE W. CRAWFORD, JR. [L. S.]

Witnesses:

H. L. BYERS,
W. A. GIBSON.