

No. 746,671.

PATENTED DEC. 15, 1903.

T. CARTER.
INSULATOR.

APPLICATION FILED SEPT. 12, 1903.

NO MODEL.

Fig. 1.

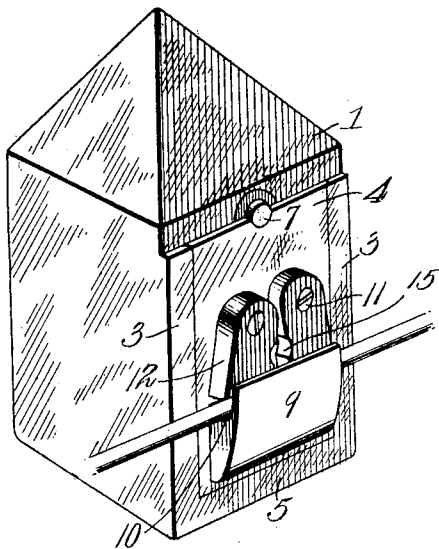


Fig. 3.

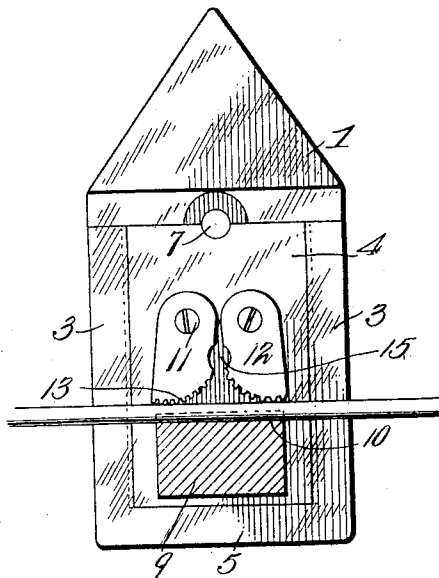


Fig. 2.

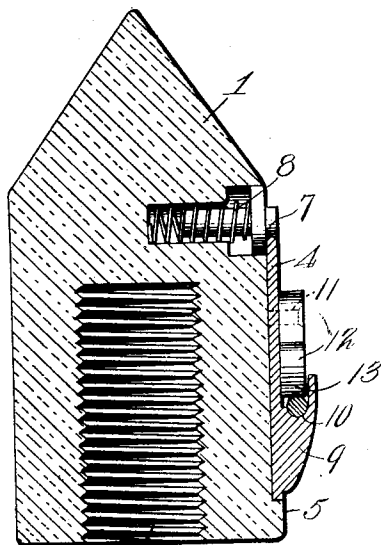
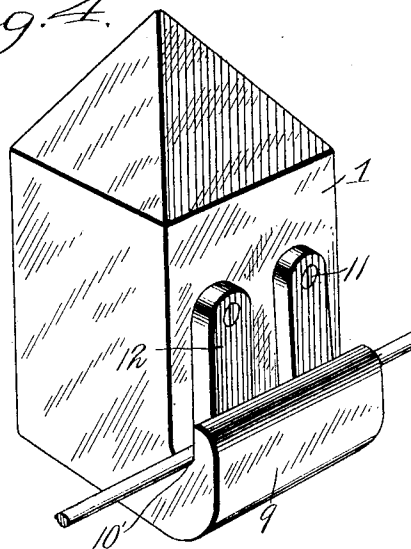


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

TAYLOR CARTER, OF FRANKFORD, KENTUCKY.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 746,671, dated December 15, 1903.

Application filed September 12, 1903. Serial No. 172,973. (No model.)

To all whom it may concern:

Be it known that I, TAYLOR CARTER, a citizen of the United States, residing at Frankford, in the county of Franklin and State of Kentucky, have invented a new and useful Insulator, of which the following is a specification.

This invention relates to certain improvements in insulators of that general class employed for stringing telephone and telegraph lines.

The principal object of the invention is to provide an insulator that will automatically engage and lock the wire and avoid the necessity of using separate tie-wires at each insulator.

A further object of the invention is to provide a self-locking insulator that will hold the wire as taut as may be desired and prevent all slack either in the original stringing line or in making repairs for connections.

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 an insulator constructed in accordance with the invention. Fig. 2 is a transverse sectional elevation of the same. Fig. 3 is a detail sectional view illustrating the engagement of the locking-dogs with the wire. Fig. 4 is a perspective view illustrating a slight modification of the invention.

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

In carrying out the invention I provide an insulator having means for engaging and holding the wire so arranged as to hold the wire from movement in either direction, the gripping force exerted being in proportion to the longitudinal stress of the wire.

The body 1 of the insulator is formed of glass and is provided with the usual threaded opening 2 to receive the ordinary insulator-

pin. At one side of the body portion of the insulator are dovetail guides 3, which may be formed integral with the body portion of the insulator. These guides serve to receive a removable plate 4, the outward movement of which is limited by a cross-bar or projection 5 at the base of the insulator, while upward movement is prevented by a spring-bolt 7, normally held in locking position by a small compression-spring 8, set in the body portion of the insulator.

The plate 4 is provided with a projecting boss 9, in the upper surface of which is formed a wire-receiving groove 10, the outer flange that forms the outer wall of the recess being of sufficient height to prevent lateral displacement of the wire in one direction, while the main plate and the body portion of the insulator prevent movement in the opposite direction. Secured to the plate are pivot-pins 11, on which are pivoted locking-dogs 12, the lower edges of which are provided with wire-engaging teeth 13, arranged on curved lines eccentric to the centers of the pins. The teeth of the two dogs face, respectively, in opposite directions, and when the two are mounted closely together it is preferred to slightly recess the adjacent edges of both, as indicated at 15, in order to permit the introduction of a tool for separating the same and setting the wire in the groove. When the wire is in the groove, the dogs fall by gravity into engagement therewith and positively hold the wire, and the initial bite or grip may be rendered more certain by the exertion of slight pressure on one or other of the holding-dogs. The gripping force exerted is strictly in proportion to the weight of the wire and the distance between supports, and when the wire is once drawn taut it is rigidly locked, and all slack is prevented. As the locking is practically automatic, the line may be strung in much less time than where the ordinary forms of insulators are used.

On reference to Fig. 2 it will be noted that the gripping-dogs are of a width about equal to the width of the wire-receiving groove and when entered therein are held from lateral displacement by the opposite vertical walls of the groove.

In Fig. 4 is illustrated a slight modification of the structure, and all of the parts, save

the dogs and studs, are formed integral with the body portion of the insulator, the said groove 10' extending for the full width of the insulator. The locking-dogs are of practically the same construction as those already described, but are shown as slightly separated, so that it becomes unnecessary to form the tool-receiving recesses in their adjacent faces.

10 Having thus described the invention, what is claimed is—

1. An insulator having a wire-receiving groove, and a pair of independent dogs pivoted to one wall of the insulator and arranged side by side in close relation, the dogs entering the groove and being held from lateral play by the side walls of such groove, said dogs having wire-gripping teeth arranged on curved lines eccentric to the centers of their 15 pivots and being movable clear of the groove to permit the introduction of the wire.

2. An insulator, a body portion having

guideways, a detachable plate adapted to said guideways, means for locking the plate in position, a boss carried by the plate and grooved to receive a wire, and locking-dogs carried by the plate and adapted to enter said groove. 25

3. An insulator, a body portion having a guideway, a removable plate adapted to the guideway, a spring-pressed locking-dog carried by the insulator and serving to engage and lock the plate in position, a boss projecting from the plate and provided with a wire-receiving groove, and a pair of toothed locking-dogs pivotally mounted on the plate and 30 having tool-receiving recesses in their adjacent faces. 35

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

TAYLOR CARTER.

Witnesses:

E. S. PETTY,

J. H. QUINLEY.