Nov. 19, 1929. W. D. KYLE 1,736,043

INSULATOR

Filed Oct. 4, 1923

FIG. 1

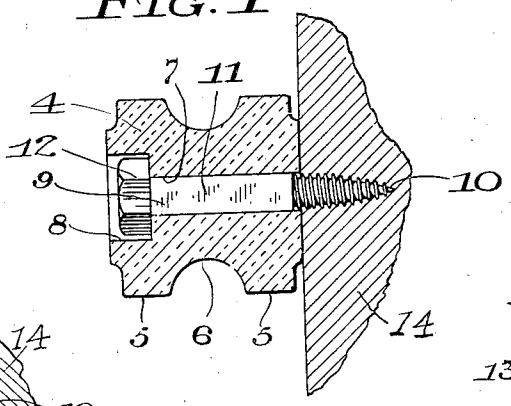


FIG. 4

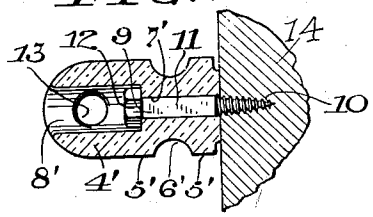


FIG. 5

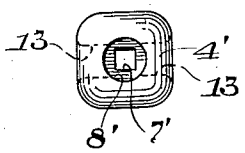


FIG. 2

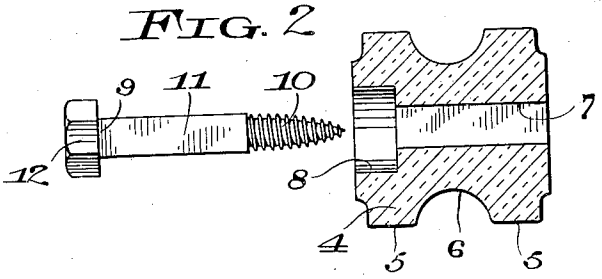
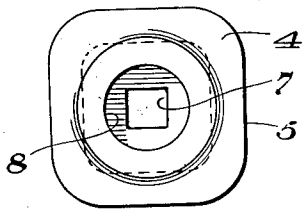


FIG. 3



WITNESSES

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UNITED STATES PATENT OFFICE

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INSULATOR

Application filed October 4, 1923. Serial No. 666,532.

The invention relates to insulators.

The usual insulators for supporting line conductors have a central opening in which the attaching screw is loosely mounted and the insulator is secured to its support by means of a screw driver. Such a construction is objectionable because of the difficulty encountered in attaching the insulator to its support. The present invention is designed to provide a construction permitting easy installation of the insulator without complicating its construction, and permitting the attachment of the insulator by the turning of the insulator itself, the insulator having a driving or keyed connection with its clamping and supporting member.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings: Fig. 1 is a vertical sectional view through a device embodying the invention, showing it applied to a support; Fig. 2 is a sectional view similar to Fig. 1 with the parts in disassembled position; Fig. 3 is a front end elevation view of the insulator;

Fig. 4 is a longitudinal sectional view of a modified form of insulator; and

Fig. 5 is a front end view of the insulator of Fig. 4 with the attaching screw removed.

The device comprises a member 4 of insulating material preferably having a square or polygonal shaped exterior 5, at least for a portion of its length, to permit a wrench to be applied thereto, an annular wire-receiving groove 6, a centrally disposed polygonal opening 7, and a counterbore or recess 8 in its front end alined with said opening.

A threaded attaching member 9 having a threaded end 10, a polygonal shank 11 adapted to fit the opening 7, and a head 12 preferably of polygonal shape is used to support the insulator member 4 and clamp it against a relatively fixed support. The threaded end 10 is shown in the form of a lag screw which is used where the insulator is mounted on wooden supports, but said end may be in the form of a machine screw to mount it on a metal support.

With this construction the shank of the member 9 is inserted into the opening 7 of the member 4 and after said member has been started a wrench applied to the squared exterior of the insulator will serve to screw the member 9 into the support and cause said member to move relative to the insulator so that the head 12 will be disposed in said recess 8 and the insulator will be firmly clamped between said head and the support 14 to which the insulator is applied, it being noted that the polygonal opening 7 and the polygonal shank 11 form a connection which permits relative sliding or longitudinal movement between the members 4 and 9, but that both of said members must turn together.

The head of the bolt or member 9 is preferably spaced from the sides of the recess and inside the outer end of the insulator so as to provide a large insulating path or surface between it and the wire within the groove 6.

In that form of insulator shown in Figs. 4 and 5 the insulator body 4′ extends forward of the shoulder receiving the head of the attaching screw 10 to accommodate a transverse wire-receiving opening 13 which intercepts the central bore 8′ through which the screw is inserted. The insulator body is formed with a square or polygonal exterior 5′ to permit a wrench to be applied thereto and may be provided with a peripheral wire-receiving groove 6′. Instead of turning the screw by means of a wrench engaging the polygonal exterior of the insulator, it may be turned by a tool such as a bar, inserted through the transverse opening 13, the bar then also serving to retain the screw in its opening and to transmit an axial thrust on the head of the screw when turning it into a support.

I desire it to be understood that this invention is not to be limited to any specific form or arrangement of parts except in so far as such limitations are specified in the claims.

What I claim as my invention is:

1. A line conductor support comprising a wire-receiving insulator having a tool-engaging surface and an axially disposed

polygonal opening, and a headed attaching screw having a polygonal shank loosely fitting in said opening, whereby said attaching screw may be turned into a support by a tool rotating said insulator.

2. A line conductor support comprising a wire-receiving insulator having a tool-engaging surface and an axially disposed opening including a polygonal portion and a recess at one end forming an interior shoulder, and a threaded attaching member having a head adapted to seat on said shoulder and a polygonal shank to loosely fit said polygonal portion of the opening, whereby said attaching member may be turned into a support by a tool rotating said insulator.

3. A line conductor support comprising a circumferentially-grooved wire-receiving insulator having a polygonal outer surface and an axially disposed polygonal opening, and a screw having a polygonal shank slidably fitting within said opening to effect its rotation by turning the insulator.

In testimony whereof, I affix my signature.

WILLIAM D. KYLE.