

(No Model.)

J. J. GREEN.
INSULATOR.

No. 480,011.

Patented Aug. 2, 1892.

Fig. 1,

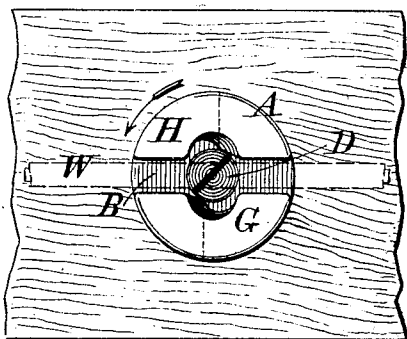


Fig. 3,

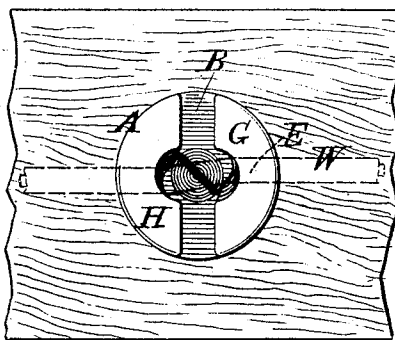


Fig. 2,

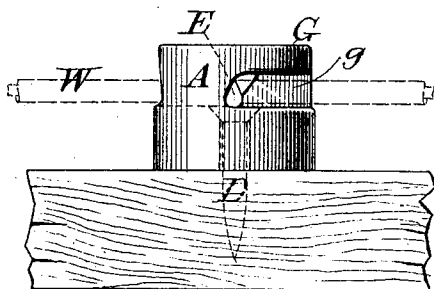
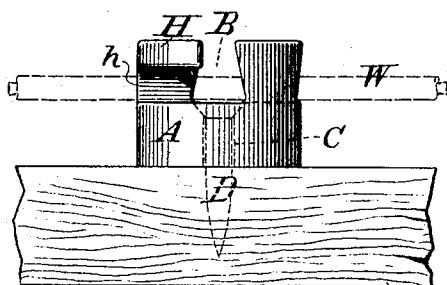


Fig. 4,



Witnesses

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INSULATOR.

SPECIFICATION forming part of Letters Patent No. 480,011, dated August 2, 1892.

Application filed March 24, 1892. Serial No. 426,220. (No model.)

To all whom it may concern:

Be it known that I, JOHN JAY GREEN, a citizen of the United States, residing in Boonton, in the county of Morris and State of New Jersey, have invented certain new and useful Improvements in Insulators for Electric Conductors, of which the following is a specification.

My invention relates to that class of insulators which are formed of some suitable non-conducting substance and are adapted to be secured to a wall, post, or other support, and designed to clamp and hold securely an electric conductor, and at the same time to prevent any escape of electricity from said conductor to the support upon which the insulator is affixed.

My invention consists in giving to such an insulator a peculiar conformation, by virtue of which the electric conductor, having first been introduced into a transverse groove formed in the insulator, is secured both in a lateral and longitudinal direction by simply turning the insulator upon the screw or pin which secures it to its support.

In the accompanying drawings, Figure 1 is a plan view of my improved insulator, showing the same with its groove in position to receive the wire. Fig. 3 is a similar view showing the position of the insulator when it has been turned so as to clamp the wire, and Figs. 2 and 4 are elevations corresponding to the plan views Figs. 1 and 3.

The body of the insulator A is formed of a single piece of porcelain, glass, or other suitable material. In its general outline it is preferably cylindrical, as shown in the figures. A transverse groove B is extended diametrically across the upper portion of the insulator, which groove is wide enough to receive the thickest wire intended to be used and in depth is preferably about half the vertical axial length of the cylinder. From the bottom of this groove an axial perforation C, preferably having its upper end countersunk, extends to and through the base of the insulator. This perforation is adapted to receive and accommodate an ordinary wood-screw D, (shown in dotted line,) by which the insulator may be secured to the support to which it is to be attached.

At right angles to but in the same vertical plane with the bottom of the transverse groove B a cylindrical channel E is formed, extending diametrically through the body of the insulator. Two of the solid segments thus formed between the lower portion of the groove B and the channel E at right angles thereto are cut away, as shown in dotted lines in Figs. 1 and 3, the recesses thus formed being shown at *g* in Fig. 2, and *h* in Fig. 4.

The insulator having been firmly screwed to its support by the screw D in the position shown in Figs. 1 and 2, the wire W is introduced into the groove B, after which the insulator is given a quarter-turn upon the screw D in the direction shown by the arrow in Fig. 1, thereby bringing it into the position shown in Figs. 3 and 4. The projections G and H above the recesses *g* and *h*, passing above the wire W, secure it in place, so that it cannot be lifted vertically from the groove B, while at the same time the wire is slightly bent, as indicated in Fig. 3, because the whole length of the channel E is not in the same vertical plane. The portion which is one side of the cylindrical axis of the insulator is not axially coincident with the other part, as may be seen by reference to Fig. 3. Thus it will be understood that when the channel E has been brought into a position at right angles to that which it originally occupied when the wire W was introduced there will be at least three points or surfaces at which the wire bears against the walls of the channel E, these being so disposed with reference to each other as to produce a slight bend in the wire as it passes through the insulator, but which is sufficient to prevent it from yielding to or rending through the insulator under the influence of a longitudinal strain.

In order to prevent the insulator from turning laterally upon its supporting-screw D by the strain of the wire, it must be fastened so firmly in the first instance as to require the exertion of considerable force to rotate it into such a position as to admit the wire to enter the groove provided for it.

I claim as my invention—

1. An insulator having a transverse diametrical groove formed in its upper portion for the introduction of the wire, a channel at

right angles to said groove for permanently retaining said wire, and an axial perforation extending from the intersection of said groove and channel to the bottom of the insulator, 5 through which a screw or pin is made to pass for securing the insulator to its support, at the same time permitting it to be rotated for the purpose of securing the wire, as set forth.

2. An insulator frictionally movable upon 10 a central axis, having a transverse diametrical groove formed in its upper portion for the introduction of the wire, and a channel at right angles to said groove for permanently retain-

ing said wire, which channel is provided with three or more bearing points or surfaces so 15 disposed with reference to each other as to produce a bend in the wire when the insulator has been rotated into position, as set forth.

In testimony whereof I have hereunto subscribed my name this 21st day of March, A. 20 D. 1892.

JOHN JAY GREEN.

Witnesses:

FRANKLIN L. POPE,
CAROLINE E. DAVIDSON.