March 19, 1929. J. L. OVERSTALL ET AL 1,705,584

INSULATOR

Filed Feb. 8, 1927

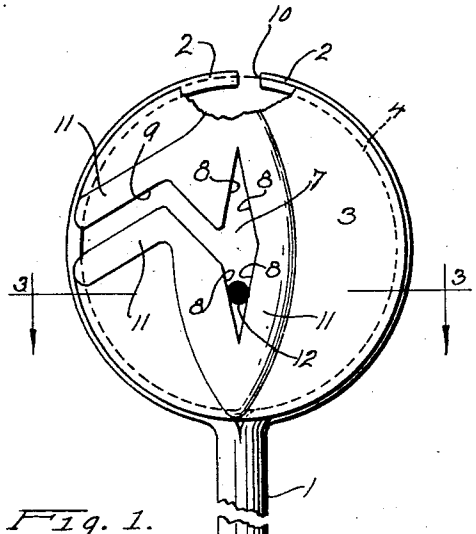

Fig. 1.

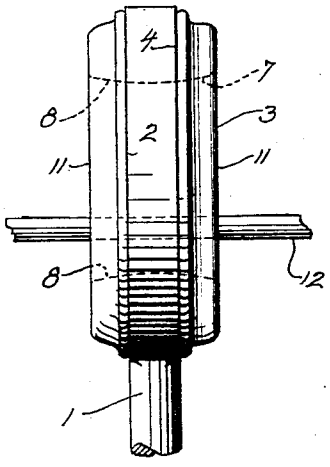

Fig. 2.

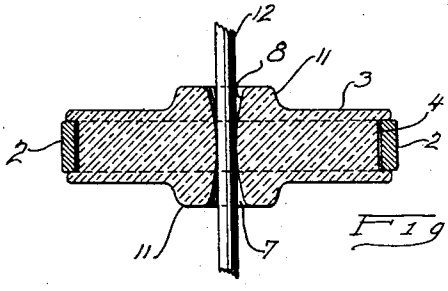

Fig. 3.

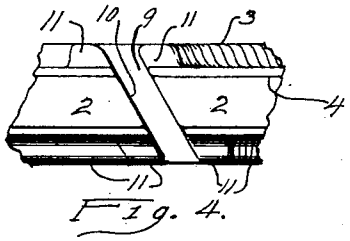

Fig. 4.

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Patented Mar. 19, 1929. 1,705,584

UNITED STATES PATENT OFFICE.

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INSULATOR.

Application filed February 2, 1927. Serial No. 165,280.

Our invention relates to improvements in insulators, and it consists in the combinations, constructions, and arrangements, hereinafter described and claimed.

An object of our invention is to provide an insulator in which the wire may be secured to the insulator without the necessity of threading the entire length of wire thru the opening in the device, and which has novel means for preventing the accidental withdrawal of the wire from the device.

A further object of our invention is to provide a device of the type described in which the wire receiving opening is shaped for clamping the wire.

A further object of our invention is to provide a device of the type described which is extremely simple in construction and which is durable and efficient for the purpose intended.

Further objects and advantages will appear in the following specification, and the novel features of our invention will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawing, forming a part of this application, in which—

Figure 1 is a front elevation of the device,

Figure 2 is a side elevation of a portion of the device,

Figure 3 is a section along the line 3—3 of Figure 1, and

Figure 4 is a top plan view of a portion of the device.

In carrying out our invention, we provide a bolt 1 having a bifurcated end, forming semi-circular arms 2, for receiving an insulating block 3, the block having an annular groove 4 in which the arms 2 are disposed. Lock nuts 5 secure the device to a cross piece 6 of a telegraph pole, not shown.

The block 3 is provided with a diamond-shaped opening 7 therein, the walls 8 of which are curved in the manner shown in Figures 2 and 3 for a purpose hereinafter described. The block also has a zig-zag slot 9 therein which extends from the periphery to the opening 7. Figure 4 shows how the slot 9 extends at an angle and how it is adapted to be brought into registration with an inclined opening 10 formed between the ends of the arms 2. The portions of the block disposed adjacent to the opening 7 and slot 9 are built up as at 11 for reinforcing the block adjacent to the cutaway portion.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. The slot 9 is aligned with the opening 10 for permitting a wire 12 to be passed into the opening 7. The block 3 is then rotated into the position shown in Figure 1 and the weight of the wire will cause it to drop and be wedged between the diamond-shaped sides of the opening 7. It will be noted that the wire is disposed below the center of the block 3. Any force tending to move the wire toward the right or the left (see Figure 1) will cause the wire to rotate the block until the wedge-shaped portion extends in the same direction as the pull of the wire. This novel arrangement prevents the wire from working out thru the slot 9 and into contact with one of the arms 2. The wire is inclined to sag between adjacent insulators and it is for this reason that we curve the edges of the opening 7 in the manner shown in Figures 2 and 3. The tapering walls of the opening will clamp the wire 12 and at the same time, the edge of the opening will not bite into the wire.

We claim:

1. An insulator comprising a supporting frame, an insulating block rotatably carried by said frame and having a diamond-shaped opening therein, said frame having an opening therein for permitting a wire to be passed therethrough, said block having a slot extending from the side of the diamond-shaped opening to the periphery of the block, said wire to be clamped in one of the points of said diamond-shaped opening below the pivotal center of said block.

2. An insulator comprising a supporting frame, an insulating block rotatably carried by said frame and having a diamond-shaped opening therein, said frame having an opening therein for permitting a wire to be passed therethrough, said block having a zig-zag slot extending from the side of the diamond-shaped opening to the periphery of the block, said wire being clamped by its own gravity at a point of said diamond-shaped opening below the pivotal center of said block, whereby lateral forces exerted on said wire will rotate said block in said frame.

3. An insulator comprising a bolt having

a bifurcated end for forming two semi-circular arms, the free ends of said arms being spaced from each other, an insulating block rotatably carried by said arms and having a diamond-shaped opening therein, said block having a zig-zag shaped slot extending from the side of the opening to the periphery of the block, a wire being held in a point of said diamond-shaped opening below the pivotal center of said block, whereby lateral forces exerted on said wire will rotate said block in said frame.

In testimony whereof we affix our signatures.

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