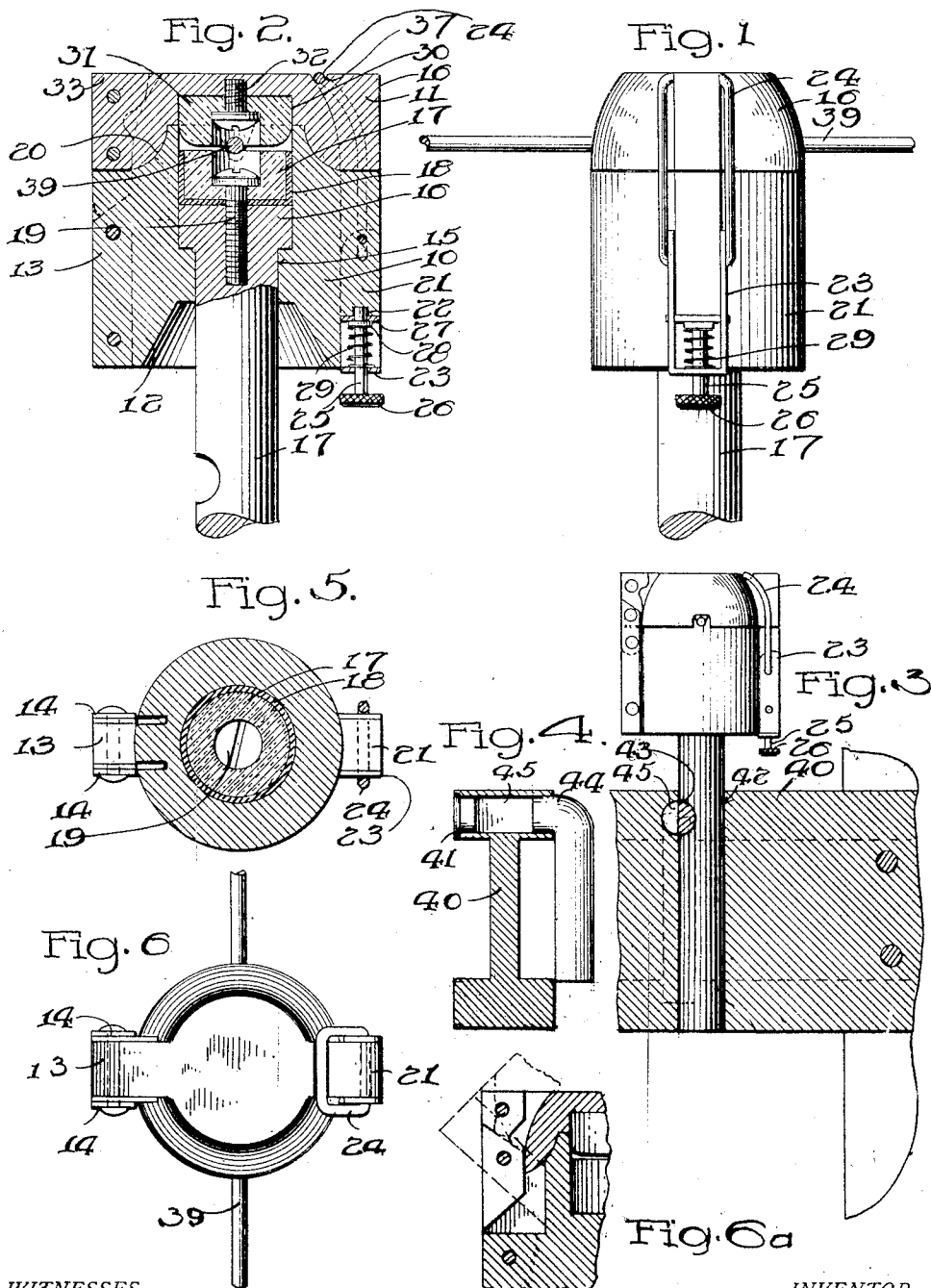


F. BROWALSKI.
IRON ARM AND KNOB.
APPLICATION FILED MAR. 30, 1912.

1,036,437.

Patented Aug. 20, 1912.



WITNESSES

J. N. Tullis

INVENTOR

Frank Browalski

By *E. C. Vrooman*, Attorney.

UNITED STATES PATENT OFFICE.

FRANK BROWALSKI, OF WORDEN, ILLINOIS.

IRON ARM AND KNOB.

1,036,437.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed March 30, 1912. Serial No. 687,540.

To all whom it may concern:

Be it known that I, FRANK BROWALSKI, a citizen of the United States, residing at Worden, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Iron Arms and Knobs, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to electric insulators of the type which are used to support lines, such as telephone and telegraph lines and the like on poles.

15 The principal object of the invention is to provide an insulator wherein iron can be used to hold the insulating material thus increasing the life and durability of the insulator and preventing the latter from being broken by mischievous and malicious shooting or throwing of stones.

20 Another object of the invention is to provide an insulator which can be readily applied to a pole and detached therefrom.

25 With the above and other objects in view, the invention consists in general of certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

30 In the accompanying drawings like characters of reference indicate like parts in the several views, and Figure 1 is a side elevation of an insulator constructed in accordance with this invention, the lower part of the pin being broken away. Fig. 2 is a transverse median section through the insulator shown in Fig. 1. Fig. 3 is a side elevation of the insulator showing the same applied to a pole arm. Fig. 4 is a transverse section through an iron pole arm having the insulator applied thereto. Fig. 5 is a section on the line 5—5, Fig. 1. Fig. 6 is a plan view of the insulator with the wire locked in place. Fig. 6^a is a detail in section.

35 The insulator provided is made in two parts, a body 10 and a cap 11. The body 10 is formed with the usual petticoat 12 and has projecting from one side a rib 13 provided with a pair of upwardly projecting arms 14. The body 10 is furthermore provided with a vertically disposed opening leading therethrough as indicated at 15 and this opening has an enlarged upper end wherein is seated the head 16 of a pin 17. Within the upper end of the opening 15

there is also provided a cup shaped member of glass, porcelain, or other non-conducting material as indicated at 17 and this material is surrounded furthermore, by a covering 18 of soft rubber or the like so as to prevent injury to the brittle insulating material. This member 17 is held in position by means of a screw 19 which has its head held within the cavity of the cup so as to be below the surface of the rim. The upper portion of the body 10 is substantially frusto-conical, the sides of the cone being concave, as indicated at 20 and these concave sides project upward above the member 17, as can clearly be seen by reference to Fig. 2. On the front of the body 10 there is provided a rib 21 having a socket 22 at its lower end. Pivoted to this rib is a yoke 23 to which in turn is pivoted a yoke 24, the yoke 24 being attached to the yoke 23 between the bight of the latter and its pivotal attachment to the rod 21. Passing through the bight of the yoke 23 is a pin 25 provided with a suitable head 26 and arranged to fit at its point into the socket 22 when the yoke is in proper position to permit such action. Between the arms of the yoke extends a guide plate 27, and adjacent the end of the pin between the guide plate and the bight of the yoke the pin is provided with a washer 28 against which bears one end of a spring 29, the other end of the spring bearing against the inner side of the bight of the yoke. The pin is thus constantly urged in a forward direction.

The cap of this invention has its interior formed to fit closely on the frusto-conical portion of the body and is provided with a recess 30 wherein is fitted a block of glass, or other suitable insulation, as indicated at 31, this block being cup shaped like the member 17 and being held in the cap by means of a screw 32, the head whereof fits within the cup shaped block. At the rear of the cap 11 there is provided a rib 33 and extending downwardly from this rib are arms 34 which move in grooves 35 formed in the body 10, and serve as stop-members to prevent lifting the cap to too great an extent. At the front of the cap there is provided a rib 36 having a notch 37 at the top thereof for the reception of the bight of the yoke 24. Both the members 17 and 31 are provided with suitable notches for the reception of a wire 39, and the body 10 and cap 11 are likewise notched, it being

obvious that the notches in the body and cap are sufficiently large to prevent wire contacting with the body or cap when the wire is in position. In locking the wire into the insulator thus formed the cap is opened and the wire placed in the notches. The cap is then closed and the yoke 23 raised to permit the yoke 24 extending over the rib 36 so that the bight of said yoke may engage in the notch 37. The bight of the yoke is then depressed, the pin being pulled outward to permit said bight swinging over the end or bottom of the rib 21. The pin is then released and the point of the pin will enter the socket 22 thus securely locking the device.

It is preferred to use this invention in connection with an iron cross arm of I-shape and in the bottom of the I-shaped arm 40 is a transversely extending opening 41 which communicates with a vertical opening 42 wherein fits the pin 17. The pin 17 furthermore is notched at its lower end as indicated at 43 and in the bottom 41 is held one end of a locking bar 44, the other end being bent at right angles to constitute a handle. This locking bar is likewise provided with a notch 45 so that when the bar is thrown in one direction the pin may be withdrawn from the opening 42, while when the bar is turned in the opposite direction the pin is locked from withdrawal. It is thus extremely easy to remove the pin from its socket and the same can be replaced without difficulty.

It is obvious that many minor changes may be made in the form and construction thereof without departing from the material prin-

ciples thereof. It is therefore not wished to confine the invention to the exact form herein shown and described, but it is wished to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the kind described, a hollow body portion having an opening extending from the interior downward, a pin projecting through said opening and having a head held in said body portion, a cup-shaped insulator held in said portion, a screw passing through said insulator to attach the same to the head, a hollow cap, a cup-shaped insulator held in the hollow of said cap, a screw passing through the cup-shaped insulator and having its head held in the hollow thereof, said screw being screwed into the cap to hold the insulator in position, and means to hold said cap on said body.

2. In a device of the kind described, a hollow body portion, said body portion being provided with an opening extending downward from the interior thereof, a pin extending through said opening and having a head lying in the hollow body, an insulator secured to said pin, cushioning material surrounding the sides of said insulator, a hollow cap, an insulator held in said cap, and means to connect said cap and the body. In testimony whereof I hereunto affix my signature in presence of two witnesses.

FRANK BROWALSKI.

Witnesses:

JOHN C. LOEWER,
HENRY KELL.