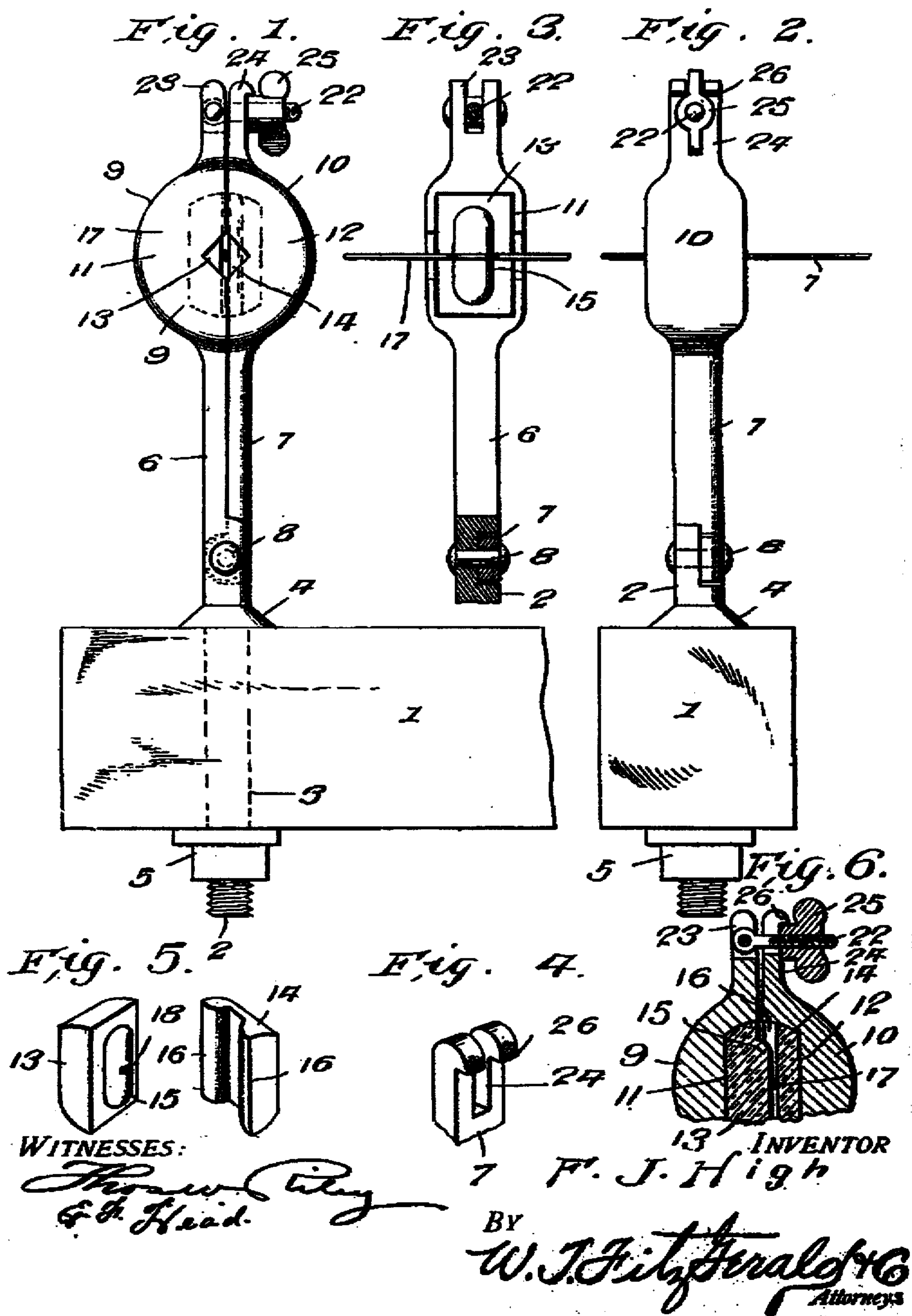


F. J. HIGH.
INSULATOR.
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FREDERICK JOSEPH HIGH, OF WEST LEBANON, INDIANA.

INSULATOR.

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To all whom it may concern:

Be it known that I, FREDERICK JOSEPH HIGH, a citizen of the United States, residing at West Lebanon, in the county of Warren and State of Indiana, have invented certain new and useful Improvements in Insulators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in insulator attachments and more particularly to that class adapted to be employed for suspending telephone, telegraph or electric wires, and my object is to provide means for securing the insulating devices to the usual form of cross arm carried at the upper end of supporting poles.

A further object is to provide means whereby the insulating blocks may be readily attached to the wires.

A still further object is to provide means for clamping the parts of the insulating device around the wires.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a side elevation of my improved insulator and securing device therefor. Fig. 2 is an edge elevation thereof. Fig. 3 is a central, vertical, sectional view through the upper portion of the insulator support and showing one of the insulating blocks in position. Fig. 4 is a detail perspective view of the upper end of one section of the insulator support. Fig. 5 is a perspective view of the insulating blocks removed from their support, and, Fig. 6 is a sectional view as seen on line 6-6, Fig. 2.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a cross arm, such as is commonly used for suspending lines of wires from poles and it has been the custom heretofore to secure wooden standards or pegs to the cross arms and secure to the upper ends of the standards the usual form of cup-shaped insulators and in view of the amount of strain placed on the standards, said standards are made of such size as to weaken the cross arms by providing openings therein of sufficient size to receive the standards,

and to obviate this result, I provide a metal standard 2, the lower end of which is introduced through an opening 3 in the cross arm, the downward movement of the standard being limited by means of a conical collar 4, while the extreme lower end of the standard is threaded to receive a nut 5, by which means the standard is secured to the cross arm.

That portion of the standard above the collar 4 is divided into two sections 6 and 7, the section 6 being integral with the standard 2, while the section 7 is pivotally secured at its lower end to the standard by introducing a pivot pin 8 through the standard 2 and the extreme lower end of the section 7. The sections 6 and 7 are provided adjacent their upper ends with semi-circular clamping members 9 and 10, respectively, said members having registering cavities 11 and 12, respectively, which are adapted to receive insulating blocks 13 and 14, respectively, the block 13 having a rib 15 extending longitudinally thereof, while each edge of the block 14 is provided with a flange 16 adapted to extend at opposite sides of the rib 15 and clamp the wire 17 over the curved face of the rib, said rib having a depression 18 at its longitudinal center to form a seat for the wire, the inner faces of the flanges 16 being rounded, thus obviating the possibility of cutting or injuring the wire and at the same time grip the same with sufficient tension to prevent longitudinal movement of the wire between the blocks.

The extreme upper ends of the sections 6 and 7 are secured together by means of a clamping bolt 22, one end of which is pivotally secured between ears 23 at the end of the section 6, while the opposite end of the bolt extends between ears 24 at the upper end of the section 7, said bolt being provided with a wing-nut 25 to draw the end of the section 7 towards the end of the section 6.

The outer edges of the ears 24 are provided with shoulders 26, below which the wing-nut is adapted to extend when turned onto the clamping bolt 22, said shoulders preventing the clamping bolt from swinging upwardly as long as the inner end of the wing-nut is in position below said shoulders, thus preventing the accidental release of the insulating blocks 13 and 14.

By forming the standard 2 of metal, it will be readily seen that the same may be

made much smaller than if constructed of wood, thereby requiring a smaller opening through the cross arm to receive the standard, while, by forming the collar 4 integral with the standard and providing a tapered upper surface therefor, water, or the like, will be prevented from entering the opening 3 in the cross arm when said collar is firmly clamped in position on the arm.

10 In securing the wire to the standards, the two sections of the standards are separated and the wire placed in position between the insulating blocks, after which the section 7 is swung upwardly and the block 14 moved
15 into engagement with the block 13, when the clamping bolt 22 is swung downwardly between the ears 24 and the wire firmly clamped between the blocks by turning the wing-nut onto the clamping bolt and, by pro-
20 viding a convex surface or rib on the block 13 and flanges on the face of the block 14 between which the rib passes, the wire will be crimped over the rib and securely held against longitudinal movement, thus hold-
25 ing the wire taut between each set of standards. It will thus be seen that I have provided a means for securing insulators to supporting arms wherein the insulator may be quickly secured to or removed from the se-
30 curing device and it will likewise be seen that by providing the clamping mechanism as shown, the wire to which the insulator is attached, may be held taut along the line of posts from which said wires are sus-
35 pended.

What I claim is:

1. The herein described insulating device, comprising the combination with an arm; of a standard adapted to be secured to said
40 arm, a collar on said standard, the upper face of which is tapered, sections above said standard, one of which is integral with the standard and the opposite section pivotally secured thereto, clamping members adjacent
45 the upper ends of said sections, having cavities therein, insulating blocks adapted to enter the cavities and means at the upper ends of the sections of the standard to clamp the sections of the insulator together.

50 2. An insulating device of the class described, comprising the combination with a

standard having sections at one end thereof, one of which sections is integral with the standard and the other section hinged there-
to, clamping members adjacent the upper 55 ends of said sections having cavities on their inner faces, ears at the upper ends of said sections, a clamping bolt pivoted to the ears on one section and adapted to extend be-
60 tween the ears on the opposite section, shoulders on the pivoted section and a wing-nut for said bolt adapted to clamp the pivoted section against the fixed section; of an insulator formed in two sections, one section
65 having a rib and a wire receiving groove extending transversely of said rib and flanges on the opposite section of the insulator adapted to cooperate with the rib on the first-mentioned section of the insulator and
70 clamp a wire passing between said sections.

3. In an insulator attachment, the combination with a standard having one of its ends threaded, a collar integral with said standard and having a tapered upper face, sections at the upper end of said standard, 75 one of which is fixed with the standard and the opposite section pivoted to the standard, clamping members adjacent the upper ends of said sections having cavities in the meet-
ing faces thereof, ears at the upper ends of 80 said sections, one set of said ears having shoulders, a clamping bolt pivoted between one set of ears and adapted to extend between the opposite ears, a nut on the free end of said bolt adapted to hold the pivoted sec- 85 tion in juxtaposition to the fixed section, said nut extending below and engaging said shoulders when the sections are in their closed positions; of an insulator formed in two sections and adapted to fit in the cavities 90 in the clamping members and be held together thereby and means to prevent longitudinal movement of a wire between said insulator-sections.

In testimony whereof I have signed my 95 name to this specification in the presence of two subscribing witnesses.

FREDERICK JOSEPH HIGH

Witnesses:

PHILIP H. HIGH,
L. B. FLEMING.