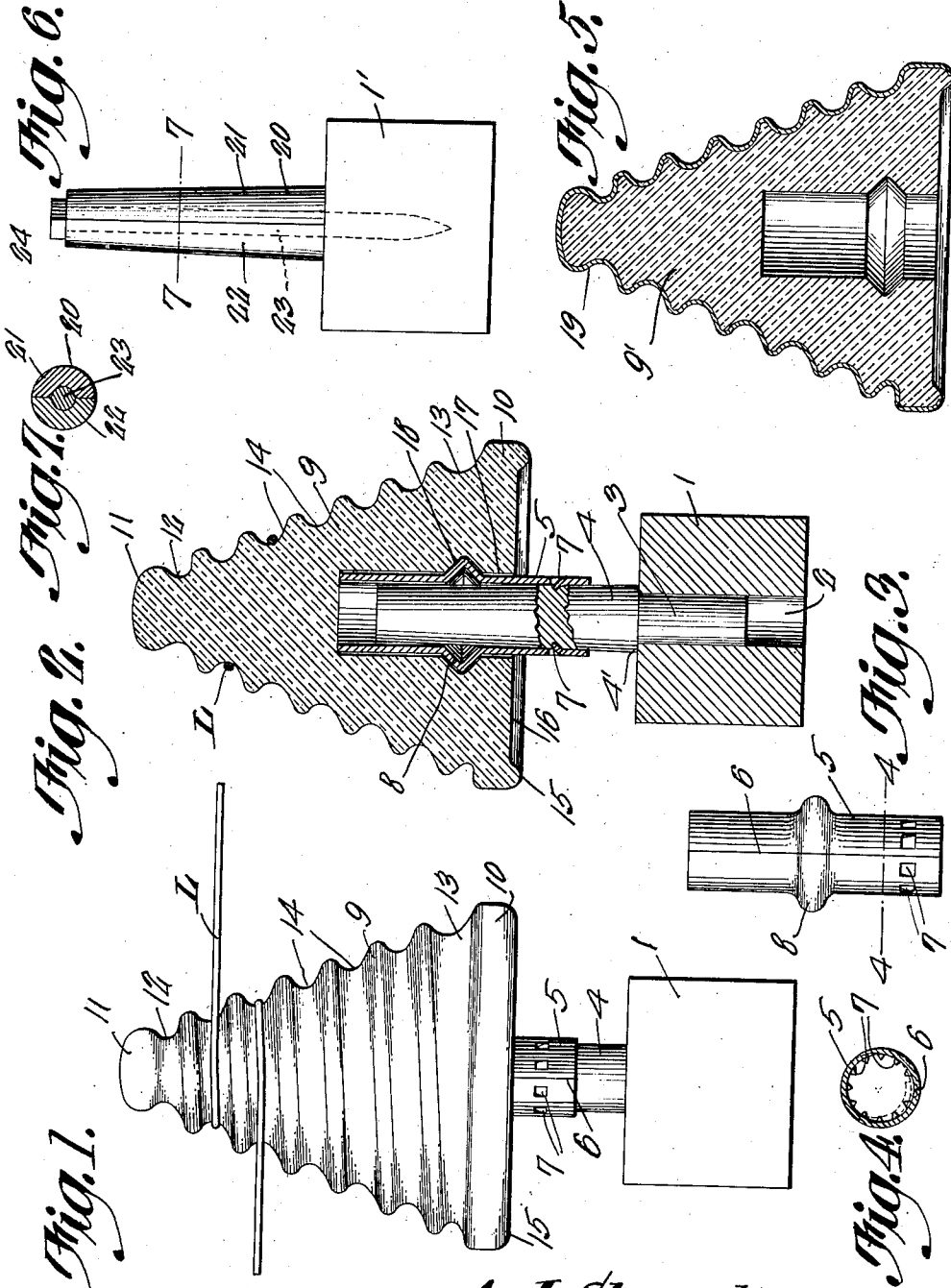


A. J. SLONECKER,
INSULATOR AND SUPPORT.
APPLICATION FILED JULY 31, 1912.

1,065,737.

Patented June 24, 1913.



Witnesses

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ABIRAM J. SLONECKER, OF TRENTON, MISSOURI.

INSULATOR AND SUPPORT.

Specification of Letters Patent. Patented June 24, 1913.

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To all whom it may concern:

Be it known that I, ABIRAM J. SLONECKER, a citizen of the United States, residing at Trenton, in the county of Grundy and State of Missouri, have invented a new and useful Insulator and Support, of which the following is a specification.

The present invention relates to improvements in insulators and supports, the primary object of the present invention being the provision of a line wire support and insulator, the said insulator being disposed for rotation upon the support to permit of the slackening or tightening of the line wire during the swinging of the wires.

A further object of the present invention is the provision of a novel form of supporting device for an insulator, whereby the insulator is readily placed in position, said support being a vertical axis upon which the insulator is permitted to rotate.

A still further object of the present invention is the provision of a conical insulator, the conical surface of which is grooved spirally to receive a line wire thereabout, the lower rim or base of the insulator being provided with a circumferentially disposed drip conveying lip and also forms the means to be grasped to rotate the insulator.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings Figure 1 is a side elevation of the complete insulator and support with the adjacent portion of a cross arm. Fig. 2 is a vertical central sectional view therethrough. Fig. 3 is a detail view in elevation of the metal connection between the insulator and the support. Fig. 4 is a section taken on line 4—4 of Fig. 3. Fig. 5 is a vertical sectional view through a modified form of insulator. Fig. 6 is a view in elevation of a modified form of supporting pin attached to a cross arm. Fig. 7 is a section taken on line 7—7 of Fig. 6.

Referring to the drawings, the numeral 1 designates the cross arm which is provided

with the vertical bore or aperture 2 for the reception of the reduced cylindrical end 3, of the pin support 4, said pin support being gradually tapered from the shouldered portion 4' to the upper end thereof. This support 4 is preferably made of wood.

Disposed to encircle the enlarged portion of the support 4 is a split sleeve or tube 5, made of a flexible or resilient metal, the same being split at 6 so that the meeting edges may be moved toward or from each other to allow of a circumferential contraction or expansion of the same. Near the lower end in the body of the tube 5 are provided the inwardly projected prongs or tangs 7 which when the tube 5 is placed upon the support 4, will pierce the body of the same as clearly shown in Fig. 2 and thereby prevent the upward sliding of the tube 5 when in insulator supporting position. The metal support 5 is further provided in its intermediate portion with the circumferentially disposed enlarged portion 8 which in reality constitutes a bead, the purpose of which will presently appear.

The insulator or line wire carrying member 9 is made preferably in the shape of a cone, the base of which is plain as at 10, while the apex is rounded to form a knob 11, the circumferential groove 12 is formed near the apex while near the base is formed a circumferential groove 13, the intermediate surface of the cone-shaped insulator being provided with the spiral groove 14, whose respective ends are in communication with the grooves 12 and 13. By this means a proper gripping or threading surface is provided for a single line wire L. Upon the under side of the base of the insulator is formed the circumferential rib or bead 15 which provides a means to direct the drip due to the collection of moisture, rain or snow upon the convoluted portion of the insulator, away from the flat portion 16 of the base at the under side thereof.

Formed concentrically in the base of the insulator and projecting approximately adjacent vertical the center line thereof, is the cylindrical bore 17 provided with the intermediate enlarged circumferential recess portion 18, the bore 17 and recess 18 forming a receptacle for the metal supporting tube 5, which, as clearly shown in Fig. 2, is disposed to project above the upper end of the

wooden support 4 and have its circumferential bead 8 projected into the circumferential recess 18 of the bore 17. By this means the insulator is held against vertical movement in either direction, but is permitted a rotary movement upon the metal sleeve 5, which in reality forms a metal bearing sleeve for the insulator. As the tube 5 is permitted a slight contraction during the positioning of the insulator, thereupon to be compressed sufficiently to permit of the passage of the circumferential bead 8 within the mouth of the bore 17 to be finally expanded into the circumferential recess 18, as clearly shown in Fig. 2.

As clearly shown in Fig. 5, a slight modification of the insulator is shown in which the body 9', which is made similar in shape to the insulator as shown in Figs. 1 and 2, is composed of a plastic insulating material, such for instance, as glass, porcelain or cement, the same being covered with a metal casing 19, which in reality forms a mold for such plastic material and provides a weather and wear resisting surface, and at the same time a surface which will protect the plastic material against breakage, both in shipment and when in line wire supporting position. The metal sheathing 19 is also designed to prevent the breakage of the material due to bullets or other missiles that may be aimed at the insulators when in use. The metal covering 19 constitutes both a mold and an armor for the material 9'.

In Figs. 6 and 7 a modification of the supporting post is shown, in which the tapered post 20, made of wood or other material, is split longitudinally into two sections 21 and 22, a lag screw 23 having a head 24 being first secured in the cross arm 1' at the desired distance, after which the sections 21 and 22 are placed as shown. With this construction, the supporting screw 23 may be placed in the cross arm and the cross arm secured to the bolts before the sectional posts are placed in position, thus rendering less liable the breakage of such posts in shipment or in handling for installation.

In placing the line wire L upon the insulator as herein shown the operator places a coil around the extreme upper end and then by grasping the base rotates the insulator body. The line wire will be fed downwardly due to the spiral grooves 14, and in such a manner as to increase the size of the coil in the line wire about the insulator, and thus automatically tighten the line wire.

As the supporting tubes 5 are made of a resilient metal, and under contraction the meeting edges 6 overlap, as clearly shown in Fig. 4, it is evident that the tube may be readily contracted for insertion within the bore of the insulator 9 and will expand to properly retain such insulator in line wire supporting position. The sleeve 5 will also

provide a bearing sleeve for the insulator so that the insulator may be rotated thereon when tightening or releasing the wire.

What is claimed is:

1. An insulator and support, comprising a tubular supporting sleeve, a conical insulator rotatably mounted thereon, and co-acting means carried by the sleeve and insulator to prevent the longitudinal movement of the insulator upon the sleeve, the outer surface of the insulator being provided with a spiral line wire receiving groove.

2. An insulator and support, comprising a tubular supporting sleeve, a conical insulator rotatably mounted thereon, and co-acting means carried by the sleeve and insulator to prevent the longitudinal movement of the insulator upon the sleeve, the outer surface of the insulator being provided with a spiral line wire receiving groove, the base of the insulator providing means for rotating the insulator to tighten or slacken the line wire.

3. An insulator and support, comprising a tubular supporting sleeve, a conical insulator rotatably mounted thereon, and co-acting means carried by the sleeve and insulator to prevent the longitudinal movement of the insulator upon the sleeve, the outer surface of the insulator being provided with a spiral line wire receiving groove, the base of the insulator being provided with a depending circumferential rib adjacent the periphery thereof to direct the moisture away from the under side of the base.

4. An insulator and support, comprising a tubular supporting sleeve, a conical insulator rotatably mounted thereon, and co-acting means carried by the sleeve and insulator to prevent the longitudinal movement of the insulator upon the sleeve, the outer surface of the insulator being provided with a spiral line wire receiving groove, the base of the insulator constituting a means for rotating the insulator, to tighten or slacken the line wire and the base of the insulator body being provided with a depending circumferential rib adjacent the periphery thereof, to direct the moisture away from the under side of the base.

5. A combination with a cross arm and a vertical insulator supporting pin carried thereby, of a metal insulator supporting sleeve capable of circumferential contraction and expansion, a conical insulator provided with a central bore to fit upon said sleeve said insulator being rotatably mounted upon said sleeve and co-acting means carried by the insulator and sleeve to retain the insulator against longitudinal movement.

6. The combination with a cross arm and a vertical insulator supporting pin carried thereby, of a metal insulator supporting sleeve capable of circumferential contraction and expansion, a conical insulator provided

with a central bore to fit upon said sleeve, said insulator being rotatably mounted upon said sleeve, and co-acting means carried by the insulator and sleeve to retain the insulator against longitudinal movement, the outer surface of the insulator being provided with a spiral groove for the reception of a line wire, the base of the insulator providing a means for rotating the insulator to tighten or slacken the line wire.

7. The combination with a cross arm and a vertical insulator supporting pin carried thereby, of a metal insulator supporting sleeve capable of circumferential contraction and expansion, a conical insulator provided with a central bore to fit upon said sleeve, said insulator being rotatably mounted upon said sleeve, co-acting means carried by the insulator and sleeve to retain the insulator against longitudinal movement, and a circumferential bead formed upon the base adjacent the periphery of the insulator for directing the drip away from the insulator.

8. The combination with a cross arm and a vertical insulator supporting pin carried thereby, of a metal insulator supporting sleeve capable of circumferential contraction and expansion, a conical insulator provided with a central bore to fit upon said sleeve, said insulator being rotatably mounted upon said sleeve, co-acting means carried by the insulator and sleeve to retain the insulator against longitudinal movement, the outer surface of the insulator being provided with a spiral groove for the reception of a line wire, the base of the insulator providing a means for rotating the insulator to tighten the line wire, and a circumferential bead formed upon the base adjacent the periphery of the insulator for directing the drip away from the insulator.

9. The combination with a cross arm and a vertically disposed insulator supporting

pin, of a longitudinally split metallic sleeve fitting upon the post, said sleeve being provided with a plurality of inwardly projecting prongs disposed to permit the insertion of the post within the sleeve and to prevent the withdrawal of the sleeve from the post, an insulator provided with a concentric bore rotatably mounted upon the sleeve, and co-acting means carried by the insulator and sleeve to prevent longitudinal movement of the insulator.

10. The combination with a cross arm and a vertically disposed insulator supporting pin, of a longitudinally split metallic sleeve fitting upon the post, said sleeve being provided with a plurality of inwardly projecting prongs disposed to permit the insertion of the post within the sleeve and to prevent the withdrawal of the sleeve from the post, an insulator provided with a concentric bore rotatably mounted upon the sleeve, said sleeve being provided with a circumferential bead intermediate of its ends, and said insulator being provided with a circumferential recess in communication with the bore to receive the bead of the sleeve and lock the insulator against longitudinal movement.

11. The combination with a cross arm, of a supporting post for an insulator, having a cylindrical metallic support with a head, and a sectional pin for an insulator surrounding the same and below the head, the exterior surface of said member being frusto-conical, and the sections being held between the head and the cross arm.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ABIRAM J. SLONECKER.

Witnesses:

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