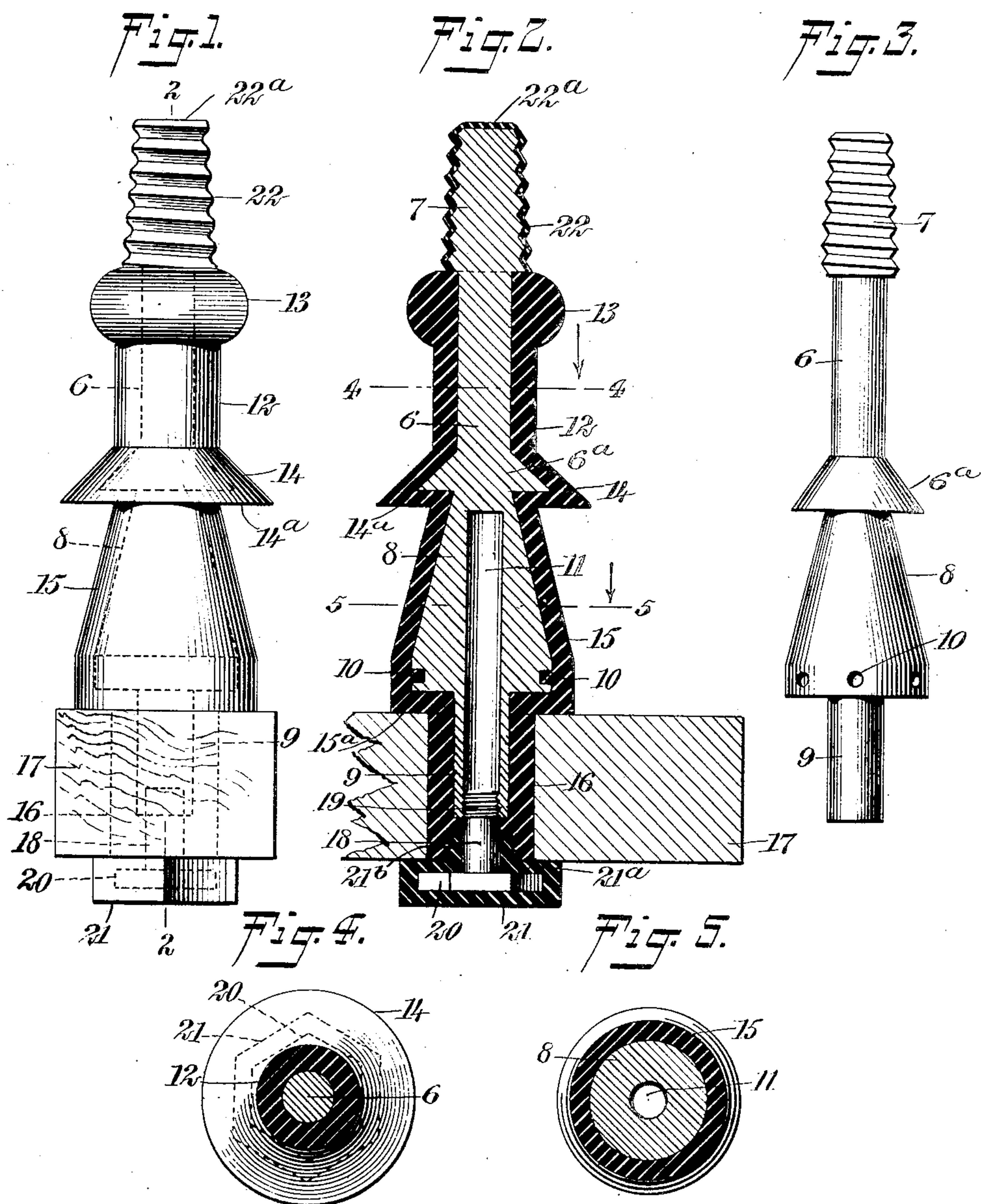


No. 855,261.

PATENTED MAY 28, 1907.

L. STEINBERGER.
INSULATOR PIN.

APPLICATION FILED OCT. 9, 1905.



WITNESSES:

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INSULATOR-PIN.

No. 855,261.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed October 9, 1905. Serial No. 282,000.

To all whom it may concern:

Be it known that I, LOUIS STEINBERGER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Insulator-Pin, of which the following is a full, clear, and exact description.

My invention relates to insulator pins, my more particular object being to produce a type of pin suitable for supporting an insulator for high potential currents.

Among the several objects sought to be accomplished by my invention, are the following: 1. To produce a supporting member of comparatively great strength with a minimum of material; 2. To render the supporting stem as near immune as possible from the effects of moisture; 3. To make the supporting stem in parts one encircling the other and firmly anchored thereto; 4. To cover the thread with electrose or with other suitable insulating material in order to increase the insulation, and also to enable the thread to be made more exact as to form; 5. To envelop all metallic parts completely with insulating material.

Reference is to be had to the accompanying drawings forming a part of this specification, to which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation showing the improved supporting pin as mounted upon a cross arm and ready to receive the insulator; Fig. 2 is a vertical cross section through the same on the line 2—2 in Fig. 1 showing the internal construction of the pin; Fig. 3 is a side elevation of the supporting stem as removed from the insulator pin; Fig. 4 is a horizontal section upon the line 4—4 in Fig. 2, looking in the direction of the arrow, and showing the supporting stem encircled by the jacket 12 of insulating material, and also showing the conical shedding portion 14; and Fig. 5 is a horizontal section upon the line 5—5 in Fig. 2, looking in the direction of the arrow, and showing the conical portion 8 provided with a cylindrical air space 11, and encircled by the conical portion 15 of the insulating jacket.

The supporting stem 6 is made preferably of metal, and is provided with an enlarged head 7 integral therewith, this head being threaded externally. This stem 6 is further provided with two conical portions 6^a and 8, the conical portion 8 terminating at its bot-

tom in a tube 9 and being provided peripherally with anchor holes 10. A jacket 12 of insulating material, preferably electrose, is provided at its upper end with an annular bead 13 integral therewith, this bead serving to strengthen the jacket at its upper end. Integrally connected with the jacket 12 are conical portions 14, 15, the portion 14 having a horizontal annular bottom 14^a, which serves to protect the upper end of the portion 15 from moisture. Below the portion 15, and connected integrally therewith, is a cylindrical portion 16 of smaller diameter than the largest diameter of the portion 15. The lower end of the portion 15 terminates in an annular shoulder 15^a resting tightly upon the cross arm 17. The portion 16 extends into the cross arm 17. This portion 16 thus encircles the tube 9 and projects beyond the lower end of the same. A bolt 18 is provided with a thread 19 and with a head 20, the latter being preferably hexagonal. Encircling this head 20 is an envelop 21 of insulating material provided with a portion 21^a which extends up flush against the body portion of the bolt 18, and is provided with an annular bead 21^b which projects into the cross arm from below, being brought approximately into contact with the portion 16. The lower portion of the tube 9 is threaded internally so as to fit the thread 19.

In mounting the insulator pin, the portion 16 containing the tube 9 is inserted from the top of the cross arm 17, and the bolt 18 is thereupon inserted from the bottom of the cross arm, so that the thread 19 engages the threaded end of the tube 9, and upon rotation of the bolt 18 the latter is drawn upward and tightened so as to make a watertight connection between the portion 21^a of insulating material and the lower face of the cross arm 17. In doing this, the main body of the pin is drawn downward.

The enlarged head 7 is provided with a thimble 22 of insulating material, preferably electrose, this thimble having a closed end 22^a and fitting neatly down upon the annular bead 13 so as to form a moisture-proof connection therebetween. This thimble 22 is therefore removable from the enlarged head 7 and may be replaced when broken or worn out. When the several parts are assembled the entire construction from the end 22^a of the thimble 22 to the bottom of the envelop 21 upon the bolt head 20 is completely watertight, except as regards its superficial

surface, and even this is rendered dry to some extent by the fact that the pin fits watertight against the cross arm, and by the further fact that the shoulder or annular surface 5 14^a renders a part of the portion 15 of the jacket of insulating material comparatively dry.

I do not limit myself to the use of metal for the construction of the central stem or 10 strengthening member, nor to the use of any particular insulating material for the jacket encircling this strengthening member. Neither do I limit myself to the exact proportions shown, nor in all cases to making the 15 thimble 22 separate from the insulating jacket.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

20 1. An insulator pin, comprising a strengthening member having an enlarged head, and a jacket of insulating material enveloping said strengthening member and provided with an annular thickened portion constituting a bead and disposed adjacent to said enlarged head.

2. An insulator pin, comprising a body member provided with a substantially conical portion having anchorages, and a jacket 30 of insulating material enveloping said conical portion and secured by said anchorages, said jacket of insulating material being also conical in form.

3. An insulator pin, comprising an enlarged body portion of metal having a metallic tube integral therewith and projecting therefrom, a jacket of insulating material enveloping said body portion, and a fastening member for engaging said metallic tube in 40 order to hold said body member upon a cross-arm.

4. An insulator pin, comprising a body member provided with a conical portion, a jacket of insulating material enveloping said 45 body member and said conical portion so as to present a shoulder, and means for securing said shoulder against a cross-arm so as to form a watertight joint.

5. An insulator pin, comprising a body member provided with a substantially conical portion and with a tube, a jacket of insulating material encircling said substantially conical portion and said tube, said jacket of insulating material being provided with an 55 annular shoulder for fitting upon a cross-arm, and with a portion encircling said tube for extending partially through said cross-arm, and a metallic fastening member provided with means for engaging said tube and 60 with means for engaging said portion of said jacket extending into said cross-arm.

6. An insulator pin, comprising a body member having a portion for engaging the upper surface of a cross-arm and having also 65 a portion of smaller diameter for extending

into said cross-arm, a jacket of insulating material covering said body member, a fastening member for engaging the portion thus projecting into said cross-arm, and an envelop covering all parts of said fastening member 70 which would otherwise be exposed, said envelop engaging said portion of said body member projecting into said cross-arm.

7. An insulator pin, comprising a metallic member provided with a shoulder, a jacket of 75 insulating material encircling said metallic member and provided with a shoulder for engaging the upper surface of a cross-arm, a fastening member for engaging the lower surface of said cross-arm, said fastening 80 member being provided with a portion for engaging said metallic member and for drawing the same downward, and an envelop of insulating material covering said fastening member and engaging directly said jacket 85 of insulating material.

8. An insulator pin, comprising a body member provided with a shoulder and with a projecting portion of smaller diameter than said shoulder, a jacket of insulating material 90 engaging said shoulder and provided with an extended portion encircling said projecting portion, a fastening member for engaging said projecting portion of said body member, and an envelop of insulating material covering 95 said fastening member and engaging directly said extended portion of said jacket of insulating material.

9. An insulator pin, comprising a portion of insulating material for extending into a 100 cross-arm, a strengthening member connected with said portion of insulating material for supporting an insulator, a bolt for engaging said strengthening member, said bolt being provided with a head, and an envelop of insulating material secured rigidly to said head. 105

10. An insulator pin, comprising a body member having a portion of reduced diameter for insertion into a cross-arm, a revoluble fastening member connected with said portion 110 of reduced diameter for pulling the same downward from below said cross-arm, said revoluble fastening member being provided with a head, and an envelop of insulating material secured rigidly to said head and revoluble 115 therewith.

11. An insulator pin comprising a body member provided with a tube threaded internally, a jacket of insulating material covering said body member and said tube, and 120 extending below said tube, a bolt provided with a portion threaded externally engaging said tube, and an envelop of insulating material encircling the exposed part of said bolt, said envelop of insulating material extending practically into engagement with the 125 lower portion of said tube.

12. An insulator pin, comprising a strengthening member provided with a threaded portion, a jacket of insulating material mounted 130

upon said pin but leaving said threaded portion thereof exposed, a threaded sleeve of insulating material detachably mounted upon said threaded portion, said sleeve of insulating material directly engaging said jacket of insulating material.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

LOUIS STEINBERGER.

Witnesses:

WALTON HARRISON,
EVERARD B. MARSHALL.