

No. 749,335.

PATENTED JAN. 12, 1904.

L. STEINBERGER.
INSULATOR.

APPLICATION FILED SEPT. 18, 1902.

NO MODEL.

Fig. 1,

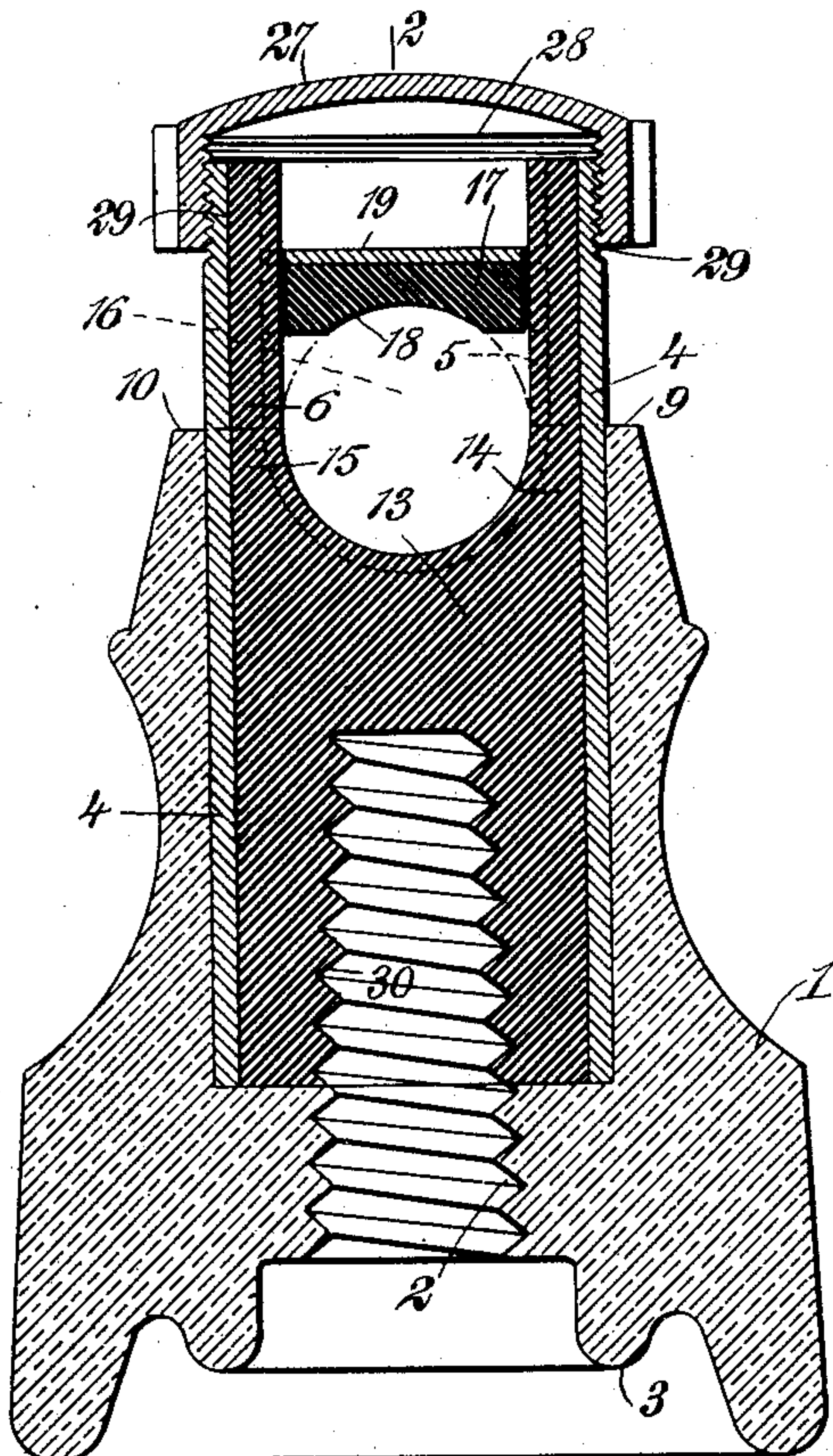


Fig. 2,

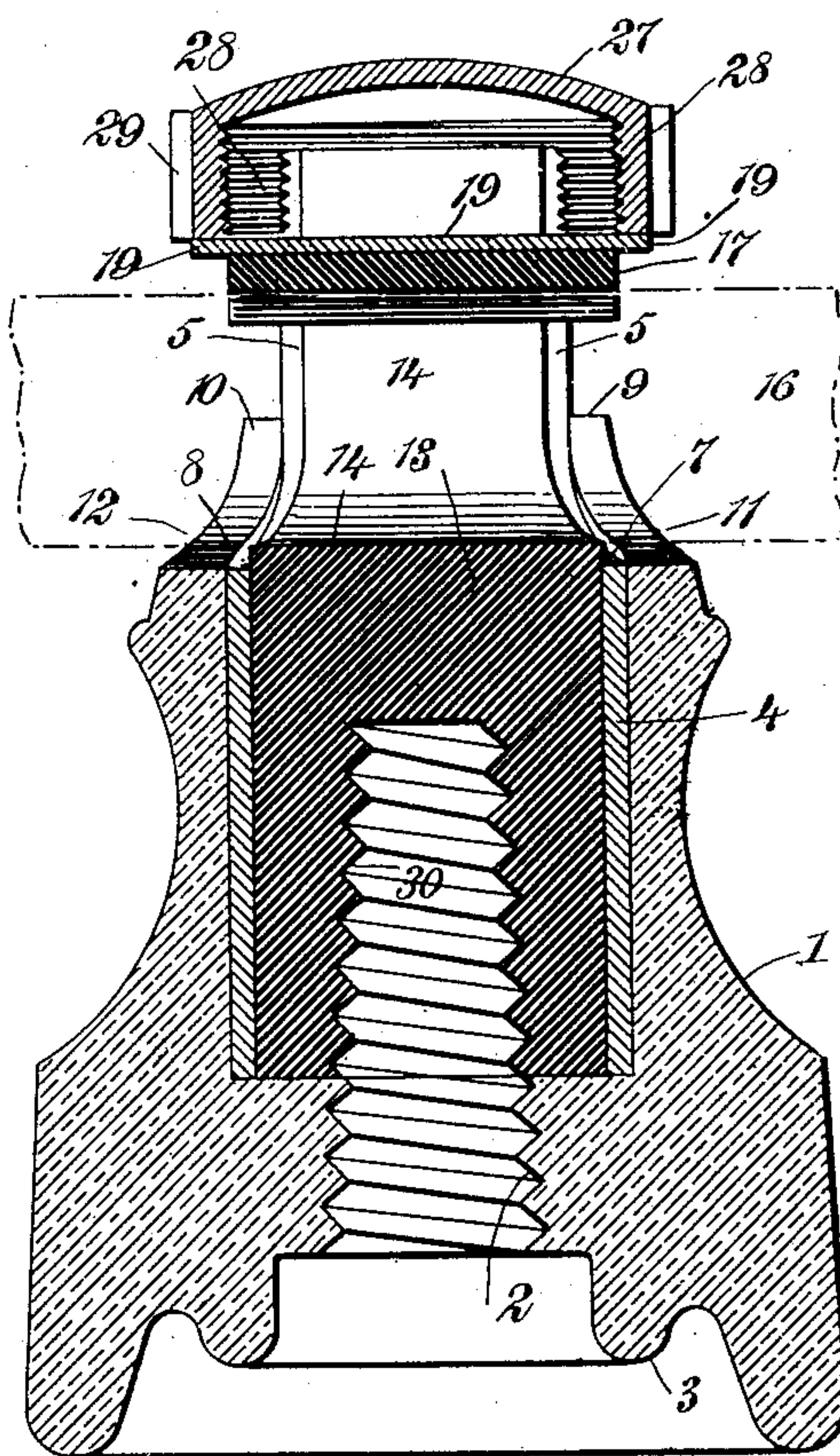
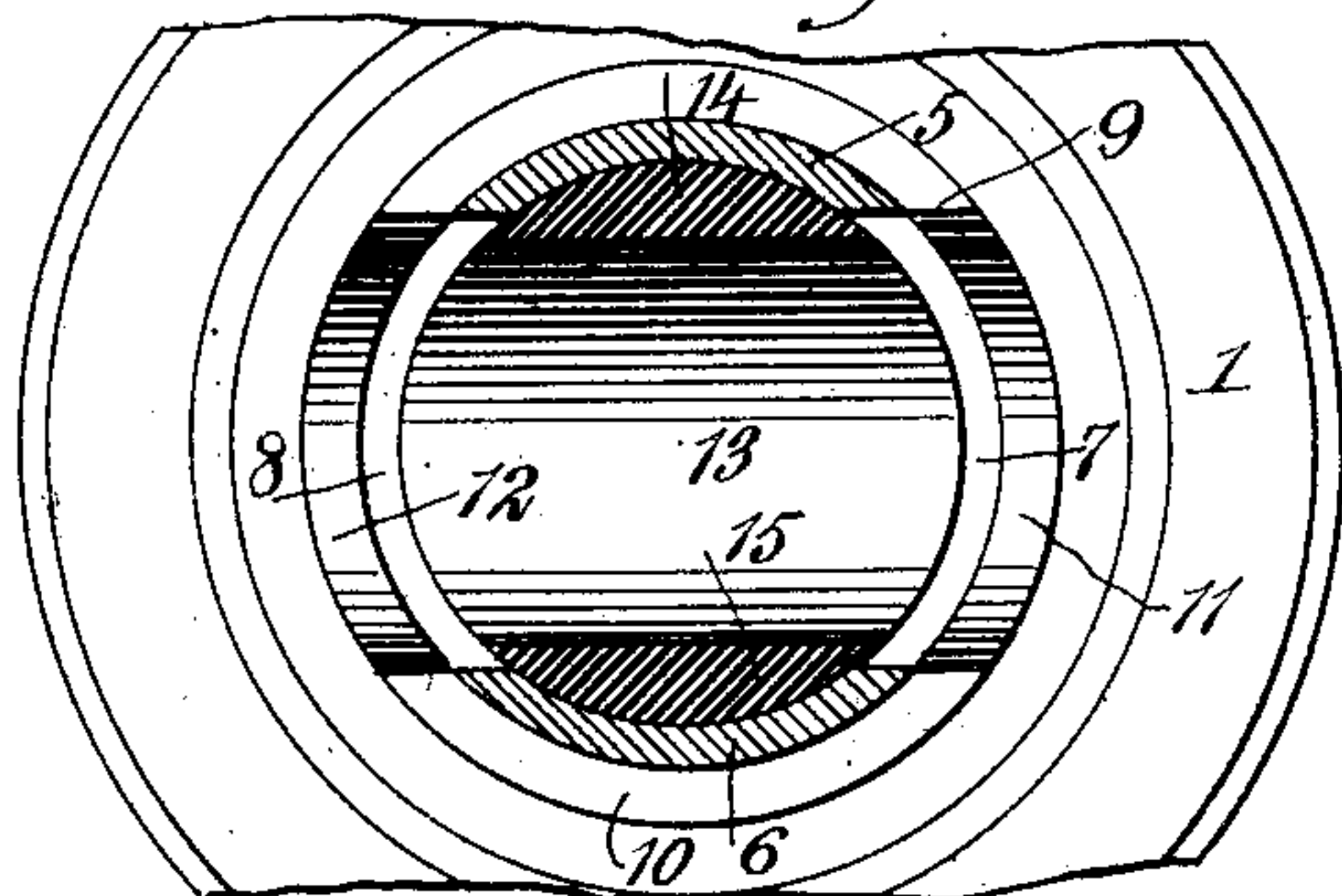


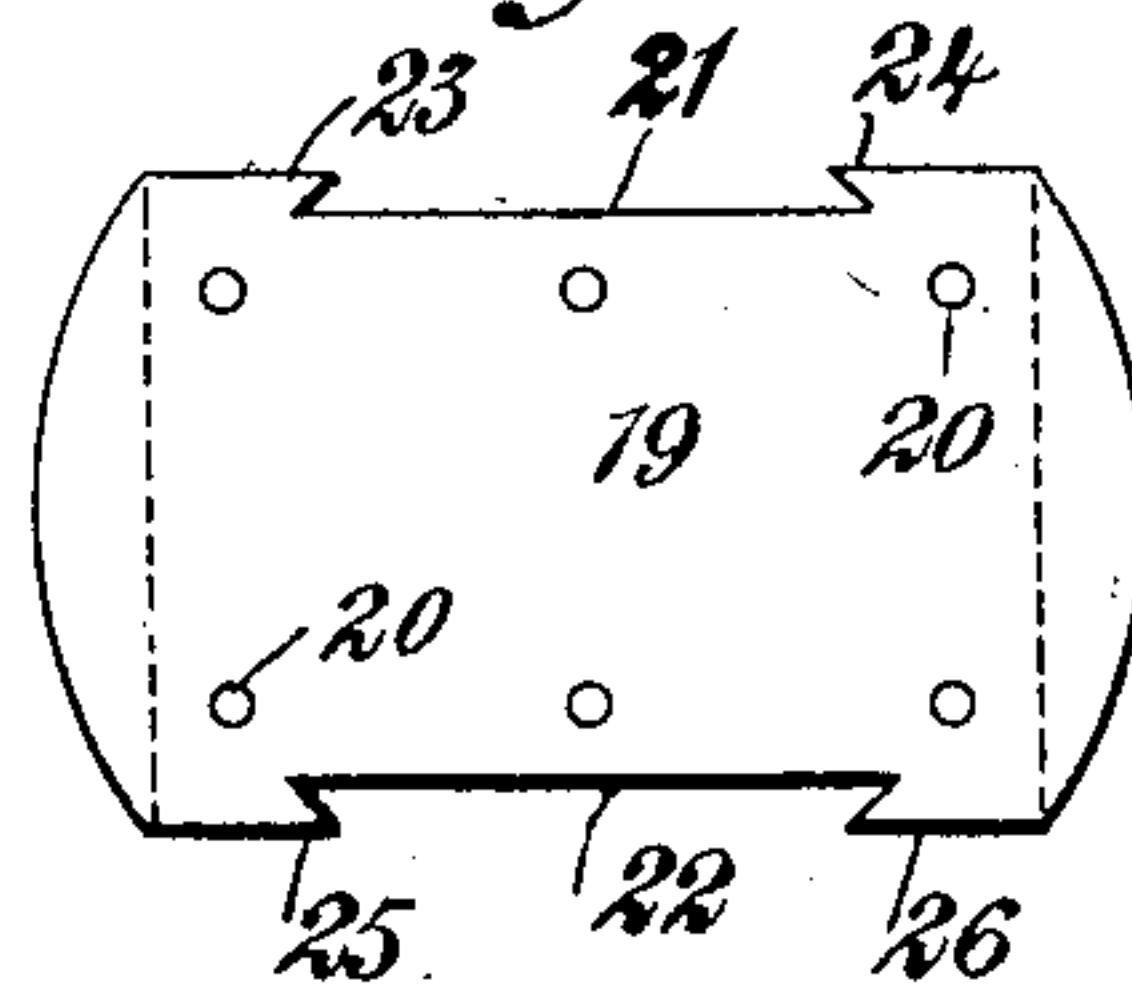
Fig. 3,



WITNESSES:

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Fig. 4.



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UNITED STATES PATENT OFFICE.

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INSULATOR.

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Application filed September 18, 1902. Serial No. 123,869. (No model.)

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, of which the following is a full, clear, and exact description.

My invention relates to insulators for external use, and more particularly to the type commonly designated as "feed-wire" insulators.

With many of the feed-wire insulators now in use considerable difficulty is found in securing perfect insulation, especially where currents of high potential are concerned.

My idea is to make an insulator which has considerable strength and in which every precaution is taken against leakage of the current.

I will describe an insulator embodying my invention and then point out the novel features in the appended claims.

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

Figure 1 is a central vertical section through an insulator constructed in accordance with my invention. Fig. 2 is a central vertical section taken upon the line 2 2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a fragmentary plan of the insulator with the screw-cap removed, and Fig. 4 is a plan view of the insulating-block for binding directly upon the cable or other electrode to be insulated.

A substantially frusto-conical body 1 of insulating material is provided with a screw-thread 2 and with a petticoat 3 in the usual manner. A metallic sleeve 4 is fitted into the insulating-body 1. This metallic sleeve is cut away, as shown, so as to leave two members 5 6, separated by a hiatus. This sleeve when placed in position within the insulating member is so disposed that its indented edges 7 8 are sunken relatively to the insulation, as indicated more particularly in Fig. 2. The upper portion of the member 1 may be provided with shoulders 9 10 and with indentations 11 12 of the shape shown. Disposed within the sleeve 4 is a filling 13 of insulating

material, which is cut away, as indicated, leaving walls 14 and 15 of the shape shown.

The cable is shown in dotted lines at 16 and fits into the indentations 14 and 15 of the inner filling. These indentations virtually constitute a longitudinal slot provided with a cylindrical bottom in order to accommodate the cylindrical cable 16. The indentations 7 8 of the metallic sleeve are so arranged that the sleeve does not come into contact with the cable 16, as shown more particularly in Fig. 2. By this means I get practically the full strength of the metallic sleeve 4 and also get practically the full insulating effect of the rigid members 1 and 13. An insulating-block 17, provided with a metallic plate 19, is movably mounted within the aperture made by the indentations above described for the purpose of securing the cable firmly in position, the block 17 being provided with a concave surface 18 for this purpose. The plate 19 is secured upon the block by any suitable means, such as the indentations 20. The block as a whole, consisting of the insulating material 17 and the plate 19, is provided with indentations 21 22 and with undercut tongues 23 24 25 26, as shown more particularly in Fig. 4. The indentations 21 22 engage the inner surface of the members 14 15 of the filling, while the undercut tongues 23 24 25 26 engage the edges of the members 5 6 of the metallic sleeve. By this means when the block is placed in position it is not readily displaced and is simply driven down upon the cable, as indicated in Figs. 1 and 2. A screw-cap 27, provided internally with threads 28, is fitted upon the sleeve 4, so that the threads of the cap engage the thread 29 of the sleeve.

The inner lower portion of the filling 13 is provided with a screw-thread 30, which simply forms a continuation of the screw-thread 2 in the insulating member 1.

By the arrangement above described it will be noted that the cable is not only free from contact with the metallic sleeve 4, but that the lower end of this metallic sleeve terminates abruptly in the insulating member 1 and that the screw-thread 30 is separated by insulating material from the sleeve 4. It is therefore practically impossible for any current to es-

cape from the cable or analogous electric conductor by way of the insulator.

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

5 1. As an article of manufacture, an insulator, comprising a body of insulating material, a metallic sleeve mounted therein and provided with an indented edge, a quantity of insulating material filled into said sleeve and project-
10 ing above said indented edge, and means for securing a conductor upon said body and said insulating material.

2. As an article of manufacture, an insulator comprising a body made of insulating material and provided with indentations, a metallic sleeve disposed within said body and likewise provided with indentations, and a filling of insulating material disposed within said sleeve, having an indentation disposed adjacent to said indentations of said body and said sleeve, but out of alinement with the indentations of said body and said sleeve, for the purpose of sinking the edge of said sleeve relatively to the edges of said filling, and means
20 for retaining a conductor in contact with said indentations of said filling.

3. As an article of manufacture, a feed-wire insulator, comprising a body made of insulating material and provided with indentations, virtually constituting a slot, a metallic sleeve disposed within said body and provided with indentations, also virtually constituting a slot, a filling disposed within said sleeve and provided with an indentation, and means for securing an electric conductor within said indentation in said filling.
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4. As an article of manufacture, a body made of insulating material and provided with indentations of arbitrary conformity, a metallic sleeve disposed within said body and provided with indentations similar to those of said body, and a filling disposed within said sleeve and provided with an indentation adjacent to said indentations of said body portion, and means for securing an electric conductor in contact with said indentations of said filling.
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5. As an article of manufacture, a feed-wire insulator, comprising a body of insulating material, a cylindrical sleeve disposed within said body, and a solid filling disposed within said sleeve, said body, sleeve and filling being provided individually with indentations, constituting together a continuous passage for a longitudinal conductor, and means for securing
55 said conductor within said passage.

6. As an article of manufacture, a feed-wire insulator, comprising a hollow body of insulating material, a cylindrical sleeve disposed within said body and provided with a threaded end, a filling within said sleeve, a movable insulating-block for engaging both said sleeve and said filling material, and a threaded cap for engaging said block and said sleeve.
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7. As an article of manufacture, a feed-wire insulator, comprising a hollow insulating-body

having an indented carrying portion, a metallic sleeve mounted within said insulating-body and provided with indentations depressed below the indented carrying portion of said insulating-body, and a filling disposed within said metallic sleeve, said filling being normally free to support a feed-wire out of contact with said metallic sleeve.
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8. As an article of manufacture, a feed-wire insulator comprising a body made of insulating material and provided with indentations, a metallic sleeve disposed within said body and provided with indentations disposed slightly out of alinement with said indentations of said body, and a filling of insulating material disposed within said sleeve and provided with an indentation smaller than the indentations of said body and of said sleeve, and disposed slightly out of alinement therewith, to enable a cable to engage said filling without contact with said body or said sleeve.
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9. As an article of manufacture, a feed-wire insulator comprising an insulating body portion provided with indentations, a metallic sleeve connected with said insulating body portion and provided with indentations, and a filling of insulating material disposed within said sleeve and provided with a surface raised relatively to the said indentations of said insulating-body and of said sleeve for the purpose of supporting a cable out of contact therewith.
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10. As an article of manufacture, a feed-wire insulator comprising a metallic sleeve of substantially cylindrical form, and provided with indentations, means for supporting and insulating said sleeve, and a substantially cylindrical filling mounted coaxially within said sleeve and provided with a bearing-surface raised relatively to said indentations of said sleeve, and free to support a cable out of contact with said indentations of said sleeve.
100 105

11. As an article of manufacture, a feed-wire insulator, comprising a substantially cylindrical metallic sleeve provided with indentations through which a cable may be threaded, an insulating member of substantially cylindrical form mounted within said sleeve and coaxial therewith, said insulating member being provided with an indented bearing-surface slightly out of alinement with said indentations of said sleeve and raised relatively thereto so as to support said cable out of contact with said sleeve, and a support for sustaining said sleeve.
110 115 120

12. As an article of manufacture, a feed-wire insulator, comprising a metallic sleeve provided with indentations through which a cable may be threaded, a support for sustaining said sleeve, and an insulating member provided with a slot for detachably engaging said cable, said slot being slightly out of alinement with said indentations of said sleeve, so as to normally hold said cable out of contact with said sleeve.
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13. In an article of manufacture, the combination of a substantially cylindrical metallic sleeve provided at one of its ends with indentations disposed diametrically opposite each other, whereby a conductor may be threaded through said sleeve in a direction crossing the axis thereof, and also provided with a cylindrical opening, and an insulating-filling of substantially cylindrical form disposed within said opening and provided with a bearing-surface for supporting a conductor out of contact with said sleeve.

14. In an article of manufacture, the combination of a substantially cylindrical metallic sleeve provided at one of its ends with oppositely-disposed indentations in alinement with each other, whereby a conductor may be threaded through said sleeve in a direction crossing the axis thereof, and also provided with a cylindrical opening, and an insulating-filling being disposed within said opening, said filling being provided with a bearing-surface disposed out of alinement with said indentations for the purpose of engaging the under side of a conductor.

15. In an article of manufacture, the combination of a substantially cylindrical metallic sleeve provided with laterally-disposed indentations in alinement with each other and through which a conductor may be threaded diametrically, and also provided with a cylindrical opening, and an insulating member of substantially cylindrical form disposed within said opening and provided with an indentation concentric to that of said indentations of said metallic sleeve.

16. In an article of manufacture, the combination of a substantially metallic sleeve provided with laterally-disposed indentations in alinement with each other, and through which a conductor may be threaded in a direction crossing the axis of said sleeve and also provided with a cylindrical opening, and an insulating member disposed within said opening and provided with an indentation concentric to that of said indentations of said metallic sleeve and disposed out of alinement therewith for the purpose of supporting a conductor.

17. As an article of manufacture, a feed-wire insulator comprising a body portion made of insulating material and provided with laterally-disposed indentations through which a cable may be threaded, and a metallic sleeve embedded within said body portion for strengthening the same and having indentations slightly out of alinement with those of said body portion of insulating material.

18. As an article of manufacture, a feed-wire insulator comprising a body portion made of insulating material and provided with indentations for admitting a feed-wire, and a substantially cylindrical metallic member embedded within said body portion for strengthening the same, said metallic member being provided with indentations larger than those

of said body portion so as to avoid engaging said wire.

19. As an article of manufacture, a feed-wire insulator comprising a body portion made of insulating material and provided with indentations, a metallic member connected with said body portion for strengthening the same, said metallic member being provided with indentations larger than those of said body portion for avoiding contact between said metallic member and said wire, and means for securing a feed-wire within said indentations of said body portion.

20. As an article of manufacture, a feed-wire insulator comprising a body portion made of insulating material and provided with indentations for admitting a feed-wire, a substantially cylindrical metallic member connected rigidly with said body portion for strengthening the same, and provided with indentations for admitting said feed-wire, said indentations being large enough to prevent engagement between said feed-wire and said metallic member, and means for securing a feed-wire within said indentations of said body portion.

21. As an article of manufacture, a feed-wire insulator comprising a body portion made of insulating material and provided with oppositely-disposed indentations, a substantially cylindrical metallic member for strengthening said body portion, said substantially cylindrical metallic member being provided with indentations and also with a thread, and screw mechanism for engaging said substantially cylindrical metallic member, said screw mechanism being provided with a thread engaging said thread of said metallic member and being movable relatively to said indentations of said metallic member.

22. As an article of manufacture, an insulator comprising a longitudinal metallic sleeve of substantially cylindrical form provided with oppositely-disposed indentations, whereby a conductor may be threaded diametrically through said sleeve, and also provided with a cylindrical opening, an insulating-support partially encircling said sleeve, and an insulating-filling of substantially cylindrical form disposed within said opening and provided with a slot for engaging a conductor.

23. As an article of manufacture, an insulator comprising a substantially cylindrical metallic sleeve provided with laterally-disposed indentations through which a cable may be threaded in a direction crossing the axis of said sleeve, and also provided with a substantially cylindrical opening, an insulating member disposed within said opening and provided with an indentation smaller than said indentations of said metallic sleeve and concentric thereto but disposed slightly out of alinement therewith for the purpose of supporting a cable out of contact with said sleeve, and a member of insulating material connected with said

metallic sleeve for the purpose of supporting the same.

24. In an article of manufacture, the combination of a metallic sleeve provided with laterally-disposed indentations through which a conductor may be threaded so as to cross the axis of said sleeve, said sleeve being also provided with means for securing a locking member thereupon and further provided with an opening, and an insulating member disposed within said opening and provided with an indentation for engaging said conductor, said indentation being out of alinement with said laterally-disposed indentations of said sleeve.

25. As an article of manufacture, a feed-wire insulator comprising a body portion made of insulating material and provided with oppositely-disposed indentations, a filling mounted within said body portion, a metallic member engaging said body portion and also engaging said filling, said metallic member being provided with indentations and with a threaded end, a block of insulating material

mounted within said metallic member for the purpose of engaging a wire, and a threaded cap for forcing said block into engagement with said wire.

26. As an article of manufacture, a feed-wire insulator comprising a body portion made of insulating material and provided with oppositely-disposed indentations, a substantially cylindrical metallic member for strengthening said body portion, said metallic member being provided with a thread, a block provided with a facing of insulating material and also provided with mutilations engaging said metallic member, and screw mechanism connected with said metallic member for forcing said block upon the feed-wire.

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

LOUIS STEINBERGER.

Witnesses:

JNO. M. RITTER,
WALTON HARRISON.