

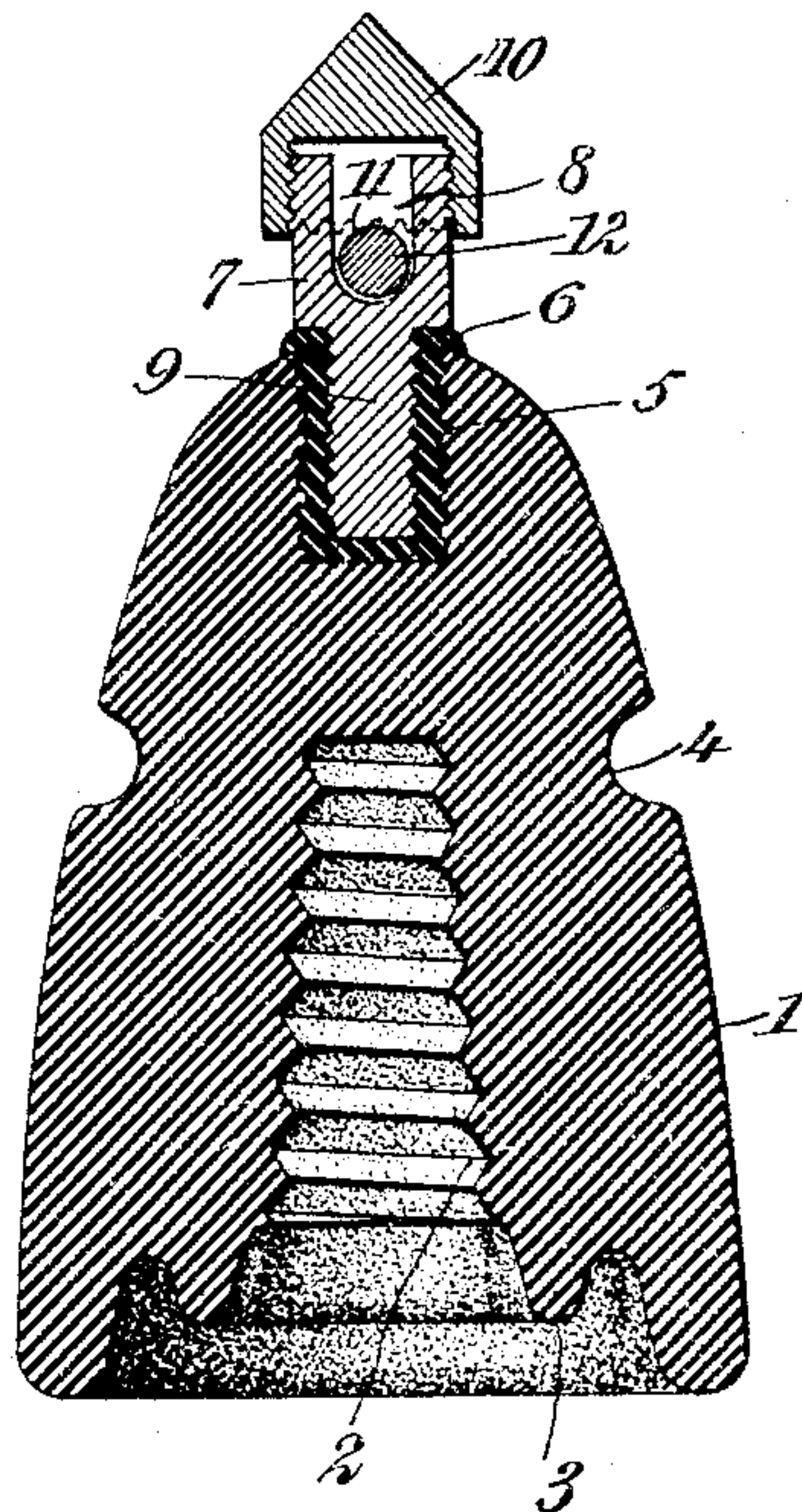
No. 789,573.

PATENTED MAY 9, 1905.

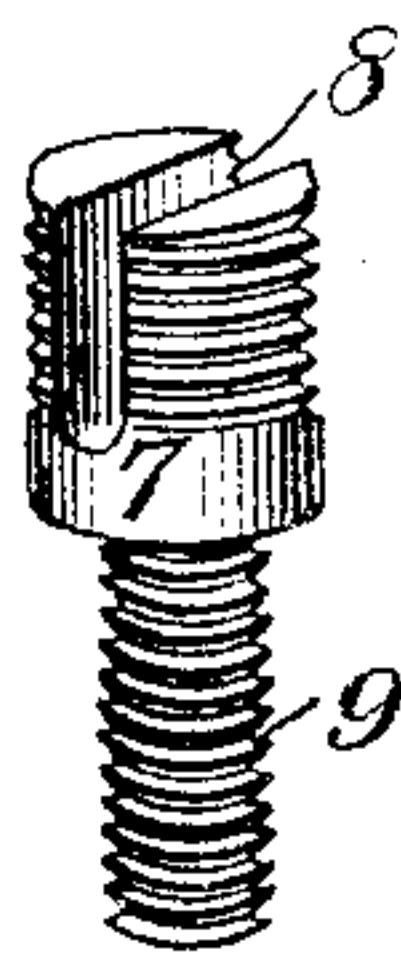
L. STEINBERGER.  
INSULATOR.

APPLICATION FILED JULY 17, 1903.

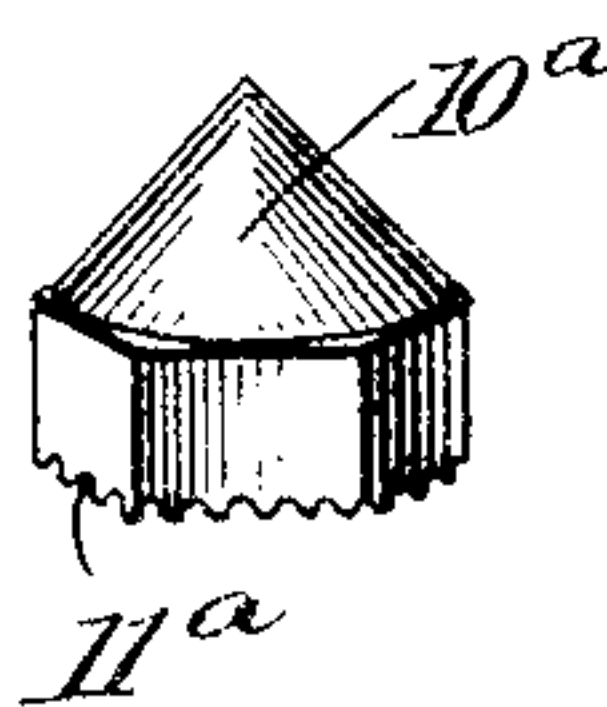
*Fig. 1.*



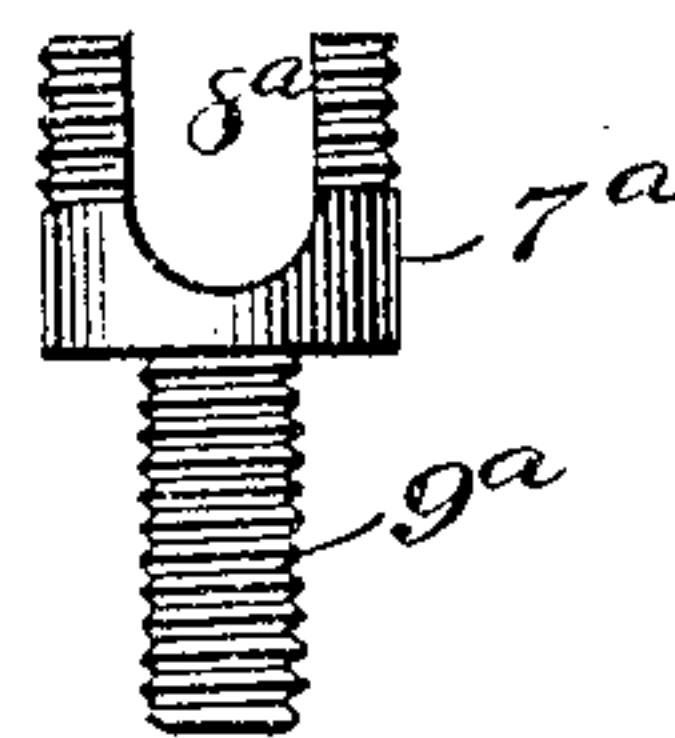
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESSES:

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INVENTOR

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BY

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# UNITED STATES PATENT OFFICE.

LOUIS STEINBERGER, OF NEW YORK, N. Y.

## INSULATOR.

SPECIFICATION forming part of Letters Patent No. 789,573, dated May 9, 1905.

Application filed July 17, 1903. Serial No. 165,959.

*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 certain new and useful improvements in insulators for electric conductors and also for deadening sound-vibrations in electric wires for telegraphs, telephones, and all other appliances where the wires or other conductors require insulation from their supports.

My more particular objects are to produce a highly-efficient, strong, reliable, and simple form of insulator in which the insulating quality is very great and in which the arcing distance between the wire and the supporting-pin is developed to its utmost limits, thereby affording an increased surface for preventing surface leakage and to prevent arcing.

My invention further provides for deadening, checking, or taking up the sound-vibrations of telegraph or telephone wires or other conductors due to the action of the wind and various other causes and to prevent injury to the insulator.

My invention further provides an improved drip and locking device for holding the wire in position, at the same time allowing the moisture to drip off at numerous points simultaneously.

My invention further provides an insulator in which the line-wire or other conductor may have some play or movement during contraction or expansion, thus preventing the breaking of the insulator or the wire, and thereby preventing mechanical injury to certain forms of conductors.

My invention further provides for making certain parts of the insulator interchangeable, so as to accommodate the same insulator to wires or other conductors of different sizes, at the same time obviating the use of tie-wires.

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 one of my insulators. Fig. 2 is a perspective detail view showing a part that I designate as the "Y." Fig. 3 is a perspective view of a cap used upon the Y; and Fig. 4 is a side elevation of another Y, which differs from Fig. 2 only in size of the slot 8<sup>a</sup>.

The body of the insulator is shown at 1 and is made of any desired material, preferably of the insulating compound known as "electrose," which is now commonly used in this art. The body portion 1 is provided with a screw-thread 2 and with a petticoat 3 in the usual manner. A groove 4 is provided for the purpose of engaging with the wire in cases where same is to be brought around corners and under certain conditions may be used for supporting the wire after the manner of an ordinary glass insulator. Mounted within the upper end of the body portion 1 is a thimble 5, of resilient yieldable material, preferably soft rubber, this thimble being threaded both internally and externally, as shown in Fig. 1. This thimble is provided with an annular collar 6 integral therewith. The Y 7 is provided with a slot 8 and with a threaded stem 9, which screws directly into the thimble 5, the thimble in turn being screwed into the upper end of the body portion 1. A cap 10, the upper surface of which has preferably the form of a cone, screws down upon the threaded portion 7<sup>a</sup> of the Y, as indicated in Fig. 1. The cap is provided with curved serrations 11, which grip upon the wire 12 as the cap is rotated by means of a wrench. The serrations are for the purpose of securing the wire rigidly in position, and they also serve as drip members for causing the cap to dispose of water and moisture. The cap shown in Fig. 3 is exactly like that shown in Fig. 1, except that it is somewhat larger, the cone 10<sup>a</sup> and the serrations 11<sup>a</sup> having the same form as those shown in Fig. 1.

The Y shown in Fig. 4 is similar to that shown in Fig. 2, with the exception that the upper portion is larger. The threaded stem 9<sup>a</sup> should be of the same size for every Y; but the slots 8<sup>a</sup> and the body portion 7<sup>a</sup> of the different Y's may be of different sizes and fitted



with different sizes of caps. By this means a number of Y's of different sizes may be rendered interchangeable when used in the same insulator and may support wires or other conductors of different diameters.

The purpose of having the cap 10 in the form of a cone is to afford a sloping surface leading down to the serrations 11, so as to cause the cap to shed water and also to prevent dirt and dust from adhering thereto.

It will be seen that the structure comprises, in effect, a body portion having a yieldable resilient thimble connected therewith for the purpose of taking up, deadening, or checking sound-vibrations and preventing injury to the insulator and allowing for expansion and contraction of the wire or other conductor, so as to avoid breaking or otherwise damaging the insulator, the wire, or other conductor. A Y-shaped member is interchangeably mounted in this thimble for the purpose of supporting wires or other conductors of various sizes and a drip and locking member for the purpose of locking the wire and providing numerous dripping-points for moisture and rain and at the same time obviating the use of tie-wires.

I do not limit myself to the particular form of device above shown and described, as many other forms may be employed, all coming within the scope of my invention.

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

1. In an insulator, the combination of a body portion provided with an aperture, a member of insulating material mounted within said aperture and provided with an annular flange extending beyond the bounds of the same, said member of insulating material being provided with a thread, and a metallic member provided with a stem fitting said member of insulating material and with a portion resting upon said flange, said metallic member being further provided with a portion for supporting a conductor.

2. An insulator, comprising a body portion of insulating material provided with an aperture, a member of yieldable material disposed within said aperture and provided with a thread, and a metallic member provided with a thread for engaging said thread of said member of yieldable material and with a portion for engaging a conductor.

3. An insulator, comprising a body portion provided with a socket having a thread, a hollow member of insulating material connected with said body portion and provided both internally and externally with threads, and a metallic member disposed within said socket and provided externally with a thread, said metallic member being further provided with an enlarged portion for engaging a conductor, said enlarged portion overlapping a portion of said hollow member.

4. An insulator, comprising a body portion

of insulating material provided with an aperture threaded internally, a member of yieldable material disposed within said aperture and provided with both external and internal threads, and a metallic member provided with a stem having threads for engaging said inner threads of said member, and also having means for engaging a conductor, said metallic member being further provided with a shoulder for binding directly upon said member of yieldable material.

5. An insulator, comprising a body portion of insulating material provided with an aperture whereby the same may be mounted upon a support, and also provided with an aperture at a point remote from said support, a hollow sleeve of resilient material disposed within said last-mentioned aperture, and a metallic member provided with a thread for internally engaging said member of resilient material, and further provided with a shoulder for externally engaging a portion of said hollow member of resilient material, said metallic member being further provided with a portion for engaging a conductor.

6. An insulator, comprising a body portion of insulating material provided with an aperture, a hollow member of resilient material disposed within said aperture and provided internally with a thread, and a supporting member having a stem provided externally with a thread for engaging said thread of said hollow member of resilient material and also having a surface for binding upon said hollow member.

7. An insulator, comprising a body portion of insulating material, a yieldable member connected therewith and provided with a threaded aperture, a supporting member connected with said yieldable member and provided with a portion for engaging a conductor, and a cap mounted upon said supporting member for holding said conductor in engagement therewith.

8. An insulator, comprising a body portion of insulating material provided with an aperture, a member of resilient material disposed within said aperture and provided with means for securing the same thereto, and also provided with a thread and with a bearing-surface, and a metallic member provided with a stem having a bearing-surface engaging said bearing-surface of said member of resilient material and also having a thread, for engaging said thread of said member of resilient material, said metallic member being further provided with means for supporting a conductor.

9. An insulator, comprising a body portion of insulating material provided with an aperture, a hollow member of resilient material disposed within said aperture, said hollow member being threaded internally, and a member provided with a stem threaded externally and fitting into said hollow member of resili-



ent material, and provided with means for engaging a conductor.

10. An insulator, comprising a body portion provided with an aperture, a member of insulating material disposed within said aperture and provided internally with a thread, and a metallic member disposed within said member of insulating material and provided externally with a thread mating said member of insulating material, said metallic member being provided with a slot for engaging a conductor.

11. In an insulator, the combination of a metallic member provided with a body portion and also with a supporting-stem, said metallic member having a portion for engaging a wire, a locking device engaging said body portion and adapted to engage said wire, a member of yieldable material engaging said supporting-stem, and an insulating member connected to said member of yieldable material.

12. In an insulator, the combination of a body portion of insulating material, a member of yieldable material connected therewith, a wire-supporting member connected with said member of yieldable material, and a metallic cap mounted upon said supporting member and projecting beyond the bounds thereof, said cap being provided with means for facilitating the drip of water therefrom.

13. An insulator, comprising a body portion of insulating material provided with means whereby said body portion may be mounted

upon a support, and also provided with an aperture disposed opposite to said support and extending therethrough a comparatively short distance, a hollow member of yieldable material detachably disposed within said aperture, and a metallic member partially inclosed by said hollow member and provided with a portion for engaging a wire.

14. An insulator, comprising an insulating member provided with oppositely-disposed ends each having an aperture, a member of yieldable material disposed within one of said apertures, and a metallic member engaging said member of yieldable material and having means for supporting a wire.

15. In an insulator, the combination of a metallic member provided with a body portion and with a supporting-stem, said body portion being provided with a surface for engaging a wire, a locking device detachably engaging said metallic member, a member of yieldable material engaging said supporting-stem, and an insulating member engaging said member of yieldable 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 BOLTON MARSHALL,