

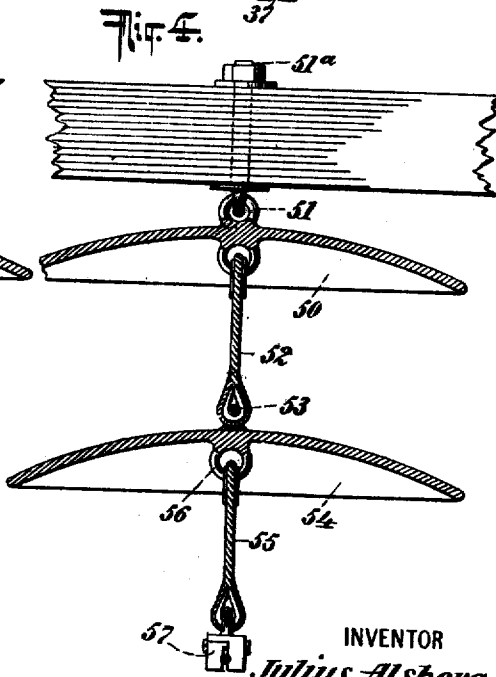
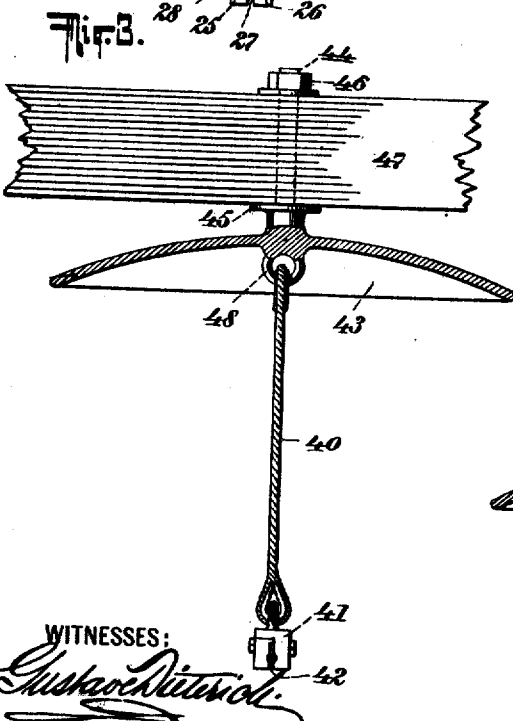
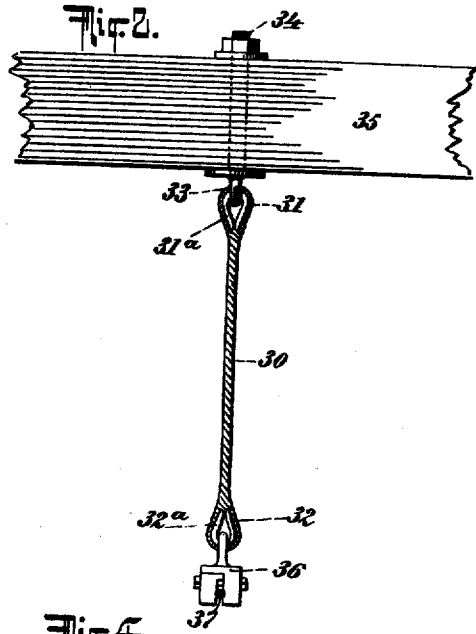
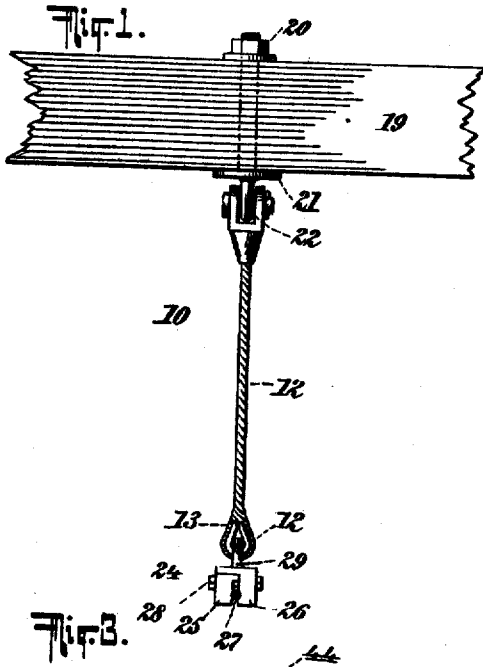
J. ALSBERG.
INSULATOR.

APPLICATION FILED JULY 29, 1907. RENEWED JUNE 13, 1911.

1,006,040.

Patented Oct. 17, 1911.

2 SHEETS—SHEET 1.



WITNESSES:
Charles H. Dietrich
Adwin H. Dietrich

INVENTOR
Julius Alsberg
BY
Conrad F. Dietrich
his ATTORNEY

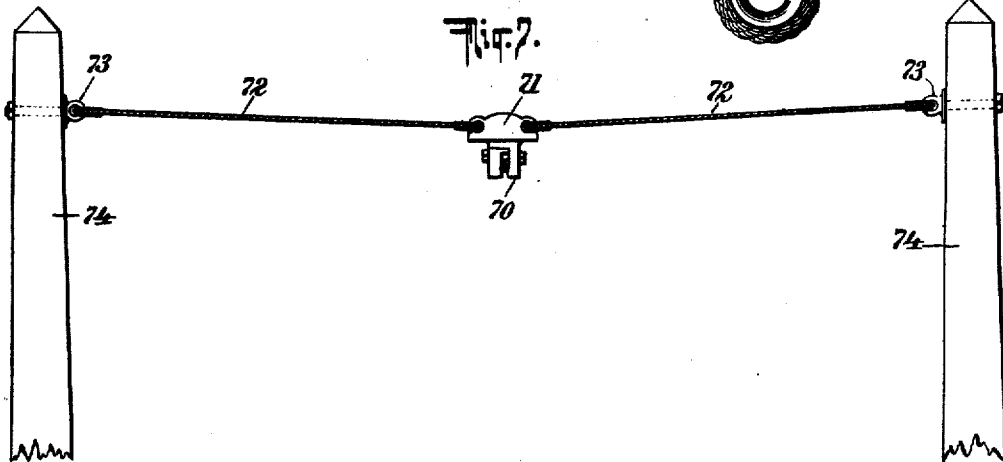
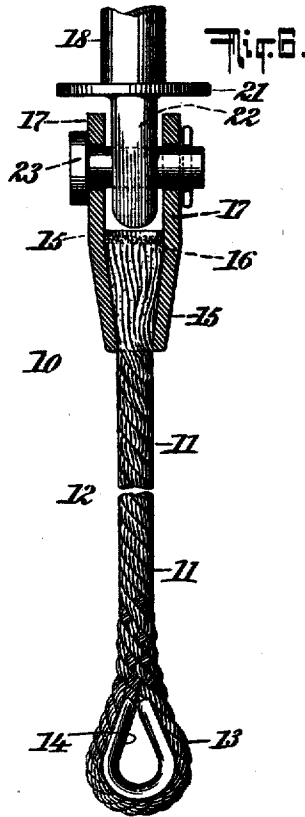
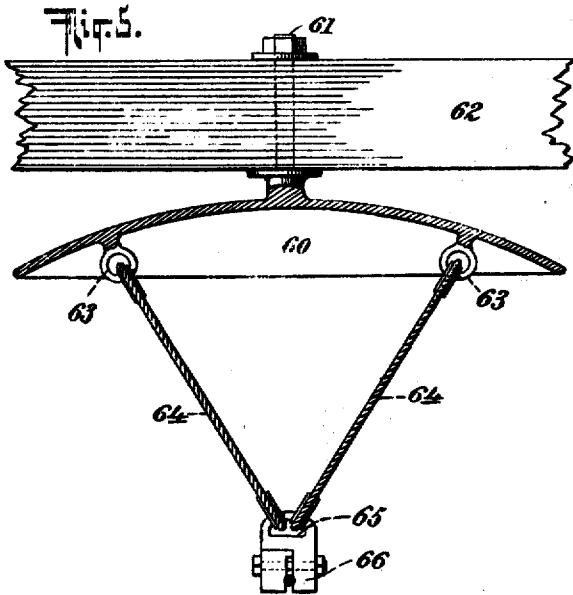
J. ALSBERG.
INSULATOR.

APPLICATION FILED JULY 29, 1907. RENEWED JUNE 13, 1911.

1,006,040.

Patented Oct. 17, 1911.

2 SHEETS-SHEET 2.



WITNESSES:

Gustave Dietrich.
Edwin M. Dietrich.

INVENTOR

Julius Alsberg

BY *Samuel A. Dietrich*
his ATTORNEY

UNITED STATES PATENT OFFICE.

JULIUS ALSBERG, OF NEW YORK, N. Y.

INSULATOR.

1,006,040.

Specification of Letters Patent.

Patented Oct. 17, 1911.

Application filed July 29, 1907, Serial No. 386,141. Renewed June 13, 1911. Serial No. 632,961.

To all whom it may concern:

Be it known that I, JULIUS ALSBERG, a citizen of the United States, residing at the city of New York, borough of Manhattan, in the county and State of New York, have invented certain new and useful Improvements in Insulators, of which the following is a full, clear, and exact specification.

My invention relates to means for supporting electrical conductors, and the same has for its object more particularly to provide a simple, efficient and durable insulating support for high-potential electric currents.

Further, said invention has for its object to provide an insulator which will not be caused to expand or shrink materially owing to changes in temperature.

Further, said invention has for its object to provide an insulator composed of the fewest possible parts, and presenting the smallest possible surface area.

Further, said invention has for its object to provide an insulator consisting essentially of a flexible material of great tensile strength and capable of withstanding a high degree of heat.

Further, said invention has for its object to provide an insulator consisting of individual sections or units which may be readily connected together to form a single structure.

Further, said invention has for its object to provide a flexible insulator which may be easily and conveniently covered or protected when necessary or desired.

To the attainment of the aforesaid objects and ends my invention consists in the novel details of construction, and in the combination, connection and arrangement of parts hereinafter more fully described and then pointed out in the claims.

In the accompanying drawings forming part of this specification, wherein like numerals of reference indicate like parts, Figure 1 is a side view illustrating one form of insulator constructed according to, and embodying my said invention, the same being shown applied to a support, and carrying an electrical conductor; Fig. 2 is a similar view showing a modification in the means for securing the insulator to its support; Fig. 3 is a side view, partly in section, showing a protected form of insulator; Fig. 4 is a side view showing a plurality of protected units connected together to form

a single structure; Fig. 5 is a side view illustrating a bifilar type of protected insulator; Fig. 6 is an enlarged side view, partly in section, illustrating the construction shown at Fig. 1, and Fig. 7 is a view showing the insulator applied to a supporting clamp suspended between two poles or supports.

In said drawings, referring particularly to Figs. 1 and 6, 10 designates an insulator comprising a member formed of a flexible, inelastic, non-absorbent, non-conducting material capable of withstanding great heat, and not liable to become affected by changes in temperature or atmosphere. For that purpose a vitreous substance such as spun glass, or any other substance possessing the characteristics or qualities above mentioned may be employed. In the present embodiment of my invention I have shown and described the insulating member as composed of a mass of spun glass threads or filaments woven or braided into strands 11, 11, and a plurality of such strands then woven or twisted together in the form of a rope or cable 12. The lower end of said cable is spliced to the body portion thereof to form a loop or eye 13 in which is disposed a metal thimble 14. The upper end of said cable is frayed out, and said frayed end disposed within the conical tubular portion of a socket 15, and embedded in a mass of cement 16 therein. At the upper end of said socket 15 are parallel upwardly projecting lugs 17, 17 having apertures therein, and

18 denotes a bolt secured in a horizontal support or arm 19 by a nut 20 working upon the upper threaded end of said bolt. The bolt 18 is provided adjacent to its lower end with a flange 21, and below said flange with an eye 22 arranged intermediate the lugs 17 17 of the socket 15, and pivotally secured thereto by a bolt 23.

24 denotes an attaching device which may be of any desired form or type, and is here shown as a clamp consisting of two parts or members 25 26 provided in their opposing surfaces with registering longitudinal grooves to receive an electrical conductor 27 which is clamped therein by a screw or bolt 28 passing through said clamp parts or members 25, 26 and 29 denotes an eye or loop on said clamp 25 by means of which said clamp may be secured to the lower end of the insulating member or cable 12.

In the modification illustrated at Fig. 2

the insulating member 30 is constructed as shown at Figs. 1 and 6 except that it is provided at both its upper and lower ends with loops 31, 32 respectively, provided with 5 thimbles 31^a 32^a. The loop 31 at the upper end is secured to the eye 33 of a bolt 34 secured in a support 35 and the loop 32 at the lower end of the insulating member is secured to a clamp 36 carrying a conduc- 10 tor 37.

In the modification shown at Fig. 3 the insulating member 40 is constructed as shown at Fig. 2, and carries at its lower end a clamp 41 in which is secured the conduc- 15 tor 42. 43 denotes a circular dished protector which may be made either of insulating material or any other material as desired, and provided upon its upper surface at the center thereof with a bolt 44 which 20 may be made either integral therewith or separate therefrom and rigidly secured thereto. The bolt 44 is provided adjacent to said protector with a flange 45 and at its upper end with a threaded portion and a 25 nut 46 by means of which the protector 43 may be rigidly secured to a support 47. Upon the underside of the protector 43 is an eye 48 in which is secured the upper looped end of the insulating member 40.

30 At Fig. 4 are shown two insulators and protectors of the type illustrated at Fig. 3, united into a single structure. In this construction the upper protector 50 is provided at its top with an eye 51 whereby said protector may be suspended from an eye bolt 35 51^a secured in a rigid support. The insulating member 52 however instead of carrying a clamp at its lower end is secured to an eye 53 on the upper side of a second protector 54, and a second insulating member 40 55 secured at its upper end to an eye 56 on the under side of said second protector or hood 54, and provided at its lower end with a clamp 57.

45 At Fig. 5 is shown a bifilar insulator designed to prevent lateral or side swaying of the conductor, and the same comprises a circular dished protector or hood 60 having a rigidly upwardly projecting bolt 61 at its 50 upper end extending through and secured to a support 62. Upon the under side of said protector or hood 60 near its periphery are provided rigid eyes 63, 63 in which are secured the upper looped ends of insulating 55 members 64, 64 constructed as heretofore described, but having their lower looped ends brought together and secured to an eye 65 of a clamp 66.

In Fig. 7 is shown a clamp 70 provided 60 with a transverse upper portion 71 having apertures at its opposite ends in which are secured the inner ends of horizontal insulating members 72 72 having their other ends secured to eye bolts 73 73 on the poles 65 or supports 74 74.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. An insulator consisting of strands composed of silicious material, substantially as 70 specified.

2. An insulator consisting of a plurality of sections, each composed of strands of silicious material combined into a unitary structure, substantially as specified. 75

3. An insulator consisting of a cable composed of strands of silicious material, and means for protecting the same, substantially as specified.

4. An insulator consisting of strands composed of a silicon compound, substantially as specified. 80

5. An insulator comprising a cable composed of vitreous filaments, substantially as specified. 85

6. An insulator comprising a cable composed of vitreous filaments and means for protecting said cable, substantially as specified.

7. An insulator composed of spun glass, substantially as specified. 90

8. An insulator composed of spun glass, and means for protecting the same, substantially as specified.

9. An insulator consisting of a cable composed of spun glass, and means for protecting the same, substantially as specified. 95

10. An insulator composed of strands of vitreous material, substantially as specified.

11. An insulator composed of twisted 100 strands of vitreous threads, and a plurality of said strands united together into a unitary structure, substantially as specified.

12. An insulator comprising a hood, means for supporting the same, and a section of pliable, silicious material suspended from said hood and provided with means for supporting a conductor, substantially as specified. 105

13. An insulator comprising a hood, 110 means for securing the same to a support, and a section of pliable, non-conducting material secured at one end to the under side of said hood, and provided at its other end with means for supporting a conductor, 115 substantially as specified.

14. An insulator comprising a circular hood, means for securing the same to a support, an insulating member consisting of a plurality of sections each composed of a 120 plurality of strands of pliable, non-conducting material, said member being secured at its upper end to said hood, and provided at its lower end with an attaching device, substantially as specified. 125

15. An insulator comprising a circular hood provided with means for securing the same to a support, an insulating member consisting of a plurality of strands each composed of a plurality of separate fila- 130

ments of spun glass, said insulating member being secured at its upper end to said hood, and provided at its lower end with a clamping device, substantially as specified.

5 16. An insulator comprising a circular hood of insulating material, provided with means for securing the same to a support, an insulating member consisting of a plurality of strands each composed of a plurality
10 of separate filaments of spun glass, said insulating member being secured at its upper end to said hood, and provided at its lower end with a clamping device, substantially as specified.

15 17. An insulator comprising a circular hood provided with means for securing the same to a support, a plurality of pliable, insulating members secured at their upper ends to said hood adjacent to its edges, and

having their lower ends brought together 20 and secured to a clamping device, substantially as specified.

18. An insulator comprising a circular hood of insulating material provided with means for securing the same to a support, a 25 plurality of pliable, insulating members secured at their upper ends to said hood adjacent to its edges, and having their lower ends brought together and secured to a clamping device, substantially as specified. 30

Signed at the city of New York, in the county and State of New York, this twenty-seventh day of July, nineteen hundred and seven.

JULIUS ALSBERG.

Witnesses:

CONRAD A. DIETERICH,
EARLE H. HOUGHTALING.