

No. 887,336.

PATENTED MAY 12, 1908.

H. MIETH.
ELECTRIC INSULATOR.
APPLICATION FILED MAY 29, 1906.

Fig. 1.

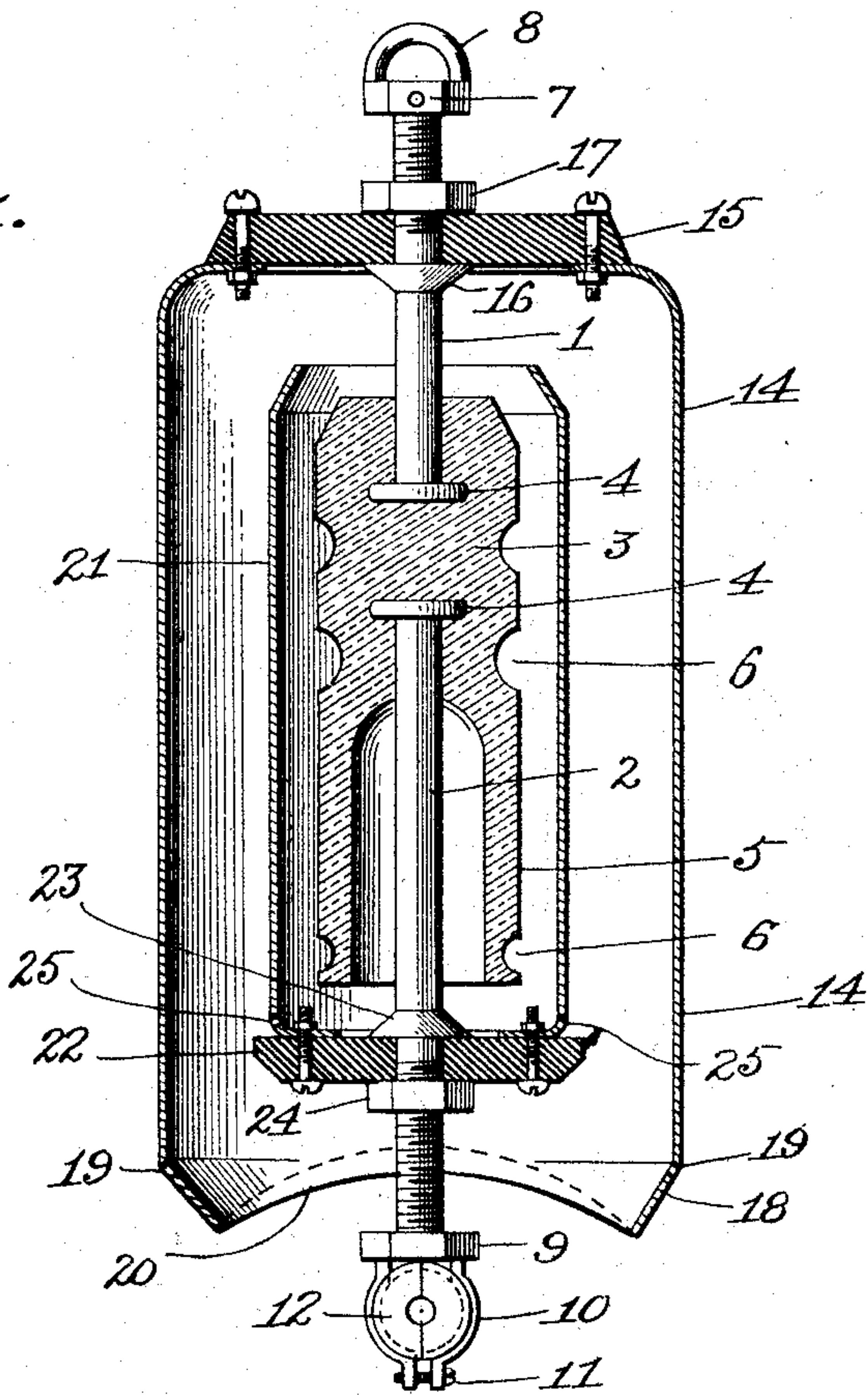
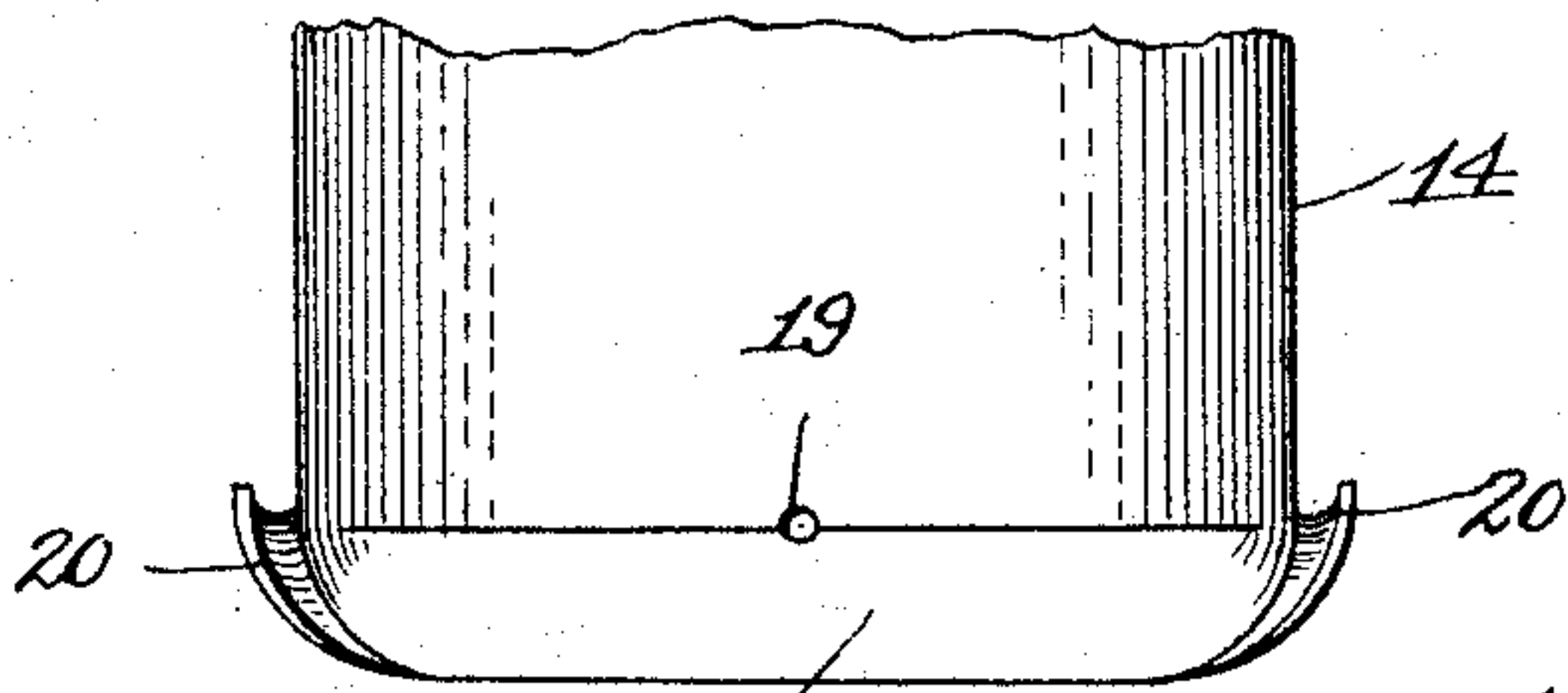


Fig. 2.



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HERMAN MIETH, OF VALLEJO, CALIFORNIA.

ELECTRIC INSULATOR.

No. 887,336.

Specification of Letters Patent.

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Application filed May 29, 1906. Serial No. 319,236.

To all whom it may concern:

Be it known that I, HERMAN MIETH, a citizen of the United States, and resident of Vallejo, in the county of Solano and State of California, have invented certain new and useful Improvements in Electric Insulators, of which the following is a full, clear, and exact description, such as will enable those skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification.

The invention has for its object the provision of an insulator that is particularly adapted to support conductors carrying currents of high potential or of considerable force, and also one that will prevent leakage through weather conditions. In wireless telegraphy, for an instance, the electric pressure is considerable and insulation of high degree is required to obtain the best results. Also where the supports are exposed to the weather, unless provision is made to guard against it, moisture is apt to collect and form electric connections through which the current leaks.

The present invention provides means that will give a high degree of insulation and which will be weather-proof to a great extent.

The invention consists in the novel construction, combination and arrangement of parts, such as will be hereinafter fully described, pointed out in the appended claims, and illustrated in the accompanying drawings.

In the drawings, in which similar reference characters designate corresponding parts, Figure 1 is a sectional view of a device embodying the invention. Fig. 2 is a detail view showing the lower end of the outer cylinder of the casing.

The upper and lower holding rods, 1 and 2 respectively, are of copper or other non-corrosive metal. They are connected at their inner ends by the insulation 3 of glass or other non-conducting material. The ends of the rods are flanged, as at 4, and the insulation is molded about them, although the rods may be screw-threaded and turned into screw-threaded openings in the insulation. The insulation has a flange or petticoat 5 extending over the lower rod and in its surface are the annular grooves 6. The flange and grooves prevent moisture from collecting on the surface of the insulation so as to form

an electric connection between the rods. The mass of material in the insulation and separating the rods depends upon the strain that is to be sustained and the voltage of the current passing through the conductor.

The outer end of the upper rod 1 is screw-threaded and turned onto the same is the collar 7 pivoted to which is the yoke 8 by means of which the device can be secured to its support. A set-screw passes through the collar and impinges on the rod to prevent accidental turning of the collar.

The outer end of the lower rod 2 is also screw-threaded and turned onto the same is the collar 9 having the arms 10 provided at their ends with the screw 11 for forcing the arms together. Clamped between the arms are the blocks 12 of insulating material, such as porcelain, and they have flanges at their ends that project over the edges of the arms to prevent longitudinal movement. In the blocks is the central groove to receive the conductor. These blocks form an additional insulation to prevent leakage from the conductor.

A casing incloses the device to protect it against adverse weather conditions. It comprises the metal cylinder 14, preferably of aluminum on account of its lightness, secured at its upper end to the disk 15 of insulating material, such as rubber. This disk is mounted on the upper rod 1, being clamped between the shoulder 16 on said rod and the nut 17 turned onto the rod. The lower end of the cylinder has the inwardly turned flange 18 to prevent the ingress of moisture and at intervals are the openings 19 to permit the escape of any moisture that might condense on the inner surface of the cylinder. Opposite edges of the flange, above where the conductor passes, are bent upwardly to clear the conductor and also to form gutters 20, as shown best in Fig. 2, to collect the water that passes down the outer side of the cylinder and to discharge it on the sides farthest from the conductor. This prevents the formation of electric connections between the conductor and cylinder through water dripping from the latter and the formation of ice or the collection of snow.

Inside of the main casing is the auxiliary casing serving as further protection against weather conditions. It consists of the metal cylinder 21, also preferably of aluminum, secured at its lower end to the disk 22 of insulating material. The disk is clamped be-

tween the shoulder 23 on the lower rod 2 and the nut 24 turned onto said rod. The upper end of the cylinder is turned inwardly to further prevent the ingress of moisture. In its lower end are the openings 25 to permit the escape of any water that may condense inside of the cylinder.

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

1. In an insulator, upper and lower holding rods, insulation interposed between and connecting said rods and provided with a petticoat extending over the lower rod, a disk of insulating material on the upper holding rod, a main cylindrical casing secured to said disk surrounding said rods and the interposed insulation, a second disk of insulating material on the lower holding rod, and an auxiliary cylindrical casing secured to said second disk extending upwardly into said main casing over said rods and the interposed insulation.

2. In an insulator, upper and lower holding rods having flanges at their inner ends and shoulders on the outer ends, insulation interposed and surrounding the flanged inner ends of said rods to connect the same, an insulating petticoat on said insulation extending over the lower holding rod, a disk of insulating material clamped against the shoulder on the outer end of the upper holding rod, a main cylindrical casing having an inwardly flared lower edge secured to said disk surrounding said rods and the interposed insulation, a second disk of insulating material clamped against the shoulder on the outer end of the lower holding rod, and an auxiliary cylindrical casing having an inwardly flared upper edge secured on said second disk extending upwardly into said main casing over said rods and the interposed insulation.

3. In an insulator, upper and lower holding rods having flanges at their inner ends and shoulders on their outer ends, insulation having annular grooves in its outer surface

interposed between and surrounding the flanged inner ends of said rods to connect the same, an insulating petticoat on said insulation extending over the lower holding rod, a disk of insulating material clamped against the shoulder on the outer end of the upper holding rod, a main cylindrical casing having an inwardly flared lower edge provided with outlets adjacent to said flared edge secured to said disk surrounding said rods and the interposed insulation, a gutter on the lower edge of said casing leading to the side of the same, a second disk of insulating material clamped against the shoulder on the outer end of the lower holding rod, and an auxiliary cylindrical casing having outlets at its lower end provided with an inwardly flared upper edge secured on said second disk extending upwardly into said main casing over said rods and the interposed insulation.

4. In an insulator, upper and lower holding rods, insulation interposed between and connecting said rods, a main cylindrical casing mounted on and insulated from said upper rod surrounding the inner ends of the rods and the interposed insulation, a gutter on the lower edge of said casing leading to the side of the same, and an auxiliary cylindrical casing mounted on and insulated from said lower holding rod projecting upwardly into said main casing over the inner ends of said rods and the interposed insulation.

5. In an insulator, upper and lower holding rods, insulation interposed between said rods and connecting the same, a casing surrounding the inner ends of said rods and the interposed insulation, and a gutter in the lower edge of said casing leading to one side of the same.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HERMAN MIETH.

Witnesses:

M. MEAGHER,
G. T. NICHOLS.