

Dec. 3, 1929.

P. J. KAYATT

1,738,009

INSULATOR

Filed Jan. 10, 1928

Fig. 1.

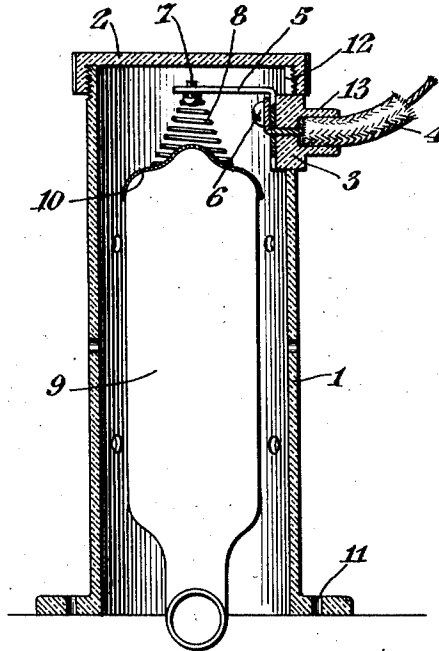


Fig. 2.

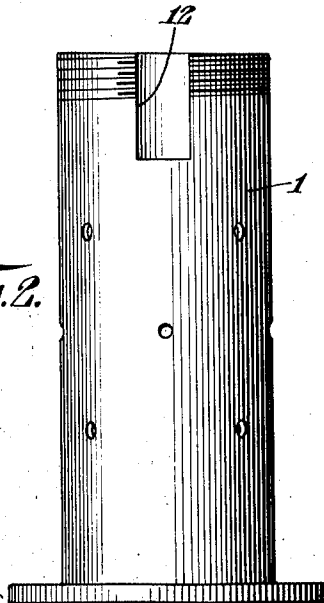


Fig. 3.

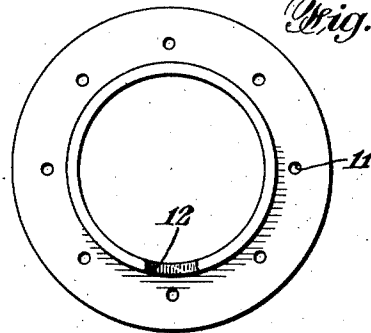
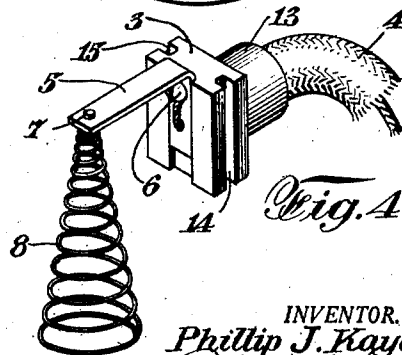


Fig. 4.



INVENTOR.
Phillip J. Kayatt
BY *Charles H. Holland*
ATTORNEY

UNITED STATES PATENT OFFICE

PHILLIP J. KAYATT, OF YONKERS, NEW YORK, ASSIGNOR TO AMERICAN NEON LIGHT CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

INSULATOR

Application filed January 10, 1928. Serial No. 245,651.

My invention relates to electrode insulators particularly adapted for use with luminescent tubes.

In the copending application of Otto B. Shulhof, Serial No. 211,956, filed August 10th, 1927, for insulators, a preferred form of such insulator is disclosed.

My present invention embodies a modification and improvement of this form of insulator wherein are found certain advantages and benefits beyond what said copending application shows and among its advantages and benefits may be mentioned great ease of inspection and repair, a greater degree of protection against vibration or jarring of the electrode chamber and a better method of securing the lead-in cables or wires and of maintaining them in self adjusting relation to said electrode. Other and further advantages will be made clear in the following specification of which the drawing forms a part.

In the drawings:

Fig. 1 is an elevation and cross section of the insulator and electrode structure.

Fig. 2 is an elevation of an insulator of a preferred form of this invention.

Fig. 3 is a top plan view of Fig. 2.

Fig. 4 is a perspective of the removable bushing.

In Fig. 1, the shell of the insulator is shown at 1, and the cap of the insulator at 2. This cap may be attached to the shell by screw threads as indicated. The removable bushing is at 3, through which passes the lead-in wire or cable, 4. Affixed to the inner face of the bushing, 3, is a connection, 5, which is held in a recess of the bushing by a screw, 6, or other adequate retaining means. This screw, 6, also serves to form a contact between the wire, 4, and the connection, 5. Attached to the inner end of the connection, 5, by means of a screw, 7, or the like, is a resilient member, 8, which I prefer to show as a helical spring. The electrode chamber is shown at 9, and on the base of this chamber is a conducting element, 10, which forms a seat for the resilient member, 8, and which also passes current from the resilient member to the electrode within the chambers, 9,—the electrode and its connections within the chamber not being shown.

The shell of the insulator, 1, is attached to the apparatus by suitable means through holes, 11, in the flange of the shell; this apparatus carrying the luminescent tube of which 9, is the electrode chamber. This apparatus is not shown but may be of the type indicated in said copending application heretofore mentioned or may be of any other form recognized in the art.

In Figs. 2 and 3, it will be seen that the shell of the insulator, which may be of bakelite, hard rubber or other similar insulating material, has a cut, 12, which extends downwardly from the upper edge of the insulator. This cut, 12, is adapted to receive the removable bushing, 3, shown in Figure 4. This removable bushing may be composed of material similar to that of the shell of the insulator and has an extension, 13, projecting from the front face of the bushing while to the rear face is attached the connection, 5, with the resilient member, 8, as heretofore described. On the edges of this bushing are two grooves, 14 and 15, which have a width approximately equal to the thickness of the shell, 1, of the insulator, and this bushing is applied by sliding it downwardly into the cut, 12, and it is held in place by the cap, 2, after this cap is screwed on the shell.

From the foregoing it can be seen that I have provided a very effective structure for the reason that by removing the cap, 2, the entire assembly of the lead-in wire or cable, the connector and the resilient member can be removed without in any way disturbing the electrode chamber or electrode.

In addition, the resilient member, 8, provides a very effective and automatic adjustment between the electrode contacts and the supply terminals and automatically compensates for variations in the distance to which the electrode chamber may enter the insulator.

While I show a preferred form of my invention, it will be evident that other forms of resilient members may be used in place of the helical spring, 8, or that connectors, other than that shown at 5, may be equally well used. Therefore, being aware that many changes and variations in my invention may

be made without departing from the spirit thereof, I desire to include all such changes and variations within the scope of my claims.

I claim:—

- 5 1. In a device of the kind described, the combination with a shell and a cap, of a removable bushing slidably mounted on the wall of said shell and held against movement by said cap.
- 10 2. In a device of the kind described, a slidably removable bushing having grooved edges, said bushing having an opening adapted to receive a wire or cable and means affixed to a face of the bushing and arranged to engage the wire or cable, said means carrying a resilient member at one extremity.
- 15 3. In a device of the kind described, an insulator having an electrode therein, a removable bushing slidably mounted on the shell of the insulator and retained by the insulator cap, a connector affixed to the inner face of the bushing and adapted to engage a wire entering through the bushing, a resilient member fixed to said connector and co-acting between the connector and said electrode.
- 20 4. In a device of the kind described, an electrode, a shell member, a cap member and a bushing carrying a connection with an external source of current, said bushing being slidably mounted on the wall of said shell and having means adapted and arranged resiliently to contact with the electrode terminal and to transmit current thereto from said external source.
- 25 5. In a device of the kind described, an electrode within an insulator, a slidably mounted bushing carrying a connection with an external source of current and mounted on the wall of said insulator and means acting between said electrode and said bushing resiliently to contact with said electrode terminal and to transmit current thereto from a source of current.
- 30 35 40 45 In witness whereof, I have hereunto subscribed my name on this the 5th day of December, 1927.

PHILLIP J. KAYATT.

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