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2,335,296

ADJUSTABLE INSULATING ELEVATION POST

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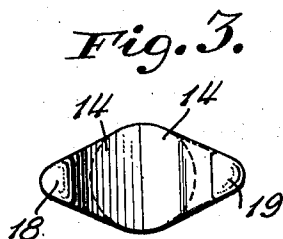
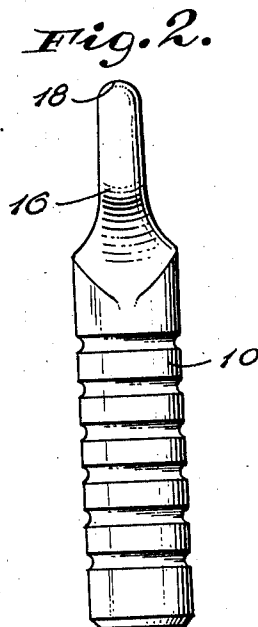
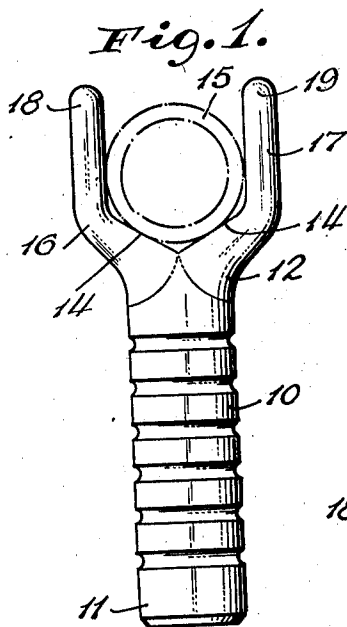
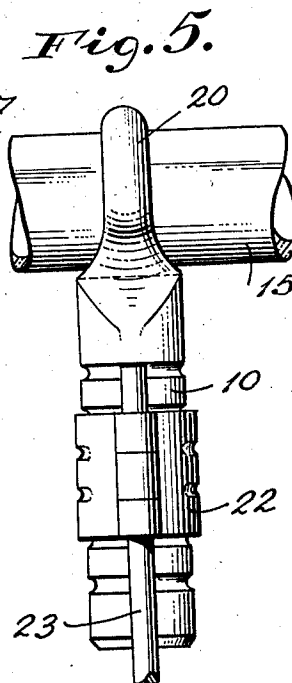
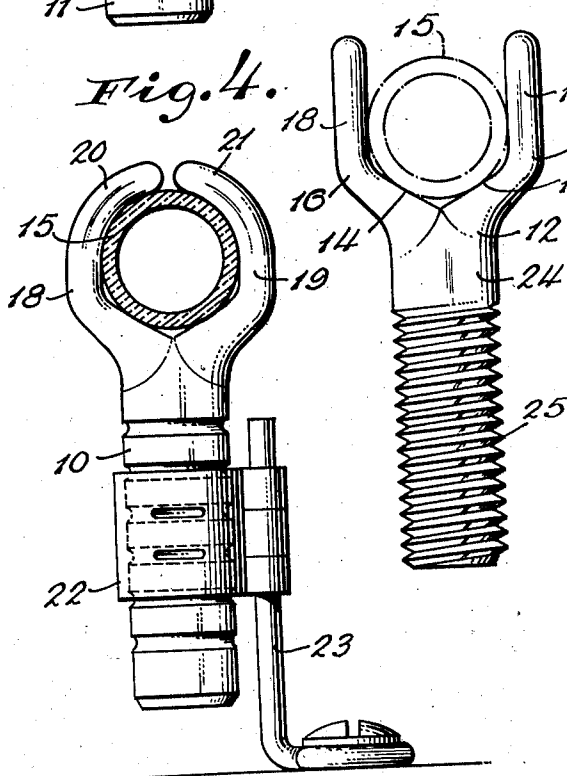


Fig. 6.



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ADJUSTABLE INSULATING ELEVATION
POST

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6 Claims. (Cl. 248—50)

This invention relates to elevation posts, more particularly to adjustable elevation posts and insulators for tubular, gaseous illuminants, such as those generally known as neon sign lamps.

Elevation posts of insulating material have heretofore been made of glass wherein the insulator element is provided with a seat for the tubular illuminant, and horns for tying the tubular illuminant thereto. The glass posts for such construction are generally referred to in my applications Serial No. 337,193 and Serial No. 369,798 filed May 25, 1940, and December 12, 1940, respectively.

The need for wiring the tubing to the elevation post horns introduces an element of labor, appearance and electrical effect, which is objectionable. The wire is not only visible but in unskilled hands, or by reason of changes in temperature, fracture of the horns of the elevation post frequently results.

It is an object of my invention to overcome the deficiencies of elevation posts as known to me, from the standpoint of enhancing the appearance thereof without sacrificing the insulating value of these contrivances. I have found that thermoplastic materials, particularly those which have a high refractive index, may be used to form the elevation posts, combining insulating properties as well as physical properties to augment the appearance of the illuminant held in position by these elevation posts.

I have discovered that the thermoplastic synthetic resins, particularly those of transparent or translucent character, are admirably suitable for use as elevation posts. I have further found that the thermoplastic insulators of transparent or translucent character, the index of refraction of which is close to quartz glass, add an unusually attractive appearance to tubular illuminants of the character described, in that the light transmission features avoid any interfering influence in the display of the tubular illuminant, and may therefore be positioned at any point along the length of the tubing which it is intended that it support.

I have further found that the thermoplastic characteristics of synthetic resinous materials may be advantageously employed to form, in situ, the connection between the elevation post and the tubing.

Thus I have found that I may form an elevation post of thermoplastic material and provide the same with tubing enveloping segments which may be formed into connecting engagement in situ, thereby eliminating objectionable wire

straps and other incidental defects heretofore experienced with glass or like elevation posts.

I have further found, by elimination of metallic tying means usually employed with glass elevation posts known to me, and the support of the luminous tubes wholly by non-metallic insulators, that visual as well as electrical defects are minimized.

Other features of my invention will become more apparent, or be more particularly emphasized as this description proceeds.

For this purpose I make reference to the accompanying drawing, forming a part hereof, in which—

Figure 1 is a front elevational view showing one embodiment of my device;

Figure 2 is a side elevational view thereof;

Figure 3 is a plan view thereof;

Figure 4 illustrates the elevation post and standard in position on a surface, together with a section of neon sign tubing;

Figure 5 is a fragmentary, side elevational view thereof;

Figure 6 is a view corresponding to Figure 1, with a screw threaded type of elevation post, in accordance with my invention.

Making reference to the drawing, I have illustrated in Figures 1 to 5 an elevation insulator post for neon sign tubing or the like, particularly suitable with my adjustable mounting installation or clip, referred to in my applications Serial Nos. 337,193 and 369,798 filed May 25, 1940, and December 12, 1940, respectively.

The invention herein concerns itself primarily with the post 10, which has its one end thereof 11 arranged to interfit with some mounting clip. The opposite end 12 is formed with a seat defined by angularly disposed faces 14, thereby serving to center tubing 15 within rather wide tolerance of sizes.

The seat is formed by the bifurcated branches 16 and 17, which terminate into fingers 18 and 19. At the time of construction, the fingers 18 and 19 are preferably formed substantially parallel to each other, whereby the tubing 15 may be disposed therebetween, to rest upon the seats 13.

In this position, where the post has the branches thereof made of thermoplastic resinous material, they are suitably heated, and then folded into enveloping positions, more clearly illustrated in Figures 4 and 5, wherein the branches are bent to form arcuate fingers 20 and 21.

It will be understood that the displacement of the enveloping position is consistent with the

size of the tubing 15 disposed upon the seat 13, thus providing firmness of engagement, particularly when the shrinkage incident to cooling is taken into account after the operation which involved forming the thermoplastic fingers 18 and 19 into engaging position by heat.

In general, I prefer to form the post 10 of thermoplastic material, which is deformable at moderate temperatures, such as approximately 200 to 225° F. The polystyrene resins and the methacrylate resins have been found suitable, though I prefer the polystyrene resins for my purpose.

Where I employ thermoplastic resinous material whose index of refraction is chosen with due regard to the nature of the glass employed, the appearance of the illuminant held in position by my construction is materially enhanced, and harmonious color schemes may be effected.

Where tubing of the type which is coated with fluorescent material is employed, marring of the surface where the coating is customarily exteriorly disposed, is minimized. Where the illuminant tubing has the fluorescent material on the interior face, the absence of metallic tying members, normally employed with glass elevation posts heretofore known to me, minimizes the deteriorating effect of this coating.

Apart from the new and novel optical effects, it will be appreciated that the toughness and shockproofness of the material introduces a highly desirable feature in the installation for the purposes contemplated by me.

In Figures 4 and 5 I have illustrated an attaching clip 22 and standard 23, which engage the shank of the post 10 by engaging any of the transverse grooves therein shown.

In another embodiment, illustrated in Figure 6, the shank 24 may be formed with a screw threaded section 25, where screw threaded adjustment may be found desirable.

It will be observed that while I have illustrated, and prefer to make my elevation post of thermoplastic insulating material, wherein moderate temperatures may be used to shape the fingers 18 and 19 into enveloping engagement about an illuminant tube 15, it is contemplated by me that some of the novel effects of my invention may be secured, in part, by forming the post with an attaching seat having wire engaging horns customarily found in glass elevation posts.

Where these features are employed, it will be understood that the use of the optical properties of thermoplastic materials, such as the methacrylates and polystyrene synthetic resins, enhances the appearance of the illuminating assembly, particularly neon signs.

Other features incident to the employment of the thermoplastic materials I have mentioned will be readily apparent to those skilled in the art.

Having thus described my invention and illustrated its use, what I claim as new and desirable to secure by Letters Patent is:

1. An elevation post for luminous tubes comprising a body portion of insulating material having a shank portion for engagement with a surface attaching mechanism, one end whereof is provided with a seat, and tube engaging elements comprising at least one finger extended to one side of said seat of a length whereby upon lateral shaping of said finger about said tube it serves to hold said tube upon the seat comprising a thermoplastic resinous material deformable at moderate temperatures whereby mounting and removal may be made of said tubes.

2. An elevation post for luminous tubes having a shank and seat portion of insulating material and extension fingers disposed from said seat of thermoplastic synthetic resinous material deformable at moderate temperatures and positioned in respect of said seat whereby said tube may be laterally positioned upon said seat and thereupon the said fingers may be shaped to engage said tube at moderate temperatures.

3. An elevation post for luminous tubes having a shank and seat portion of insulating material and extension fingers disposed from said seat of thermoplastic synthetic resinous material deformable at moderate temperatures and positioned in respect of said seat whereby said tube may be laterally positioned upon said seat and thereupon the said fingers may be shaped to engage said tube, said synthetic material being a polystyrene polymer of substantially transparent characteristics.

4. In combination with luminous tube, an insulator elevation post of synthetic resinous material deformable at moderate temperatures having extension fingers of said material shaped about said tube and shrunk in situ into engaging position about said tube.

5. In the method of positioning luminous tubes in position by the seating of said tubes upon an insulator elevation post having thermoplastic extensions deformable at moderate temperatures, the steps which consist in locating the tube upon the seat and then in shaping in situ at moderate temperatures the extension of insulating material about said tube into engagement with said tubes and thermally setting the same in position.

6. In the method of positioning luminous tubes in position by seating of said tubes upon an insulator elevation post, having extensions and which is made of thermoplastic synthetic resinous material deformable at moderate temperatures, the steps which consist in positioning the tube upon the seat and then thermally shaping the extensions in situ at moderate temperatures into engaging position with said tube and setting the same to fixedly hold the extensions into engaging positions by permitting the same to cool.

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