This invention relates to new and improved unit clips. In order to understand the invention, it is considered advisable to specify the meaning of the term "unit" used in the title employed to designate this invention. In the industry devoted to the manufacture and assembly of advertising signs of the so-called "neon" type the term "unit" is employed to designate a glow lamp formed out of a tube of glass. A glass tube or unit of this type is filled with a gas and is provided with electrodes so as to produce colored illumination when current is supplied to the electrodes. Tubular glow lamps or units are mounted in conventional use upon a supporting surface or sign body in such a way that they are insulated from such a supporting surface so that there is little danger of leakage current passing from the glass unit to the supporting surface under various weather conditions and the like. In the conventional assembly of neon advertising signs and the like a glass stand is employed as an insulating support structure. Such stands are formed so as to have a forked end adjacent to which there formed projections located on each side of the stand. In use a glass tube forming a part of a lamp unit is located between the arms of this fork type of structure and a copper or other similar wire is wrapped around the tube and the projections so as to hold this tube in position. This type of structure suffers from many operational deficiencies. It is difficult and relatively inconvenient to mount a lamp unit utilizing glass stands of this category. A more important disadvantage of this type of glass stand structure lies in the fact that the wires used are opaque, and hence break up the continuous illumination produced by the lamp unit. Also, copper wires or the like such as are conventionally employed tend to discolor the lamp unit after prolonged weathering, and currents are apt to be induced in these wires.

An objective of this invention is to provide assemblies for mounting lamp units of the class described which overcome substantially all of the disadvantages of the above and other prior art structures designed for the same general purpose of the invention is to provide assemblies for the purpose indicated which are easy and inexpensive to manufacture and to utilize. A related objective of the invention is to provide assemblies of this category which can be employed with lamp units having glass tubes of varying diameters. Still further objectives of the invention are to provide holders and clips as will be hereinafter specified for use in mounting lamp units. Other objectives of the invention, as well as many specific advantages of it, will be more fully apparent from the remainder of this specification, including the appended claims and the accompanying drawing in which:

Fig. 1 is a perspective view showing a lamp unit mounted with unit clips of the present invention;

Fig. 2 is a side elevational view taken at line 2-2 of Fig. 1, this view being partially in section so as to reveal certain construction details;
desired extent and then twisted to the position shown in Fig. 4 of the drawing so as to complete the assembly of a unit clip 18. Preferably, the shank 42 is formed of such dimension as to fit tightly within the cylindrical body portion 32 so as to prevent undesired movement. If desired, the end of this shank fitting within the holder 20 can be tapered so as to facilitate assembly.

The end of the clip 22 remote from the holder 20 is provided with a bifurcated arm structure having arms 44 which diverge away from the shank 42 and then converge towards one another so that their ends are located adjacent to, but spaced from, one another. Preferably, these arms are of generally flat shape so that the glass tube 16 may be snapped between them as shown in Fig. 2 and rigidly held in such a manner that neither this tube nor the clip 22 can rotate so long as other portions of the tube 16 are held with either unit clips 18 of this invention or other means.

In Figs. 7, 8 and 9 of the drawing various views are shown illustrating how the arms 44 employed with a clip 22 can be utilized to hold various tubes 16, 16', and 16'' of different diameters. In the embodiment of the invention illustrated in Figs. 2 and 5 of the drawing, the circumferential grooves 40 are formed so as to extend in a single plane about the axis of the shank 42. If desired, a structure of the clip 22 may be altered as illustrated in Fig. 10 so as to provide a modified clip 22' in which the circumferential grooves 40' are formed in a thread-like manner around the shank 42. The remainder of this modified clip 22' is identical with the clip 22.

It is preferred to form the holder 20 out of any convenient resilient non-corrosive metal such as coated steel; it is preferred to form the clip 22 or the modified clip 22' out of a resilient, comparatively strong, transparent polymer such as a butyrate polymer produced by Eastman Chemical Products, Inc. of Kingsport, Tennessee, and sold under the trade name Tenite II, Formula 435, H4. It is to be understood, however, that other materials can be utilized.

One of the advantages of this invention lies in the fact that a shank 42 may be manufactured at any convenient length, and may be cut at the site of an installation to any desired length. Another advantage of this invention lies in the fact that when clips such as are described herein are employed that a line does not break up the illumination produced by a lamp unit so as to affect the appearance of the lamp unit. A further advantage lies in the fact that unit clips as described can be readily adjusted in any manner during installation and are sufficiently resilient so as to “give” in order to prevent breakage. Because of the fact that a wide variety of modifications may be made without departing from the essential features or principles of this invention, it is to be considered as being limited only by the appended claims.

It is claimed:

1. An assembly for use in holding a tube forming a part of an electric lamp which comprises: a holder formed of a resilient metal having a base adapted to be attached to a supporting surface, a resilient arm attached to said base so as to extend therefrom, a cylindrical body portion attached to said arm so as to project therefrom, said body portion including a slit extending parallel to the axis thereof along the entire length of said body portion and projections formed on the inside of said body portion on the end thereof remote from said base, said projections being located on each side of said slit and being adapted to engage a groove; and a clip formed of a resilient, transparent material having an elongated, cylindrical shank, one end of said shank being provided with circumferential grooves and a longitudinal groove intersecting said circumferential grooves, and a bifurcated portion having arms, located at the other end of said shank, said arms being curved so that the ends of said arms converge towards one another, and the ends of said arms being spaced from one another, said shank being adapted to be located within said cylindrical body portion by being inserted so that said projections pass through said longitudinal groove and then by being twisted so that said projections fit within one of said circumferential grooves, said shank and said cylindrical body portion being dimensioned so that said shank fits closely within said cylindrical body portion so as to be held against undesired movement when so located.

2. A sign structure which comprises: a supporting surface; a lamp unit having a tubular member forming a part thereof located parallel to said supporting surface so as to be spaced therefrom; a plurality of holders, each of said holders being formed of a resilient metal so as to include a base attached to said supporting surface, a cylindrical body portion attached to said base and at least one projection formed on the inside of said body portion on the end thereof remote from said base, said projection being adapted to engage a groove; a clip held by each of said holders, each of said clips being formed of a resilient, transparent material having an elongated cylindrical shank, one end of said shank being provided with circumferential grooves and a longitudinal groove intersecting said circumferential grooves, and a bifurcated portion having arms located at the other end of said shank, said arms being curved so that the ends of said arms converge toward one another, the ends of said arms being spaced from one another, said clips each being inserted within one of said holders with the shank of each of said clips located within the cylindrical body portion of one of said holders so that said projections fit within said circumferential grooves, said arms of said clips resiliently engaging said tubular members so as to hold said tubular member in a desired position spaced from said supporting surface.

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