Oct. 19, 1948. S. DENNING 2,451,539

NEON LIGHTING EQUIPMENT

Filed June 17, 1944

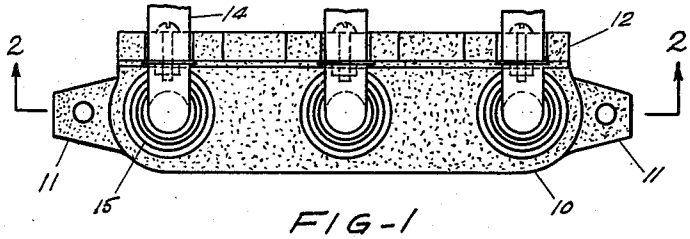


FIG-1

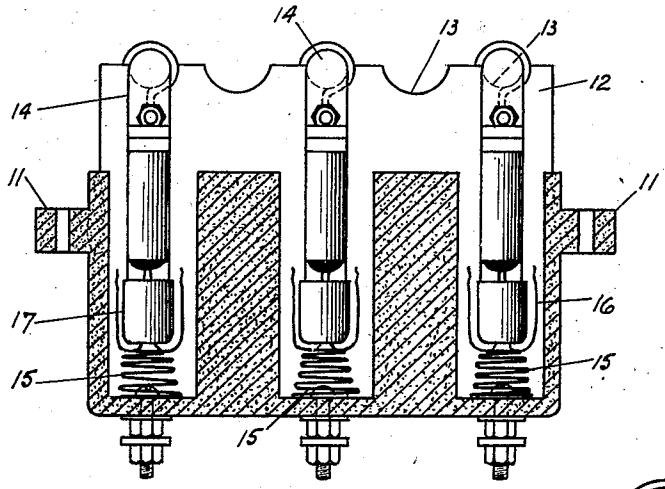


FIG-2

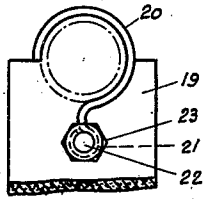


FIG-5

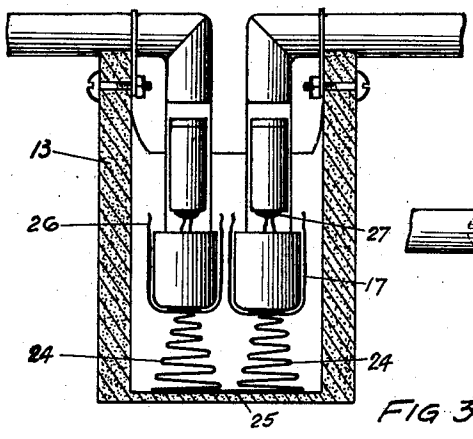


FIG 3

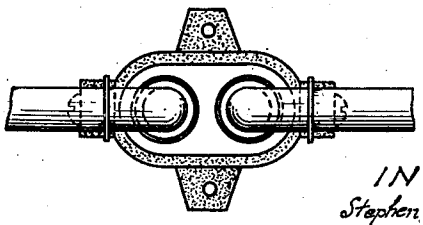


FIG-4

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Patented Oct. 19, 1948 2,451,539

UNITED STATES PATENT OFFICE

2,451,539

NEON LIGHTING EQUIPMENT

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Application June 17, 1944, Serial No. 540,860

1 Claim. (Cl. 173—328)

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The invention relates to the improvements in neon lighting equipment as described in the present specification and illustrated in the accompanying drawings which form a part of the same.

The invention consists essentially of the novel features of construction as pointed out broadly and specifically in the claim for novelty following a description containing an explanation in detail of an acceptable form of the invention.

The objects of the invention are to devise a housing that will not only support the tubes but will act as a holder therefor; to construct a housing provided with resilient means for holding the cups to the electrodes and means for retaining the tubes in constant engagement with the cups; to facilitate easier installation by electricians and others in the assembly of the various parts of the neon lighting equipment; to furnish housings that will thoroughly protect the vital parts of the neon equipment and easily applicable for installation to various structures and articles; and generally to provide housing that will be economical to manufacture, durable in construction and efficient in use.

In the drawings:

Figure 1 is a plan view of the housing illustrating the assembly of the glass tubes to the electrodes.

Figure 2 is a longitudinal sectional view as taken on the line 2—2 in Figure 1.

Figure 3 is a sectional view of a modified form of the invention.

Figure 4 is a plan view of the modified forms of the invention as illustrated in Figure 3.

Figure 5 is an enlarged fragmentary detail illustrating one of the hooks for detachably holding the tube.

Like numerals of reference indicate corresponding parts in the various figures.

Referring to the drawings:

The housing as indicated by the numeral 10 is made of suitable insulated material, such as porcelain, and is provided with integral lugs 11 through which it is fastened to the selected structure or article.

The housing is formed with the projecting wall or walls 12 having supporting surfaces 13 preferably arcuate in shape or curved to follow the contour of the glass tubes 14. Within the housing are located the phosphorus helical springs 15 and these springs may be independent of one another or connected to one another, as the case may be.

In Figures 1 and 2, these springs 15 are illustrated as being independent in order that the various tubes, which are coupled to the housing,

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may be independently lit from one another. These helical springs are also detachably secured to the housing and form a support for the cup 17, while the ends 16 of the electrode leads are turned up in alignment with the cup wall the latter being fastened to the electrodes which are inserted in the tubes 14.

The tubes themselves are detachably held to the housing by means of the fastening members 19. These fastening members may be constructed in any suitable manner but, as herein shown they are in the form of hooks 20, the lower end of the hooks being looped at 21 to encircle the threaded member 22 and they are held in place by the nut 23.

The hook is also adapted to encircle a portion of the contour of the tube, and thus hold the tube to the supporting surface 13 of the housing.

In Figures 3 and 4, the phosphorus helical springs 24 are coupled together by the wire conductor 25 and, although two couplings are illustrated in Figures 3 and 4, it is understood that there may be a series of same.

The tubes, as illustrated, have turned ends 26 and in which the electrodes are introduced, the wires of the electrodes extending through the tip 27 of the tube and through apertures formed by the retaining cups 17.

The housing may contain separate compartments for enclosing the respective ends of the glass tubes and their accompanying electrodes, cups, and springs, or the housing may be simply provided with a single compartment for enclosing one or more of the electrodes, cups, and springs.

It will be seen, therefore, that in all the modifications and the ramifications that the general features of this structure are followed throughout and that is, in the combination of forming a simple and efficient support and holder for the glass tube and the means in which the phosphorus springs support the cups which, in turn, enclose that portion of the glass tubes which contain the electrode.

What I claim is:

In neon lighting equipment, a housing formed of insulated material and having outside mounting flanges, the said housing being formed with a plurality of recesses, a wall projecting outwardly from one edge of said housing and having a plurality of arcuate neon tube supporting surfaces formed in the edge thereof and located at right angles to the direction of the recesses formed in said housing, phosphorus helical springs situated in the bottom of the recesses of said housing

and detachably secured terminal posts extending through the bottom of said recesses, cups supported by said helical springs and enclosing the ends of neon tubes, electrodes in the neon tubes electrically connected to said cups, the neon tubes being supported by the arcuate surfaces of said wall and extending into the recesses of the housings and contacting with said cups, and fastening members for detachably securing said tubes in the said arcuate supporting surfaces against the tension of the said helical springs.

STEPHEN DENNING.

REFERENCES CITED

The following references are of record in the file of this patent:

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