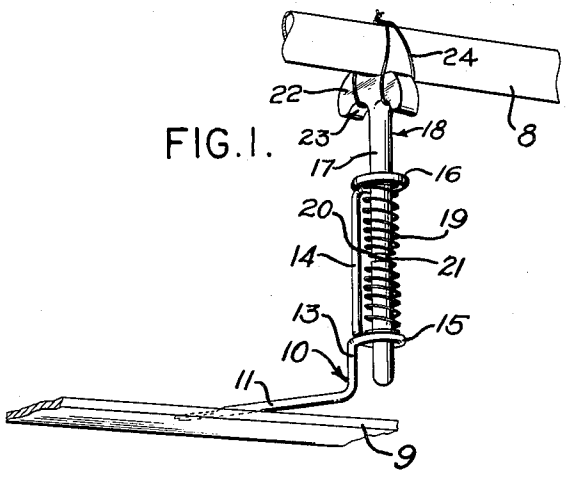
May 8, 1956 K. W. RICHTER 2,744,705

RESILIENT SUPPORTS FOR LIGHT TUBES

Filed Oct. 1, 1952

FIG. 1.



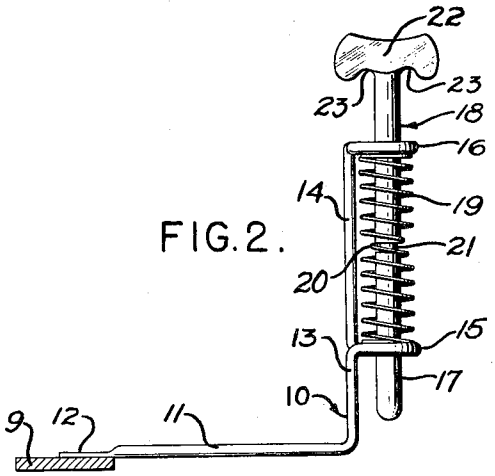


FIG. 2.

FIG. 5.

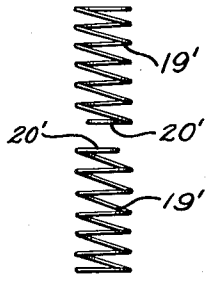


FIG. 3.

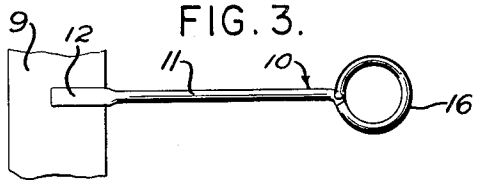
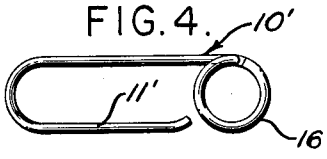


FIG. 4.



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RESILIENT SUPPORTS FOR LIGHT TUBES

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Application October 1, 1952, Serial No. 312,470

1 Claim. (Cl. 248—50)

This invention relates to improvements in resilient supports for light tubes.

Gas filled tubes, such as neon tubes, are used for electric display signs and for illuminating purposes. Frequently these tubes, or portions thereof, are elongated and it is the present practice to support spaced portions of said tubes on rigid brackets or supports which are mounted on the frame of the sign or light. Elongated gas filled light tubes can, however, be rendered defective or be impaired by vibrations and consequently, it is the primary object of the present invention to provide supports for elongated light tubes which are resilient and which will cushion or absorb normal vibrations to thereby protect the supported tube and enhance its life and effectiveness.

A more specific object of the invention is to provide a resilient support for light tubes which is easy to mount on a frame portion of a light or sign, and which is readily supportingly engaged with a desired portion of a tube.

A further specific object of the invention is to provide a resilient support for light tubes which is easy to manufacture, assemble and install.

Another specific object of the invention is to provide a resilient support for light tubes which may be yieldingly interposed between a desired portion of a light tube and any convenient portion of a fixed frame or base.

A further object of the invention is to provide a resilient support for light tubes which is inexpensive to manufacture, which is strong and durable, which is effective and efficient in its operation and duties, and which is well adapted for the purposes described.

With the above and other objects in view, the invention consists of the improved resilient support for light tubes, and its parts and combinations as set forth in the claim, and all equivalents thereof.

In the accompanying drawing in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a perspective view of the improved resilient support mounted on a frame or base member and engaging a portion of a neon tube;

Fig. 2 is a side view of the resilient support mounted on a frame member;

Fig. 3 is a plan view of the bracket portion of the support, the post and spring being removed;

Fig. 4 is a plan view of a modified form of the bracket portion of the improved light tube support; and

Fig. 5 is a side view of an alternative form of spring arrangement for use in the resilient support assemblage.

Referring now more particularly to the drawing, it will appear that an elongated portion of a gas filled tube for display or illuminating purposes is indicated by the numeral **8**. In practice, extents of such tubes may be arranged in elongated irregular configurations for display or advertising purposes. Also, major portions of such tubes are in practice outwardly or laterally offset from the stationary frame portions of the display or advertising sign. In the drawing a fragmentary portion of a

frame, spaced from the tube **8**, is indicated by the numeral **9**.

The improved resilient support assemblage includes a bracket generally indicated by the numeral **10** which is preferably bent and shaped from a rod or section of wire. The bracket includes a mounting arm portion **11** which, in the preferred form of the invention is somewhat flattened at its outer end portion, as at **12**, to permit its securement to a face portion of the frame **9**, preferably by spot welding. The post guiding portion of the bracket is generally at right angles to the mounting arm portion **11** and includes a pair of rectilineal sections **13** and **14** interrupted by an open loop portion **15** in a plane at right angles to the plane of the portions **13** and **14**. The outer end of the rectilineal **14** also terminates in a loop portion **16** concentric with the loop portion **15** and substantially spaced therefrom.

The stem portion **17** of a post member **18** is reciprocatably extended through the loops **15** and **16** of the bracket member **10**. Surrounding that portion of the stem **17** of the post member **18** which is between the loops **15** and **16** is a coiled spring **19**. In the form of the invention illustrated in Figs. 1 and 2, one or more intermediate convolutions of the spring **19** are of reduced size, as at **20**, to engage a reduced shoulder portion **21** of the post stem **17**, thereby serving to anchor the spring to the intermediate portion of the stem of the post.

The outer end of the past **18**, substantially beyond the bracket loop **16**, terminates in a transverse head **22** of saddle-like formation, with the outer surface thereof being dished on a radius to provide a seat for the light tube **8** in the manner shown in Fig. 1. The under surface of the post head **22** is grooved or recessed as at **23** for reception of portions of a tie or anchor wire **24** which is secured to the head and about the tube **8** in the manner shown in Fig. 1, for the attachment of the head of the post to the tube **8**. The entire post unit **18** may be of plastic or any other suitable material.

In lieu of the one piece spring shown in Figs. 1 and 2, with an intermediate convolution of reduced size, the spring may be formed in two sections, **19** and **19'**, as shown in Fig. 5, with the adjacent end coils **20'** of each section being of a reduced size to engage in the shouldered groove **21** of the post.

In Fig. 4 there is illustrated an alternative form of mounting bracket which permits the same to be bolted to the frame member **9**. The portion of the bracket of Fig. 4 which reciprocatably receives the post **18** is the same as that illustrated in Figs. 1 and 2, but the mounted arm portion is of U or reverse bend formation, it being intended that the closed end of the arm portion **11'** engage a face of the frame **9** and provide an opening for the shank of a screw or bolt which is extended through the frame **9**. The head of the screw or bolt used for this purpose overlaps the closed end portions of the arm **11'** and thus clamps the arm portion of the bracket to the frame.

It will thus be seen that the improved resilient light tube support assemblage comprises a minimum of simple, easily assembled parts. For assembly purposes it is merely necessary to position the coil spring member between the loop portions **15** and **16** of the bracket and to then insert the stem **17** of the post member **18** through the loop members and the convolutions of the spring, engaging the reduced intermediate convolutions of the spring with the shouldered portion **21** of the stem **17**.

The post head **22** will then be resiliently supported spacedly beyond the outer looped end of the bracket. The free end of the bracket is secured to a suitably fixed frame portion **9** by spot welding or bolting and the

resilient mounting of the post permits its head portion to then engage a suitable portion of the elongated tube 8 and it is secured to the tube in the manner previously described.

In use, if the tube is subjected to any vibration or movement, the post of the support assemblage can yieldingly reciprocate in its bracket to compensate for and cushion any vibration or movement to which the tube is subjected.

The improved resilient support for light tubes is of very simple construction, is inexpensive, is easily mounted, and is well adapted for the purposes set forth.

What is claimed as the invention is:

A resilient support for luminous tubes adapted for interposition between a portion of an imperforate frame and the tube to be supported, comprising a right angularly shaped bracket having one leg thereof attachable to the frame and extending in the plane of the frame laterally thereof, the other leg of the bracket being formed with separated aligned eyed portions in a plane at right angles to the axis of the last-mentioned leg of the bracket, a post freely reciprocatably mounted directly through the eyed portions of the bracket with the eyed portions of the bracket loosely engaging opposite end portions of the post, the post having a head portion projecting beyond the adjacent eyed portion of the bracket and formed on its top surface with a recessed seat for supporting a portion of the luminous tube, the undersurface of the head portion of the post on opposite sides

of the post being formed with recesses for receiving tube securing means, an intermediate portion of the post being formed with a shouldered groove, and a coiled spring confined in a state of compression between and bearing against the eyed portions of the bracket and surrounding a portion of the post, intermediate convolutions of the coiled spring being of reduced circumference and engaging in the shouldered recess of the post to anchor the spring to the post and to urge the latter to a projected position relative to the bracket, said spring serving as the sole means for connecting the post to the bracket and engaging the bracket only at its opposite extremities.

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