May 5, 1931. W. B. WILSON 1,803,884

DISPLAY SIGN

Filed Oct. 29, 1928

Fig. 1.

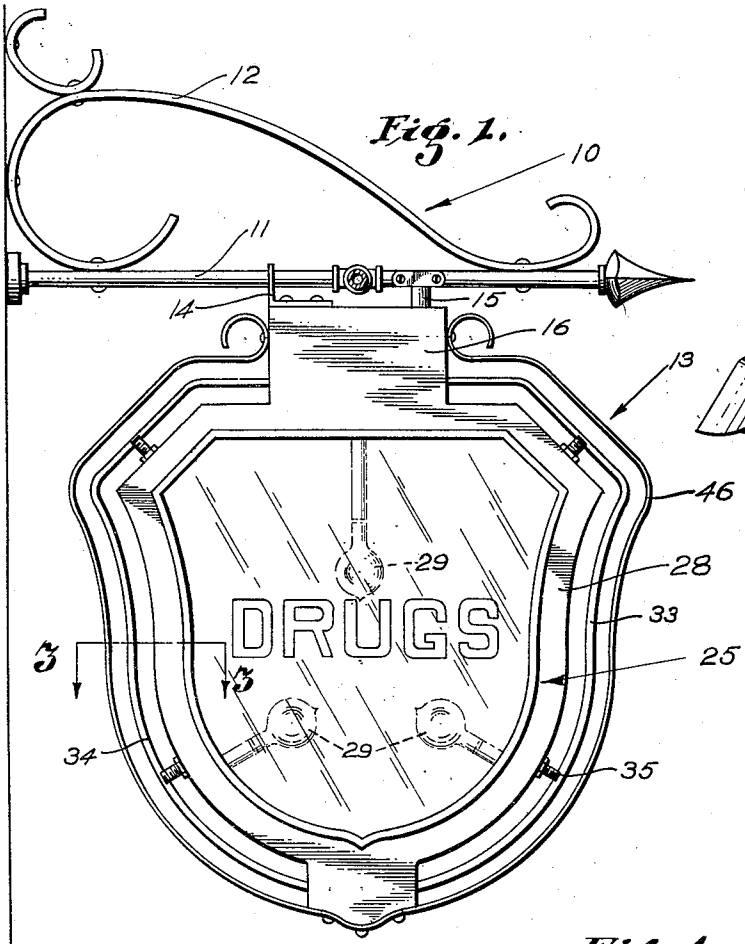


Fig. 2.

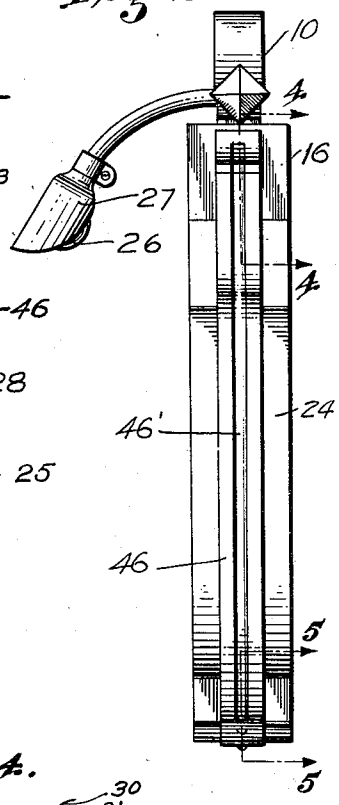


Fig. 3.

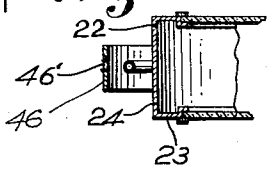


Fig. 4.

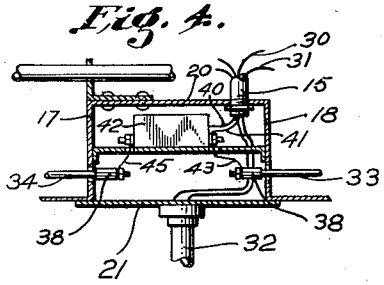
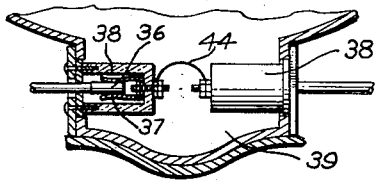


Fig. 5.



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Patented May 5, 1931

1,803,884

UNITED STATES PATENT OFFICE

WILLIAM B. WILSON, OF LOS ANGELES, CALIFORNIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO METLOX CORPORATION, LTD., A CORPORATION OF CALIFORNIA

DISPLAY SIGN

Application filed October 29, 1928. Serial No. 315,650.

This invention relates to advertising signs and particularly pertains to display signs embodying the use of gas tubes as the illuminating medium.

At the present time advertising signs are being extensively used which employ illuminating tubes carrying the rare gases, and through which gases a charge of electricity passes to cause the gases to become luminous. In the construction of these signs it has been found desirable to build signs having a body of any desired configuration and which body may carry advertising subject matter, these signs being outlined by a border formed by rare gas illuminating tubes which conform to the contour of the perimeter of the sign. It has been found, however, that in climates where snow and sleet occur that these elements often damage the tubes forming the outline and it is the principal object of the present invention to provide a sign having protecting means for the outlining tubes, but which do not prevent the tubes from being observed at both sides of the body of the sign where they will appear as forming an illuminating outline for the contour of the sign body.

The present invention contemplates the use of a sign body of a desired contour and which body carries one or more illuminating tubes with the rare gases,—the configuration of the tubes agreeing with the contour of the sign body and uniformly spaced in relation therewith; said sign body carrying an outlining shield member bent to the configuration of the tube and the sign, and uniformly spaced in relation to the tube to protect the tube without obscuring the view of the illuminating tube as viewed from opposite sides of the sign.

The invention is illustrated by way of example in the accompanying drawings in which:—

Fig. 1 is a view in elevation showing one form of sign in which the invention may be embodied.

Fig. 2 is a view in end elevation showing the sign of Fig. 1.

Fig. 3 is a view in transverse section through a fragmentary portion of the sign as seen on line 3—3 of Fig. 1.

Fig. 4 is a fragmentary view of the transformer box incorporated in the top of the sign body and being shown as seen on the line 4—4 of Fig. 2.

Fig. 5 is a fragmentary view of the tube socket housing at the bottom of the sign body as seen on the line 5—5 of Fig. 2.

Referring more particularly to the drawings, 10 indicates a supporting member for a sign. This member may be of any preferred design, but is here shown as having a horizontally extending pipe 11, supported by structure brackets 12 of any desired configuration. The complete sign 13 is dependent from the hanger 10, and is here shown as connected thereto by a bracket 14 and conduit 15. The bracket is shown as secured to the top of a transformer box 16, which has end walls 17 and 18 and side walls 20 and 21, and over which lie suitable frame members 22—23 shown integral with the walls 17—18 and 20—21. These frame members may be cut in any desired configuration and are here shown as forming a shield shaped sign. The opposite side frame members 22 and 23 are spaced from each other and connected by a side wall 24, which represents the perimeter of the sign body 25.

It is to be understood that the sign body may be constructed with opaque sides which may be indirectly illuminated by exterior lighting fixtures, such as the electric light globe 26, mounted within a suitable reflector 27, or the side frame members 22 and 23 may be cut away to form a frame structure as indicated in Fig. 1 of the drawings, and which structure will accommodate translucent panels 28 at the opposite sides of the sign body, the panels being illuminated by electric light globes 29 mounted within the sign body and concealed from view. The electric light globes receive their electrical energy through lead wires 30 and 31 which are led in through the pipe 11 to the conduit 15. These wires then are led through the transformer box to a support 32 for the globes 29. It will be understood that any number of electric light globes uay be used within the sign and

that any indicia may be placed upon the panels 28.

The present invention is more particularly concerned with the illuminating tubes 33 and 34 which are bent to conform to the configuration of the sign body 25. These tubes are mounted upon insulated supporting standards 35, which extend outwardly from the perimeter of the sign body and thus hold the tubes in fixed uniform spaced relation to the sign body. The tubes are preferably formed at their opposite ends with electrodes 36 which are frictionally engaged by contact fingers 37 of sockets 38. These sockets, as indicated in Figs. 4 and 5 of the drawings, are suitably mounted in the end walls of the transformer box 16 at the top of the sign, and a connector box 39 at the bottom of the sign.

The tubes 33 and 34 are filled with a desired rare gas which, when charged with electricity will produce an illumination of a color characteristic of the gas used. The current for the tubes is delivered through the lead wires 30 and 31 to wires 40 and 41, which are suitably connected with a transformer 42. One pole of the transformer is connected to the socket 38 of tube 33 by a conductor 43. The current passes through the tube 33 to a socket 38 at its lower end. This socket is connected to a complementary lower socket by a conductor 44, after which the current passes along the tube 34 to the upper socket 38 and thence along the wire 45 to the transformer 42.

It will thus be seen that the luminous tubes here shown are in series and are on a separate circuit from the electric light globes 29.

Disposed around the edge of the sign body 25 and on the outside of the tubes 33 and 34 is a shield 46. This shield is formed of a strip of relatively thin metal, the plane of which lies parallel to the plane of the side wall 24 of the sign body 25, and with said side wall forms a space which is partially occupied by the luminous tubes 33 and 34.

By reference to Fig. 3 of the drawings, it will be seen that the shield 46 is spaced from the tubes 33 and 34 and is so positioned that blows delivered edgewise of the sign body will be warded off, and will not strike the tube with any damaging effect. It will also be observed that the opposite sides of the space formed by the shield and the side wall of the sign body are open, thus making it possible to observe the luminous tube outline without an obstruction of vision by the shield. It will thus be seen that the device here disclosed provides an illuminated sign in which the ordinary system of electric globe illumination may be employed directly or indirectly, and in addition to which luminous tubes of rare gas may also be used to outline the sign, and may be mounted and housed in a manner to be shielded from the action of the elements while permitting the luminous tubes to be observed from both sides of the sign.

In the construction of signs having a trim of luminous tubes around the edge thereof it has been quite common to make the body of the sign convex so that the converging sides of the sign will meet along a median line as represented by the perimeter of the sign body and at which point the luminous tube will be mounted. In this form of sign it has been found that the light from the luminous tube will tend to cast a shadow on a part of the sign body and the advertising matter carried thereby. For that reason, it has been desirable to shield the sides of the sign from the light of the luminous tube, and for that reason, the sign as here disclosed is formed with a relatively wide edge member 24, which will act to shield the opposite faces of the sign body from the luminous tube, as clearly seen in Fig. 3 of the drawing, thus the luminous tube will merely act to provide a luminous outline for the sign and will not interfere with the illumination or display of the advertising material upon the opposite faces of the sign body.

It has also been found desirable to slit the protecting shield 46, as indicated at 46′ in the drawing, so that the luminous tube may be observed by persons standing in a position to view the sign on its edgewise position. The width of this slot, however, is not sufficiently great to permit the snow and the sleet to enter the space between the shield and the sign to cause any damage to the tube.

While I have shown the preferred form of my invention as now known to me, it will be understood that various changes may be made in the combination, construction and arrangement of parts by those skilled in the art, without departing from the spirit of the invention as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. A display sign for advertising purposes, said sign including a transformer box at the top thereof, a connection box at the bottom thereof, illuminating means within said sign, marginal shield members extending from the transformer box and secured by their opposite ends to the opposite sides thereof whereby a composite frame structure will be formed, a luminous tube electrically connected to said connection box and lying within said marginal shield members and advertising matter on the side of said sign to be illuminated by said illuminating means.

2. In an illuminated sign, a transformer box disposed at the top thereof, a connection box at the bottom thereof, complementary shield members secured by their opposite ends to the opposite sides of the transformer box and forming a frame structure there-

with, and luminous tubes extending along the marginal edge of said complementary shield members to be electrically connected with the electrical apparatus within the transformer box and the connection box, said frame members acting to guard said luminous tubes from lateral force.

3. In an illuminated sign, a transformer box disposed at the top thereof, a connection box at the bottom thereof, complementary frame members secured by their opposite ends to the opposite sides of the transformer box and forming a frame structure therewith, luminous tubes adapted to extend along the marginal edge of said complementary frame members to be electrically connected with the electrical apparatus within the transformer box and the connection box, and a shield member extending from the opposite sides of the transformer box and around the marginal edge of the sign body, said shield member being disposed on the outside of the luminous tube and extending in a protecting position with relation thereto.

4. In an illuminated sign, having a sign body, a luminous tube extending along the marginal edge thereof, a shield the plane of which extends parallel to the marginal edge of the sign body and being spaced a distance therefrom to accommodate the luminous tube between it and the marginal edge of the sign body, said shield having a slot formed longitudinally thereof and in the same plane with the luminous tube so that the tube may be viewed through the slot when the sign is in an edgewise position.

5. In an illuminated sign, a sign body of a desired thickness, the marginal edge of which is at right angles to the plane of the sign, a luminous tube mounted around the marginal edge of the sign and disposed with relation thereto, whereby the direct light from the tube will be shielded from the sign by the edge of the sign and the tube will thus provide an illuminated outline for the sign, and a shield member of flat material extending in spaced relation to the edge of the sign and parallel therewith, said shield being disposed on the outside of and extending along the tube and conforming to the configuration thereof, whereby to protect the tube from matter moving edgewise of the sign.

6. An illuminated sign comprising a relatively flat sign body, sets of socket members disposed along the edge of said sign body, luminous gas tubes adapted to be electrically connected with said socket members, said tubes extending along and being uniformly spaced with relation to the perimeter of the sign and a flat shield strip lying in a plane parallel with the edge of the sign body and being spaced around and conforming to the contour of the lengths of said tubes whereby to shield the same while permitting an unobstructed view of the tubes from opposite sides of the sign.

7. In an illuminated sign, the combination of a marginal illuminating tube, illuminating means within the body of said sign and separate from said tube, and means forming a boundary along the outer perimeter of said marginal illuminating means to confine the luminosity of said tube to forward and rearward directions.

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