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E. H. PENDLETON

2,037,041

ILLUMINATED SIGN

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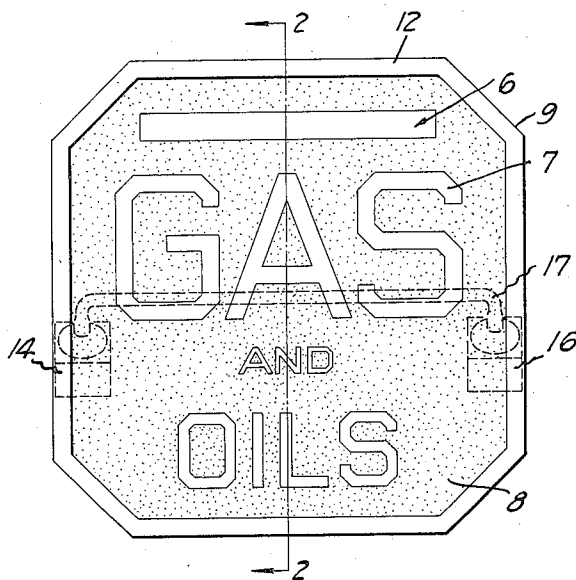


FIG. 1.

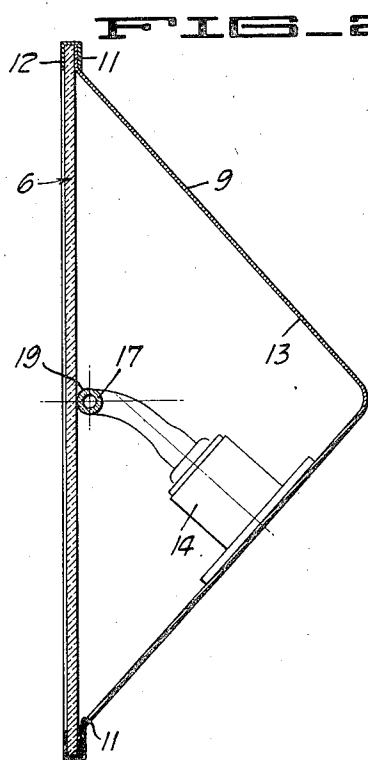


FIG. 2. FIG. 3.

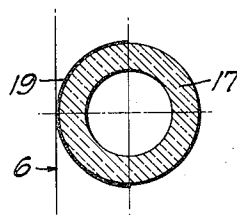
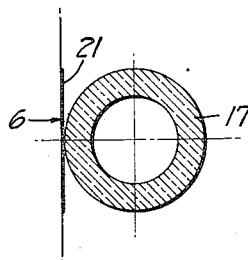


FIG. 4.



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3 Claims. (Cl. 40—132)

My invention relates to display devices and is particularly concerned with signs which are illuminated by gaseous discharge tubes such as neon tubes.

5 Customarily, such signs are manufactured in a relatively expensive manner, by bending discharge tubes into suitable shapes to form letters and other requisite insignia. The complication is considerable when the insignia are foreign language characters, such as Chinese, or Japanese or Arabic. Somewhat cheaper constructions have been utilized, in which a gaseous discharge tube in linear form is visible through a stencil or similar sign-forming element in order to provide the 10 desired sign. This cheaper form, however, is not entirely satisfactory, inasmuch as the rectilinear source of illumination is glaringly visible and is itself so apparent as to subordinate the remainder of the sign.

20 An object of my invention is to provide a satisfactory illuminated sign utilizing a gaseous discharge tube in generally linear form, which at the same time is cheap to manufacture.

25 A further object of my invention is to provide such a sign in which the source of illumination is not glaringly visible.

A further object of my invention is to provide a manner of displaying extremely intricate insignia in an economical and satisfactory fashion.

30 An additional object of my invention is to provide a generally uniform field of illumination for an illuminated sign.

The foregoing and other objects are attained in the embodiment of the invention illustrated in the 35 drawing, in which—

Fig. 1 is a front elevation of an illuminated sign constructed in accordance with my invention.

Fig. 2 is a cross-section the plane of which is indicated by the line 2—2 of Fig. 1.

40 Fig. 3 is an enlarged view of the gaseous discharge tube shown in Fig. 2.

Fig. 4 is a view similar to Fig. 3 but showing a modified form of gaseous discharge tube arrangement.

45 In its preferred form, the illuminated sign of my invention includes a transparent indicia panel varying the characters or indicia of the sign, adjacent to which there is arranged a generally rectilinear gaseous discharge tube. The tube is often associated with a reflector which, together with the panel, forms an enclosure, and the tube is provided with a screen or shield or coating between the tube and the panel, which shield is of such a character as to reduce the amount of 50 light transmitted directly by the tube, so that the

resulting transmitted light is of approximately the same color and intensity as the light transmitted indirectly from the reflector onto the panel, the net result being to afford a generally uniform field of illumination for the sign and to preclude 5 unusual brightness or intensity of the source of light.

While the illuminated sign of my invention can of course take various forms in accordance with different environmental conditions, I have chosen 10 to illustrate it herein in the form which includes a generally transparent panel 6 which in the present instance is of ordinary glass and carries suitable indicia 7 for affording the desired sign display. These indicia are distinguished from 15 the remainder of the glass in any desired fashion; in the present instance it is arranged that the indicia 7 are freely light transmitting, while the background 8 is substantially opaque.

Acting in conjunction with the panel 6 is a casing 20 9 preferably of sheet metal or comparable material, which is of substantially the cross-sectional contour shown in Fig. 2 and which is peripherally flanged, as at 11, to be suitably engaged with the panel 6 by a circumscribing channel 12 25 which secures the parts detachably together. In this fashion there is formed an enclosure in which the casing 9 is on its interior surface effective as a reflector. I do not contemplate that the interior surface 13 of the material 9 ordinarily will 30 be highly polished, but I do contemplate that it will be light in color, or bright, so that it serves as a reasonably good light reflector.

Situated within the enclosure formed by the panel and the casing, and preferably mounted on 35 the casing itself through suitable supports 14 and 16, is a gaseous discharge tube 17 which in its major portion is generally rectilinear in form and which is located centrally of the enclosure but in close juxtaposition to the panel 6. The discharge 40 tube is preferably the so-called "neon" tube of commerce, or some recognized equivalent thereof.

If the sign as so far described were illuminated, an observer would be impressed with a very vivid line of light coming directly from the tube 17 45 through the letters 7, and would perceive a comparatively poor and dull illumination for the remaining part of those letters and the remaining part of the sign. This difficulty is obviated in accordance with my invention by providing the forward side of the tube 17, or the side of the tube 50 next to the panel 6, with a shield 19. The shield preferably takes the form of a coating of paint or comparable material applied directly to the tube on substantially the forward half thereof, 55

which paint is applied in a thickness and of a color so that when the tube 17 is illuminated the paint is effective as a shield to prevent direct transmission of a major portion of the light from the tube to the indicia 7, and at the same time presents from the exterior of the sign to an observer substantially the same color and intensity as the background or reflector 13. In this fashion there is provided a generally uniform shield, and the source of light is sufficiently subdued that it is not obtrusive. While in many instances the shield 19 can be completely opaque, and thus cast somewhat of a shadow upon the interior of the sign and provide a darker stripe across the indicia, still when the sign is seen from a considerable distance such shadow is not particularly objectionable. It is preferable, however, to utilize a generally opaque paint which is nevertheless sufficiently translucent to permit some light to filter therethrough directly onto the indicia 7.

In certain instances, the shield need not be directly coated upon the tube, but, as illustrated in Fig. 4, there can be provided a shield 21 which is a coating of paint or comparable material on the panel 6. In this instance the coating extends substantially in registry with the projected outline of the tube 17, so that, to most intents and purposes the constructions of Figs. 3 and 4 are equivalent, they being utilized interchangeably unless conditions particularly indicate one or the other.

I claim:

1. An illuminated sign comprising a reflector, a gaseous discharge tube adjacent said reflector, an indicia panel having transparent indicia formed thereon through which said tube and said reflector are visible, said tube and said reflector presenting to an observer a different appearance when viewed through said panel, and means in the nature of a light permeable film matching said reflector in luminosity and substantially in registry with said tube, interposed between said tube and the observer.

2. An illuminated sign comprising a reflector, a linear gaseous discharge tube adjacent said reflector, a substantially opaque indicia panel having transparent indicia formed thereon through which said tube is visible, and means in the nature of a light permeable film matching said reflector in luminosity and substantially in registry with and conforming to the contour of said tube interposed between said tube and said indicia panel.

3. An illuminated sign comprising a reflector, a gaseous discharge tube adjacent said reflector, a panel having a substantially opaque portion and a transparent indicia portion through which said tube is visible, and means in the nature of a light permeable film matching said reflector in luminosity and substantially in registry with said tube interposed between said tube and said panel.

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