

March 20, 1945.

E. S. SCHENKEL

2,372,124

SIGN CONSTRUCTION

Filed Jan. 28, 1942

2 Sheets-Sheet 1

Fig. 1.

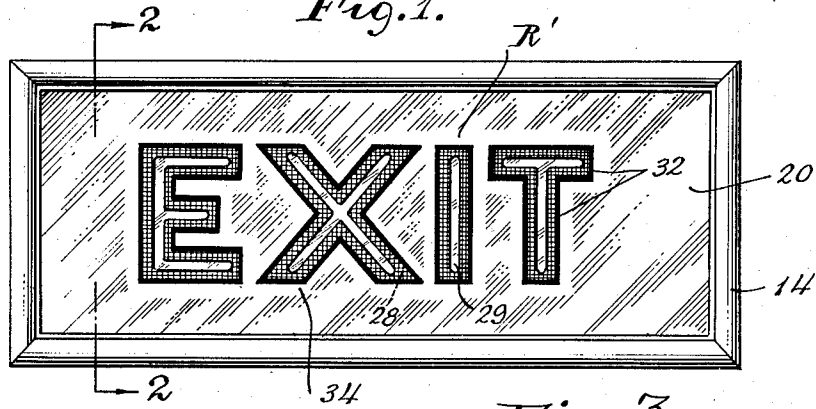


Fig. 2.

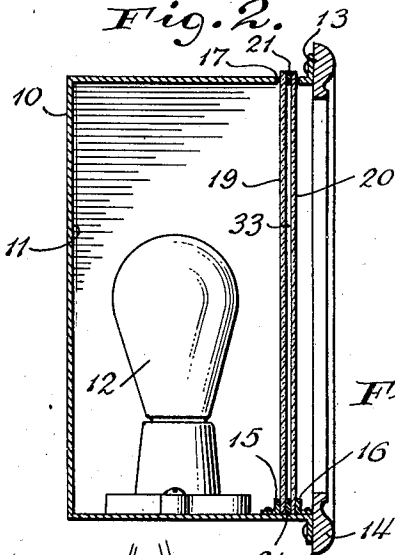


Fig. 3.

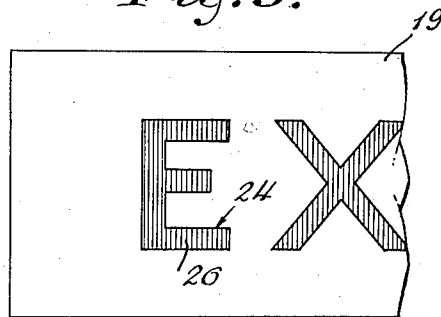


Fig. 4.

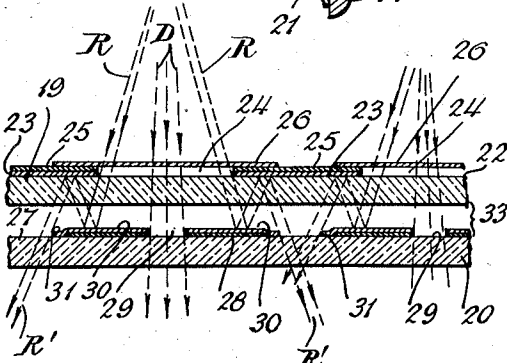
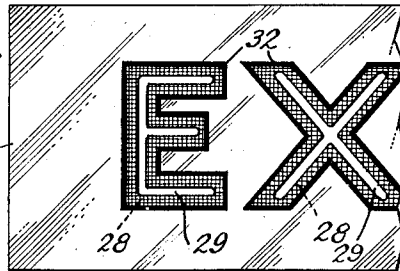
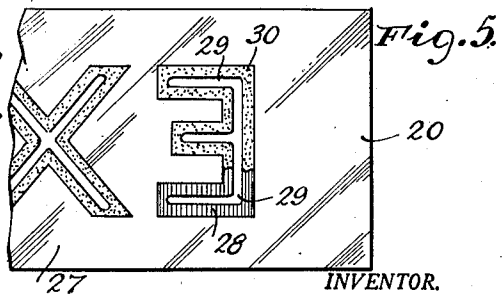


Fig. 6.



INVENTOR.
EMIL S. SCHENKEL

BY

J. Basseches
his ATTORNEY

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E. S. SCHENKEL

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2 Sheets-Sheet 2

Fig. 7.

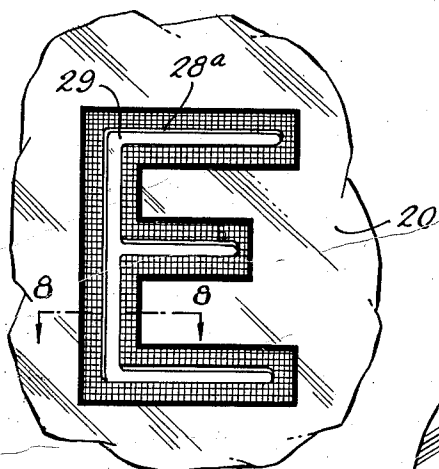


Fig. 8.

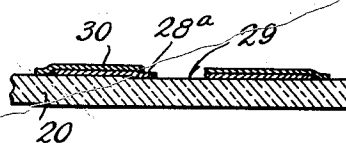


Fig. 9.

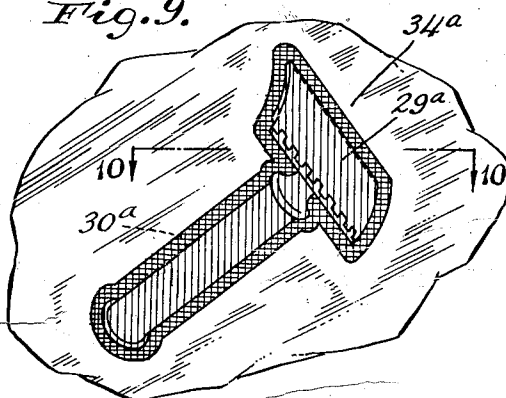


Fig. 10.

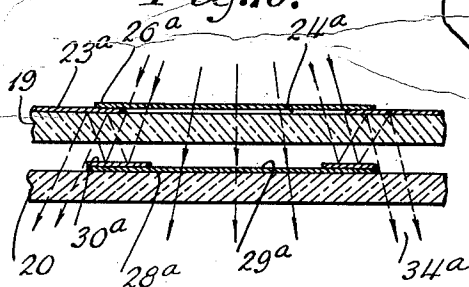


Fig. 11.

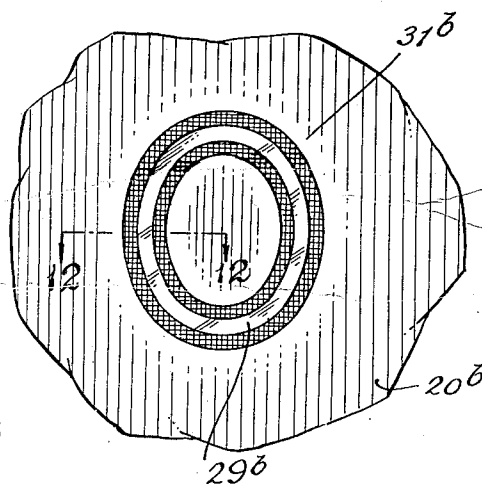
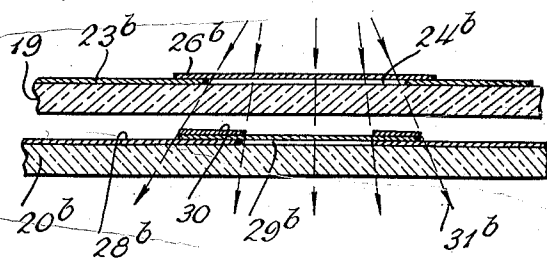


Fig. 12.



INVENTOR.
EMIL S. SCHENKEL
BY

E. S. Schenkel
his ATTORNEY

UNITED STATES PATENT OFFICE

2,372,124

SIGN CONSTRUCTION

Emil S. Schenkel, Woodmere, N. Y.

Application January 28, 1942, Serial No. 428,507

1 Claim. (Cl. 40—132)

This invention relates to signs; more particularly to illuminated signs.

My invention herein is an improvement over that disclosed in my Patent No. 1,887,523, for Sign illumination, patented November 15, 1932.

In my patent aforementioned, it is contemplated by me to provide signs wherein graphic representations, upon illumination, will give the illusion of depth and, therefore, be more conspicuous, prominent and attractive. The endeavor to simulate the appearance of incandescent lamps of tubular contour, or so-called neon signs, was also an objective of my prior invention in that substantial registry of graphic characters upon sign elements in spaced relation to each other in the foreground of a light source likewise serves to give the illusion of depth characteristic of gas filled tube illuminants.

With the advent, in recent years, of fluorescent tubing, the construction in accordance with my prior invention contrasted too conspicuously with the fluorescent type of glass tubing illuminants.

Accordingly, it is an object of my invention to provide a sign for advertising and exhibit purposes which has substantially the same ease of manufacture and low cost of construction as my prior invention, as set forth in the patent aforementioned, but which, with little alteration, serves to accentuate depth effects by the use of spaced sign elements more closely simulating the modern fluorescent type of gas filled tube illuminants.

My invention further contemplates, as an object thereof, to supply in an illuminated sign construction made from substantially spaced sign elements carrying graphic representations in registry, the appearance of a peripheral glow or halo, prominently characteristic of fluorescent gas filled tube illuminants, thereby further accentuating the illusion of depth, as well as enhancing the visual lure of the sign.

Other objects of my invention involve the provision of a sign construction wherein, by the use of supporting elements of flat material, such as glass, paper, parchment, Celluloid, which may be finished by simple and inexpensive surfacing operations, such as by printing, coating, painting or the like, the details of which will be apparent herein or be more clearly pointed out as the description proceeds, simulation of the dominant characteristics of a fluorescent gas filled tube illuminant will be achieved.

Accordingly, I make reference to the accom-

panying drawings, forming a part hereof, in which—

Figure 1 is a face view of my device;

Figure 2 is an enlarged section taken on the line 2—2 of Figure 1;

Figure 3 is a fragmentary face view of a rear sign element;

Figure 4 is a face view of a fragment of a front sign element;

Figure 5 is a rear view of the sign element shown in Figure 4;

Figure 6 is an enlarged fragmentary horizontal section of my device, with the rear and front elements in position;

Figure 7 is an enlarged face view of another embodiment of my construction for a front sign element to be used with said rear sign element;

Figure 8 is a section taken on the line 8—8 of Figure 7;

Figure 9 is a face view of another embodiment of my invention;

Figure 10 is an enlarged section taken on the line 10—10 of Figure 9;

Figure 11 is a fragmentary front face view of a still further embodiment of my invention;

Figure 12 is an enlarged section taken on the line 12—12 of Figure 11.

Making reference to the drawings, the device contemplated by me, and which may follow the general characteristics of that illustrated in my prior patent, in one form comprises a housing 10, preferably made of sheet metal, with a brilliant internal reflective surface 11. The housing may likewise be of paper, cardboard, coated with metal foil or metal paint.

A source of illumination 12 is mounted at an intermediate point, being connected with a source of electrical current supply which, as in my prior invention, may include a flickering device, if desired.

The housing 10 is open at its front face 13, at which point some framing element 14 is provided. Rearwardly of the frame 14, there is provided a spacing frame 15 and 16, access to which may be secured through the slit 17.

The spacing frames 15 and 16 and the slit 17 are illustrative of means for mounting a rear sign element 19 and a front sign element 20, predeterminedly spaced from each other by a spacer member 21.

Referring now more specifically to Figures 3 and 6, I prefer to have the sign element 19 formed at its rear face 22 with a coating 23, defining apertures 24, the uncoated outline of which corresponds to some graphic representa-

tion, such as a letter, figure or the like. This, in effect, provides a stencil outline, blocking out the characters defined by the portion 24. The coating material 23 is chosen to be colored to simulate the fluorescent colors employed in neon sign tubing. Superimposed upon the coating 23 is a second opaquing coating 25. In the embodiment illustrated in Figures 3 and 6, the coating 25 is in registry with the coating 23.

Superimposed upon the uncoated character defining aperture 24, there is applied a translucent film coating 26 which is the defining color again corresponding to that found prevalent in the colors of neon sign tubing—that is, the colors secured by the employment of the inert gases, such as neon, krypton, argon, mercury vapor and the like.

It will be observed that while in Figure 6, the film layer 26 is shown spaced from the surface 22 of the plate 19, this is merely for illustrative purposes. The film 26 may lie in contact with the surface 22, and if the film 26 is formed by painting, silk screen or like deposition process, a spacial position of the film 26 will be maintained where this material is preformed into films, such as by the employment of dyed parchmentized paper, dyed regenerated cellulose, Celluloid or similar foil forming materials.

Upon the rear surface 27 of the front sign element 20 there is deposited the film coating 28, defining a graphic representation, letter or picture similar to that defined by the opening 24 upon the plate 19. The outline of the character defined by the film coating 28 is such as to be concentric with the axial line through the character defined by the space 24—that is, exact registry of the opening 24 is not secured, as will be evident from a comparison of Figures 3 and 4.

The medial section of the film coating 28 is left clear at 29, providing a transparent section or aperture. This section follows in contour the graphic representation or letter. The film coating 28 is preferably colored and is of the same tone as the film coating 26.

Superimposed upon the film coating 28 is the opaquing layer 30, which is preferably provided with an overlap 31, thereby forming an opaquing outline 32 for the characters defined by the film coating 28. The deposit left by the film coating 30 is such as to leave a light dispersing surface—that is, a white color, for purposes which will hereinafter appear. The dispersing effect of the rear surface of the coating 30 may be accentuated, if desired, by depositing some aluminum powder thereon.

It will be observed that with the sign elements 19 and 20 arranged in parallelism, the rear sign element 19 and the front sign element 20 are so positioned as to have the characters on each plate substantially concentric, so far as registry is concerned, it being noted, however, that since the characters of the front element 20 are larger, the rear diffusing film 30 will overlap and extend beyond the outlines defining the aperture 24 of the rear plate 19.

It will further be observed that with the plates arranged to have the characters of the front sign element and the rear sign element substantially in registry, the aperture 29, being transparent, will provide greatest intensity of light at this section. The arrow lines D are intended to show the directly transmitted rays.

The aperture 24 will transmit light by the rays R, which will thereupon illuminate the diffusing

film layer 30. This will, in turn, diffuse the light rearwardly to strike the rear sign element 19, and illuminate the film coating 23, reflecting the rays in part at R' emerging about the periphery of the characters defined by the film coating 28 and the outlining portion 32.

The spacing 33 between the front sign element 20 and the face of the rear sign element 19 is determined largely by the halo effect which is desired to be produced about the periphery of the characters.

In the illustration shown in Figure 1, the halo zone is indicated at 34, and the depth or extensiveness of this halo zone is determined by the spacing 33 between the plates 19 and 20, as well as the angular direction of the incident light R upon the diffusing film 30.

Desirable results have been secured by me for so-called counter display signs of the general dimensions of about 10" x 18" by spacing the plates from each other about $\frac{1}{16}$ ". This spacing is maintained where the characters are proportioned as shown in the drawings, it being understood that this is for purposes of illustration only and that variations in effect will be secured as the spacing between the plates is altered, and the diffusing characteristics of the film coating are modified, as well as the angular direction of the light rays R in respect of the film coating 30.

It will also be observed that while the halo effect is secured by diffused light which strikes the film coating 30, reflecting the same from the front surface of the plate 19, this halo effect is, in part, secured by the illumination of the film coating 23 in defined zones which, from the frontal aspect, are adjacent the periphery of the characters defined by the film layer 28.

It is desirable also to observe this dimensional relationship in the construction—that the spacing 33 should not be so great that for observation of the sign from the front of the assembly at an angle, the line of vision through the aperture 29 will be confined within the area outlined by the aperture 24.

For observation from the frontal direction, the characters defined by the film 28, being of the same color tone as the film 26, but in different planes, serves to give a three dimensional effect to the characters.

When illuminated by the light source 12, greatest brilliancy dominates the characters adjacent the section defined by the clear portion 29. The characters themselves are silhouetted against the background of color formed by the stencilling film coating 23 formed on the rear surface of the back element 19. It is under these conditions that the halo zone 34 appears about the periphery of the characters on the front sign element 20.

Referring to Figures 7 and 8, I intend herein to show a different embodiment wherein the front sign element to be used with the rear sign element already described 20 is provided with a character defining film coating 28, as in the prior example. The diffusing and opaquing film coating 30 is here formed to leave an exposed overlapping portion 28a. Under such conditions, the film coating 28, being translucent and lying within the zone defining the aperture 29, will provide a shade of outline slightly less brilliant than that which is viewed through the aperture 29, thereby accentuating the three-dimensional effect of the character outlined by the aperture 29 through which the more brilliantly illuminated section 24 is visible.

In Figure 9 I have illustrated another embodiment of my invention particularly suitable in connection with a pictorial representation, and not necessarily some graphic representation, such as letters.

In this construction, the rear sign element 19 is formed with a film coating 23a, serving as a stencil defining the aperture 24a, over which aperture there is applied a film coating 26a. The film coating 23a may be opaqued prior to superimposition of the film coating 26a.

The opening defined by the section 24a outlines some pictorial representation which, in the illustration shown, is that of a safety razor. In this embodiment, the front sign element 20 has its rear face coated with a film 28a of translucent material, tinted to correspond to the color of the film coating 23a.

Superimposed upon the film coating 28a is an opaquing diffusing coat 30a, which follows the outline of the film 28a adjacent its periphery. The contour of the pictorial illustration outlined by the film coating 28a corresponds to that outlined by the aperture 24a of the rear plate, though of larger dimension, the outline 24a and the outline of the film coating 28a being in substantial registry.

Since the opaquing coating 30a is located adjacent the periphery of the film coating 28a, it will thus define an area 29a which is translucent under illumination through the rear sign element 19. The area defined by the section 29a permits of more detailed illustration to give more definite portrayal of the article illustrated. However, since the section defined by the portion 29a is smaller than the section defined by the portion 24a, the diffusing background coating 30a will illuminate a zone beyond the periphery, to provide a halo zone 34a, as in the prior embodiment.

In Figures 11 and 12 I have illustrated a still further embodiment. In this construction, the rear sign element 19 has applied thereto an opaquing stencil 23b, defining the characters 24b. Over the aperture 24b a film coating 26b of a translucent material may be applied.

The front sign element 20b is coated at its rear surface with a film coating 28b in the form of a stencil outlining an aperture 29b. The character outlined by the section 29b is the same as that outlined by the aperture 24b but of smaller dimension.

Rearwardly of the inner periphery of the section 24b, a film coating 30b is applied. This is an opaque coating, the rear surface of which is of light diffusing character. The outline of the film coating 30b is intended to follow generally the inner periphery of the section 29b and the periphery of the section 24b.

It will be observed that when the sign elements 19 and 20b are placed in front of an illuminant, as in the assembly illustrated in Figure 2, light will be emitted through the section 24b, which takes on some color by reason of the translucent film coating 26b. Light is emitted, likewise,

through the section 29b, illuminating the area 29b, which may or may not be tinted.

The emanation of light is obscured by the film coating 30 within that portion outlined by the film coating 30. Light striking the diffusing rear surface of the film coating 30 is reflected rearwardly upon the front surface of the sign element 19, illuminating, in turn, the translucent stencil coating 28b.

Other directional light rays emanating through the section 24a may likewise directly illuminate a zone 31b as the light strikes the transparent film coating 28b. A definite halo zone therefore surrounds the opaque section, simulating the emanations immediately adjacent the periphery of a fluorescent neon sign tube.

It will thus be observed that I have provided a new and novel sign which is not only simple, and provides all the essential and desirable characteristics for imparting distinctiveness and attractiveness and three-dimensional effects, but one wherein the major attributes of a fluorescent gas filled tube sign is simulated.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is:

In an illuminated sign, the combination comprising a housing having an opening and a light source for transmitting illumination, spaced front and rear sign elements for covering said opening comprising transparent plates, the opposite surfaces of which plates are normally reflective, the front plate carrying an opaque coating to define graphic matter on the rear surface of said front plate, leaving the remainder of the plate clear, an exposed light diffusing coating overlying the opaque coating and exposed on the rear surface of the opaque coating of said front plate, the rear plate being coated on its rear surface with an opaque material to define by a stencilling outline the identical aforementioned graphic matter, by reverse plate effects blocking out all but the graphic matter to locate the same in substantial alignment concentrically with the graphic matter on the front plate with reference to the light source, the graphic outline of matter defined by the stencil on the rear plate being smaller than that defined on the front plate, whereby the graphic matter on the front plate is silhouetted by illumination through the stencil openings of the rear plate and the light diffusing coating serves to reflect light to and from the front surface of the rear plate about the margins of the graphic matter outlined on the front plate, to thereby produce a halo effect about the periphery of the graphic matter on the front plate, the graphic matter on the front plate including an axially defined portion which leaves the plate substantially clear within the confines of the graphic matter on said rear plate and concentric therewith, whereby an axial portion of greater light intensity is visible upon illumination by the light source.

EMIL S. SCHENKEL.