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C. E. KARST

2,062,887

ADVERTISING SIGN

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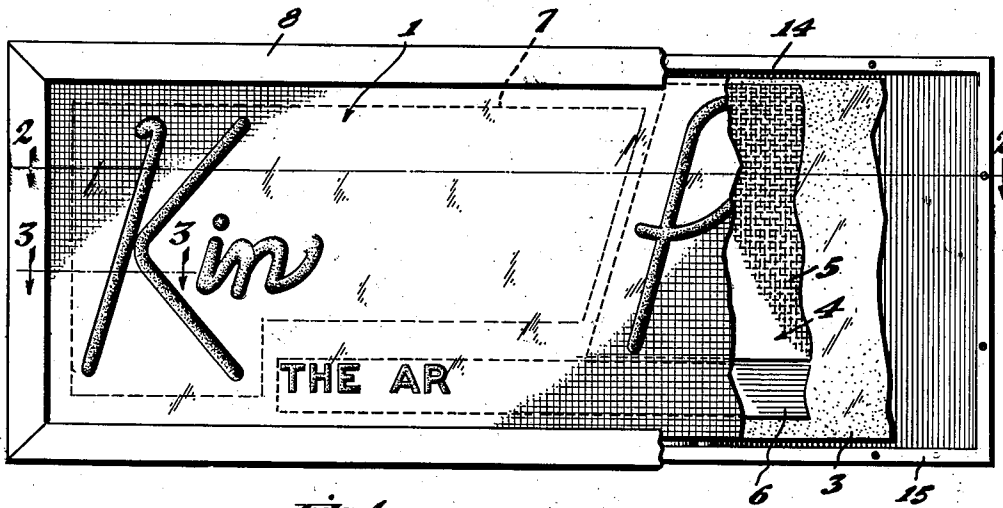


Fig. 1

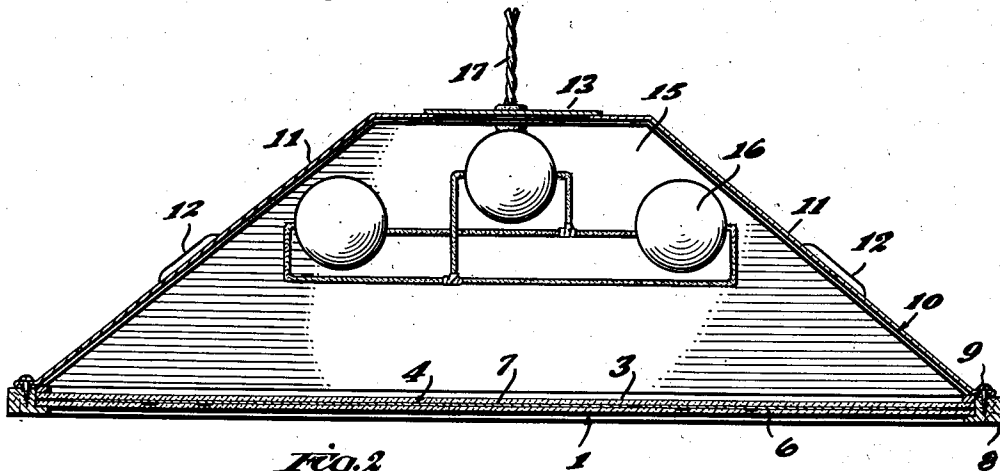


Fig. 2

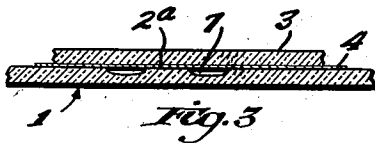


Fig. 3

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ADVERTISING SIGN

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3 Claims. (Cl. 40—132)

This invention relates to illuminated signs and has particular reference to a display sign in which a novel means is used to secure the visual effect of so-called neon signs, whereby the utility of a neon effect is secured without the special or additional electrical and mechanical equipment incident to such a sign.

Neon signs or display devices deriving their illumination from ionized gases contained in con-
figured transparent tubing, are relatively ex-
pensive to construct and, furthermore, require
special electrical service accomplished through
transformers or the like, to furnish the means
for their operation. Their relatively expensive
initial cost, aside from installation, is usually
great enough to preclude their adoption by man-
ufacturers seeking to distribute such signs in the
advertising of their wares and commodities.

When a manufacturer contemplates advertis-
ing of his product through display signs for store-
keepers, shops and the like, it is conventional
practice for such manufacturer to purchase a
relatively large number of such signs and then,
through the cooperation of individual storekeep-
ers, procure their installation in stores where the
particular products advertised are being mer-
chandized, the manufacturer absorbing the cost
of the sign and the cost of its installation.

Moreover, there are a great many shops and
stores throughout the country seeking to adver-
tise not particular manufacturers' products, but
commodities of a given nature, such as "beer,
books, candy and the like."

Another aspect of the general problem to which
the invention relates lies in the fact that the usual
neon signs are too brilliant for interior use and
in some instances for exterior use when located
to be viewed from close proximity. The light
emanating from the neon tube is so brilliant and
accentuated that an optical condition akin to
blindness is produced, such as, for instance, the
situation which arises when a neon sign is in-
stalled in a small store behind a counter.

The sign contemplated in this invention is char-
acterized by lettering or indicia having the novel
and unusual appearance of neon tube lettering
but distinguished therefrom by a soft and dif-
fused glow inducing notice from a potential cus-
tomer rather than a harsh and brilliant light
having the tendency to cause a person in close
range to look away from the sign.

It is an object of this invention, therefore, to
provide a display sign which has the advertising
appeal of the neon sign when it is viewed from a

distance, but which is considerably less expensive
to construct and install.

Another object of the invention is to produce a
sign which is distinctly modern in appearance and
novel to a potential customer for that reason, but
which is adapted by reason of its inexpensiveness
to be distributed by a particular advertiser free of
charge to storekeepers, shopkeepers, and the like.

A still further object of the invention is to pro-
vide a sign in which the advertising indicia has
visual appearance of a neon tube sign, but which
lacks the blatancy and harsh brilliance of the ac-
tual neon tube whereby the sign can be effectively
used in locations where such lighting characteris-
tics are preferred.

Another object of the invention is to produce a
sign in which the color of the indicia is not lim-
ited to a few, but rather selectable from a wide
range of available transparency colors.

Other objects and further advantages will be
made more fully apparent by reference to the
following description and to the drawing, in which
latter Figure 1 is a face side view of the sign, show-
ing the elements thereof in partial fragmentary
manner with a portion of the advertising indicia
visible.

Figure 2 is a sectional view of the sign taken on
the line 2—2 of Figure 1.

Figure 3 is an enlarged sectional view taken on
the line 3—3 of Figure 1.

Briefly, the sign of this invention comprises a
front glass or indicia plate in which the display
lettering is intaglioed by etching to a concave
and relatively deep depression on the inward side
of the plate, a color transparency behind the in-
dicia plate, a light diffuser plate behind said color
transparency, and a shadow box housing a suit-
able light source for vitalizing the sign.

Referring particularly to the drawing the in-
dicia plate or front glass is generally indicated at
1. This plate comprises a piece of glass prefer-
ably clear and preferably relatively heavy gauge.

Into this plate is intaglioed the desired adver-
tising lettering or design subject matter. To ac-
complish this step the desired indicia laid out on
the glass is bounded or outlined with a shielding
substance such as ceresin wax. The configura-
tion of lettering for the design preferably simu-
lates the face configuration of lettering construct-
ed from glass tubing; that is to say, it is preferably
of rounded form, typical of neon tube lettering
although, of course, angular block lettering or
other types may be used if desired, solely or in
conjunction with neon tube lettering, as shown
in the illustration, Figure 1.

An etching acid such as hydrofluoric acid is placed within the area confined by the shielding wax to effect the desired lighting concavity into the glass. In this operation a few crystals or
 5 grains of sand scattered indiscriminately throughout the length of a given area by an etched surface to produce in the concave surface, after etching, an effect serving to accentuate the roundness of the depression within the glass.
 10 The curvilinear concavities comprising the lighting indicia in this manner become crystalline in appearance in which the crystal lattice, being relatively large, is visible from a distance to create the effect of scintillance of light emanating
 15 from the sign. The concavity of the depression in cross section is shown in Figure 3 at 2.

After the front glass is intaglioed to the desired extent the non-design or non-lettering areas are rendered opaque through the application of
 20 paint or like substance as shown at 2a in Figure 3, preferably dark in color to lend contrast to the optical effect. In this respect additional interest can be imparted to the sign by bounding the edges of the lettering with a stripe of paint, preferably different in color from the color of the
 25 opaque background of the front glass.

The desired three dimensional effect of the lettering is greatly aided by the superposition behind the front glass of a light diffuser plate 3.
 30 In this manner the partial rounded effect produced by the concavity of the lettering as disclosed in Figure 3 is advanced to the optical illusion of complete roundness and creates the effect of a neon tubing imbedded in a sheet of glass.
 35 The light diffuser plate 3 can be an ordinary plate of glass frosted in the usual manner either over its entire surface or at the areas directly behind the areas which are transparent in the front glass.

Between the light diffuser plate tube and the front glass 1 is disposed a color transparency, generally indicated at 4, adapted to impart to light passing through the diffuser plate color of
 40 a desired hue. If desired, instead of a single color being used, each word or design appearing from the front glass can be given an individual color by the use of separate transparencies behind the separate words. These transparencies
 45 are made of the usual colored gelatin, celluloid, or like substances, and are preferably simply laid between the front glass and the diffuser plate.

Separate transparencies are indicated in the drawing at Figures 1 and 2 by the numerals 5, 6
 50 and 7.

55 The composite sign comprising the etched front glass 1, the color transparency 4, and the diffuser plate 3 is mounted within frame 8. To this frame is secured, by means of screws 9, appropriately placed, a shadow box 10. This shadow

box comprises a sheet metal casing preferably tapering to the rear in cross section. The sides 11—11 of the shadow box are ventilated as at 12. The back wall is preferably provided with a hand
 5 hole opening and a door 13 covering the same. The shadow box is provided with a top 14 and a bottom 15.

Upon the bottom plating 15 of the shadow box are mounted a plurality of electric light bulbs 16 preferably wired in parallel circuit whereby
 10 one or more of the lights may be in use at a given time, thereby affording control of the brilliance of the sign. An electric cord 17 passes through the back wall of the shadow box. The shadow box, on its interior, is coated preferably with a
 15 dull white paint.

Upon lighting, the lettering of the sign optically assumes a rounded three dimensional shape, creating the appearance of neon sign lettering
 20 disposed within a block of glass. In this manner an extremely interesting effect is obtained.

Having described my invention, I claim:

1. As a new combination a sign composite adapted for use in conjunction with a shadow
 25 box, said composite comprising a front glass into which on the rearward side thereof deep etched configurations concave in cross section and crystalline in surface are provided, said front glass rendered opaque in the non design areas, a color
 30 transparency disposed behind said plate, and a frosted transparent medium behind said color transparency adapted to diffuse light in its passage therethrough, the said composite sustained in its mounted relationship by a suitable frame
 35 for engagement with a shadow box.

2. In a shadow box sign a front transparent plate rendered opaque except for area bearing
 40 design, said latter area bearing deeply etched concavities generally curvilinear in cross section, a rear transparent plate frosted to render it light diffusive, a color transparency disposed between
 45 said rear plate and the etched side of said front plate, and a shadow box housing incandescent light sources and sustaining said plates in their mounted relationship.

3. In a shadow box sign including a housing and a source of light, a luminous front assembly
 50 exhibiting indicia which is three dimensional in appearance, said luminous assembly made up of plate elements laminated in relation to one another in comprising a frosted back glass
 55 diffusive with respect to light passing therethrough, a color transparency disposed adjacent thereto and a front glass plate having deep etched cavities configured to provide design indicia, said front glass rendered opaque in the non design areas with the etched side of said glass facing the source of light.

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