Sept. 22, 1931. H. K. PALMER 1,824,620

ILLUMINATED SIGN

Filed Jan. 10, 1930

Fig. 3.

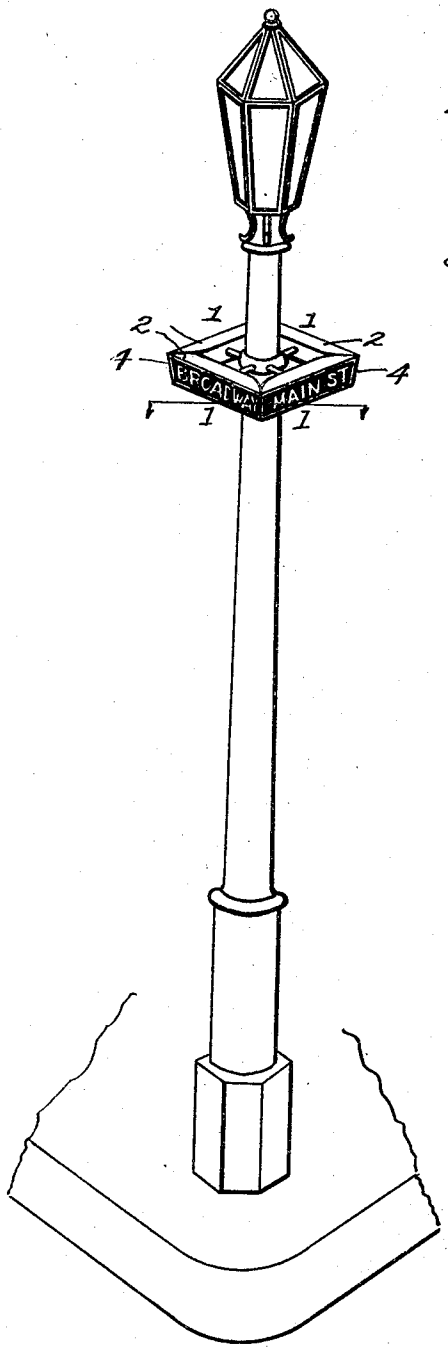



Fig. 1.

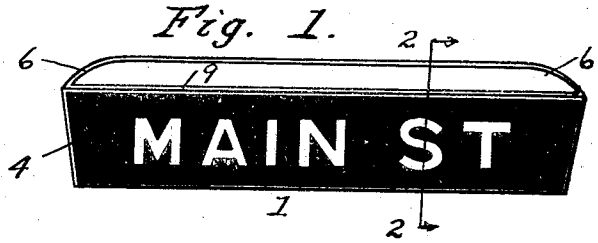



Fig. 4.

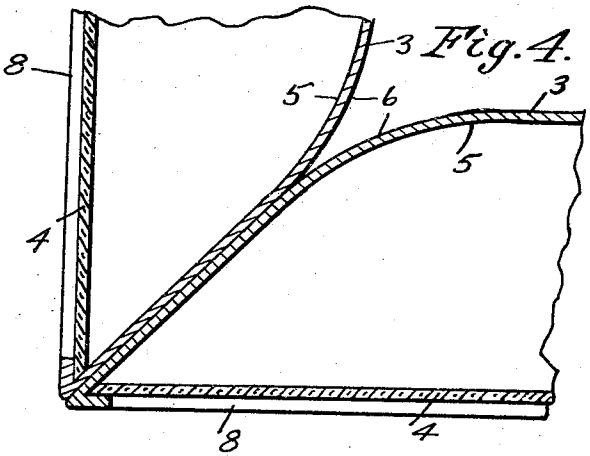


Fig. 2.

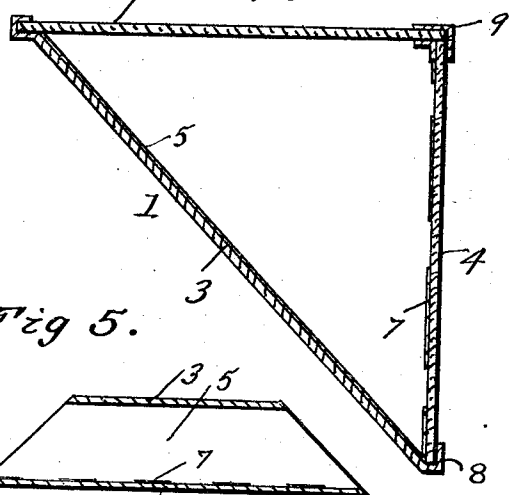


Fig 5.



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1,824,620

# UNITED STATES PATENT OFFICE

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## ILLUMINATED SIGN

Application filed January 10, 1930. Serial No. 419,787.

This invention relates to signs, and more particularly to an illuminated sign which may be illuminated either by the sun or by artificial light.

The general object of the invention is to provide an illuminated sign by means of which its characters may be shown more distinctly than is possible with other signs of this type.

A more particular object is to provide a sign of the character stated, the face of which may be readily seen from any position from which the face is visible.

Another object is to provide a sign of the character stated by means of which all dark spots or shadows are eliminated so that the face of the sign is clearly and uniformly visible from all angles of vision.

Another object is to provide a sign of the character stated constructed with a luminous reflector for reflecting a bright light through the sign plate to cause the sign to stand out very distinctly and enable the sign to be self illuminating at night.

Another object is to provide a sign of the character stated in which the rear face of the sign plate is arranged to reflect light against the reflector to increase the light reflected through the characters of the sign plate, whereby the sign is illuminated more brilliantly and the sign characters caused to stand out more distinctly, regardless of the position or angle of the source of light.

Another object is to provide a sign of the character stated which will be weatherproof and dustproof.

A further object is to provide an illuminated sign of the character stated which may be used to advantage as a street sign.

Other objects and advantages will appear hereinafter.

The invention is illustrated in the annexed drawings which form a part of this specification and in which,

Fig. 1 is a face view of my sign.

Fig. 2 is a cross section of my sign taken on line 2—2 of Fig. 1.

Fig. 3 is a perspective view of my invention shown applied to a street lamp as a street sign.

Fig. 4 is a horizontal section of my sign taken on line 4—4 of Fig. 3.

Fig. 5 is a horizontal section of a modification of my invention.

Corresponding parts are designated by the same reference characters in all the figures.

My invention is in the form of a housing 1 which is triangular in cross section and is formed by a top plate 2, a reflector 3 and a sign plate 4. The top plate 2 is translucent and is preferably frosted glass which diffuses the light passing therethrough. The reflector 3 may be of metal, with an inner white painted or enameled or otherwise weatherproofed reflecting surface 5, and is curved forwardly at its ends, as at 6, closing the ends of the housing 1, said reflector extending at an angle of substantially forty-five degrees to the top plate 2 and sign plate 4 and supporting at its upper edge the rear edge of the top plate 2. The sign plate 4 may be of glass with letters 7 formed thereon designating the name of a street or other sign, the glass being transparent through the letters and opaque outside the letters and the rear surface of the opaque portions of the plate may be painted white or otherwise covered to form a light reflecting surface for reflecting any light cast thereon, upon the reflector. The lower edge 8 of the reflector 3 is formed to receive and support the face plate 4 at its lower edge, the upper edge of said sign plate and the forward edge of the top plate 2 being connected together by a weatherproof joint 9. The sign plate 4 ordinarily extends at an angle of substantially ten degrees to the vertical when the sign is used as a street sign, which from experiment has been found to be the best angle for visibility of the sign from the street. The top plate 2, when the sign is used as a street sign, extends at an angle of substantially five degrees to the horizontal, or substantially at right angles to the plate 4.

In operation, light whether natural or artificial passes from the outside through the translucent top plate 2 which diffuses the light before it strikes the white reflector 3, from which reflector the light is reflected through the transparent letters 7 in the face plate, whereby said letters are illuminated

and caused to stand out distinctly, any light cast upon the back of the face plate being reflected back upon the reflector from which such light is reflected through the characters of the sign plate.

The forwardly curved ends of the rear walls or reflector 3 makes it possible to miter together the ends of adjoining signs, so that the ends of the sign plates 2 of such adjoining signs may be brought together or substantially together (see Figs. 3 and 4) and not leave unsightly spaces therebetween, (which spaces would appear if the ends of the signs were formed straight,) thus providing for neat joints between signs arranged at right angles to each other, giving such signs a neat and finished appearance, especially when placed about a lamp post (Fig. 3) to designate the names of intersecting streets, and at the same time eliminating shadows which would otherwise mar the appearance at the ends of the sign.

Radium paint or other luminous substance or material may be applied to the surface of the reflector and/or to the rear or inner surface of the opaque portions of the sign plate 2, which paint on the reflector will brilliantly reflect any light striking the same through the transparent characters of the sign plate and enable the sign to be self illuminating at night, and such reflected light from said paint on the rear of the sign plate will strike the reflector 3 and be reflected thereby, with the main body of light on the reflector forwardly through the transparent characters of the sign plate, whereby said characters will be illuminated more brilliantly and caused to stand out more distinctly.

The top plate 2 acts as a shadow-proof reflector or background when the sign is viewed from below.

In the form of my invention shown in Fig. 5 the rear upper portion of the reflector 3 is of shorter length than the sign plate 4 so that the ends of the sign plate extend beyond the ends of said upper rear portions of the reflector, leaving the ends of the housing open to receive light from outside to prevent shadows from being reflected by housing ends upon the ends of the sign plate.

I do not limit my invention to the exact construction and arrangement herein disclosed, because various changes may be made therein without departing from the spirit of the invention.

Having described my invention I claim:

1. A sign as described comprising a translucent plate through which light is first projected and a reflector formed with a light diffusing surface for reflecting the light projected through said translucent plate and a sign plate through which light is reflected by said reflector for illuminating the sign on said sign plate.

2. An illuminated sign comprising a casing formed with a sign plate with transparent letters, a top plate through which light may enter the casing and a reflector for reflecting the light from the casing through said transparent letters, the ends of said reflector curving to the ends of said sign plate so that the ends of the sign may be mitered with the ends of other adjoining signs with the ends of the sign plates of the signs meeting.

3. An illuminated sign comprising a casing formed with a sign plate with transparent letters, a top plate through which light may enter the casing and a reflector for reflecting the light from the casing through said transparent letters, the rear surface of said sign plate about said letters being covered with luminous material to reflect light upon said reflector.

4. An illuminated sign comprising a casing formed with a sign plate with transparent characters, a top plate through which light may enter the casing, and a luminous reflector for reflecting the light from the casing through said transparent characters, the rear surface of said sign plate about said characters being covered with a luminous material for reflecting light upon said reflector.

HENRY K. PALMER.