

Aug. 13, 1929.

C. S. WILLEY

1,724,243

SIGN

Filed April 4, 1927

2 Sheets-Sheet 1

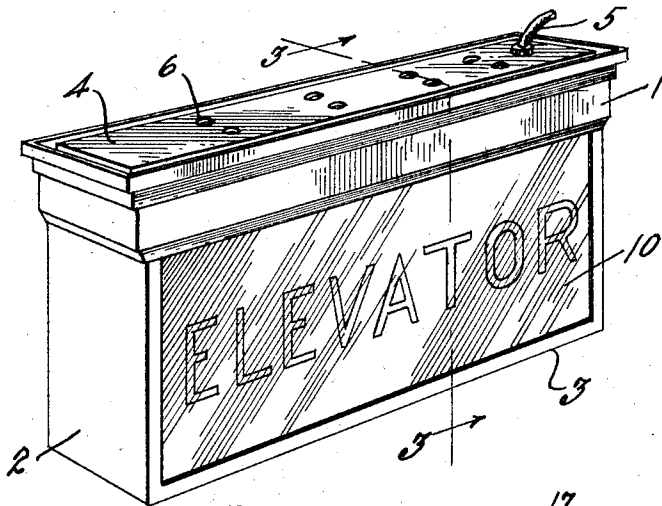


Fig. 1

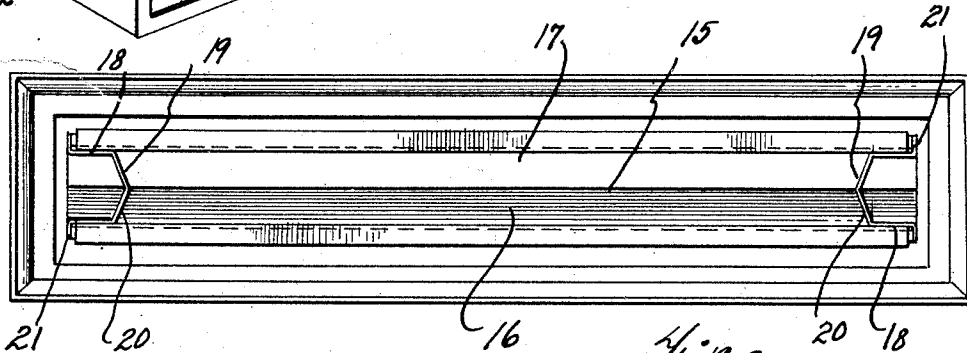


Fig. 2

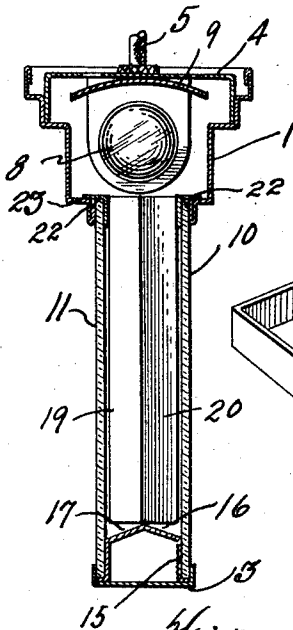


Fig. 3

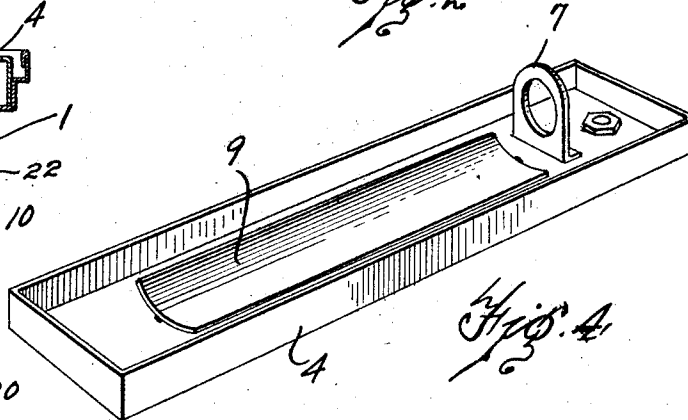


Fig. 4

INVENTOR.
CLAUDE S. WILLEY
BY *Stuart C. Barnes*
ATTORNEY.

Aug. 13, 1929.

C. S. WILLEY

1,724,243

SIGN

Filed April 4, 1927

2 Sheets-Sheet 2



Fig. 5

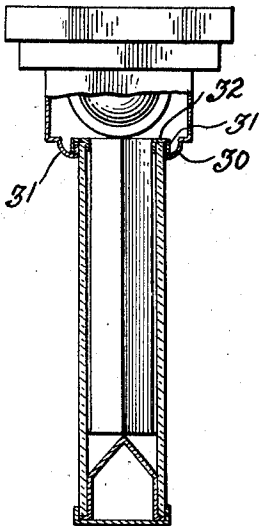


Fig. 6

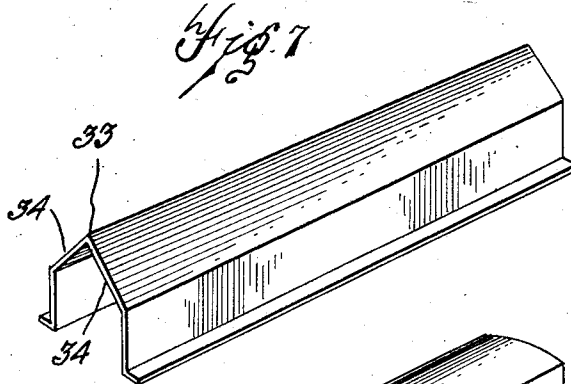


Fig. 7

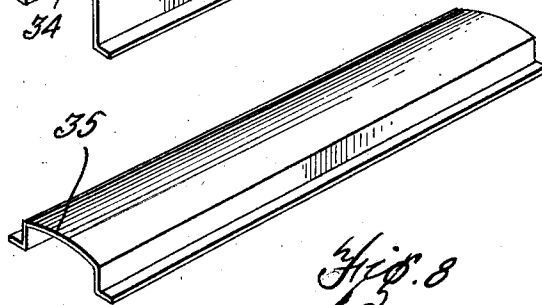


Fig. 8

INVENTOR.
CLAUDE S. WILLEY
BY *Stuart C. Barnes*
ATTORNEY.

UNITED STATES PATENT OFFICE.

CLAUDE S. WILLEY, OF DETROIT, MICHIGAN.

SIGN.

Application filed April 4, 1927. Serial No. 180,735.

The subject matter of this invention is a sign, and more particularly a sign of the type adapted to be illuminated, either the whole of the time it is in use or only a part of the time, as dictated by the requirements of particular conditions.

It is the aim of the invention to produce a sign wherein the source of light, which may be disposed along one edge of the sign, is reflected at the sides of the sign in a manner to effect an even or uniform illumination of the sign. In other words, it is the aim to produce a sign which will not show bright spots or dark spots as a result of nearness or remoteness from the light source. It is a further object of the invention to provide such a sign which can be easily and economically manufactured and assembled, wherein a minimum number of parts are used and wherein some of the parts function in a dual manner, as for instance, a part which functions both as a reflector and as a member for assisting in holding the several parts of the sign assembled. A further feature of this invention is the manner in which the sign structure is constructed, and the several parts assembled so that all of the joints are tight fitting and dust proof. Notwithstanding this arrangement, however, the invention contemplates provision for circulation of air so that heat generated by the light source may be dissipated.

In the accompanying drawings, a satisfactory form of the invention is shown:

Fig. 1 is a perspective view of one form of the sign structure made in accordance with the invention.

Fig. 2 is a top view with the top closure removed and looking into the sign structure.

Fig. 3 is a sectional view on line 3—3 of Fig. 1.

Fig. 4 is a perspective view of the cover for the sign.

Fig. 5 is a plan view of a different sort of a sign.

Fig. 6 is a sectional view taken through a sign structure showing a slightly different arrangement from that shown in Fig. 3.

Figs. 7 and 8 are perspective views of different reflectors for use with different sorts of signs.

The sign shown in the drawings is of the type for interior use; that is, use within office buildings, theaters, and the like. The body of the sign is made up of a framework or casing, which includes a top molding 1, end panels 2, and a bottom 3. A removable cover 4 closes the upper end of the molding, and the cover may be provided with a suitable opening and bushing for the passageway therethrough of a cable 5 for conducting an electric current. The cover may be also provided with openings 6, in order to permit circulation of air so as to prevent overheating of the device from the heat generated by an electric light. The molding is adapted to provide a light compartment. As shown in Fig. 4, the cover is provided with a bracket 7 positioned adjacent the bushing through which the cable passes, and this bracket is designed to hold a socket (not shown) which in turn holds a light bulb 8. In practice, it has been found satisfactory to use a light bulb of considerable length so as to extend well along the length of the sign. The cover is also provided with a reflector 9 which, as shown in Fig. 3, lies immediately above the light bulb. The reflector may be soldered to the cover.

The framework of the sign structure thus described is designed to receive and hold a sign panel 10 which may be of glass provided with the desired indicia which may be put in the glass by a sand blasting process. A second panel 11 (Fig. 3) may be carried by the frame, and where desirable this panel may include sign matter, or it may be left blank with no indicia thereon. This, of course, depends upon requirements of the particular installation.

Within the sign casing and at the bottom thereof is a reflector and holding device 15, and as will be noted by reference to Fig. 2, this device runs substantially the entire length of the casing and is just enough shorter than the casing to permit it to be easily inserted. This member is made of relatively thin sheet metal and may be advantageously shaped as shown in the drawing. This member may be tinned or similarly treated so as to have at least one side thereof of a light reflecting nature, thus

providing, due to its shape, a pair of reflecting surfaces 16 and 17.

At each end of the sign frame structure is a reflector and holding device 18, which is constructed in a manner similar, and of similar material to the member 15. These members thus provide reflecting surfaces 19 and 20 at each end of the casing. Preferably, these members have their ends turned over as at 21, so as to lie in behind the ends of the panels 10 and 11 so that they are securely held in place. A strip of angle material 22 is placed along the upper edge of each panel. These strips are disposed so that their end parts lie between the panels, and the end members 18. Also, these angle members project outwardly far enough to overlie the adjacent shoulder of the sign molding, as shown at 23, thus closing the crack between the panels and the sign frame to keep the elements, dirt, and dust from entering into the sign and light compartment.

In producing the device it will be understood that the sign frame and its cover and the glass panels are made up separately. In addition to these pieces, it is necessary only to make up the bottom member 15, the end members 18, and the angle members 22, all of which are easily produced by stamping or rolling the sheet metal. In assembling the sign structure the bottom member 15 may first be put into place, and then the two panels, whereupon the end holders and reflectors may be inserted between the panels. Then the angle members may be positioned along the upper edges of the panels. The bottom and end and reflectors are made of metal possessing some spring qualities, and they are designed to press outwardly against the panels thus to hold the panels tightly against the adjacent frame members. Thus, the panels are held securely in place and prevented from moving or rattling within the casing. Moreover, the angle strips act as reinforcements so that the upper edge of the panels are held outwardly against the frame.

By reference to Fig. 3 it will be noted that the cover for the sign sets tightly within the molding and rests upon a horizontal shoulder in the molding. This cover makes a nice fit in the molding and prevents the entrance of dust. It will be noted that the side panels are held snugly against the frame structure on all four sides. The angle strips and the out turned edges of the reflectors cooperating to make dust tight joints all around.

By again referring to Fig. 3 it will be noted that the reflector 9 is secured to the top in such a way as to provide spaces between the reflector and the top, and the holes 6 in the top communicate with these spaces. Thus while air circulation is permitted be-

tween the reflector and the top and let out through the holes, yet the arrangement is such as to prevent any light from shining upward out through the holes which would be undesirable and destroy the nicety of the sign. Likewise, dust which may enter the holes will, in the main, settle on the back of the reflector and will not pass into the main interior of the sign.

In Fig. 6 a slightly modified form is shown, and in this form the top molding is rounded outwardly as at 30 and the edge of the molding material is turned upwardly at 31. With this type of molding, securing strips 32 which are U-shaped in cross section, may be used. The interior of the sign structure is otherwise the same as the form shown in Fig. 3 and the assembling is the same. However, the U-shaped strips securely fix the upper edges of the panels to the inturned edges 31 of the frame structure and also form a very efficient dust proof joint. It is noticeable that the removing of the interior parts of the sign structure is as easy as its assembly. Accordingly, the sign frame may be made up along standard lines and any sort of a sign panel can be used. If at any time a particular sign has been used, and it is desired to change the indicia, the panels and the reflectors may be taken out and the sign may be reassembled with new panels, all of which is a very simple operation and speedily accomplished.

By reference to Figs. 7 and 8 reflector members of different shapes will be seen. In Fig. 7 the reflector member is provided with a relatively sharp angle 33 thus providing reflecting surfaces 34 which are at a greater angle than the type of the reflector shown in Fig. 3. In the use of the different reflectors, assume that Fig. 3 has a sign including one word as shown in Fig. 1. Here it is desirable to have the greatest illumination along the center of the panel to illuminate the indicia and the reflectors shaped as shown in Fig. 3 do this nicely. Again assume that the structure of Fig. 6 as a side panel corresponding to that shown in Fig. 5. Here we have two words one arranged above the other and by using the bottom reflector as shown in Fig. 7 a bright spot, so to speak, is thrown on the lower word "Room". The upper reflector in the cover is arranged correspondingly to illuminate the upper word "Check". The reflectors are interchangeable so that the proper light effect can be had for any type of sign panel.

The use of reflectors to properly position bright spots or to eliminate bright spots where necessary is especially desirable where the panel as a whole is not opaque, as for instance the glass having a red tint and designed to permit the passage of a certain amount of light through all portions of the

panel. The bright spots or bright portions, appear through the red glass.

The reflector in Fig. 8 has a curved reflecting surface 35. This reflector has reflecting surfaces which are not so abrupt as the form shown in Fig. 3 and is especially adapted for use with light tinted panels so that an even distribution of light is thrown over the panel so as to give the panel a uniform appearance.

It will be noted that all of the interior pieces of this sign are made up of sheet metal pieces which are so arranged as to act as reflectors and holders with a glass panel, and that all the parts including the glass panels are held securely within the sign casing without involving any soldering, welding, or similar operations.

The sign shown and described is one which may carry indicia visible from opposite sides. Sometimes it may be desirable or necessary to have the indicia visible from but one side only, in which case the panel 11 need not be of glass, and may, indeed, be of metal embodied directly into the sign casing.

Claims:

1. A sign structure, comprising a casing including a light compartment disposed at one edge of the casing, a panel provided with indicia and arranged to fit against the casing to close one side of the casing so that light from the said compartment illuminates the indicia on the inside of the casing, sheet metal members arranged around the three other edges of the casing, said sheet metal members being shaped so as to act as reflectors and being arranged to hold the said panel in position within the casing, and an angle member arranged so that one of its sides overlies the top of the panel and a part of the casing forming a wall of the light compartment to overlie the abutting portion of said panel and the said wall, said angle member overlapping some of the sheet metal members and held in place thereby.

2. A sign structure, comprising a casing with open sides, a pair of panels relatively loosely fitted within the casing for closing these sides, separate metal members disposed between the panels and along three edges of the casing and adapted to hold the two panels separated and to urge them outwardly in tight engagement with the casing, and angle members overlying the upper edges of the panel members and also overlying the adjacent part of the casing and having parts disposed between the panels and said metal members so as to bridge the abutting portions of the panel members and the casing.

3. A sign structure comprising a casing having open sides, panels with indicia thereon for closing the sides, a light compartment along one edge of the casing il-

luminating the space between the panels, means disposed along three edges of the panels normally urging the panels apart and pressing them tightly against the casing, said means being in the form of reflectors, all of the said means and the panels being independent of the casing and held therein by the spring action of the said means and readily removable therefrom whereby to readily permit a change in the panels to change the indicia and change in the reflectors corresponding to the change of indicia, some of said means being of less length than the adjacent side of the casing so as to substantially abut against another of said means.

4. A sign structure comprising a casing having open sides, panels carrying indicia for closing the sides, means for holding the panels separated and against the sides of the casing, said casing having a moulding along one edge which forms a light compartment, reflectors along the other three sides, said moulding having a wall which joins with the casing which extends perpendicular to the casing, and means held in place by some of the reflectors covering the top of each panel and the said adjacent wall of the moulding to close the crack between the panels and the casing and prevent entrance of foreign matter in the casing and moulding.

5. A sign structure comprising a casing having open sides, panels carrying indicia for closing the sides, means for holding the panels separated and against the sides of the casing, said casing having a moulding along one edge which forms a light compartment, said moulding having a wall which joins with the casing which extends perpendicular to the casing, and means held in place by some of the panel holding means, covering the top of each panel and the said adjacent wall of the moulding to close the crack between the panels and the casing and prevent entrance of foreign matter in the casing and moulding, said panels, means for holding the panels, and the angular members being independent of the casing and readily removable to permit of change in the panels to vary the indicia.

6. A sign structure comprising a sign casing adapted to be illuminated from within for illuminating a translucent panel in the sign casing which carries sign matter, means providing a light compartment along the upper edge of the casing, a removable cover for closing the light compartment, a light source carried by the removable cover with the center line of the light source positioned substantially on the center line of the cover whereby the light source is positioned to project light into the casing, a reflector arcuate in cross section and secured substan-

tially on its center line to substantially the center line of the cover with its edges spaced from the cover, said cover, light source and reflector being removable as a unit from said casing, said cover having ventilator apertures therein positioned off its center line and within the depending edges of the reflector whereby to permit passage of air around the reflector and through the apertures for ventilating purposes and to prevent the passage of light through said apertures. 10

In testimony whereof I affix my signature.

CLAUDE S. WILLEY.