Oct. 24, 1933. H. EASTERDAY ET AL 1,931,577

SIGN

Filed Jan. 14, 1932

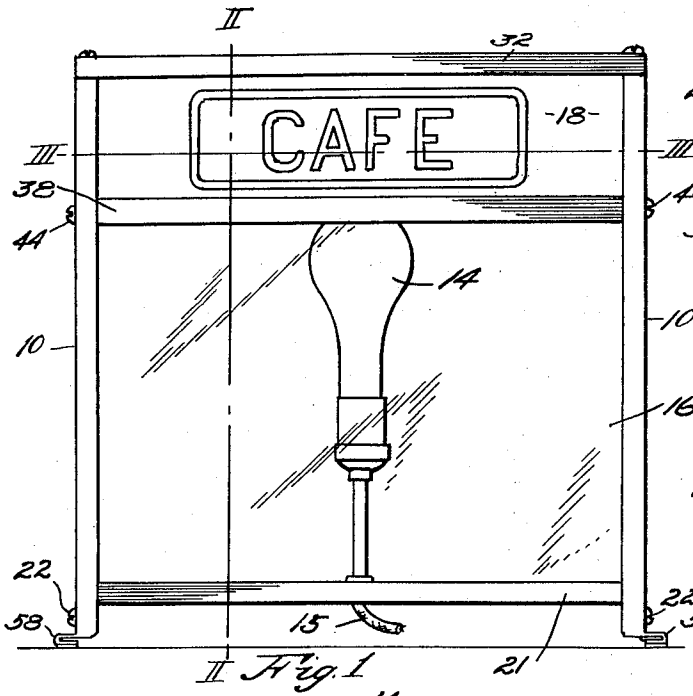


Fig. 1

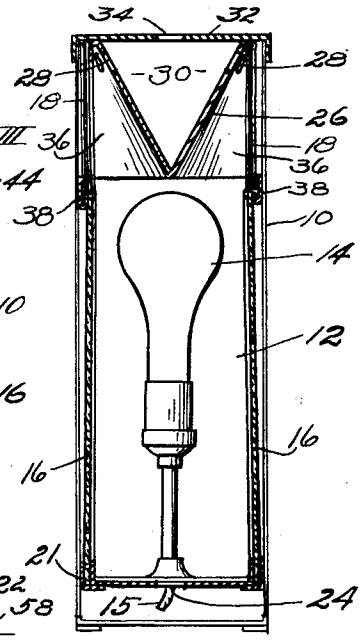


Fig. 2

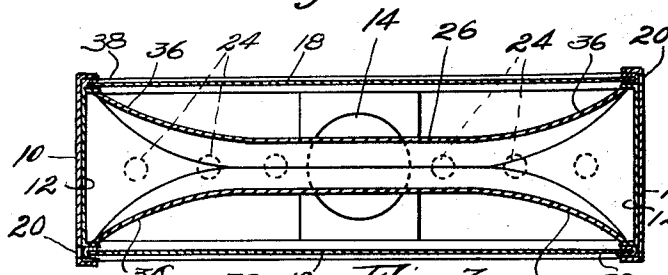


Fig. 3

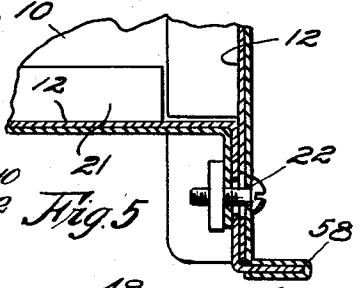


Fig. 5

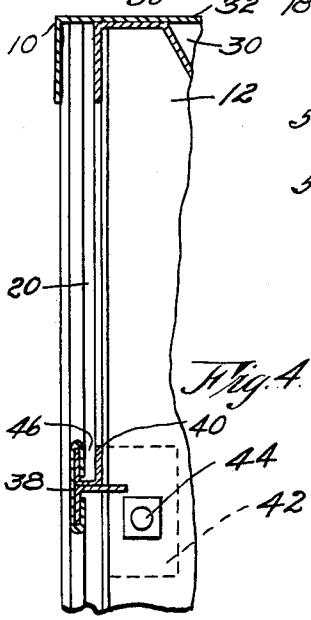


Fig. 4

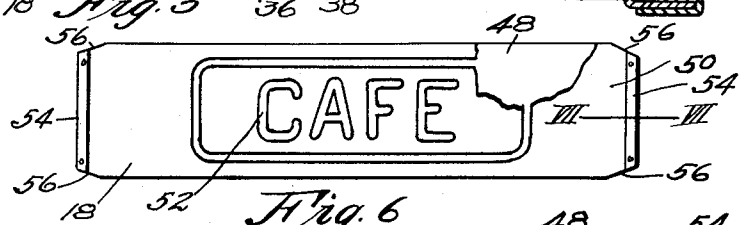


Fig. 6

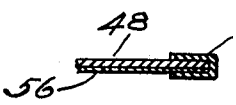


Fig. 7

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SIGN

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Application January 14, 1932. Serial No. 586,510

4 Claims. (Cl. 40—132)

This invention relates to multi-panel signs and particularly illuminated signs having a single source of illumination disposed to thoroughly light all the panels of the sign without creating excessive bright spots at any point.

One of the primary objects of the instant invention is the contemplation of a sign structure wherein is incorporated a completely insulated case having an appropriate liner therein, which is specially formed along the top of said case to create a reflector and a ventilating chamber that is positioned between the case top and said reflector.

A yet further object of this invention is to provide a unique reflecting unit within a sign casing, which reflector is designed and built to eliminate blind spots and which is likewise made to cast an even glow of light throughout the entire area of two opposed sign panels, the lower edges of which lie in substantially the same plane as the lower edge of the reflector.

A still further object of the invention is the provision of a unique sign panel for illuminated signs, which panel is formed of colored, translucent, fibrous and flexible material that is treated with an opaque substance for the purpose of creating indicia thereon.

The present invention further contemplates specific forms of construction which combine to make a multi-panel illuminated sign that is provided with a fixed and a removable panel at each of its two oppositely directed faces, the uppermost panel being formed of material as set down above.

Many minor objects of the invention will appear during the course of the following specification, referring to the accompanying drawing, wherein:

Figure 1 is a side elevation of a sign embodying the features of the present invention.

Fig. 2 is a vertical section through the sign taken on line II—II of Fig. 1.

Fig. 3 is a horizontal section through the entire sign assembly, taken on line III—III of Fig. 1.

Fig. 4 is an enlarged fragmentary, vertical section through the upper portion of one side of the sign.

Fig. 5 is an enlarged, detailed, sectional view through one of the lower corners of the sign, illustrating the relation of parts at that point.

Fig. 6 is a face view of one of the removable panels which forms a part of one side of this sign, and,

Fig. 7 is a fragmentary section through a portion of the panel, taken on line VII—VII of Fig. 6.

One embodiment of the invention is illustrated in the accompanying drawing and like parts of the several views are designated by similar reference characters. The numeral 10 indicates a casing formed preferably of aluminum, treated by a special process which renders the same non-conductive to currents up to 220 volts. This insulating process is well known in the trade and the means and method whereby aluminium might be so treated is fully disclosed in existing patents. It is desirable to render case 10 of this sign completely non-conductive so that in the event of short circuits in the wiring of the sign, no shock could be received by touching any part of case 10. Obviously, case 10 might be overlayed with insulating material 9 of any desirable nature, but since the process just above mentioned is effective in rendering the metal thoroughly insulated and also in producing a desirable finish, it is preferred to use this expedient for the purpose set down.

In producing an insulated case 10, the finish adheres to all surfaces of the sheet metal and in the case of otherwise overlaying all parts of the case 10, the insulating material would, of necessity, eliminate any reflecting properties which the surface of case 10 might have. It is therefore necessary to line the bottom, sides and top of case 10 with a liner 12 which should be highly polished and susceptible of reflecting rays from electric light bulb or similar illuminating means 14.

This illuminating means is supported by the bottom liner 12 and conductors 15 may lead thereinto from any suitable source of electrical energy. Case 10 has two oppositely facing sides provided with means for receiving transparent or translucent sign panels 16 and 18 respectively. Panel 16 is fixed while panel 18 is removable and in order to provide for such expedient, channels or slots 20 are formed to receive panel 18 after it is introduced thereinto from one side of casing 10. (See Figs. 3 and 4.) The lowermost panel 16 is introduced into the structure of casing 10 from the bottom thereof and is moved into place before the lower part of case 10 is completely assembled. After placing panel 16, it is secured against removal or dropping out of position by the angle 21, which is held in place by the assembly bolt 22. As illustrated in Fig. 5, this assembly bolt likewise secures in position liners 12, which overlie the bottom and adjoining side of case 10. Ventilating apertures 24 are provided along the central portion of the bot-

tom of case 10, and it is through these apertures that cool air passes to thoroughly ventilate and protect the panels forming the two oppositely facing display sides.

Fixed panel 16 is considerably wider than removable panel 18 and as illustrated, the two are in substantially the same plane, the smaller being above the larger. A V-shaped reflector 26 should be provided within case 10 at the top thereof to extend downwardly toward illuminating means 14 a distance substantially equal to the width of removable panel 18. That is to say, the lower side or the meeting edge of the inclined sides of reflector 26 is in substantially the same plane as the bottom edge of removable panel 18. A series of openings 28 is formed along each side of reflector 26 adjacent the top of case 10 to receive air from within sign case 10 after it has passed upwardly along the inner side of both panels 16 and 18 at both sides of the sign.

Removing heated air from within the sign at these points insures perfect ventilation and precludes excessive heating of the sign panels. A ventilating chamber 30, formed by the two sides of reflector 26 and the top 32 of case 10, receives the heated air from within the sign case before it leaves through holes 34. One of the important features of the invention is the formation of reflector 26 by liner 12 and since but a single electric light is normally used within casing 10, it is important that reflector 26 be flared adjacent each end thereof to present arcuate surfaces 36, all of which are utilized in directing the rays of light from illuminating means 14 toward and through the appropriate panel 16 or 18. As illustrated in Fig. 3, reflector 26 is flared to merge with the central portion of reflector 26, forming a point at the sides of case 10. Through this construction no rays of light are absorbed and rendered non-effective by striking the end of case 10 adjacent the top 32 thereof, where they will not be directed outwardly through the sign panels.

The dividing bar 38 between removable and fixed panels 18 and 16 respectively is supported by a channel-forming member 40 as shown in Fig. 4. This member has a comparatively large wing 42 at each end thereof that is held behind liner 12 at the ends of case 10. An assembly bolt 44 passes through this wing 42, the side of case 10 and end liner 12 to maintain all the parts in rigid relation at this point. A channel 46 formed by member 40 receives the lower edge of removable panel 18 after it has been moved thereinto through slot 20 at one end of sign case 10.

In practice this sign is to be distributed by large manufacturers who desire to advertise their commodity through the medium of the fixed panel sign 16. When the sign is made and placed in the individual dealer's hands, fixed panel 16 is in place and cannot be removed without disassembling the entire structure.

Dealers displaying the sign are desirous of placing their own signs in position above fixed panels 16 on each side of case 10. For this purpose a special flexible, non-breakable panel 18 has been designed, and since it is desirable to interchange these removable panels 18 to display different signs, the same are made easily removable by the user as often as he wishes. It is customary to supply several panels 18, all lettered to the specification of the dealer installing the multi-panel sign.

Figs. 6 and 7 illustrate the specific construction embodied in these removable panels 18. These panels are made by what is known in the art as processing, but so long as the panel includes a base 48 and a partial coating of opaque substance 50, placed in such a manner as to form indicia 52, the same is formed in accordance with this invention. In the instance illustrated, base 48 is of heavy colored translucent paper stock or similar fibrous, flexible material having a partial coating of opaque substance 50, such as black paint or ink.

Panel 18 is reenforced through the medium of clips 54 fastened along each end respectively of base 48. The longitudinal edges of panel 18 are inclined inwardly at the ends thereof as at 56 to facilitate inserting the sign and prevent bending as the same is moved along channel 46 to and from the displayed position. Each of the oppositely facing sides of the multi-panel sign is the same. The bottom of case 10 should be supported in spaced relation to the table upon which the sign is resting to allow free ingress of air through openings 24. This point may be carried out by projecting the ends of case 10 downwardly beyond the bottom thereof and forming feet 58 thereon.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A multi-panel sign comprising a case; a pair of oppositely facing display sides on the case; illuminating means within the case between said sides; each of said sides comprising a fixed panel and a removable panel disposed in the same plane; and a reflector in the case above said illuminating means, said reflector being V-shaped and flared outwardly from its major longitudinal alignment adjacent its ends as shown and described.

2. In a multi-panel sign, a case; a pair of oppositely facing display sides on the case; a lining for the bottom, ends and top of said case; and illuminating means within the case intermediate the ends thereof and between said dispay sides, said lining being formed across the top of said case to present a V-shaped reflector extending downwardly toward said illuminating means, said reflector being flared toward the sides of the case at each end thereof as said ends are approached from the illuminating means.

3. In a multi-panel sign, a case; a pair of oppositely facing display sides on the case; an illuminating means between said sides; a reflector within the case and extending downwardly from the top thereof toward said iluminating means, said display sides each comprising a fixed panel and a removable panel, said removable panel being disposed above the said fixed panel, in substantially the same plane therewith and having its lower edge positioned in the same general horizontal plane as the lowermost edge of said reflector.

4. In a sign, an indicia-carrying panel comprising a base of colored translucent fibrous flexible material; a partial coating of opaque substance carried by said base whereby to form indicia; the longitudinal edges of said panel being inclined inwardly at the ends thereof; and reenforcing clips along each end of said base, said clips extending the distance between said inclined portion of the longitudinal edges.

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