June 13, 1933. F. B. CROSBY 1,913,585

ILLUMINATED SIGN

Filed Jan. 19, 1931

Fig. 1

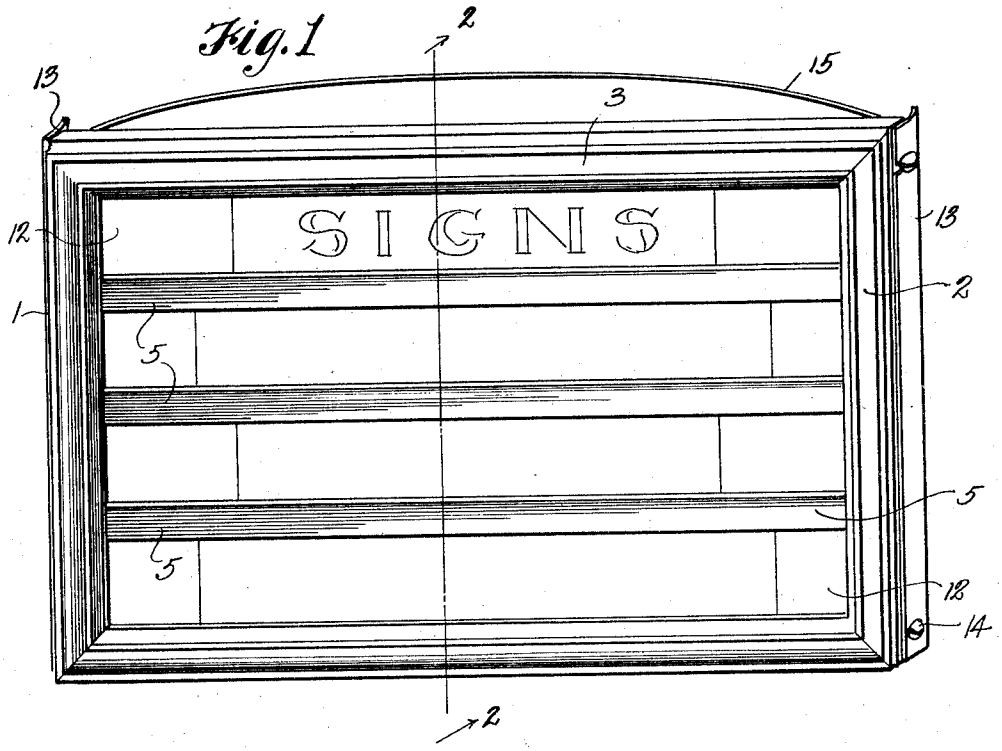


Fig. 2

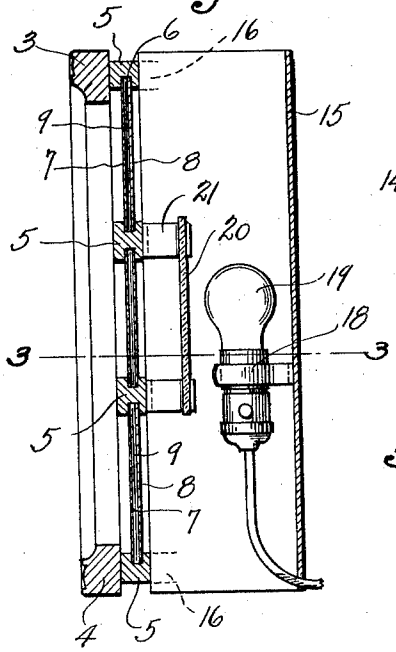


Fig. 3

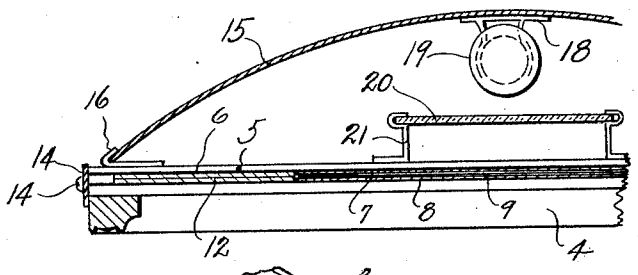


Fig. 4

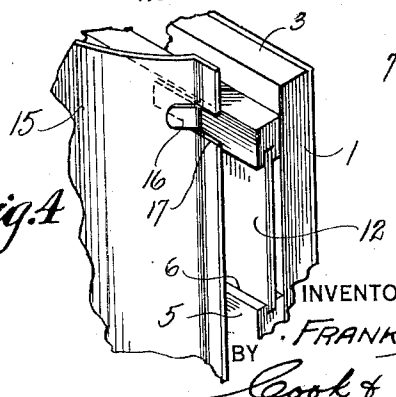
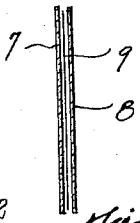


Fig. 5



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Patented June 13, 1933 1,913,585

UNITED STATES PATENT OFFICE

FRANK B. CROSBY, OF SEATTLE, WASHINGTON

ILLUMINATED SIGN

Application filed January 19, 1931. Serial No. 509,772.

This invention relates to improvements in illuminated signs or display devices, and it has reference particularly to devices of that character wherein signs, sign forming characters, or displays are placed on translucent material in front of lights whereby the display is illuminated.

It is the principal object of this invention to provide an illuminated sign, or display, of a very attractive character that is especially suited to window or counter display purposes and which may be effectively and efficiently lighted by use of a single lamp.

More specifically stated, the invention resides in the provision of a display device comprising a frame member within which signs or displays may be interchangeably used, and back of which is an arcuate reflector whereby the light from a lamp may be concentrated on the display so as to effectively illuminate it; the display in this instance being on translucent or transparent material and supported between pieces of glass, celluloid or other transparent material, and the lamp being mounted on the reflector plate back of the sign or display, with a glass plate interposed between the lamp and sign characters to protect the latter from the heat of the lamp.

It is also an object of the invention to so arrange the parts that the lamp may be easily and quickly detached from the reflector when such is desired, and to provide also that the reflector may be easily detached from or applied to the frame. Also, to so arrange the reflector on the frame that it will serve as a support for the device.

Other objects of the invention reside in the various details of construction, and in the combination of parts, and in their mode of operation, as will hereinafter be described.

In accomplishing these and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawing, wherein—

Fig. 1 is a perspective view of a display sign constructed in accordance with the present invention.

Fig. 2 is a cross sectional view of the same, taken on the line 2—2 in Figure 1.

Fig. 3 is a horizontal section on the plane of line 3—3 of Figure 2.

Fig. 4 is a perspective view illustrating the means of support for a corner of the reflector plate.

Fig. 5 is a sectional view illustrating the disposition of the display sheet between transparent supports.

Referring more in detail to the drawing—

In a preferred form of construction the display device consists of a frame structure of rectangular form made up of opposite end rails 1 and 2 joined by upper and lower rails 3 and 4. Fixed to the back side of the frame, and extended horizontally across it in parallel relation are supports or guide bars 5. These guides are spaced apart as desired and have grooves 6 formed lengthwise thereof in their upper and lower edges for containing and supporting within them, edges of transparent panels 7 and 8 between which the display sheet 9 or sign is supported.

The display sheet is a transparent or translucent member, such as paper or celluloid on which the letters of a sign, or a display are painted or printed. The two supporting parts 7 and 8 with the display sheet 9 between them, as shown in Figures 2 and 5, are slipped into the grooves of two adjacent bars 5 and are thereby held properly in position. The display character may be individually formed or may be made in strips; it being preferred in some instances to provide the individual letters or characters so that various words may be formed and the display or sign frequently changed. If a display or word does not fill the entire space provided between the guide bars, the space may be blocked off at the ends by the use of cardboard or other filling pieces as designated at 12. The displays are held in the slots by plates 13 pivotally fixed to the ends of the frame by screws 14. These plates extend across the ends of the grooves, as shown best in Figure 3 and may be adjusted out of retaining position when it is desired to remove, change or alter the display or sign.

Supported back of the frame is a reflector plate 15 which, at its opposite ends and near upper and lower edges, is seated within sup-

porting hooks 16 fixed to the frame pieces. Preferably, the edge of the plate would be notched out, as at 17 in Figure 4, to receive the hooks and this effectively and solidly holds the plate in place by reason of its tendency to straighten out.

The reflector is arcuately curved so as to be spaced rearwardly of the display, and fixed to its inner side is a clamp 18 for holding an electric lamp 19 for illuminating the sign or display. The display is protected from heat of the lamp by the use of a plate of glass 20 supported by brackets 21 from the cross bars 5; the glass being interposed directly between the lamp and display.

A colored effect may be produced by use of colored glass or colored bulbs, or by use of a colored display.

In this construction, the reflector plate serves as a support for holding the frame upright. It also directs the light rays against the back side of the display to effectively illuminate it.

Such devices may be made in various sizes, proportions and shapes without departing from the spirit of the invention. They provide a very attractive and convenient way of displaying signs and are very useful especially for window or counter signs.

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

A display device comprising a frame structure, a plurality of transverse guide bars fixed in parallel, spaced relation within the frame; said bars having longitudinally extending grooves in their top and lower edges, sign or display forming characters removably supported between the bars in the said grooves, hooks fixed in opposed relation to the back side of the frame at its opposite sides, a reflector plate having its opposite end edges supported by said hooks, a clamp mounted on the reflector, a lamp removably applied to the clamp to illuminate the characters, and a transparent plate supported from the frame between the lamp and sign characters to protect the sign from heat of the lamp.

Signed at Seattle, Washington, this 18th day of October, 1930.

FRANK B. CROSBY.