May 3, 1932. W. A. BURNS 1,856,462

SIGN

Filed April 6, 1929

Fig. 1.

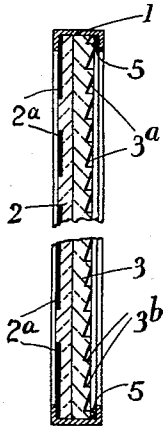


Fig. 2.

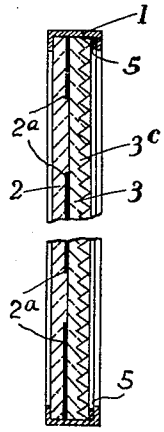


Fig. 4.

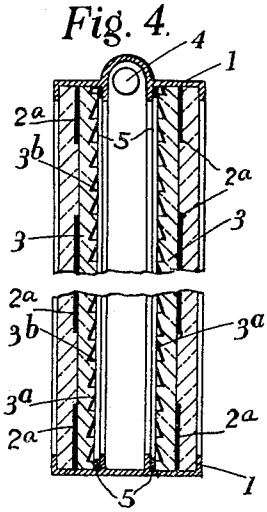


Fig. 3.

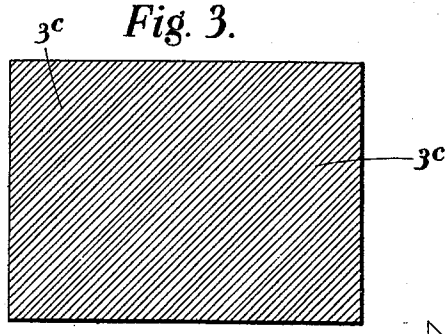
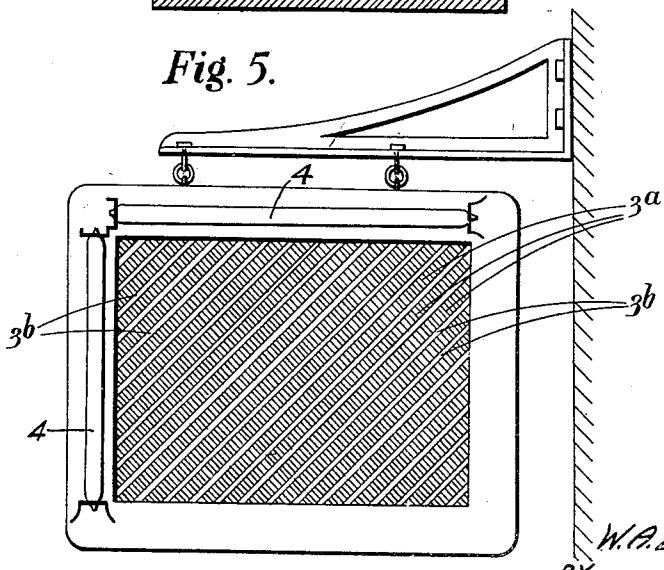


Fig. 5.



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UNITED STATES PATENT OFFICE

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SIGN

Application filed April 6, 1929, Serial No. 353,118, and in Great Britain April 17, 1928.

This invention relates to "daylight" signs and to prismatic glass for use therein.

The principal object of the invention is to provide a sign capable of being viewed effectively from lateral or slightly lateral positions. In the ordinary way, if a sign illuminated by daylight through a reflexive or refractive medium is hung at right angles to the face of a building (particularly near the street level of a high building) an observer only views such a sign effectively when he is at the same distance (or less) from the face of the building as the sign itself. As the distance a sign is allowed to overhang a pavement is relatively small only a proportion of passers-by on a wide pavement view it effectively.

Accordingly, a sign made according to the present invention and adapted to be hung out from the face of a building comprises a panel or stencil (hereinafter referred to as a stencil) and a ribbed prismatic refractive glass or a reflector whereof the ribs are inclined to the horizontal, the higher ends of the ribs being next the building. With this arrangement, the normal to the reflecting or refracting surface is directed laterally upwards and away from the building, and light derived from a lateral or vertical region of the sky is directed laterally of the sign after deviation to render it visible to persons who are also laterally situated at the same side of the sign.

I prefer to make the angle of tilt of the surfaces as large as possible to extend the field of view, the limit being usually fixed by the height of buildings or other masks on the opposite side of a street. In an extreme case where the building carrying the sign is openly exposed, the inclination of the ribs may approach the vertical.

Such signs having prismatic glass arranged to give what I may term lateral deviation, may be used in single-fronted signs, in parallel double-fronted signs, or in V-shaped double-fronted signs. In the case of double fronted signs care must be taken that neither construction masks the incident rays to the other. Considerable economy of space may be sometimes effected by arranging the prismatic glass with its ribs away from the stencil and towards the incident light.

Several preferred forms are shown upon the accompanying drawings wherein:—

Fig. 1 is a vertical sectional end view of a simple single-sided sign.

Fig. 2 is a similar view of an alternative form.

Fig. 3 represents a back view of the sheet of prismatic glass shown in section at Fig. 2.

Fig. 4 is a vertical sectional end view of a double-sided form.

Fig. 5 is a sectional elevation of the same.

Referring first to Fig. 1, the sign comprises a frame 1 enclosing a stencil 2 (which may be a sheet of a light-diffusing nature carrying an actual painted stencil) as indicated at 2^a and a sheet of prismatic glass 3 having ribs which have a long and a short face. The glass 3 is arranged with the ribs running diagonally—that is upwardly towards one side, enabling the glass to collect light coming somewhat from that side where the lower ends of the ribs lie. The comparatively long reflecting faces 3*a*, 3*a* are silvered and the short faces 3*b*, 3*b* may be free of silvering.

Fig. 2 shows the frame 1, stencil 2 and backing glass 3, but in this case the main lighting comes from behind, i. e. the right of the figure, and is transmitted through the glass; and the ribs may be regular and are acute-angled for satisfactory refraction and transmission of the light through the stencil. The ribs 3*c* are shown very considerably inclined at Fig. 3, as for a position where the best light is derived from considerably to one side of the sign.

Figs. 4 and 5 show a double-sided form generally similar to the form shown at Fig. 1. The frame 1 holds a stencil 2 and backing gales 3 at each side. Daylight from the top and outer sides is reflected by the inclined silvered strips 3*a*, 3*a* shown shaded in Fig. 5. The casing also contains suitable sources of artificial light 4, 4 at the top and side edges, subtended by the ribs, so as to illuminate the stencils in an alternative manner at night by throwing the light through the unsilvered steps or short faces 3*b*, 3*b*. In each case packing strips 5 are shown between the

prismatic side of the glass and the casing.

While I have described this invention in connection with outdoor signs, it can be conveniently applied to indoor signs, or signs under cover provided a window, fanlight, glass roof, or other such aperture giving a view of the sky, is available; as by choice of site and selection of a suitable prismatic glass and inclination of the same with respect to the horizontal, signs may be efficiently exhibited in positions where they would be useless if the system of horizontal ribbing was employed.

Where such signs are required to be illuminated by artificial light, I may employ known methods in the case of single signs, or double signs having parallel panel. With V-shaped signs, where the arrangement in plan is that of a triangle the two outside ends of the stencils meeting at the apex and the face of a building or the like constituting the base, I may be able to illuminate both stencils simultaneously by a row of lamps placed along the base of the triangle and generally somewhat below the level of the stencils.

It will be understood that although I have illustrated reflectors of glass yet metal reflectors may be used where found convenient, the same being provided with inclined ribs as and for the purpose described.

I claim:—

1. In a daylight sign, means to define display matter, and means to illuminate the sign comprising a light-deviating member having parallel ribs inclined relatively to the horizontal, said ribs having a short face and a long face, the long faces of said ribs having a normal directed upwardly and laterally of the sign, said member being arranged behind the display matter.

2. In a daylight sign, means to define display matter, and means to illuminate the sign comprising a light-deviating member having parallel ribs inclined relatively to the horizontal, said ribs having a short face and a long face, said long faces having reflecting surfaces, said member being positioned behind the display matter.

3. In a daylight sign, means to define display matter, and means to illuminate the sign comprising a light-reflecting glass panel having parallel ribs inclined to the horizontal, said ribs having a short face and a long face, the long faces of said ribs being silvered, said glass panel being positioned behind the display matter.

4. In a daylight sign, a frame, a stencil, a light-reflecting glass panel positioned behind and adapted to illuminate said stencil and having parallel ribs inclined to the horizontal, said ribs having a short face and a long face, the long faces of said ribs being silvered, and a source of artificial illumination to illuminate said stencil alternately through said short faces.

5. In a daylight sign, a frame, a stencil, a light-deviating glass panel positioned behind and serving to illuminate said stencil, said panel having a series of parallel ribs inclined to the horizontal, and means to attach said frame to a vertical supporting surface so that said ribs slope upwardly toward said surface.

6. For use in a daylight sign having means to define display matter, means to illuminate the sign comprising a light-deviating panel of rectangular outline positioned behind said display matter, said panel including light-deviating, parallel ribs extending obliquely across said rectangular panel.

WILLIAM ALBERT BURNS.