

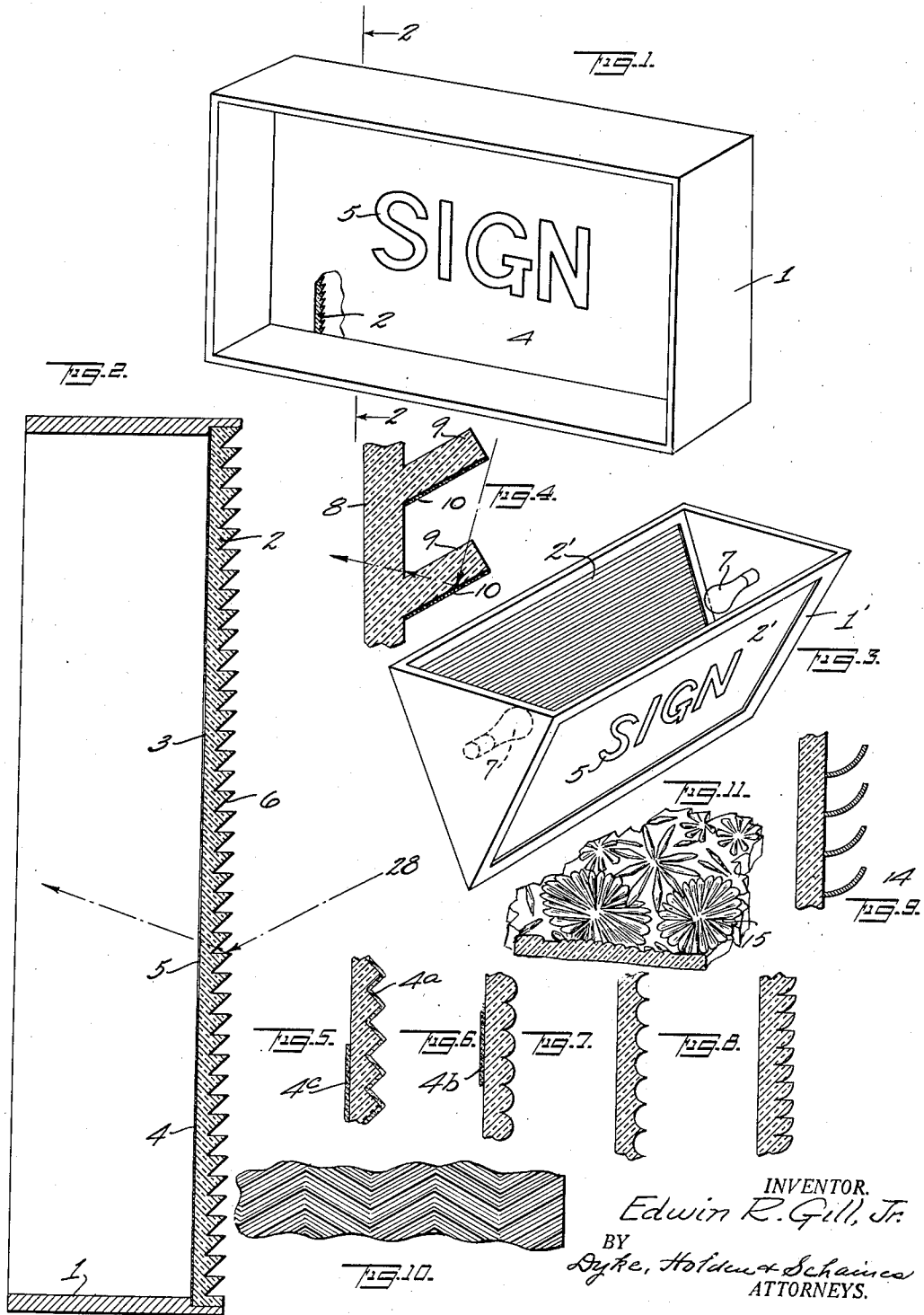
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SIGN

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SIGN

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My invention relates to signs, and has for its object the production of a sign which, without any source of light other than sunlight or adjacent artificial lights, will present the appearance of a brightly illuminated sign. This effect may be produced either in broad daylight, as when the sign is mounted on an automobile, or other support in the street, or in a street show window, etc., or in case the sign is placed in a position where it is exposed to a substantial degree of artificial illumination.

This result is obtained by providing the sign with a translucent member (which word as used throughout the specification and claims includes transparent as well as translucent members) having a light inlet or receiving surface so formed as to cause a large percentage of the light which reaches it while travelling in a downward path to be reflected or deflected into said member. The light exit surface of the translucent member is provided with opaque material applied thereto to form light exit display characters which will be strongly illuminated by light issuing therefrom.

Various color effects may be produced by forming the translucent material of colored glass, or by applying pigments to the light inlet or light exit surfaces or to both. Lamps may be used, if desired, to increase the illumination, and by using colored lamps, various color effects are possible without the use of pigments.

My invention is capable of embodiment in a large number of forms, and I do not limit myself to any particular or special form but include all such structures as are included within the claims hereof.

Reference is hereby made to the accompanying drawing, of which:

Figure 1 is a perspective view of a sign constructed in accordance with my invention;

Fig. 2 is a section on line 2—2 of Fig. 1;

Fig. 3 shows a modified form of sign which may be viewed from opposite directions;

Fig. 4 is a detail section of a modified form of translucent member;

Figs. 5, 6, 7 and 8 are detail sections illus-

trating various modified forms of translucent member;

Fig. 9 is a similar view of a modification;

Fig. 10 is a front view showing a modification of the translucent member, and

Fig. 11 is a perspective view partly in section, of another modification.

The sign of Fig. 1 comprises a rectangular frame 1, the rear of which is open. Within the forward portion of said frame is mounted a translucent member 2. This member is preferably formed of prism glass in which the prisms are of saw tooth form, as shown, and the glass is so disposed that the horizontal portions of the prisms face upwardly. These prisms preferably extend in parallel horizontal lines. It is, however, possible to obtain desirable results by forming the prisms so that they extend in a direction inclined to a horizontal, for example, downwardly and upwardly as shown in Fig. 10.

The exterior or prismatic surface of the member 2 is the light inlet surface of the translucent member. That is, it receives light from exterior sources, as for example, sunlight or the light of an illuminated street or show window, etc. This light passes through the translucent member. The interior surface 3 of the translucent member is the light exit surface, which will be viewed by the observer. This surface is preferably a plane surface provided with opaque material 4 so disposed as to form display openings in the form of characters 5 through which the light may pass and which under suitable conditions, as described, will be brilliantly illuminated.

The glass 2 may be colored if desired. If clear glass is used, pigment 4^a may be applied to the light inlet surface, as shown in Fig. 5. This pigment may be of any desired character, being preferably waterproof and substantially transparent, as for example, aniline dye held by glue, shellac, banana oil, etc. By placing this pigment on the light inlet surface, a very desirable depth of color is obtained with respect to the light exit surface. This pigment may, if desired, be applied to the light exit surface instead of to the light

inlet surface, as shown at 4^b Fig. 6, or it may be applied to both, as 4^a and 4^c, Fig. 5.

In Fig. 3 the sign is shown as comprising a frame 1' of triangular cross section, within which are mounted electric lamps 7 of incandescent or other type, and there are a pair of translucent members 2' which may be similar in all respects to the member 2 previously described. In this construction, the light inlet surfaces of the plates 2' are interior with respect to the frame and the light exit surfaces are exterior.

Referring to Fig. 4, the translucent member 8 is provided with a series of parallel integral ribs 9 which extend outwardly in an upward direction and constitute a light inlet surface with respect to the translucent member 8. The lower surfaces of the ribs 9 may be provided with reflecting material 10 if desired, for example, mercury.

Figures 5, 6, 7 and 8 show various forms which the cross section of the translucent member may take. In each of these forms the surface toward the right is the light receiving or inlet surface and in each case such surface has a horizontal component of substantial proportion which is adapted to receive light moving in a downward direction and to deflect it through the translucent member so that it will emerge from the left or light exit surface of the translucent member. The forms of Figs. 5 to 8 do not have so large a horizontal component as that of Fig. 2 and consequently the light emitting characters or openings 5 formed by the opaque material 4 will not be so brightly or uniformly illuminated under the same lighting conditions.

In Fig. 9 is shown a translucent member 13 consisting of an ordinary pane of clear glass adjacent the light receiving surface of which are mounted a series of parallel horizontal metal reflectors 14. The interior surfaces of these reflectors are polished and plated with a highly reflecting material, as for example, nickel or chromium. These reflectors are so formed and placed as to receive light approaching the translucent member 13 from an upward direction.

Instead of forming the translucent member with horizontally extending prisms or other irregularities, I may use other forms of glass, for example, the form shown in Fig. 11, in which the light receiving surface is formed of a large number of projections 15 extending radially in substantially all directions, from a multiplicity of centers. Such a translucent member has upwardly facing horizontal components of substantial area and is adapted to receive light approaching in a downward direction, so as to cause it to pass through and illuminate characters formed on the interior thereof, as described in connection with Fig. 2.

Having now described my invention, what I claim is:

1. A sign comprising a translucent member adapted to be disposed vertically and having on its inlet surface a series of parallel prisms, each of said prisms having a surface facing upwardly and a lower surface forming an acute angle therewith, the projection of said last named surfaces in the direction of the plane of said member having an area approximately that of the surface covered by said prisms, and means for cutting off a portion of the light passing through said member to form display characters.

2. A sign comprising a translucent member adapted to be disposed vertically and having on its inlet surface a series of parallel prisms, each of said prisms having an upper substantially horizontal plane surface and a lower plane surface forming an acute angle therewith, and means for cutting off a portion of the light passing through said member to form display characters.

3. A sign comprising a translucent member adapted to be disposed vertically and having on its inlet surface a series of parallel prisms, each of said prisms having an upper substantially horizontal plane surface and a lower surface forming an acute angle therewith, and opaque material applied to the light exit surface to form display characters illuminated by light from said inlet surfaces.

4. A sign comprising a translucent member adapted to be disposed vertically and having on its inlet surface a series of parallel prisms, each of said prisms having a surface facing upwardly and a lower surface forming an acute angle therewith, the projection of said last named surfaces in the direction of the plane of said member having an area approximately that of the surface covered by said prisms, means for cutting off a portion of the light passing through said member to form display characters, and an opaque frame surrounding said translucent member and extending therefrom for a substantial distance in the direction of the passage of light through said member.

5. A sign comprising a translucent member having a light inlet surface composed of a series of parallel prisms capable of reflecting and transmitting light towards the light outlet side of said member, said prisms having exposed surfaces extending outwardly substantially normal to the plane of said member and relatively longer surfaces connecting the outer ends of said first named surfaces with the inner ends thereof and forming acute angles therewith, the projection of said last named surfaces in the direction of the plane of said member having an area approximating that of the surface covered by said prisms, and means for cutting off a por-

tion of the light passing through said member to form display characters.

6. A sign comprising a translucent member having a light inlet surface composed of a series of parallel prisms capable of reflecting and transmitting light towards the outlet side thereof, said prisms having exposed surfaces extending outwardly substantially normal to the plane of said member and adapted to receive light predominately from points opposite the same approaching said member at an acute angle, and having relatively longer exposed surfaces connecting the outer ends of said first named surfaces with the inner ends thereof and forming acute angles therewith, the projection of said last-named surfaces in the direction of said member having an area approximately that of the surface covered by said prisms, opaque material applied to the light exit surface of said member to form display characters illuminated by light from the light inlet surface, and a shade disposed about the exit side of said member and having an exit for the light at the front.

7. A sign comprising a translucent member having a light inlet surface fully exposed to extraneous light and composed of a series of parallel prisms capable of reflecting and transmitting light towards the light outlet side of said member, said prisms having exposed surfaces extending outwardly substantially normal to the plane of said member and adapted to receive extraneous light predominately from points opposite the same approaching said member at an acute angle, and having relatively longer exposed surfaces connecting the outer ends of said first named surfaces with the inner ends thereof and forming substantially 45° angles therewith, the projection of said connecting surfaces towards said member being substantially continuous, and said connecting surfaces serving as internal reflectors for the light passing into said prisms at said first named surfaces and to pass therethrough for refraction light reflected from said first named surfaces, means for cutting off a portion of the light passing through said member to form display characters, and a shade surrounding said member at the front side thereof and projecting forwardly therefrom.

In testimony whereof, I have signed my name hereto.

EDWIN R. GILL, JR.