

L. H. MOISE.
ILLUMINATED SIGN.
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966,846.

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Fig. 2.

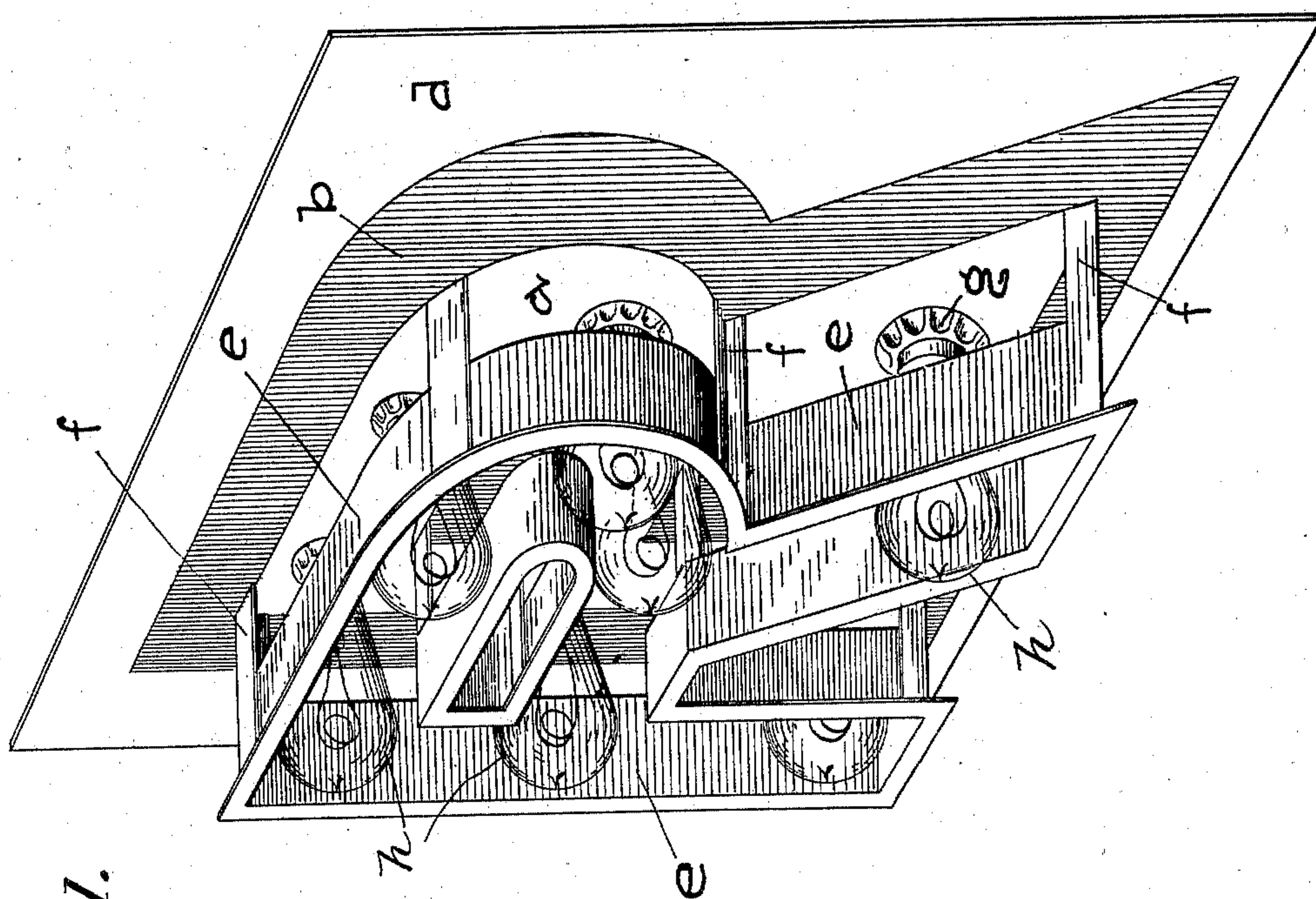
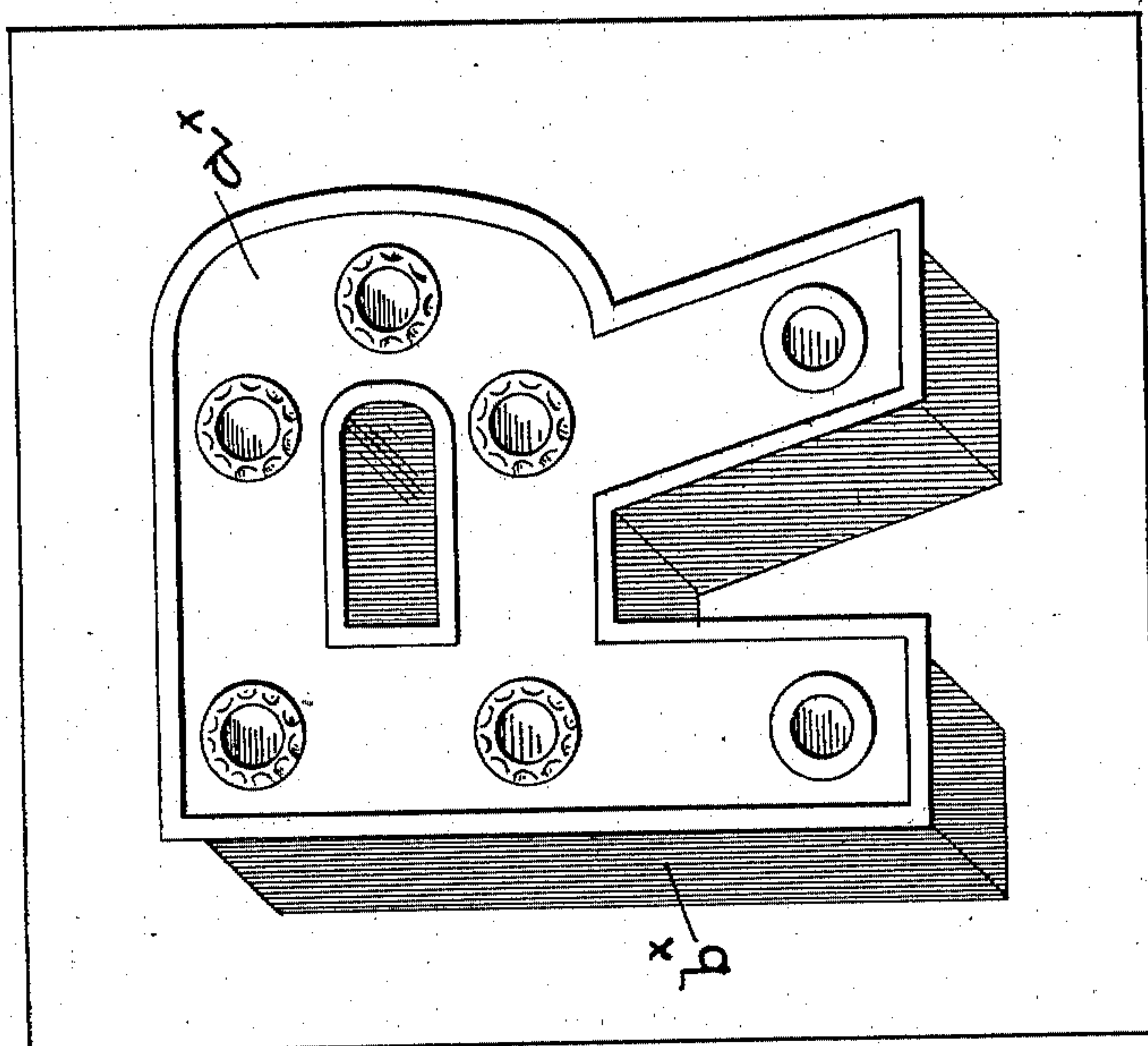


Fig. 1.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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ILLUMINATED SIGN.

966,846.

Specification of Letters Patent.

Patented Aug. 9, 1910.

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To all whom it may concern:

Be it known that I, LIONEL H. MOISE, a citizen of the United States, and a resident of the city and county of San Francisco, State of California, have invented a new and useful Improvement in Illuminated Signs, of which the following is a specification.

This invention relates to improvements made in illuminated signs of the kind or description in which each letter or symbol is painted or otherwise delineated in contrasting colors on a panel or plane surface, and by means of incandescent electric lamps fixed on its face each letter is illuminated and rendered legible by night; the letters being so formed or produced on the panel as to serve all the purposes of a legible sign by day. A sign of the type to which these improvements relate is distinguished also by a standing rim surrounding each letter on all sides and conforming to the characteristic shape or outline of the letter; the rim being generally of a proper height or projecting from the face of the panel to a sufficient extent to have both the function of a shade and a reflector. Letters of this type are formed in some constructions of signs, either separately of the sign panel with or without a closed back, and are fastened to the panel in the required order or arrangement to produce the sign. Or they are produced by fixing reflecting strips on the face of the panel around the letter which is outlined or delineated on the panel in contrasting colors.

The object of the invention is to secure an ornamental and artistic appearance, as well as a high degree of legibility both by day and by night, when illuminated or when not illuminated, and to obtain the desired effects with a minimum number of electric lamp bulbs. These and other objects pertinent to the construction of these illuminated signs, I attain and secure in and by the novel parts and combination of parts as hereinafter described and set forth.

In the accompanying drawing I have shown the application of my invention to the production of the capital letter R from the description of which a person familiar with the construction of illuminated signs will be able to apply the invention to the production of any other letter or character that may enter into the formation of a sign embodying the invention, without further

or special illustration of different letters or characters.

Figure 1 of the drawing represents in perspective the capital letter R of the form or style known as a block letter, the same showing a portion of the sign panel, the letter delineated on the surface of the panel in accordance with my invention, the shade and reflector and the lamp bulbs or illuminating elements on the face of the letter. Fig. 2 is a full front view of the same letter, illustrating a slight modification in which the margin of a contrasting color to the body of the letter is confined to one side of the letter, instead of surrounding the letter and conforming to its outline on all sides.

In an illuminated sign letter of my invention the element or part that has the functions of a shade and a deflector of the illuminating rays, conforms to the characteristics of the letter in its outline, the same as the standing sides in the well known trough letter in which the bottom of the trough forms the body of the letter and is provided with sockets for the lamp bulbs. But while inclosing the letter on all sides the standing strip forming the shade and deflector in the present improvements is detached from the panel and is set away from the surface, so that a slit or opening exists between the surface of the panel and the strip. Instead of joining the face of the panel or springing directly from it, the standing strip in my improvement is set away from such surface, so as to provide an aperture through which a portion of the illuminating rays from the lamps within the inclosure are permitted to strike and lighten the surface of the panel immediately around the body or solid portion of the letter. In the letter of my invention also, the body of the letter borne by the panel is produced on the surface of that part by painting the central portion in one or more colors in contrast with the surface or background, and a margin of greater or less breadth of a different and preferably of a lighter color or shade than the body portion and which under illumination will reflect the light more strongly than the surrounding background.

As embodied in the letter R illustrated in the drawing it will be seen that the central portion *a*, or body proper of the letter, is surrounded by the marginal portion or bor-

der b ; and the margin b again by the background d , each having absorbing or reflecting qualities differing in degree by being painted or otherwise produced in different colors. As for illustration, the body a being light colored, and the background a dark color, as black, dark green or dark blue, the border d will be painted in cardinal red, or a lighter color of a similar contrasting character. In another way, a brilliant and exceedingly effective sign may be produced by forming the central body a of sheet metal either brass or white metal, and the border b of copper or bronze or gold leaf upon a dark background. The remaining element of the letter composed of the shade and reflector e is supported by posts or strips of metal f situated at intervals apart around the margin, and fixed to or in the face of the panel in sufficient numbers to insure a stiff and rigid fastening against wind pressure and other forces to which the skeleton frame constituting this element of the letter may be exposed in the complete sign or structure. This attaching means may be formed integral with the strip or strips from which the element e is produced, by cutting out portions at intervals along the inner edge, so as to leave posts or strips for attaching it to the panel; or the posts may be formed separately as represented at f Fig. 1. The complete letter of my invention will be seen therefore to be composed of a solid body letter produced in contrasting colors on a plane surface, and a skeleton letter composed of a frame like structure standing away from the panel and inclosing within its standing sides the lamp bulbs h . As embodied in the construction shown by the drawing it will be seen further, that the lamp sockets g are situated within the body a of the letter, and that a standing shade and deflecting element e is formed to restrict the field illuminated by the lamps principally to the body or main portion of the letter, by being made of the same dimensions in outline as the body. A portion of the surrounding surface or background is utilized, however, to increase the ultimate size of the letter, and add to its brilliancy as well as its legibility by setting the shade and deflecting element away from the panel surface, or,—by what accomplishes the same result—providing apertures in the standing sides of the part e through which a portion of the rays from the illuminating elements will strike and lighten the margin or border b of the letter. A greater degree of legibility, as well as a more ornamental and effective sign both under illumination and under day light is secured by this construction and arrangement of the elements than has heretofore been practicable, for the reason that the background immediately around the letter, but outside the plane of the shade and deflecting element is thrown

into or employed to increase the dimensions of the letter, and this without modifying the function of the shade and deflector to such a degree as to reduce or destroy the sharpness of outline and a well defined separation of the letters when the lights are turned on, and especially when the sign is viewed from a distance, or is elevated at a considerable height above the observer.

In practice the shade and deflector is made of sufficient breadth to cut off the principal portion of the lateral rays from the illuminating elements and deflect them against the sides of that member of the letter; allowing only a portion of the rays to pass out at the apertures under the deflector and strike the edges or margins of the letter. The height or size of such opening is governed and is to be determined by the size and style of lamp bulb employed for the illuminating element, and will obviously be increased or reduced in size as the form or style of the lamp bulbs used may cause them to project farther from or lie more closely to the face of the letter.

In the letter of my invention represented in Fig. 2 the contrasting margin or border b^* is confined to one side of the body a^* , but it is partially illuminated in the same manner as the similarly extending margin in the letter Fig. 1. It does not receive the same degree or quality of illumination as the body a^* , however, because the standing side of the shade and deflector on the side next the extended margin b^* cuts off the principal lateral ray of the lamps and prevents a full illumination of that surface outside the body of the letter.

It is found in a practical application and embodiment of the invention in either form, that a partial illumination of the immediate background all around the letter while confining the full illumination to the body of the letter has the effect to make the letter stand out from the panel in appearance like a beveled letter. Another feature of advantage and which is a quite important feature in an outdoor sign in situations where it is exposed to all kinds of weather is what may be termed the self cleaning quality of the letter, by virtue of which dust, dirt, snow or moisture can not lodge in the corners and angles between the shade and deflector and the face of the panel.

I claim:—

1. A letter for an illuminated sign comprising a relatively light colored body on a relatively dark background, illuminating means situated within the outline of the said body, a reflector surrounding the said body and conforming to the outlines thereof, the said reflector having apertures for passage of light from the illuminated field inclosed by the reflector on to the surrounding surface outside the reflector.

2. A letter for an illuminated sign comprising a relatively light colored body on a relatively dark colored background, means for illuminating said body, a shade and reflector adapted to limit the directly illuminated field to the body of the letter and comprising apertured strips surrounding the body of the letter on all sides and conforming to the general outlines thereof, the solid portions of said strips being so arranged with relation to the illuminating means as to limit the directly illuminated field to the outlines of the letter, and the apertured portion being arranged to permit restricted illumination of the surrounding background in the region of the body of the letter.

3. In a letter or symbol for an illuminated sign, a panel, a letter thereon, of a contrasted color to the surrounding surface, a shade and reflector conforming to the outlines of the letter and surrounding the same on all sides, means for illuminating the letter situated within the field inclosed by the reflector, and means supporting said reflector clear of the letter-bearing surface whereby the surface outside the reflector immediately surrounding the body of the letter is exposed to a portion of the illuminating rays from the inside, and the surface lying beyond such illuminated region is in shade.

4. In a letter or symbol for an illuminated sign, the combination of a letter bearing sur-

face, a letter thereon comprising a body portion having the immediate background of a contrasting color to the surrounding surface, a reflector conforming to the outline of the said body portion and standing away from the surface carrying said body portion and illuminating means situated within said reflector.

5. In an illuminated sign, a letter bearing surface, a letter thereon having a relative high light reflecting quality, a surrounding background of a relative high light absorbing quality, and a marginal portion differing in light reflecting quality from the letter and separating the latter from the surrounding surface, in combination with a reflector having the outline of the letter and supported clear of the letter bearing surface in front of the letter.

6. In a letter or symbol for an illuminated sign, a letter bearing surface, a letter thereon having a higher degree of reflecting quality than the surrounding surface, and a shade and reflector conforming to the outlines of the letter separated from the letter bearing surface by an open space, and illuminating means situated within said reflector in close relation to the letter bearing surface.

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Witnesses:

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