

P. G. WATMOUGH, JR.
ILLUMINATED SIGN.
APPLICATION FILED JUNE 17, 1911.

1,029,734.

Patented June 18, 1912.

Fig. 1.

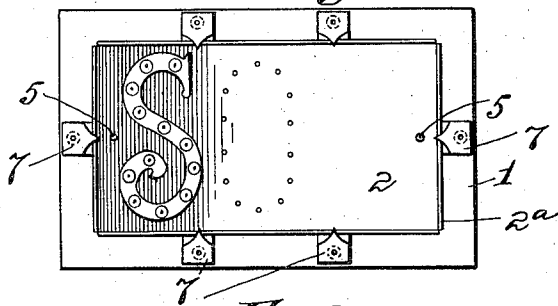


Fig. 2.



Fig. 8.

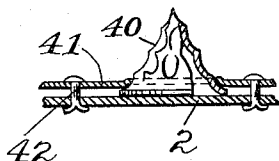


Fig. 3.

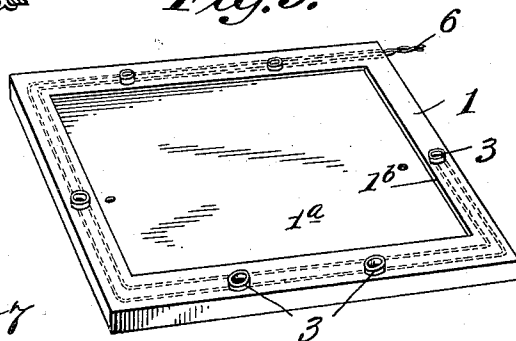


Fig. 4.

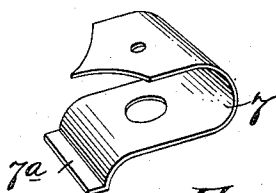


Fig. 5.

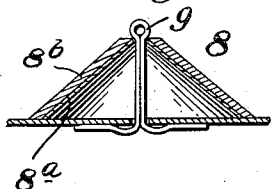


Fig. 6.

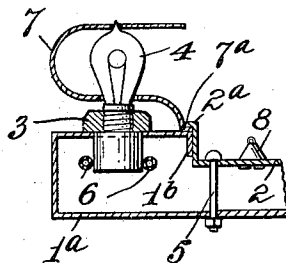
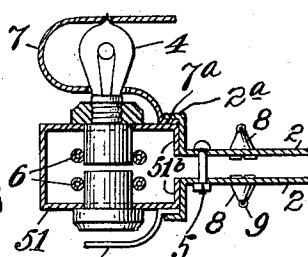


Fig. 7.



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UNITED STATES PATENT OFFICE.

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ILLUMINATED SIGN.

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To all whom it may concern:

Be it known that I, PENDLETON G. WATMOUGH, JR., a citizen of the United States, residing at New Brighton, Staten Island, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Illuminated Signs, of which the following is a specification.

My present invention is an improved electric sign.

The improvements relate both to general and special features of the make-up of the sign including special reflecting devices for outlining the display matter of the sign.

In the drawings which show only one of the specific forms which my improved sign may take whether it be of the single or double-face type, Figure 1 is a front elevation of a single-face sign within my invention; Fig. 2 is a perspective view of the so-called face-pan detached from said sign; Fig. 3 is a perspective view of the frame of said sign; Fig. 4 is a perspective view of one of the illuminating reflectors detached; Fig. 5 is a vertical section partly in elevation through one of the display reflectors including a portion of the face-pan of the sign; Fig. 6 is a vertical section partly in elevation on an enlarged scale through one edge of the sign of Fig. 1; Fig. 7 is a view similar to Fig. 6 except that the section is taken through the edge of a double-face sign; and Fig. 8 is a side elevation partly broken away and in section showing a modified form of conical reflector and modified means for attaching this or other forms of reflector to the back-board of the sign.

I will now describe the devices of the drawings.

1 is the frame of the sign consisting of sheet metal bent up or otherwise worked to form a hollow frame. In the single-face sign of Figs. 1, 3 and 6, the rear side 1^a of the frame is continued so as to completely close the frame opening at the rear side of the frame. On the other hand, in Fig. 7, showing a double-face sign (that is, one where there is display matter on both sides), the frame 51 is the same on both sides and consists of a true hollow rim which frames a rectangular opening. In either event the inner edge, or edges, of the frame is preferably provided with an inwardly extending flange 1^b or 51^b respectively which not only stiffens the frame but has another purpose hereinafter mentioned.

Lamp sockets 3 are mounted in openings in the front side of the hollow frame of the single-face sign (see Figs. 3 and 6) and on both sides of the double-face sign of Fig. 7. These sockets receive the incandescent lamps 4 by which the display matter on the face-pan 2 is illuminated from all sides.

The face-pan 2 consists of a piece of sheet metal having its sides bent up as shown in Fig. 2. The sides of the pan are snugly received within the frame opening with the flanges 2^a of the pan resting on the face of the frame. Means 5 is provided between the pan and the rear of the frame in the sign of Fig. 6 and between the two pans themselves in Fig. 7 to hold the pans in place.

It will be seen that it is a matter of the utmost simplicity to remove the pans from the frame to give access to the interior of the latter where the wiring of the illuminating lamps is located. Thus, the lead wires 6 (see Figs. 3, 6 and 7) enter through an opening in the edge of the frame and are connected in multiple with the lamp sockets.

Individual reflectors are provided for the illuminating lamps consisting of pieces of sheet metal bent up into U-form 7. One leg of the U has a relatively large opening receiving through it the lower portion of the body of the incandescent lamp, whereas the other leg has an aperture receiving the tip of the lamp. The tendency of the two legs of the U to spring toward each other may be utilized to increase the security of the reflector on the lamp. However, this is not essential because the free end of the lower leg of the reflector shown is formed into a toe 7^a receivable between the flange 2^a of the pan and the face of the sign-frame.

It will be understood that the interior of the reflector 7 will be bright, whereas their exteriors will preferably be painted a dull color. Thus, they direct the illumination from the lamps upon the display matter, but prevent the lamps from being seen by the spectator. Further, it will be understood that the reflectors 7 are made of very thin sheet metal so that the flange 2^a of the pan is separated from the face of the frame merely by the thickness of a sheet of paper instead of by the much exaggerated distance shown in Figs. 6 and 7. The result is that in practice the paint applied to the frame fills in the space under the flange 2^a and makes the joint weatherproof. Similarly, the flange 1^b assists in keeping out the ele-

ments by reason of the greater surface of contact thereby given with the sides of the pan 2.

In the sign shown, the display matter consisting of the letter S, etc., is painted on the pan 2, the letters preferably being white or some other light color on a dark ground. Positioned on the letters in spaced apart relation are cones 8 with their apices directed outwardly and having reflecting exteriors. The conical reflectors 8 reflect the illumination from the surrounding lamps 4 to the eye of the spectator and thereby outline the display matter with a highly pleasing and novel effect.

The individual reflectors 8 may take a variety of forms; for example, they may be bent or spun up out of sheet metal, or they may consist as shown in Fig. 5 of a mere reflecting coating 8^a surrounded by a protecting transparent member 8^b. Specifically the member 8^b may be a conically hollow glass member, upon the interior of which is placed or coated a silver amalgam or other composition used in the manufacture of mirrors. The transparent member 8^b protects the bright mirror surface of the conical reflectors from becoming tarnished and is therefore a preferred construction.

Each conical reflector has an opening through its apex to receive through it the prongs of a cotter pin 9 (Fig. 5). These are passed through an aperture in the face-pan corresponding to the desired position of the reflectors, whereupon the prongs are clenched, as shown, on the other side. Figs. 1 and 2 show a series of these apertures in the face-pan corresponding to the letter O.

Fig. 8 shows the possibility of using modified forms of conical reflectors, the form there shown being designated 40 and being a sheet metal cone in general conical formation but wherein the surface is formed with a plurality of peaks and intermediate depressions to give a novel reflecting effect. The same figure shows modified attaching means consisting of a plate 41 having an opening through it through which projects the reflector with the exception of the base thereof which is clamped between the plate and the pan 2 or other back-board of the sign. The securing means between the plate 41 and the back-board of the sign consists of the prong-fasteners 42. The plate 41 may have the form or outline of the particular letter or other display matter and may have a plurality of the described openings through which project as many reflecting units. On the other hand, the plate 41 may be reduced to a mere ring surrounding the base of the reflector and securing it to the back-board.

By the expression "conical" herein is meant members that taper or whose sides converge to an apex.

Having thus described my invention, what I claim is:

1. An illuminated sign comprising the combination of a hollow sheet metal frame having a frame-opening, the inside edge of said frame being open all around to permit access to the hollow interior of the frame, removable pan-means fitting into the frame-openings and when removed, serving to uncover the aforesaid open inside edge of the frame, a plurality of conical reflectors outlining the display matter and supported on the pan means with their apices directed outwardly, electric lighting means supported on the frame in position to illuminate all parts of the conical exteriors of the reflectors.

2. In an illuminated sign the combination of a plurality of exteriorly reflecting conical reflectors outlining the display matter on the back-board, said reflectors being conical members with their conical surfaces exteriorly reflecting, said members being secured to the back-board with their apices directed outwardly, said apices having openings therethrough, securing means received through said openings securing the reflectors to the back-board, and lighting means illuminating the conical reflectors.

3. In an illuminated sign the combination of a plurality of exteriorly reflecting conical members supported with their apices directed outwardly outlining the display matter of the sign, and lighting means illuminating the reflectors, which consist each of a hollow transparent member, having a conical interior coated with reflecting material.

4. In an illuminated sign the combination of a back-board, a plurality of conical reflectors outlining the display matter on the back-board, said reflectors consisting of exteriorly reflecting conical members which are supported on the back-board with their apices directed away from the back-board and toward the front of the sign, said reflectors being independent of one another and each being supported in any desired location on the back-board, and lighting means on the same side of the back-board as the conical reflectors and at the edges thereof so as to illuminate all parts of the conical exteriors of the reflectors.

In testimony whereof I affix my signature in presence of two witnesses.

PENDLETON G. WATMOUGH, JR.

Witnesses:

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