July 20, 1926. 1,592,966

O. M. YATES

ILLUMINATING ELECTRIC SIGN

Filed Feb. 25, 1924 2 Sheets-Sheet 1

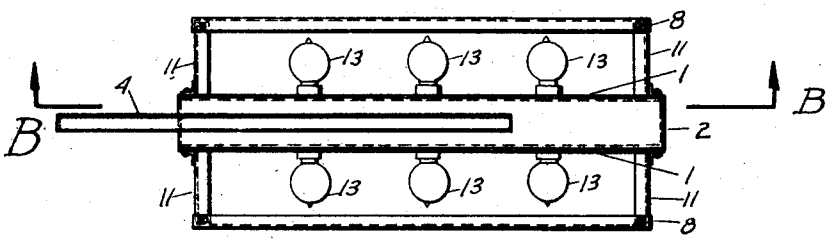


Fig. 3

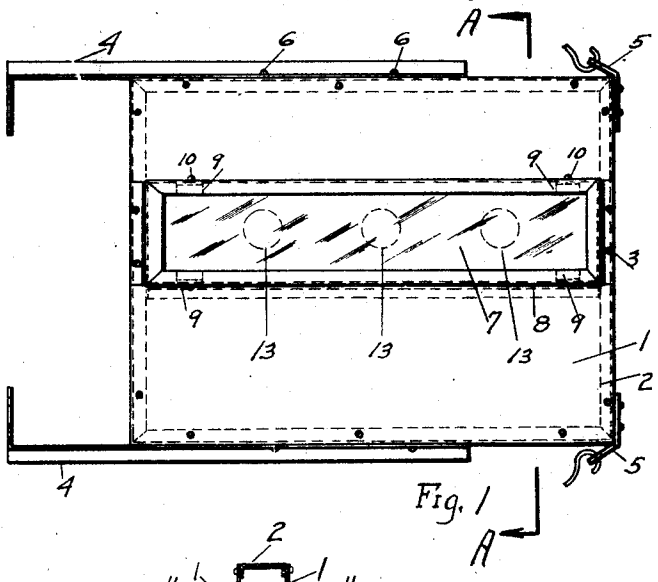


Fig. 1

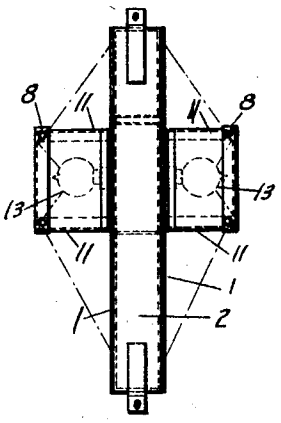


Fig. 2

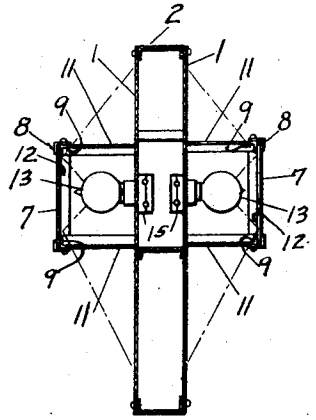


Fig. 4

INVENTOR

Omar M. Yates.

BY

Myron J. Dikeman

ATTORNEY

July 20, 1926. 1,592,966

O. M. YATES

ILLUMINATING ELECTRIC SIGN

Filed Feb. 25, 1924 2 Sheets-Sheet 2

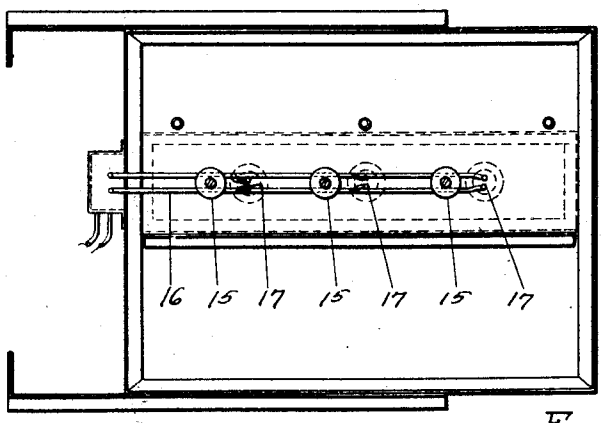


Fig. 5



Fig. 6

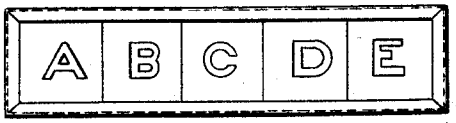


Fig. 7

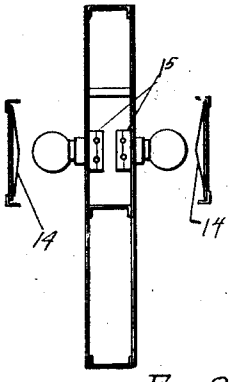


Fig. 8

INVENTOR

Omar M. Yates.

By Myron J. Dikeman

ATTORNEY

Patented July 20, 1926. 1,592,966

UNITED STATES PATENT OFFICE.

OMAR M. YATES, OF DETROIT, MICHIGAN, ASSIGNOR TO LLOYD R. BRITTON AND WALTER H. GROVER, BOTH OF DETROIT, MICHIGAN, AS TRUSTEES FOR BRITTON-GROVER COMPANY, A COPARTNERSHIP.

ILLUMINATING ELECTRIC SIGN.

Application filed February 25, 1924. Serial No. 694,973.

The object of my invention is to produce an illuminated electric sign that will be visible in the night time without the use of a special independent lighting system.

Another object is to produce a self illuminated electric sign, so constructed that the operating lights of one portion of the sign will illuminate the balance of the sign board.

A further object is to produce a self illuminated sign so constructed that the lighting system is invisible from a position in front of the sign board.

A still further object is to produce a sign board system that is easily and efficiently operated, can be dismantled for removal, and can be manufactured at a low cost.

These several objects are secured in their preferred form by the construction and arrangement of parts more fully hereinafter set forth.

Similar parts on all drawings are marked by similar numerals.

Fig. 1 is a front view of the assembled sign showing the position of the illuminating section on the sign board.

Fig. 2, is an end view of the assembled sign board showing the double construction and the general arrangement of the illuminating section.

Fig. 3, is a top view of the sign board.

Fig. 4, is a sectional view taken on the line —AA— of Fig. 1, illustrating the detailed construction of the sign.

Fig. 5, is a sectional view on the line —BB— of Fig. 3 showing the electric wiring and connections as constructed within the board.

Fig. 6 is a front view of the illuminating section illustrating the use of transparent or translucent letters in the front panel.

Fig. 7, shows an alternate form of block, translucent letters, commonly used for advertising purposes.

Fig. 8 is an alternate section on the line —AA— of Fig. 1, illustrating a distorted deflector back of the illuminating section.

I will now describe more fully the detailed construction of my electric sign, referring to the drawings and the marks thereon.

The general construction of the sign comprises double rectangular wall sheets, suitable for advertising printing, painting &c, said walls being spaced several inches apart, and connected by an outer supporting frame, leaving a hollow space within the sign body. On the outside of the wall sheets, and slightly above the center of the centerline of the sign, is mounted a secondary plane, positioned and supported a short distance in front of the wall sheet to allow the installation of electric lights thereunder, and so designed that the exposed surface may also be used for advertising purposes, by the use of transparent or translucent materials, while the back portion of the panel is constructed for use as a light reflector for illuminating the surfaces of the wall sheets on the body of the sign, thus lighting the entire advertsing board by lights invisible to the observer in front of the sign.

The body of the sign is made of two wall sheets —1—, preferably of sheet metal, and having a surface suitable for painting general advertising matter thereon. The wall sheets being spaced several inches apart and mounted on a frame —2—, forming a hollow rectangular body, suitable for advertising matter on both sides thereof. The frame —2— may also be made of metal, preferably of channel construction, and the wall sheets fastened thereto by means of small bolts —3—. Support arms —4— are attached to the top and bottom edges of the sign body, also by the use of small bolts —6—, and for attaching the sign to a building wall. At the outer corners of the sign body are attached the clips —5—, also for support connections when the sign is erected out away from the supporting building. The entire assemblage of the frame and wall sheets is by the use of bolts for the purpose of removing either side from the frame for repairing, and for dismantling the sign.

The secondary light panel —7— is made of opaque material with transparent or translucent letters therein, supported in the frame —8—, and held in place within the frame by means of the small clips —9— and screws —10— attached to the side of the frame —8—. The frame —8— is supported by the legs —11— attached to the corners thereof and to the face of the sign body, by means of clips and bolts, forming a stationary extended panel beyond the surface of the wall sheets —1—. The back, or inner surface of the panel —7— is covered with a light reflecting coating or material —12—, such as white paint, or a light reflecting surface, for deflecting the rays of light back on the sign body. On the outer faces of the wall sheets —1— of the sign body, and directly beneath the secondary panel —7—, are mounted the illuminating light bulbs —13—. The bulbs —13— being of the ordinary electric bulb type, and so positioned beneath the panel —7— and reflector —12—, that the light rays therefrom will pass through the translucent letters in the secondary panel, such as are illustrated in Figs. 6 and 7, and also the rays of light striking the deflector surfaces are deflected back to the surface of the wall sheet —1—, and illuminates the entire sign wall, thus illuminating the entire sign from a single lighting system, obscure from an observer. The deflector —12— may be attached directly to the back of the panel —7—, as shown in Fig. 4, or it may be curved away from the panel as illustrated in Fig. 8, and having letter openings therein conforming to the translucent letters on the light panel —7—, the latter distributing the light over a larger surface on the sign body, than could be obtained in the former. The panel as illustrated in Fig. 1, is a plain transparent panel, upon which the letters may be placed, and the deflector coating on the back thereof be added. While this panel may be substituted by the lettered panels shown in Figs. 6 and 7, said lettered panels illustrate translucent letters thereon, to allow the light rays to pass, thus illuminating the advertising matter as assembled in the panel, which conceal the lighting bulbs. Inside of the sign body, and between the wall sheets —1—, are attached insulators —15— for supporting the electric wires —16— which are connected in an electric circuit. The wires —16— are attached to the bulb circuit for each of the bulbs —13—, by the lead wires —17—, thus lighting the entire system of bulbs as the electric current is turned on. The entire sign is assembled by the use of bolts to allow for dismantling the sign for removal purposes.

While I have described the preferred form of my illuminating electric sign board, it is obvious that my invention is capable of various modifications without departing from the spirit of my invention. It is further obvious that the illuminating sign is adapted to a single surface wall, as well as the double structure shown, likewise several secondary suspended light panels may be used in cases of large sign bodies for extended advertising purposes.

Having fully described my illuminating sign, what I claim as my invention and desire to secure by Letters Patent is:

1. An illuminated sign comprising a straight sign board wall, means for suspending said sign wall, electric light bulbs mounted across the center of the face of the sign wall, means for connecting said light bulbs in an electric circuit, a secondary frame mounted in front of said light bulbs, and attached to the main sign board wall and parallel therewith, a reflector panel mounted within said secondary frame, said reflector panel having translucent letters made therein, and so arranged as to illuminate the main sign board above and below by the electric light bulbs on the face of the sign walls.

2. An illuminated sign comprising a straight sign board wall, electric lights mounted across the center of the face of said sign wall, a secondary frame attached to the said sign wall and positioned directly in front of the light bulbs, and parallel to said sign wall an opaque panel having translucent letters made therein mounted in said secondary frame, a reflecting panel attached to the back of the opaque surface of the opaque panels and so arranged as to reflect a portion of the light from the electric bulbs back to the upper and lower section of the sign wall.

3. An illuminated sign comprising a plain straight advertising sign board having a smooth plain surface, electric light bulbs mounted across the center of the face of the sign wall, means for connecting said electric lights into an electric circuit, a secondary advertising panel with translucent letters therein, mounted in front of the light bulbs and parallel to the surface of said sign board, and so positioned that the light from the bulbs will illuminate the said translucent letters thereon, and means attached to the back of the said secondary panel for reflecting the rest of the light rays back to the upper and lower sections on the surface of the sign board.

4. An illuminated sign board comprising double straight sign walls arranged parallel to each other, a supporting frame mounted between the said parallel walls and attached thereto, electric light bulbs mounted across the center of the face of each of the sign board walls, electric wires installed within the sign body and between the sign walls

connecting all of the said light bulbs in an electric circuit, a secondary reflecting panel with translucent letters therein mounted in front of the electric light bulbs, on each sign wall and parallel thereto said reflecting panel so arranged as to allow a part of the light from the electric bulbs to pass through the translucent letters therein and to reflect the balance of the light back to upper and lower sections on the surface of the sign board.

In witness whereof I sign these specifications.

OMAR M. YATES.