H. MULHOLLAND & C. G. WEST.

ILLUMINATED SIGN.

APPLICATION FILED AUG. 20, 1910.

1,039,175. Patented Sept. 24, 1912.

Fig. 1.

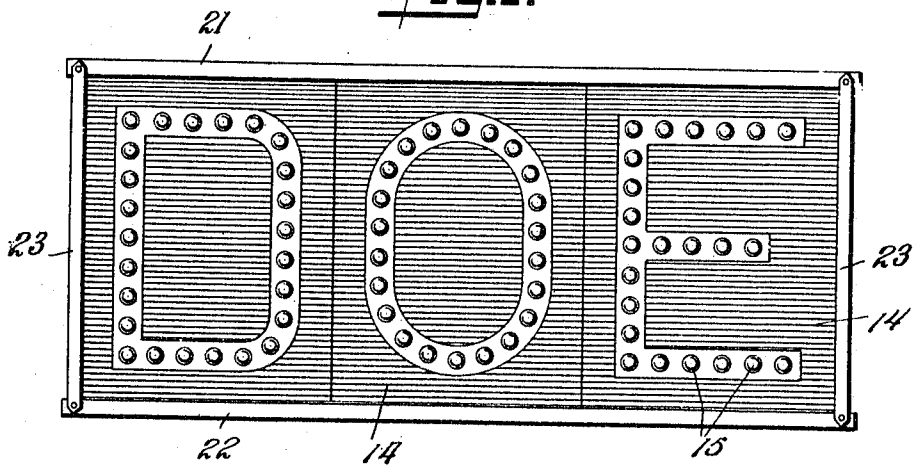


Fig. 2.

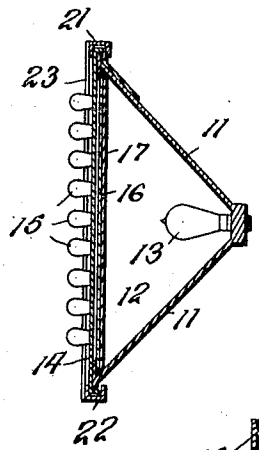


Fig. 3.

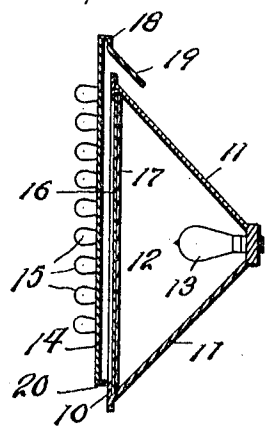
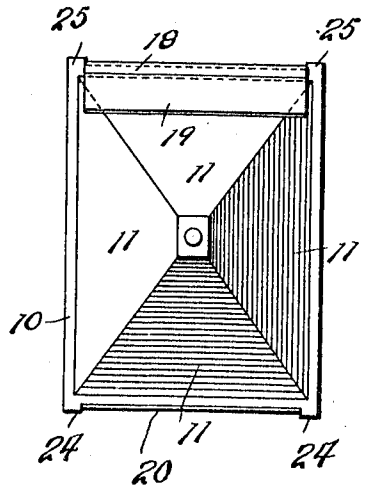


Fig. 4.



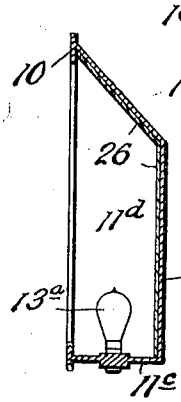


Fig. 5.

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UNITED STATES PATENT OFFICE.

HUGH MULHOLLAND, OF NEW YORK, N. Y., AND CHARLES G. WEST, OF GREENWICH, CONNECTICUT, ASSIGNORS, BY MESNE ASSIGNMENTS, TO GEORGE M. POTTER, OF NEW YORK, N. Y.

ILLUMINATED SIGN.

1,039,175. Specification of Letters Patent. Patented Sept. 24, 1912.

Application filed August 20, 1910. Serial No. 578,120.

To all whom it may concern:

Be it known that we, HUGH MULHOLLAND and CHARLES G. WEST, both citizens of the United States, and residents, respectively, of the city of New York, borough of Manhattan, in the county and State of New York, and of Greenwich, in the county of Fairfield and State of Connecticut, have invented a new and Improved Illuminated Sign, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in illuminated signs of that type in which there is employed a casing illuminated upon the interior and having a wall provided with perforations or apertures arranged to form the letters, numerals or designs, and through which the light from the interior of the casing may pass.

The object of our invention is to form a sign of this character in which the several letters, numerals or designs constituting the sign, will be separate and independent so that the same units may be assembled to form various different signs. In our improved construction the units are removable from the frame or support, and, furthermore, the face or letter-forming wall of each unit is removable, so that in changing the sign, only the faces of the units need be exchanged instead of the whole unit.

Our improved construction embodies many features of importance which will be pointed out more particularly hereinafter.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a front view of a sign constructed in accordance with our invention; Fig. 2 is a transverse vertical section through the sign; Fig. 3 is a vertical section through a unit, the face wall of the unit being partially removed; Fig. 4 is a rear view of the unit; and Fig. 5 is a vertical section through a slightly modified form of unit.

In the preferred form of our improved construction, each unit is in the form of a casing having means for illuminating the interior thereof, and having a face wall provided with apertures arranged to form the letter, and through which the light may shine.

In the specific form illustrated in Figs. 2, 3 and 4, the casing has an open frame 10, substantially rectangular and formed of sheet metal or other material. From the back of this frame, a plurality of walls 11 converge, substantially in the form of a pyramid, to form the casing. These converging walls form a substantially pyramidal or conical chamber 12, which is interiorly illuminated in any suitable manner. As shown, an incandescent electric light bulb 13 is mounted at the apex of the chamber, although it is evident that other form of illumination might be employed, or that the illuminating means might be supported at other points than the apex of the chamber. By placing the electric light bulb at the apex, and by forming the inner surfaces of the walls 11 with a reflecting coating, the light rays from the lamp 13 will be reflected forwardly toward the opening in the frame.

In connection with the walls 11 and frame 10 of the casing, we employ a front wall 14, preferably in the form of sheet metal and adapted to engage with the front side of the frame to close the chamber. This front wall has a series of apertures therein arranged to form a letter, numeral or design, and each aperture supports a forwardly-extending bulb or tube 15 simulating a small electric light bulb. These bulbs are preferably hollow and the light from the interior of the casing shines through each of them in substantially equal amounts. The bulbs may, if desired, be constructed as illustrated in our prior Patent No. 1,004,585 granted October 3, 1911. In case bulbs of the character defined in said application are employed, each bulb may carry its own color disk, so that any desired color effect may be produced. If the bulbs be plain, a color disk may be employed within the casing which will cover all or any desired number of the bulbs. As shown, there is employed a layer 16 of colored gelatin within the casing and held in place between the rear side of the frame 10 and the front of the converging walls 11. Between this colored screen of gelatin and the electric light 13, there is employed a sheet 17 of mica, which protects the gelatin from the heat of the lamp, so that the gelatin cannot readily catch fire, and it serves as a flexible transparent reinforcing member for holding the

gelatin in position. The front wall 14 may be held in place in any suitable manner, but is preferably so mounted that it may be readily detached and replaced by another wall having a different letter or design thereon. As shown, the front wall 14 engages with the front side of the frame, and is bent to form a groove or pocket 18 along its upper edge which receives the upper edge of the frame. From this groove the terminal portion of the plate is bent downwardly and rearwardly to form a flange 19 for engaging with the upper side of the top rear wall 11. By forming the upper portion of the plate in this manner, rain and dust are effectively prevented from gaining access to the interior of the casing, particularly adjacent the upper edge of the gelatin. The lower edge of the plate is preferably provided with a short rearwardly-extending flange 20 for engagement beneath the lower edge of the frame 10. The unit when so constructed may be supported in various different ways and combined with other units to make up a sign. A simple form of support is that illustrated in Figs. 1 and 2. This support is in the form of a frame having substantially parallel top and bottom members 21 and 22 in the form of channel members having their grooves opposed to each other. These channel members may be held rigid in respect to each other by vertical bars 23, secured to the front sides of the channels. The channels are each of such width that they may receive the edges of the units and effectively hold the latter. The units may be moved into position lengthwise, by sliding them along the channels to the proper position, and the channels will serve not only to sustain the weight of the units, but will also prevent them from tilting or being otherwise displaced. The frame 10 of each unit preferably has depending lugs or extensions 24 at its lower corners, and similar upwardly-extending projections 25 at its upper corners, between which the front face is held to prevent lateral displacement of the latter. These extensions or projections serve to sustain the rear portion of the unit, that is, the casing proper independent of the front wall 14. It is, of course, understood that the formation of the rear walls of the casing is not important, as said walls may extend rearwardly from the front to form a chamber of any desired shape.

In Fig. 5, we have illustrated a casing in which there is a front frame 10, similar to that above described, but in which the rear casing has a back wall 11^a parallel to the frame, a downwardly-inclined top wall 11^b, a horizontal bottom wall 11^c, and side walls 11^d. An incandescent electric light 13^a may be supported from the bottom wall 11^c, and mirrors 26 may be secured to the inner surfaces of the top and rear walls, so as to reflect the light from the lamp to the bulbs carried by the front wall, which latter is not shown but which may be constructed as illustrated in Figs. 1 to 4, inclusive.

Various changes may be made in the details of construction, without departing in any way from the spirit of our invention.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. An illuminated sign including a frame having opposed channel members, and a series of units slidable along said frame, and each having a front frame provided with upwardly and downwardly-extending projections adapted to enter the grooves of said channels, rearwardly-extending converging walls carried by said second frame, means illuminating the interior of the unit, a front wall having its upper and lower edges adapted to enter within said channel members between said projections, and having its upper edge provided with a depending flange overlapping a portion of the upper rear wall of the unit, a color screen adjacent the inner surface of said front wall, and a plurality of transparent bulbs carried by said front wall and arranged to form the display matter.

2. An illuminated sign including a frame having opposed channel members and a series of units slidable along said frame, each of said units having a front frame the upper and lower edges, of which extend into said channel members, rearwardly extending walls carried by said second frame, means for illuminating interior of the unit, a front wall having its upper and lower edges adapted to enter within said channel members so as to be retained in engagement with its respective unit by said first mentioned frame, said front frame and said front wall having interengaging connections independent of the first mentioned frame for preventing relative sliding movement of said front frame and said front wall, and a plurality of transparent bulbs carried by said front wall, and arranged to form the display matter.

3. An illuminated sign including a frame having upper and lower opposed channel members, and connecting members permanently secured thereto for holding said channel members rigid in respect to each other, and a plurality of units independent of each other and independent of said frame, but supported thereby and free to slide along the same, each of said units including a casing, having a front frame for sliding engagement with said main frame, rearwardly extending walls carried by such second frame, a front wall detachably carried by said second frame and held in engagement therewith by said main frame,

said front wall having apertures to form the sign, and independent means for illuminating the interior of each unit.

4. An illuminating sign including a frame having parallel upper and lower members and connecting members permanently secured thereto for holding them rigid in respect to each other, and a plurality of units, each including a casing having an apertured front wall, and projections on said casing for engaging with the upper and lower members of said frame, and permitting of the sliding of the units along the frame, said front wall being secured between said projections, so as to slide with the unit but freely removable from the remainder of the unit upon the removal of the unit from the frame.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HUGH MULHOLLAND.
CHARLES G. WEST.

Witnesses:
JAMES LESLIE PINKS,
ALFRED STECKLER, Jr.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."