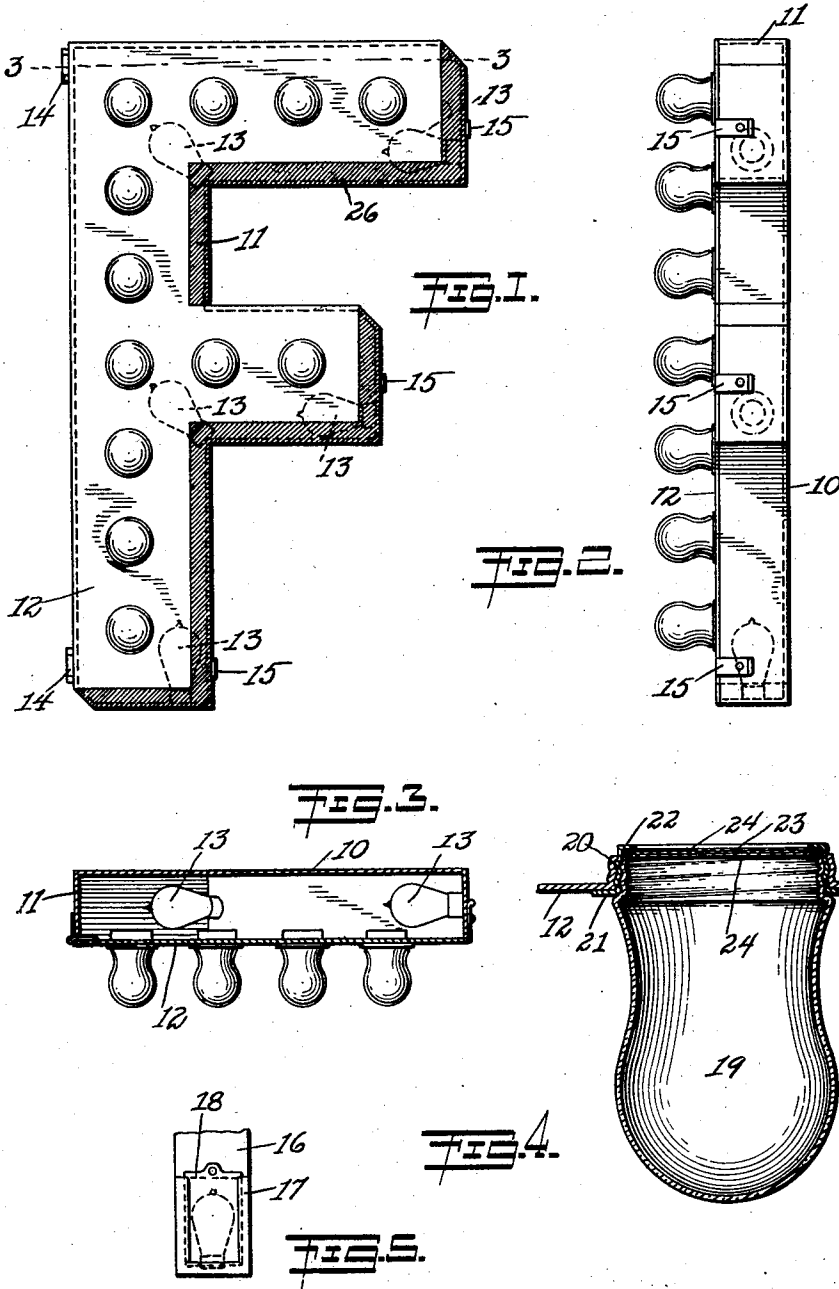


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ILLUMINATED SIGN.
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Patented Apr. 30, 1912.



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UNITED STATES PATENT OFFICE.

HUGH MULHOLLAND, OF NEW YORK, N. Y.

ILLUMINATED SIGN.

1,024,695.

Specification of Letters Patent.

Patented Apr. 30, 1912.

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To all whom it may concern:

Be it known that I, HUGH MULHOLLAND, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, county and State of New York, have invented new and useful Improvements in Illuminated Signs, of which the following is a full, clear, and exact description.

10 This invention relates to certain improvements in illuminated signs, and more particularly to that type of sign in which there is an illuminated chamber, having the front wall perforated to permit the passage of light therethrough, at such points as will form the desired letter, numeral or other design.

My invention relates particularly to that type of sign shown in the prior application, Serial No. 577,236, filed August 15, 1910, by myself and Charles G. West.

20 One main object of my invention is to facilitate the attachment and removal of the bulbs which are employed to simulate individual incandescent electric lights and a further object is to facilitate the supporting of individual color disks for the several bulbs.

30 The various features of my invention will be set forth more fully hereinafter and more particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, which form a part of this specification, and in which similar reference characters indicate corresponding parts in the different views.

40 Figure 1 is a front view of a sign letter constructed in accordance with my invention; Fig. 2 is an edge view thereof; Fig. 3 is a transverse section on the line 3—3 of Fig. 1; Fig. 4 is a longitudinal section through one of the bulbs and its securing means; and Fig. 5 is a detail showing a portion of a modified form, in which there are sliding doors for facilitating access as to the electric lights.

50 In the specific form illustrated in Figs. 1, 2 and 3, each individual letter, numeral or other design has an individual casing with electric lights or other source of illumination therein. This casing has a back wall 10, a peripheral wall 11 and a front wall 12.

The front and back walls are substantially parallel, and are spaced apart a distance slightly greater than the diameter of an incandescent electric light bulb. Within the casing are a plurality of electric light bulbs 13, which are of sufficient number and of such candle power as to highly illuminate the interior of the chamber. In the specific form illustrated, I have shown five of these electric lights, but in practice I preferably would not use so many, as the desired lighting effect can be secured by the use of a smaller number.

65 In order to gain access to the interior of the chamber or casing to facilitate the removal of dead lights or to repair the wiring, various different expedients may be employed.

70 In Figs. 1, 2 and 3, I have shown the front wall 12 secured to the peripheral wall by suitable hinges 14 at one edge of the letter and by detachable fasteners 15 along the opposite edge. By detaching the fasteners, the front wall may be swung outwardly on the hinges and access gained to all of the lights as well as to the wiring.

80 In Fig. 5, I have illustrated a portion of a peripheral wall 16 with guideways 17 and a sliding door 18. One of these doors is disposed adjacent each electric light, so that by opening the door nearest any light, access may be readily gained to the latter. Various other means may be employed for accomplishing the same result.

85 The front wall 12 is provided with a series of apertures therein, arranged centrally along the separate elements or sections of the letter, numeral or the like, and within each aperture, I secure a bulb 19 of a size and form similar to that of an incandescent electric light hollow bulb. My invention relates to the means for securing these bulbs in place and at the same time for holding a color disk or screen across the rear end of the bulb so that the light passing through the screen and bulb will give the latter the appearance of the screen. This improved securing means includes a sheet metal collar 20, bent or spun to present external and internal threads. At one end of the collar, there is an outwardly extending annular flange 21, and at the opposite end there is an

inwardly directed annular flange 22. The bulb 19 is exteriorly threaded so as to screw into the collar and to abut against the flange 22. The pitch is comparatively coarse, so that there is a wedging action, which prevents the bulb from loosening, but at the same time the bulb may be removed by turning it a portion of a revolution. In case it is desired to employ a screen, this screen is secured in place between the open end of the bulb and the flange 22. To give the bulb the rich color desired, I preferably employ a screen 23 of gelatin and support and protect it upon opposite sides by disks 24 of mica. The mica protects the gelatin from the action of heat, prevents moisture from gaining access thereto, and supports and reinforces the gelatin so as to prevent the latter from being easily broken or displaced. Other forms of color screens may be employed, for instance, a round sheet of colored glass may be employed and held in place between the end of the bulb and the flange 22 of the collar. The external threads on the collar 20 are designed to screw into the aperture in the wall 21. I have illustrated the wall as having an inwardly directed flange 25 surrounding the aperture and threaded to receive the threads of the collar, but this is not at all essential. The collar is screwed into the aperture until the flange 21 firmly engages the outer surface of the wall. In doing this, it is not essential that the collar be held in the hand, as preferably the collar is first screwed on to the bulb to fasten the color screen to the latter, and then by grasping the bulb in the hand, the collar may be screwed into the wall, inasmuch as the threads on the collar are formed by pressing the metal rather than by cutting it and are of the same pitch and direction upon the outside as upon the inside. To give the letter the appearance of symmetry and to provide the proper space for receiving the electric lights, I may make the front wall of the casing of such form and so painted or marked as to simulate a perspective view of a block letter. In other words, along the right hand side and along the lower side of each section or element of the letter, I form an extension 26, which may be painted or otherwise marked so as to give the appearance that these extended portions are in reality the walls of the righthand side and lower side of the block letter. The bulbs 19 are arranged centrally along the remaining portion of the front wall, so that in reality the bulbs are nearer the upper edge and lefthand edge of the letter than they are to the lower edge and righthand edge. There is, therefore, more space within the casing below the bulbs than above, and more space at the righthand edge than at the lefthand edge. In these portions of greater width, I place electric lights 13 so that none

of them come directly in the rear of any of the bulbs 19. The interior of the casing is thoroughly and uniformly illuminated, and there is no material difference in the amount of light which the several bulbs 19 receive.

I have illustrated my invention embodied in the letter F, but it is, of course, evident that the same idea may be carried out with all of the other letters of the alphabet, with the numerals, and with arbitrary or fanciful designs.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:

1. A sign having an apertured wall, a bulb closing the aperture therein, and having a cylindrical, exteriorly-threaded neck and a sheet metal collar having an interiorly and exteriorly-threaded body portion to receive said neck and to be received within the aperture, said body portion having an inwardly directed flange at the inner end of the bulb and an outwardly extending flange for engagement with the outer surface of the wall.

2. A sign having an apertured wall, a bulb closing the aperture therein, and having a cylindrical, exteriorly-threaded neck, a color disk of gelatinous material, closing the inner end of said bulb, a sheet of transparent non-combustible material protecting said color disk, and a collar encircling said neck, and having an inwardly directed flange for holding said color disk and said transparent sheet in engagement with the end of the bulb upon the removal of the bulb from the wall.

3. A sign having an apertured wall, a bulb having a neck, a color disk closing the end of said bulb, and a collar encircling said neck and holding said color disk in engagement with said bulb upon the removal of the bulb from the wall, and said collar being exteriorly threaded to retain the same within the aperture, and having a flange for limiting the movement of the bulb through the aperture.

4. A sign having a hollow bulb, a color disk closing the end of said bulb, and a collar encircling said bulb and having a flange for retaining said color disk in engagement with the end of the bulb, said collar being exteriorly threaded to facilitate the attachment of the bulb and collar to a supporting wall.

5. A sign having an apertured wall, a collar disposed within the aperture therein, and having a flange in engagement with the outer surface of the wall, and an inwardly directed flange at the opposite end of the collar, a color disk within the collar adjacent to the surface of said flange, and a hollow bulb extending into said collar and retaining said color disk in position.

6. A sign having an apertured wall, a bulb

closing the aperture therein, a color disk
at the inner end of the bulb, and a collar
carried by said bulb and retaining said color
disk in engagement with the latter, said col-
5 lar being exteriorly threaded to facilitate
the screwing of the collar into the aperture
in the wall.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

HUGH MULHOLLAND.

Witnesses:

CHAS. F. BENTON,
DAL G. EBERSOLE.

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