No. 769,139. PATENTED AUG. 30, 1904.

J. HOTCHNER.

ILLUMINATED SIGN.

APPLICATION FILED APR. 30, 1904.

NO MODEL.

Fig. 1.

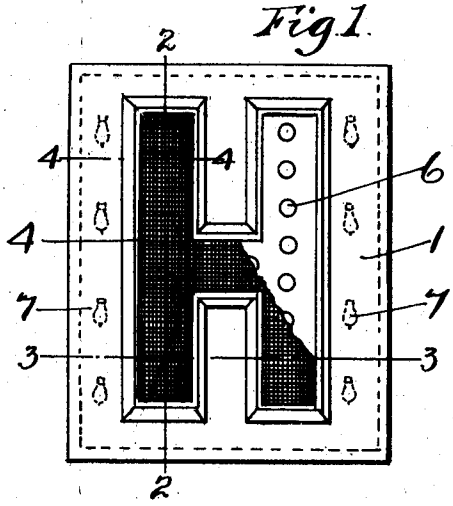


Fig. 2.

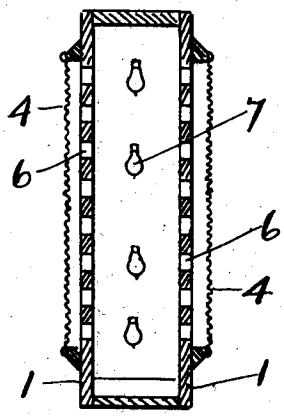


Fig. 3.

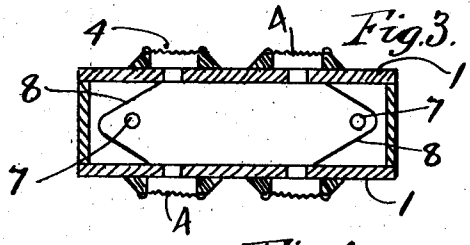


Fig. 6.

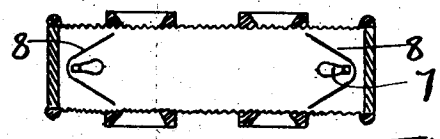


Fig. 5.

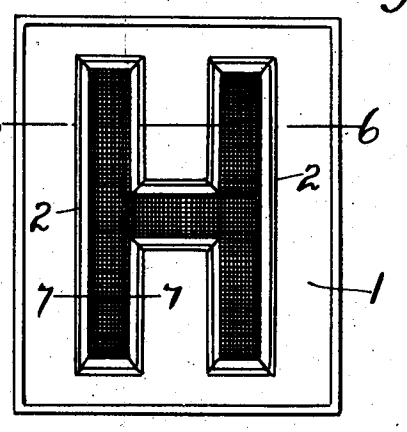


Fig. 4.

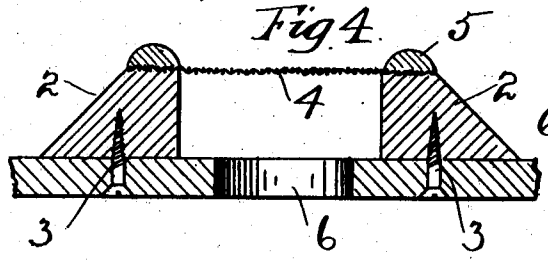
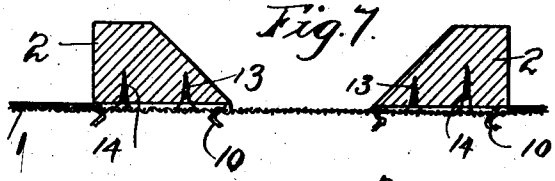


Fig. 7.



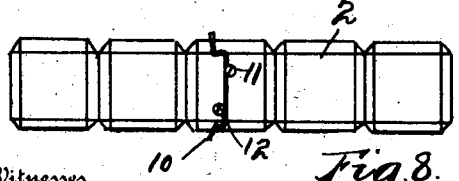
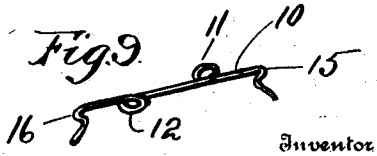


Fig. 8.

Fig. 9.



Witnesses

George L. Miner

Ed. F. Wyden

Inventor

Joseph Hotchner

By Howard E. Parlow

Attorney

No. 769,139. Patented August 30, 1904.

UNITED STATES PATENT OFFICE.

JOSEPH HOTCHNER, OF PROVIDENCE, RHODE ISLAND.

ILLUMINATED SIGN.

SPECIFICATION forming part of Letters Patent No. 769,139, dated August 30, 1904.

Application filed April 30, 1904. Serial No. 205,766. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HOTCHNER, a resident of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Illuminated Signs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to illuminated signs, and has for its object to construct raised characters for signs so as to allow the light to shine through the center portion of said characters from the back thereof and at the same time to give the character the appearance by day of being carved from solid material, the means of illuminating being entirely concealed.

Another object is to construct the raised portion of the character by securing strips of material, such as molding or the like, to the backing, thus forming the outline of the character having a hollow center portion, said center portion being formed on or covered by gauze wire that may be gilded the same as the rest of the character and through which wire light may shine for the purpose of illuminating the sign at night. Thus the characters are made to present a handsome and rich appearance by day and are capable of being brilliantly illuminated by night by means that are concealed and away from the action of the wind and weather.

With these and other objects in view the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a front view of my illuminated sign, showing the letter "H" with its center portion covered with gauze wire, said wire being partly broken away to show the holes through the backing of the sign through which light may enter to illuminate said letter. Fig. 2 is a longitudinal section of said sign on line 2 2 of Fig. 1. Fig. 3 is a transverse section on line 3 3 of Fig. 1, showing the light-reflector on the interior of the hollow box. Fig. 4 is an enlarged transverse section on line 4 4 of Fig. 1, showing the hollow portion of the letter and gauze wire across its outer face covering said hollow portion. Fig. 5 is a modification showing a front view of a letter constructed on a gauze-wire background, said letter being formed in outline by securing molding or strips of material on said background, the surface of the main portion of said background being painted or the mesh being otherwise filled in, leaving the gauze wire in the center portion of the letter only, the mesh of said center portion being left open to allow the light to shine therethrough. Fig. 6 is a transverse section on line 6 6 of Fig. 5, showing the lamps and means of reflecting the light therefrom. Fig. 7 is an enlarged view on line 7 7 of Fig. 5. Fig. 8 is a detail view showing the construction of a special design of sectional molding which may be used in the construction of the outline of letters, also illustrating the means of attaching said molding to the wire background. Fig. 9 is an enlarged view in detail showing a wire clamp or fastener by which the molding is secured to the wire background.

In the drawings, Figs. 1 to 4, inclusive, show one manner of constructing the backing, in which 1 is the background formed into the shape, preferably, of a thin hollow box having two broad flat faces and which may be constructed of wood or any other suitable material. On two of the faces of this box are secured raised characters, the letter "H" being shown in the drawings. This letter is formed in outline on the backing 1 by strips of molding 2 or the like, having beveled edges, said strips being secured to said backing by screws 3 or other suitable fastenings. Across the top face of this letter is secured gauze wire 4 or other similar material, which is held in place around the top edge of said letter by screws or nails, the heads of said fastenings then being covered by the molding 5. At 6 are holes or apertures made through the backing for the admission of light to the center portion of the letters from within the box. Inside of this box and on each of two of its sides is placed a row of electric lights 7 7, back of which lights is arranged a

beveled reflector 8 8, which may be made of metal or other suitable material. This reflector throws the light from said lamps toward the center of the hollow box and through the apertures 6, causing the face of the letter to be brilliantly illuminated. It is found in practice that the light as it comes through the apertures 6 into the hollow portion of the letter is diffused by the fine mesh of the gauze wire, and the light is nicely distributed over the face of the letter.

Figs. 5, 6, and 7 illustrate another manner of forming the background for the letters. The broad idea of constructing the raised letter in outline on the backing and providing the center portion of the letter with gauze wire, through which light may shine, is the same as the letter described above. In these figures, however, the construction of the background is illustrated as being made entirely of gauze or wire of a fine mesh, and to this wire background is secured the strips of material 2, which form the outline of the letters. After the letters are secured to this backing 1 the background is painted over or the mesh otherwise filled in all around said letters, making the surface opaque, the mesh in the gauze in the center portion of the letter not being filled in, but simply gilded to compare with the rest of the letter and to allow the light to shine through that portion only. In this letter (see Fig. 7) the molding may be beveled inwardly to the wire-gauze, which is located at the bottom of the hollow center portion of said letter. The molding or strip of material used in the forming of my raised sign-letters, as above described, is preferably constructed in sections, each section or block being partially separated from the whole strip, that may be easily broken apart, as illustrated in Fig. 8. These sections may be made in a great variety of forms, either spherical, rectangular, square, oblong, or, in fact, any shape desired. The different sections, owing to the construction of the strip, may be readily disengaged at the point desired, thus facilitating the construction of this herein-described form of letters.

To facilitate the attaching and detaching of these letters to and from the wire backing, I have constructed the fastening device. (Best illustrated in Fig. 9 at 10.) The fastener is preferably made of wire bent so as to form two eyes 11 and 12. These eyes are formed one on each side of the main portion of the wire, so that when the fastening-screws 13 and 14 (see Fig. 7) enter the wood therethrough they will be out of line with each other to prevent splitting the letter. The ends of the fastener are bent down, forming shoulders 15 and 16, which enter the mesh of the wire backing, and the letters are thereby securely held in place and may also be readily detached from said background.

My construction of an illuminated sign is extremely simple, inexpensive, and practical. By the arrangement of lights within the hollow box and the reflector behind them the light is thrown into the center of the letter, which is thus brilliantly illuminated. The lights thus arranged are completely hid from view when the sign is in position and always under cover and protected from the action of the weather, the essential feature of my construction being that the letters by day present the handsome and showy appearance of solid carved raised letters without showing any means of being illuminated by night. By securing these letters to a wire backing the sign is made very light in weight, one face of which may be hinged, if desired, so as to be swung open, making it possible to get at the interior of the sign for repairs without having to take the sign apart. The letters made by my improved construction will not warp or break, as the molding that forms their outline always runs lengthwise of the grain.

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

1. In a device of the character described, a background, raised characters secured to said background and gauze wire covering the middle portion of said characters for the purpose of illuminating said characters from the back thereof.

2. In a device of the character described, a backing, characters raised in outline on said backing and gauze wire covering the middle portion of said raised characters for the purpose of illuminating said characters from the back thereof.

3. In a device of the character described, a backing, characters raised in outline on said backing forming a hollow center portion, and gauze wire covering said hollow center portion for the purpose of giving said character the appearance of a raised carved letter and also to admit light therethrough from the back.

4. In a device of the character described, a backing, a character raised in outline by strips of material placed around its outer edge, said strips being secured to said backing forming a hollow center portion between the said strips, and gauze wire covering said hollow center portion for the purpose of giving it the appearance by day of a raised carved character and also to admit light therethrough from its back by night.

5. In a device of the character described, a backing constructed of gauze wire, a character raised in outline by strips of material placed around its outer edge, and means for securing said strips to said backing to form a hollow center portion between the said strips, the mesh of said wire background being filled in all around the characters leaving a gauze-wire

center portion for the purpose of admitting light from the back to illuminate the face of said characters.

6. In an illuminated sign, a hollow box, lamps within said box, a reflector for throwing the light from said lamps toward the center of the box, a raised character in outline on the face of said box, gauze wire covering the middle portion of said raised character for the purpose of allowing the light to shine therethrough and illuminate the face of said character.

7. In an illuminated sign, a hollow box, lamps within said box, means for reflecting the light from said lamps toward the center of said box, one or more of the faces of said box being covered with gauze wire forming a background, and characters raised in outline and secured to said background, the mesh of the wire background being filled in making the same opaque leaving openings only through the gauze wire in the center portion of the raised characters for the purpose of admitting light to illuminate the face of said characters.

8. In an illuminated sign, a hollow box, lamps within said box, means for reflecting the light from said lamps toward the center of said box, one or more of the faces of said box being covered with gauze wire forming a background, and characters raised in outline on said background by strips of material leaving a hollow center portion, the mesh of the wire background being filled in making the same opaque, leaving openings only through the gauze wire in the center portion of the raised characters for the purpose of admitting light to illuminate the face of said characters.

In testimony whereof I have hereunto set my hand this 29th day of April, A. D. 1904.

JOSEPH HOTCHNER.

In presence of—
HOWARD E. BARLOW,
E. I. OGDEN.