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G. H. HAMILTON ET AL

1,820,797

AISLE LIGHT

Filed Dec. 26, 1929

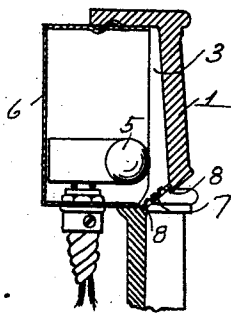
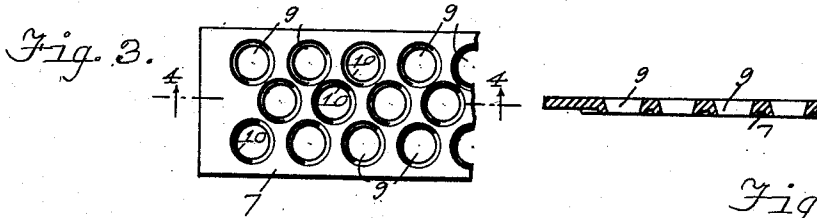
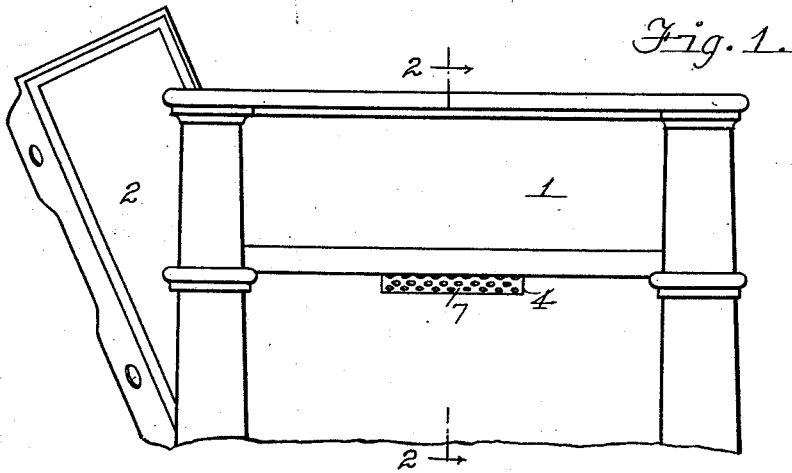


Fig. 4.

Fig. 2.

Witness:
John Braddock

INVENTORS
George H. Hamilton
Edward W. Chapman
BY
Rice and Rice
ATTORNEYS

UNITED STATES PATENT OFFICE

GEORGE H. HAMILTON AND EDWARD W. CHAPMAN, OF GRAND RAPIDS, MICHIGAN,
ASSIGNORS TO AMERICAN SEATING COMPANY, OF GRAND RAPIDS, MICHIGAN, A
CORPORATION OF NEW JERSEY

AISLE LIGHT

Application filed December 26, 1929. Serial No. 416,542.

The present invention relates to lighting means, particularly such as are employed for lighting the aisles of theatres and the like; and its object is, generally, to provide an aisle light improved in certain respects hereinafter appearing; and more particularly, to provide an improved lamp chamber having a wall perforated for the emission of light.

This object is attained by, and the invention finds preferable embodiment in, the structure hereinafter particularly described in the body of this specification and illustrated by the accompanying drawings, in which:

Figure 1 is an elevational view of the outer side of the upper portion of a seat or chair adjacent a theatre aisle, and provided with an aisle light;

Figure 2 is a vertical sectional view thereof taken on line 2—2 of Figure 1;

Figure 3 is an inner-side view of the perforated bottom plate of the lamp chamber; and

Figure 4 is a longitudinal sectional view of the same, taken on line 4—4 of Figure 3.

In these drawings the lighting means is shown applied to the aisle-side of a theatre seat. This seat has the upright end or supporting member 1 (preferably a metal casting) and the back support 2. This seat end has formed therein a chamber 3 having an opening (the elongated light-emitting slot) 4 extending downwardly and outwardly from the chamber to the outer side of the support.

In this chamber is an electric lamp 5 which, in the particular embodiment of the invention shown, is mounted in a sheet metal casing 6 removably seated in said chamber. A cover plate 7, preferably a sheet metal stamping, is removably seated on the ledges 8 of the seat end 1 adjacent the opening 4, this plate thus extending across the said opening. The said plate is perforated, having numerous round openings 9 therethrough, these openings being disposed in rows, the openings in one row being in staggered relation with those in the adjacent rows as shown, and being positioned so close together that

the rays of light passing therethrough from the lamp will be blended thus casting no shadows on the aisle floor, the imperforate portion of the plate however serving to diminish to a desired degree the amount of light shed on the floor. These openings 9 desirably have surrounding short peripheral flanges 10 extending from the outer surface of this plate 7.

The disposition of the round tapered or conical openings staggered in rows permits more light to be shed through the plate than could be emitted through a plate of the same area having the openings arranged in any other manner, and the rays of light issuing from the several openings will more perfectly blend with one another, thus preventing shadows being cast on the floor of the aisle and illuminating an area of the aisle more uniformly than can be done by light emitting openings of any other shape, whether arranged in staggered relation or uniform parallel rows or any other arrangement. The light emitting openings in their staggered relation are arranged so that the adjacent rows have a common intervening wall.

The peripheral flanges which surround the light emitting openings at the outer ends increase the thickness of the plate at the openings, so that a plate of extreme thinness and cheapness can be used and yet at the same time possess the advantages of a thick and strong plate so far as the light emitting openings are concerned. When the plate is thick at the light emitting openings the light shed through an opening in the plate is directed in a more nearly straight line than if the same opening were formed in a thin plate. It will thus be seen that the peripheral flanges surrounding the light emitting openings increase the thickness of the walls of the opening and strengthen the plate and at the same time increase the effectiveness in emitting light rays.

When the conical light emitting openings taper outwardly, more parallel rays from the lamp reach the wider or inner end of the opening and are reflected or directed downwardly on the floor, than is possible with

light emitting openings of a uniform diameter equal to the diameter of the outer ends of the conical openings. Thus a thin and cheap plate having conical openings with peripheral flanges is strong enough for practical use and yet properly diffuses the light without casting shadows and obviates the necessity of employing a much thicker plate, which is necessary when the light emitting openings are circular and of uniform diameter at the inner and outer faces of the plate.

What is claimed is:

A theatre seat having a chamber containing a lamp and provided with a downwardly extending opening, and a plate extending across the opening and having light emitting openings therein arranged in rows, the openings in the rows being staggered and arranged close together with the adjacent portions of the openings having a common separating wall, said light emitting openings being tapered outwardly and the plate being provided at the outer ends of the openings with peripheral flanges projecting from the outer face of the plate.

In testimony whereof we have hereunto set our hands at Grand Rapids, Michigan, this 16th day of December, 1929.

GEORGE H. HAMILTON.
EDWARD W. CHAPMAN.