ELEVATOR ANTI-TRIP LIGHT

Filed April 3, 1964

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Fig. 2

Fig. 3

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INVENTOR.

by

March 15, 1966
F. A. HAJNIK

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This invention relates to a novel and useful elevator anti-trip light and more specifically to an apparatus designed primarily for the purpose of providing an illuminated area immediately adjacent the edge portion of the floor of an elevator defining the lower extremity of the ingress and egress opening therein for receiving and discharging passengers therethrough.

While it is seldom that a person entering or leaving an elevator finds it difficult to be sure of his footing if the floor of the elevator is substantially coplanar with the adjacent flooring of the building in which the elevator is disposed, should the elevator floor be even slightly out of horizontal alignment with the adjacent flooring of the building, a passenger entering or leaving the elevator may experience difficulty in having to suddenly adjust to the different elevation of the flooring on which he is supported.

This sudden unexpected adjustment demand which is experienced by a large percentage of the people who ride elevators can cause an elevator passenger to lose his footing and fall. Further, even though the floor of an elevator may be coplanar with the adjacent flooring of the building in which the elevator is disposed, past experience sometimes causes elevator passengers to suddenly remember a previous fall which can result in the passenger becoming unsure of his footing and to fall even though the elevator may be coplanar with the adjacent floor of the building.

It is accordingly the main object of this invention to provide an elevator anti-trip light of the type including means for forming an illuminated strip at the edge of an elevator floor defining the lower limit of the doorway formed in the elevator in order that passengers may be visually forewarned if the elevator floor is not coplanar with the adjacent building flooring.

Another object of this invention, in accordance with the immediately preceding object, is to provide an elevator anti-trip light which will call an elevator passenger’s attention to the edge of the flooring of the elevator defining the lower limit of the doorway opening in the elevator even though the elevator flooring may be coplanar with the adjacent flooring of the building in which the elevator is disposed in order that the elevator passengers may feel confident of their footing as they enter and depart from the elevator.

Still another object of this invention is to provide an elevator anti-trip light constructed in a manner whereby it may be readily secured to existing elevators as an attachment therefor.

A further object of this invention is to provide an elevator anti-trip light constructed in a manner whereby it is adapted for securement to substantially all types of elevators.

A final object of this invention to be specifically enumerated herein is to provide an elevator anti-trip light in accordance with the preceding objects which will conform to conventional forms of manufacture, be of simple construction and dependable in operation so as to provide a device that will be economically feasible, long-lasting and relatively troublefree.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a fragmentary perspective view of a conventional form of elevator shown with the elevator anti-trip light mounted thereon;

FIGURE 2 is a horizontal sectional view of the elevator anti-trip light taken substantially upon a plane passing along the upper surface of the lower portion of the housing for the light source of the anti-trip light;

FIGURE 3 is a fragmentary vertical sectional view taken substantially upon a plane passing through the center of the anti-trip light and the associated elevator with the elevator shown positioned in horizontal alignment with a floor construction of a building; and

FIGURE 4 is a perspective view of a replaceable portion of the anti-trip light.

Referring now more specifically to the drawings the numeral 10 generally designates a conventional form of elevator which includes a floor 14 and one upstanding side wall 16 having an opening 18 formed therein whose lower extremity is defined by the upper surface of the floor or flooring 14.

From FIGURE 3 of the drawings it may be seen that the elevator 10 may be operated so as to horizontally align the upper surface of the floor 14 with the upper surface of an adjacent floor 20 of a building in which the elevator 10 is disposed.

The elevator anti-trip light of the instant invention is generally referred to by the reference numeral 22 and includes a light source enclosing housing generally referred to by the reference numeral 24. The housing 24 is tubular and includes upper and lower halves 26 and 28 which are secured together in any convenient manner such as by fasteners 30. A pair of depending mounting brackets 32 are supported from the lower surface 34 of the flooring 14 in any convenient manner such as by fasteners 36 and include laterally directed support flanges 38 at their lower end portions on which the housing 24 is secured in any convenient manner.

The housing 24 encloses an elongated lighting tube 40 of conventional incandescent or fluorescent design and it is to be understood that the lighting tube 40 is to be operatively connected to any suitable source of electrical potential with switch means operatively disposed between said source of electrical potential and the lighting tube for controlling the operation of the latter.

The lower half 28 of the housing 24 has an upwardly opening notch 42 formed in the front side wall 44 thereof. One end of an elongated panel 46 is secured in the notch 42 and clampingly engaged between the confronting surfaces of the upper and lower halves 26 and 28 of the housing 24 between which the panel 46 is received. The panel 46 is longitudinally smoothly curved as at 48 so that its end remote from the housing 24 is substantially vertically disposed and passes upwardly along the front edge 50 of the floor 14. The panel 46 is secured to the front edge 50 in any convenient manner such as by fasteners 52 and it is to be noted that the panel 46 includes characteristics enabling it to transmit light rays therethrough. The curvature of the panel 46 as at 48 and the index of refraction of the material from which the panel 46 is constructed is such that light rays entering the end edge 54 of the panel 46 disposed within the housing 24 will be transmitted longitudinally through the panel and to the remote end edge 56 thereof which faces upwardly.

Although the panel 46 could be made of sufficient length so as to project upwardly to a point substantially horizontally aligned with the upper surface of the floor 14, inasmuch as such an elevated upper end edge of the panel 46 would be continuously marred by persons walking there-
on when entering or leaving the elevator 10 the panel 46 terminates at its end edge 56 below the upper surface of the floor 14. However, a transparent extension strip 58 is provided and is secured to the edge or face 50 in any convenient manner such as by fasteners 60 and includes a lower edge portion 62 which is in vertical alignment with the upper edge portion 56 and receives light rays emitting from the edge portion 56. Therefore, the extension strip 58 forms an extended face of the panel 46 which may be readily replaced as its upper edge 64 becomes overly scarred by persons stepping thereon when entering or leaving the elevator 10.

As can best be seen from FIGURE 2 of the drawings the upper half 26 of the housing 24 may be removed so as to expose the illuminating tube 40 in order that the latter may be cleaned or replaced as desired.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed is as follows:

1. In combination with an elevator including a floor and at least one upstanding side wall projecting upwardly from one side of said floor and having a door opening formed therein, an elevator anti-trip light comprising a panel of transparent material adapted to transmit light rays edgewise therethrough and including a first edge portion, said panel being supported from said elevator which said first edge portion disposed upright and extending along said one side of said floor and with the end edge of said one edge portion facing upwardly, said panel depending downwardly from said end edge, a light source supported from said elevator and positioned so as to direct light into the end edge of said panel opposite the first-mentioned end edge thereof.

2. In combination with an elevator including a floor and at least one upstanding side wall projecting upwardly from one side of said floor and having a door opening formed therein, an elevator anti-trip light comprising a panel of transparent material adapted to transmit light rays edgewise therethrough and including a first edge portion, said panel being supported from said elevator with said first edge portion disposed upright and extending along said one side of said floor and with the end edge of said first edge portion facing upwardly, said panel depending downwardly from said end edge and smoothly curving inwardly under said floor, a light source supported from said elevator and positioned so as to direct light into the end edge of said panel opposite the first-mentioned end edge thereof, the first-mentioned edge of said panel being disposed below the upper surface of said floor, an upright extension strip also constructed of transparent material remotely supported from said floor with its lower edge above and vertically aligned with the first-mentioned end edge of said panel and its upper edge disposed substantially flush with the upper surface of the adjacent portions of said floor.

3. In combination with an elevator including a floor and at least one upstanding side wall projecting upwardly from one side of said floor and having a door opening formed therein, an elevator anti-trip light including a light source supported from said elevator and below said floor, means defining an upwardly facing transparent surface disposed adjacent and extending along said one side of said floor and including means operable to transmit light from said light source to said surface.

4. In combination with an elevator including a floor and at least one upstanding side wall projecting upwardly from one side of said floor and having a door opening formed therein, an elevator anti-trip light including a light source supported from said elevator and below said floor, means defining an upwardly facing transparent surface being recessed below the upper surface of the adjacent surfaces of said floor, an upright extension strip constructed of transparent light transmitting material remotely supported from said floor with its lower edge extending along, disposed above and vertically aligned with said transparent surface and having its upper edge disposed substantially flush with the upper surface of the adjacent portions of said floor.

5. The combination of claim 3 wherein said transparent surface is of a length approximately equal to the width of said door opening.

6. The combination of claim 1 wherein said first edge portion of said panel is secured to said one side of said floor.

7. In combination with an elevator including a floor and at least one upstanding side wall projecting upwardly from one side of said floor and having a door opening formed therein, an elevator anti-trip light comprising a panel of transparent material adapted to transmit light rays edgewise therethrough and including a first edge portion, said panel being supported from said floor with said first edge portion disposed upright and extending along said one side of said floor and with the end edge of said first edge portion facing upwardly, said panel depending downwardly from said end edge and smoothly curving inwardly under said floor, a light source supported from said floor and positioned so as to direct light into the end edge of said panel opposite the first-mentioned end edge thereof, the first-mentioned edge of said panel being disposed below the upper surface of said floor, an upright extension strip also constructed of transparent material remotely supported from said floor with its lower edge above and vertically aligned with the first-mentioned end edge of said panel and its upper edge disposed substantially flush with the upper surface of the adjacent portions of said floor, said first edge portion of said panel being secured to said one side of said floor, and said extension strip also being secured to said one side of said floor.

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