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LIGHTING FIXTURE FOR SHOW WINDOWS

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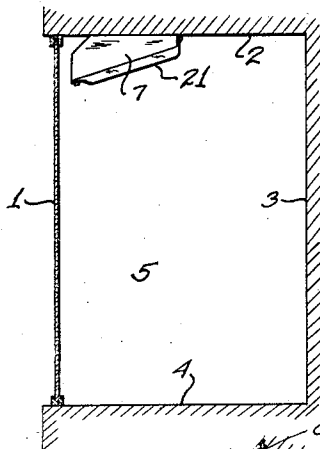


FIG. 1.

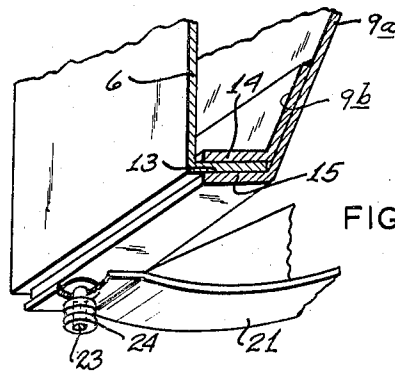


FIG. 4.

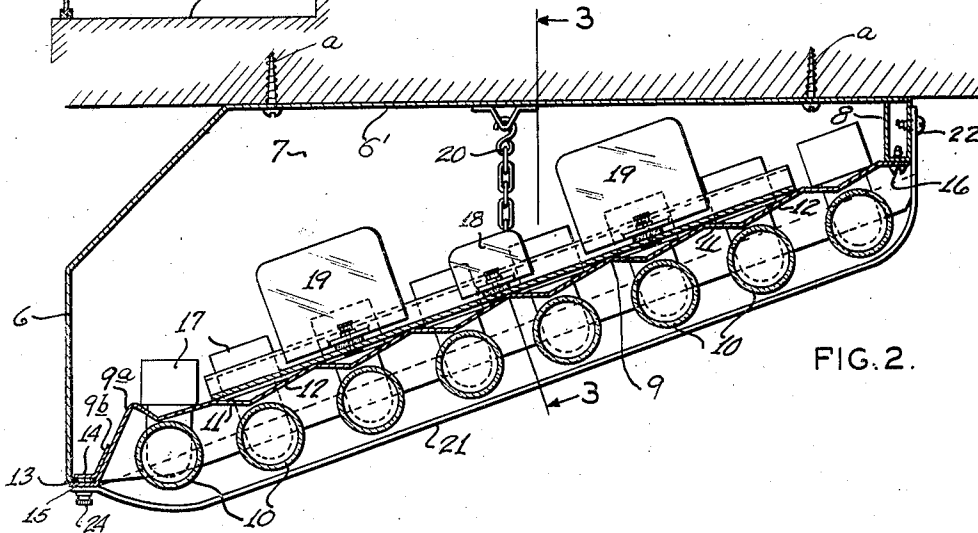


FIG. 2.

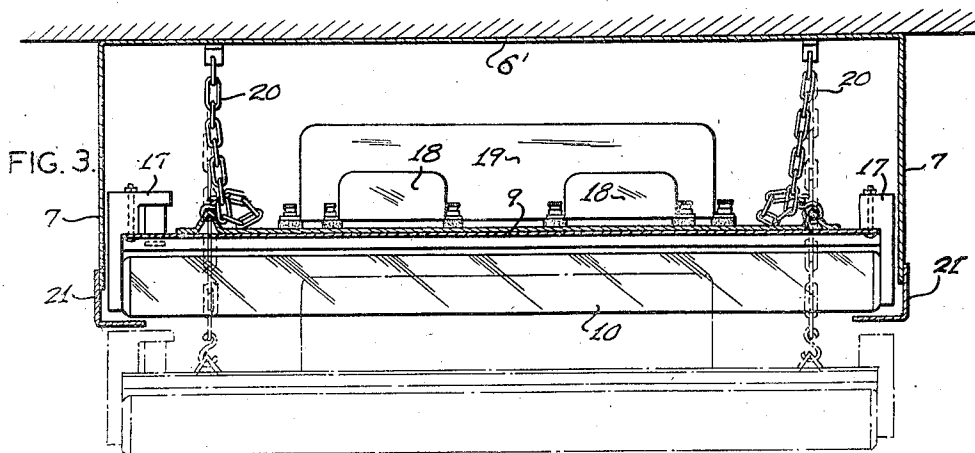


FIG. 3.

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LIGHTING FIXTURE FOR SHOW WINDOWS

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2 Claims. (Cl. 240—6)

This invention relates to certain new and useful improvements in lighting fixtures for show windows, the peculiarities of which will be hereinafter fully described and claimed.

The main objects of this invention are to provide means, first, for the efficient diffusion of the light from fluorescent lamps over the entire area it is desired to illuminate; second, for adjustably tilting reflectors disposed over each lamp to an appropriate angle for the purpose of properly diffusing the light downwardly into the show window itself and shielding the lamps to avoid reflecting the light outwardly through the glazed window; third, for guarding each lamp, so that if the lamp for any reason should come loose in the lampholder, it could not possibly fall down; fourth, for so mounting the guard that it must always be removed for replacing the lamp; fifth, for fastening auxiliaries to the reflector for preventing the reflector from falling if its fastening should become loosened; sixth, for allowing the reflector and its connected parts to be lowered as a unitary structure for inspection and replacement of auxiliaries or parts connected with the reflector, while it is still supported and guarded in hanging position; and other features hereinafter described and claimed.

In the accompanying drawing in which like reference numerals indicate corresponding parts:

Fig. 1 represents a vertical section of a show window with its glass front and my lighting fixture secured to the ceiling near the front and tilted toward the back wall;

Fig. 2 is an enlarged vertical section of my lighting fixture casing secured to the ceiling in section, showing the reflector tilted towards the back wall and fluorescent lamps in cross section supported below the lampholding reflector carrying the auxiliaries, and the lamp guards secured as to the casing;

Fig. 3 is a similar section on the line 3—3 of Fig. 2, showing the lamps lengthwise as mounted below the reflecting bottom wall of the fixture with side guards and auxiliaries, and indicating the position when the guards are removed and the reflector and parts carried thereby lowered and hanging on supporting chains for inspection and replacement; and

Fig. 4 is an enlarged detailed cross section of the lower front portion of the casing and adjacent end of a side guard as secured thereto and partly broken away to show the fastening screw.

Referring now more in detail and by reference characters to the drawing, 1 designates the glass front of a show-window, and 2, 3, 4, and 5 the

ceiling, rear wall, bottom wall, and end walls, respectively, of a substantially standard show-window.

My new lighting fixture is preferably in the form of a suitably elongated box-like casing or shell preferably constructed of sheet metal and comprising a top wall 6', a relatively deep front wall 6 preferably of angular section, as best seen in Figure 2, a relatively shallow rear wall 8 preferably of U-formation in cross-section, and opposed end walls 7 tapering upwardly from the front wall 6 to the rear wall 8, so as to accordingly tilt or bevel a reflector-plate 9 forming the bottom wall of the fixture casing or shell.

In practice, the lighting shell is disposed in suitable adjacency to the window-front 1 and is fixed dependingly to the window-ceiling 2 as by means of suitable screws or other fastening members *a* engaging its top wall 6', as best seen in Fig. 2.

The reflector-plate 9, it may be here stated, is provided preferably with a baked enamel surface and is bent or deformed longitudinally to include a series of sets of angularly disposed connected relatively narrow strips 11 and relatively wider strips 12, the narrow strips 11 being crosswise disposed in approximate horizontal relation to the top wall 6' and the wider strips 12 being disposed crosswise in oblique relation to the top wall 6', or, in other words, the strips 11 may be compared to steps and the strips 12 may be compared to oblique risers therebetween, and the bend or apex between the rearward margin of each strip 11 and the forward margin of each strip 12 being presented downwardly, for purposes presently appearing.

At its forward margin and preferably throughout its length, the reflector plate 9 is formed with what may be described as an angular extension 9^a having, in turn, a forwardly projecting flange 15, and fixed to the plate portion 9^a, is an angular member 9^b, one portion 14 of which is arranged for co-operation with the flange 15 in the provision of a groove for accommodating a lateral flange 13 presented rearwardly from the lower end of the casing front wall 6, the plate 9 at its upper margin being extended to project beneath the bight of the wall 8, to which it is flatwise fixed as by means of a series of fastening members 16.

Suitably fixed to and at the ends of, and depending from, the reflector plate 9, is a series of lampholders or terminals 17 of standard structure for supporting a series of suitably spaced parallel fluorescent lamps or other suitable lamp-tubes

10 lengthwise of the lighting shell or casing and preferably beneath the apices of the plate strips 11, 12, and it may now be remarked that, by reason of the peculiar angular disposition of the reflector strips 11, 12, the rays of light emanating from the lamps or light-tubes 10 are diffused downwardly and rearwardly therebetween rather than outwardly toward the glass front 1. Thus the light-rays from the lamps 10 are deflected and diffused over substantially the whole area of the bottom wall 4 and rear wall 3 of the show-window and the articles displayed therein, the deep casing front wall 6 also shielding the lamps 10 from reflecting outwardly.

The reflector-plate 9 also carries on its upper surface suitable auxiliaries, such as a compensator 18 and ballast 19 suitably disposed on each side of a longitudinal central line of the reflector, on which line is secured the lower end of a chain connection 20, the upper end of which is secured to the top wall 6' of the casing, as shown in Figs. 2 and 3. These chain connections 20 at respective ends of the reflector-plate 9 are disposed in a slack condition, as shown in Fig. 3, while the reflector-plate 9 is held in its normal position by the engagement as described of its lateral margins with the front and rear walls 6 and 8, respectively, of the casing, from which the plate 9 may be readily detached on removal of the several securing-screws 16. And when the reflector-plate 9 is disengaged from the shell front and end walls 6 and 8 and lowered upon the chain connections 20, said connections 20 support the reflector-plate 9 and its auxiliaries in a suspended and balanced position at a suitable distance below the casing to facilitate inspection and replacement of any parts thereon, as indicated by dot-dash lines in Fig. 3.

In order to prevent any possible loosening of the several lamps 10 from their lampholders 17 and their falling into the show window and articles disposed therein, I provide a safety device for guarding the lamps 10 from such accidental disengagement. These guards consist of strips of angled or other suitable shape 21, the vertical leg of which is disposed adjacent the respective end wall 7 and the horizontal leg extends under the respective end of the series of lamps, as shown in Fig. 3. Any accidental disengagement of said lamps will thus be guarded by these strips 21. When it is necessary to remove any of the lamps 10, however, these guarding strips may be easily removed by disengaging their respective upper ends 22 from its fastening screw connection with

the shallow upper wall 8, and detaching the respective lower ends of the guard strips from a vertical stem 23, Fig. 4, depending from the said secondary flange 15 and having a nut 24 threaded thereon to detachably secure said lower end of each guard strip. The lamps 10 are thus safely guarded from accidental disengagement and may be easily removed for replacement when necessary after removing said guards.

I do not confine myself to the exact construction herein shown except by the appended claims.

While the fixture as disclosed herein has been illustrated and described as being secured directly to a ceiling, it should be understood that the fixture may be secured to the lower end of a suitable hanger, stem or bracket element for spacing the fixture a suitable distance below the ceiling, which spacing may be desirable in certain installation conditions without departing from the intended scope of this invention.

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

1. In a lighting-fixture, a reflector-plate including, a series of sets of angularly disposed connected strips, means comprising a casing having a shallow rear wall and a deeper front wall for suspending said plate within, and in oblique relation to the ceiling of, a show-window, the strips of one set having a greater width than the strips of the other set, the narrow strips being disposed in stepped horizontal planes parallel with the window-ceiling and some of the apices between said strips being presented downwardly, and means for suspending light-tubes from said plate in spaced parallel relation with said apices.

2. A lighting-fixture comprising a reflector-plate including a series of sets of angularly disposed connected strips, means comprising a casing having a shallow rear wall and a deeper front wall for suspending said plate within, and in oblique relation to the ceiling of, a show-window, the strips of one set having a greater width than the strips of the other set, the narrow strips being disposed in stepped horizontal planes parallel with the window-ceiling, and the strips of the other set being disposed in oblique relation to the window-ceiling, and alternating apices between said strips being presented downwardly, light-tube terminals supported by the plate, and light-tubes mounted upon the terminals and disposed in spaced parallel relation with and below said apices.

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