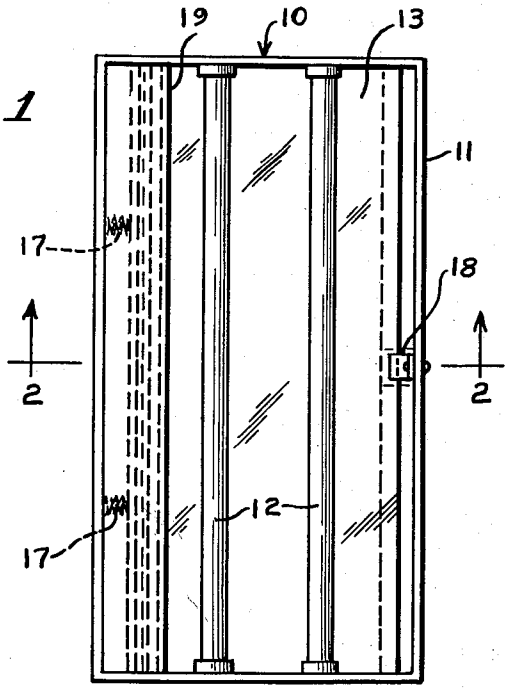
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LIGHTING FIXTURE

Filed June 5, 1962

Fig. 1



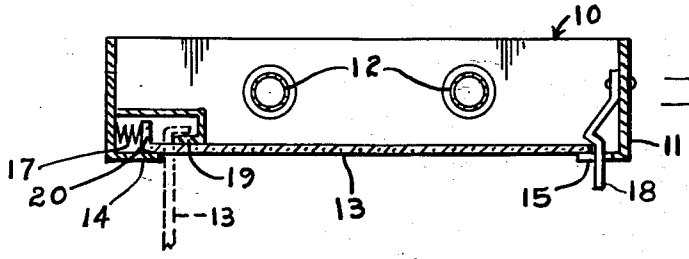


Fig. 2

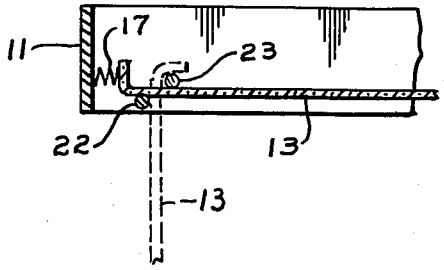


Fig. 3

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LIGHTING FIXTURE

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This invention relates to a lighting fixture of the type wherein one or more lights are mounted on a ceiling and are provided with a horizontally disposed light-transmitting panel beneath them through which light emitted therefrom passes into a room.

There is a problem in designing such fixtures to be simple in construction and inexpensive to manufacture and at the same time to permt speedy and convenient replacement of burned-out bulbs. It is especially desirable that such fixtures be designed so that bulbs can be replaced without the complete removal of their light-transmitting panels since the additional motions required in ascending and descending a ladder with a removable panel are time-consuming and increase the probability of breakage.

It is, therefore, an object of this invention to provide a lighting fixture of simple construction wherein access to bulbs contained therein can be effected expeditiously and without the necessity of removing the light-transmitting panel from the fixture.

The invention will be described with reference to the accompanying drawings, in which:

FIG. 1 is a top plan view of a lighting fixture according to the invention,

FIG. 2 is an enlarged sectional view taken on line 2—2 of FIG. 1, and

FIG. 3 is a partial sectional view of a modification of the embodiment of FIGS. 1 and 2.

Referring to the drawings, there is shown lighting fixture 10, which is adapted to be mounted on or recessed within the ceiling of a room. Fixture 10 comprises frame 11, fluorescent bulbs 12 and light-transmitting panel 13, which may be formed of, for example, strengthened glass or transparent plastic. Panel 13 is supported at two opposite edges in its closed position by horizontal supports which, in the illustrated embodiment, comprise flanges 14 and 15, forming part of frame 11. Supplementary flange 19 is provided for supporting panel 13 in its open position, as indicated by the broken line of FIG. 2. Springs 17 press against one edge of panel 13, and spring clip 18 presses against the opposite edge to maintain the panel centered in the fixture and in contact with flanges 14 and 15.

As illustrated in FIG. 2, when panel 13 is in its closed position, it is held down on flanges 14 and 15 by means of supplementary flange 19 and by means of spring clip 18, and is maintained in position laterally between springs 17 and spring clip 18. When it is desired to lower the panel to the open position illustrated by the broken line, it is necessary merely to press lower tip of spring clip 18 in the direction of springs 17, thereby moving panel 13 to the left in FIG. 2, compressing springs 17 until the right hand edge of the panel passes the left hand edge of flange 15. This end of the panel will then fall due to the influence of gravity, while the left hand edge, or flange edge, of the panel will rotate, and panel flange 20 will engage supplementary flange 19, thereby suspending the panel. While panel 13 is thus suspended, bulbs 12 may be replaced. When the bulbs have been replaced, in order to close the fixture it is necessary merely to lift the free edge of the panel while exerting a slight force in the direction of springs 17. When the free edge reaches the lower surface of flange 15, spring clip 18 is moved toward the left, thereby forcing panel 13 to the left to clear the edge of flange 15 as it is moved upwardly by hand. When the

panel has passed above flange 15, spring clip 18 is released, and the panel becomes centered between spring clip 18 and springs 17.

It will be seen that as long as the horizontal distance between frame flange 14 and supplementary flange 19 is not greater than the sum of the thickness of panel 13 at the flange end plus the length of panel flange 20, the panel will not fall from the frame while in the open position illustrated by the broken lines, and that in order for the panel to hang as illustrated, this horizontal distance must be at least equal to the thickness of the panel. The horizontal distance between the flanges if preferably, although not necessarily equal to the thickness of the panel in the vicinity of the panel flange in order to prevent horizontal movement of the flange end of the panel when the panel is in the open position. It will be found advantageous for the vertical distance between flanges 14 and 19 to be substantially the same as the thickness of the panel at the flange end. In this way, the flange end of the panel will be held down by flange 19 when the panel is in the closed position and is less likely to be dislodged when it is in positions intermediate between the open and closed positions. By constructing flanges 14 and 19 with either horizontal or vertical separation slightly greater than the thickness of panel 13, it will be made possible to remove the panel from frame 11 at such intermediate positions, even though it will not be removable at either the open or closed positions. It may be advantageous for flanges 14 and 19 to be slightly resilient, in order to prevent breakage of the panel when it is allowed to fall freely from the closed to the open positions.

From the foregoing description it will be apparent that modifications may be made in the illustrated lighting fixture within the scope of the invention. For purposes of strength and convenience of manufacture, panel 13 is supported by flanges. It will be appreciated that the critical parts of the frame flanges which act upon panel 13 are the edges thereof. Accordingly, the flanges may be replaced, for example, as illustrated in FIG. 3, by rods 22 and 23 or other appropriate supports. In addition, flange 20 of panel 13 may be modified. It will be apparent that it is not necessary that there be a continuous flange extending along the entire edge of panel 13. It will be sufficient if there are provided means extending outwardly away from the panel surface for engaging the support members of the frame. If desirable for purposes of increased strength, the panel may be provided with a metal rim, and the panel flange, or panel support means, may be a part of the rim.

What is claimed is:

1. A lighting fixture comprising a light source, a light-transmitting panel, and at a level below that of said light source an upper support and a lower support, said supports being spaced apart both horizontally and vertically, said panel passing between said supports and being rotatable through vertical angles between a closed position and an open position, said panel having panel support means near one edge thereof extending outwardly away from one surface thereof, said lower support engaging said panel from beneath near said means when said panel is in said closed position with said means extending upwardly from said panel, said upper support engaging said means when said panel is in said open position, said upper and lower supports being separated horizontally by a distance less than the sum of the length of said means and the thickness of that part of said panel adjacent thereto and vertically by a distance substantially equal to the thickness of said panel in the vicinity of said panel support means, such that said upper support prevents upward movement of the end of said panel near said means when said panel is in said closed position, a third support beneath said panel near its edge opposite said means, and springs resiliently maintaining said panel above said

lower support and said third support in said closed position.

2. A lighting fixture according to claim 1 in which said upper and lower supports are separated horizontally by a distance equal to the thickness of said panel in the vicinity of said panel support means, such that horizontal movement of the end of said panel near said means is prevented when said panel is in said open position.

3. A lighting fixture comprising a light source, below said light source a light-transmitting panel having a transversely extending flange near one edge thereof, a frame supporting said light source and said panel, said frame being open at the bottom and having located at the bottom near one side thereof an upper support and a lower support spaced from one another both horizontally and vertically by distances each substantially equal to the thickness of said panel in the vicinity of said flange, said panel passing between said supports and being movable between a closed position and an open position, said lower support together with a third support located at the opposite side of said bottom of said frame engaging the bottom of said panel in said closed position, said upper support engaging said panel flange to support said panel when said panel is in said open position, and spring means located between said panel and the respective said opposite sides of said frame and maintaining said panel in contact with said supports.

4. A lighting fixture comprising a light source, a light-transmitting panel therebeneath having a single transversely extending flange perpendicular to said panel and integral therewith at one edge thereof, a frame supporting said light source, said frame having first and second sides opposite one another, each side being provided with a first flange extending in the direction of the interior of said frame, the first of said sides having a second flange located above said first flange and extending in the direction of the interior of said frame but having a lower portion extending from the innermost edge of said second flange in the direction of said first side of said frame and terminating at an edge spaced apart both horizontally and vertically from the innermost edge of said first flange of said first side by distances each substantially equal to the thickness of said panel in the vicinity of said panel flange, said panel passing between said flange edges and movable between a closed position and an open position, said first flanges engaging the bottom of said panel in said closed position, and said second flange engaging said panel flange when said panel is in said open position, and spring means located between said panel and each of said opposite sides resiliently maintaining said panel above the said first flanges.

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