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LIGHTING AND SOUND ABSORBING FIXTURE

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Fig. 1

Fig. 2

Fig. 3

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LIGHTING AND SOUND ABSORBING FIXTURE

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This invention relates to lighting fixtures and more particularly to lighting fixtures having acoustical properties.

An object of this invention is to integrate the lighting and acoustical facilities in a room in order to effect a substantial improvement in room environment.

Another object is to provide lighting and acoustical facilities which do not require expensive alterations of existing structures or extensive labor to install.

A further object is to provide a self-contained lighting and acoustical unit utilizing a common mounting means.

A further object is to provide a self-contained lighting and acoustical unit which requires but one outlet box.

These and other objects, advantages and features are attained in accordance with the principles of our invention by providing a lighting unit with an inverted canopy having sound-absorbing material disposed therein, the side walls of the canopy serving as reflectors for the light sources of the lighting unit and being a definite part thereof.

In the specific embodiment of the invention shown in the accompanying drawings,

Figure 1 is an exploded view of one embodiment of a fixture of this invention.

Figure 2 is a partial transverse sectional view thereof.

Figure 3 is a side elevation view thereof.

Basically, the specific embodiment of the lighting fixture of this invention shown in the drawing comprises three main components, viz., a mounting plate 10, an inverted canopy 12 and a lighting unit 14, the canopy being wider than the lighting unit. The mounting plate 10, which is attached to a mounting surface 16 by bolts 18, has a plurality of bolts 20 depending therefrom. The inverted canopy 12 and the lighting unit 14 are supported from the mounting plate 10 by the bolts 20 which extend through the inverted canopy 12 and the chassis 22 of the lighting unit 14 and which are provided with nuts 24.

The side walls 26 of the inverted canopy 12 are curved sheets of sound-transmitting material, such as perforated metal plates for example. A body of sound-absorbing material 28, such as glass fibers or cork for example, is disposed within the inverted canopy along the side walls 26 thereof.

The lighting unit 14 comprises a channel chassis 22, and plates 30 mounted on the ends of chassis 22 and a sub-

stantially V-shaped reflector 32 which lies beneath chassis 22 and which is supported at each end by a spring latch 34 mounted on the inside face of each end plate 30, as is shown in U. S. Patent 2,525,553. Lampholders 36, one of which is shown in Figure 2, mounted on the inside face of each end plate 30, support fluorescent lamps 38. Light-diffusing panels 40 enclose the bottom and sides of the lighting unit 14. Each light-diffusing panel 40 is supported along one of its longitudinal edges by a panel-supporting strip 42 attached to the V-shaped reflector 32 along the apex edge thereof. The other longitudinal edge of each light-diffusing panel 40 is bent back on itself and is hung on tabs 44 mounted on the inside face of the end plates 30. The panels 40 are securely retained in position by latches 46 pivotally mounted on the inside face of end plates 30. The top of the lighting unit 14 directly above the lamps 38 is open. Thus the side walls 26 of the inverted canopy 12 serve as reflectors for that portion of the light from the lamps which radiates upward.

Although a specific type of lighting unit has been shown and described in the specific embodiment of the lighting fixture of this invention, it will be apparent to those skilled in the art that other types of lighting units may be readily adapted for integration with the acoustical unit without departing from the spirit of the invention.

What we claim is:

1. A lighting fixture comprising: an inverted canopy having light-reflecting, sound-transmitting sides curved inwardly and downwardly and terminating in a truncation; a body of sound-absorbing material disposed within said inverted canopy and along said sides thereof; and a lighting unit disposed beneath said inverted canopy and attached thereto, said lighting unit including two light sources spaced from one another and spaced laterally from the longitudinal edges of said truncation whereby direct light from each light source is reflected downwardly by the side of said canopy adjacent thereto.

2. A lighting fixture comprising: a mounting plate; an inverted canopy supported from said mounting plate and disposed therebeneath, said inverted canopy having light-reflecting, sound-transmitting sides curved inwardly and downwardly and terminating in a truncation; a body of sound-absorbing material disposed within said inverted canopy and along said sides thereof; and a lighting unit disposed beneath said inverted canopy and in abutting relationship with respect thereto, said lighting unit including two light sources spaced from one another and spaced laterally from the longitudinal edges of said truncation whereby light from each light source is reflected downwardly by the side of said canopy adjacent thereto.

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