STRIPLIGHT FIXTURE AND CONNECTOR THEREFOR

Donald L. Jackson, Moundsville, W. Va., assignor to Sylvania Electric Products Inc., a corporation of Delaware
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ABSTRACT OF THE DISCLOSURE

A fluorescent strip lighting fixture in which the main body member is a roll-formed, indented, substantially rectangular-shaped channel designed to receive snap-on lampholder brackets and end plates, and having a dovetail track formed in the top thereof to receive a joining plate at each end thereof and one or more hangers therebetween.

This invention relates to lighting fixtures and more particularly to fluorescent lighting fixtures. There are many different types and styles of fluorescent lighting fixtures; some are multi-lamp fixtures and others accommodate but one lamp; some are quite ornamental in design while others are quite simple and essentially functional. This invention is concerned primarily with fluorescent fixtures which are quite simple in design and essentially functional. More particularly, this invention is concerned primarily with fluorescent strip lighting fixtures.

In the design of any lighting fixture, it is always desirable to strive for simplicity of construction and ease of assembly, both in the fixture manufacturing plant and in on-the-job installations. This is particularly true insofar as fluorescent strip lighting fixtures are concerned. These and other desiderata are attained, in accordance with the principles of this invention by utilizing a roll-formed, indented rectangular-shaped channel designed to receive snap-on lampholder brackets and end plates, and having a dovetail track formed along the top thereof which can receive a joining plate at each end thereof and hangers therebetween.

The accompanying drawings, FIGURE 1 is a top perspective view of a pair of strip lighting fixtures arranged for end-to-end mounting. FIGURE 2 is an end elevational view of one of the fixtures of FIG. 1.

FIGURE 3 is a bottom perspective view of one end of a strip lighting fixture completely assembled.

FIGURE 4 is an exploded bottom perspective view of the fixture of FIG. 3.

As shown particularly in FIGS. 1 and 2, the base member of the fixture of this invention is a roll-formed, indented, rectangular-shaped channel 10, the upper and lower longitudinal edges of each side 12 thereof being characterized by indent segments 12a and 12b respectively. The top of the cell 10 is shaped to define a dovetail track 14 within which hangers 16, one of which is shown, are adiably disposed. The lateral face 12c of each indented segment 12b which characterizes the lower longitudinal edges of each side 12 of channel 10 is provided with an elongated slot 12d near each end thereof. Lampholder brackets 18 are located at each end of channel 10, the legs 18a of the brackets 18 overlying the vertical face of indent segment 12b and extending through the elongated slots 12d in the lateral faces 12c thereof. Each leg 18c of each lampholder bracket 18 is provided with a pair of inwardly struck lances 18b which cooperate with a corresponding pair of slots 12e cut in the vertical face of indent segments 12b to effect a firm mechanical interlocking of the lampholder brackets 18 in the channel 10. Lampholder 20 are snapped into suitable cute-ins provided therefor in the bracket 18.

As shown in FIG. 1, a pair of channels 10 are aligned for end-to-end mounting. The channels 10 are joined to one another by a joiner plate 22 fitted into the dovetail track 14 at the adjacent ends of the two channels 10. The joiner plate 22 is provided with a pair of downwardly struck lances 22a which, when the channel 10 are brought into abutting relationship, interlock with co-operating slots 14a in the tracks 14 of the channels 10. It will be noted that the joiner plate 22 is illustrated in FIG. 1 as having legs 22b which are shown in phantom. The purpose and function of these legs 22b will be described below in connection with the description of FIGS. 3 and 4.

Although the fixture illustrated in FIGS. 1 and 3 is a one lamp fixture (it has only one lampholder at each end) whereas the fixture illustrated in FIGS. 1 and 2 and described above is a two lamp fixture, it includes the structural features of the latter and thus they will not be described again. Reference was made, in the description of FIG. 1, to a joiner plate 22 illustrated with a pair of legs 22b shown in phantom. This member is the same structurally as end plate 21 illustrated with a pair of legs 21b shown in solid in FIG. 4. As shown in FIG. 4, the legs 21b are provided with outwardly struck lances 21c which, when the end plate 21 is inserted into the end of channel 10, interlock with co-operating slots 10a in the sides 12 thereof as shown particularly in FIG. 3. Thus the joiner plate 22 and the end plate 21 are the same basic member structurally. When the member is to be used as an end plate, it is inserted into the end of a channel as illustrated in FIGS. 3 and 4. When it is used as a joiner plate, it is inserted into the dovetail tracks 14 at the adjoining ends of two channels 10, and the legs are broken off as shown in FIG. 1.

As shown in FIGS. 3 and 4, the channel 10 is provided with a reflector 24, sides 24a of which overlie the indent segments 12b which define the lower longitudinal edges of sides 12 of channel 10. The reflector 24 is provided with a pair of cutouts at each end thereof and the lampholder brackets 18 mounted at each end of the channel 10 are each provided with a pair of tabs which cooperate with the reflector cutouts. In assembling the reflector 24 with the channel 10, one end of the reflector is guided into position with respect to the channel and the lampholder brackets 18 at that end thereof so that the cutouts of the reflector interlock with the tabs of the lampholder bracket. The other end of the reflector is then brought up (FIG. 4 to FIG. 3) so that the tabs 18d of the adjacent lampholder bracket 18 lie in the cutouts 24b of the said other end of the reflector. This end of the reflector is provided with a latch 26 which extends into a slot 18c in the lampholder bracket 18. A quarter turn of the latch 26 securely fastens the reflector to the lamp holder bracket. In some cases, due to the contours of the members involved for example, it may be preferable to employ a latch 26 at each end of the reflector to effect its attachment to the lampholder brackets.

A strip lighting fixture of the type illustrated in the accompanying drawings and described above possesses many features and advantages which will be readily apparent to those skilled in the art. For example, first and foremost it requires no tools for its assembly. It provides a basic design which lends itself to accommodate different numbers of lamps, different types of lampholders, etc. The indent channel and the manner in which snap-in components are assembled therewith provide a fixture free of protrusions outside the channel surface, thus insuring a smooth, clean fixture line capable of fitting squarely into corners and coves. The dovetail track which charac-
terizes the top of the channel not only receives the joining plates and hangers but it also provides a space for ballast mounting and wiring, etc., and thus makes unnecessary the protrusion of these items above the top face of the channel.

What I claim is:

1. In a lighting system, the combination of: at least two elongated channels arranged in end-to-end relationship, the top thereof having a dovetail track formed therein; a snap-in lampholder bracket secured to each of said channels near each end thereof; and a snap-in dual purpose member comprising a plate having a pair of spaced legs normal thereto, one of said dual purpose members being snapped into each of the exposed ends of said channels, and one of said dual purpose members, with the legs broken off, bridging said abutting channels and fitted into and secured to said dovetail tracks thereof.

2. In a lighting system, the combination of: at least two elongated channels arranged in end-to-end relationship, the upper and lower longitudinal edges of each side of each channel being indented and the top thereof having a dovetail track formed therein; a snap-in lampholder bracket secured to each of said channels near each end thereof; hangers fitted in said dovetail tracks of said channels; and a snap-in dual purpose member comprising a plate having a pair of spaced legs normal thereto, one of said dual purpose members being snapped into each of the exposed ends of said channels, and one of said dual purpose members, with the legs broken off, bridging said abutting channels and fitted into and secured to said dovetail tracks thereof.

3. In a lighting system, the combination of: at least two elongated channels arranged in end-to-end relationship, the upper and lower longitudinal edges of each side of each channel being indented and the top thereof having a dovetail track formed therein; a snap-in lampholder bracket secured to each of said channels near each end thereof; hangers fitted in said dovetail tracks of said channels; and a snap-in dual purpose member comprising a plate having a pair of spaced legs normal thereto, one of said dual purpose members being snapped into each of the exposed ends of said channels, and one of said dual purpose members, with the legs broken off, bridging said abutting channels and fitted into and secured to said dovetail tracks thereof.

4. In a lighting system, the combination of: at least two elongated channels arranged in end-to-end relation-ship, the upper and lower longitudinal edges of each side of each channel being indented and the top thereof having a dovetail track formed therein; a snap-in lampholder bracket secured to each of said channels near each end thereof; hangers fitted in said dovetail tracks of said channels; a snap-in dual purpose member comprising a plate having a pair of spaced legs normal thereto, one of said dual purpose members being snapped into each of the exposed ends of said channels, and one of said dual purpose members, with the legs broken off, bridging said abutting channels and fitted into and secured to said dovetail tracks thereof; and a reflector closing each of said channels, the sides of each reflector overlying the lower longitudinal indents of the sides of each of said channels.

5. In a lighting system, the combination of: at least two elongated channels arranged in end-to-end relationship, the upper and lower longitudinal edges of each side of each channel being indented and the top thereof having a dovetail track formed therein; a snap-in lampholder bracket secured to each of said channels near each end thereof; hangers fitted in said dovetail tracks of said channels; a snap-in dual purpose member comprising a plate having a pair of spaced legs normal thereto, one of said dual purpose members being snapped into each of the exposed ends of said channels, and one of said dual purpose members, with the legs broken off, bridging said abutting channels and fitted into and secured to said dovetail tracks thereof; a reflector closing each of said channels, the sides of each reflector overlying the lower longitudinal indents of the sides of each of said channels; and means for securing said reflectors to said lampholder brackets.

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NORTON ANSHER, Primary Examiner.

RICHARD M. SHEER, Assistant Examiner.