June 19, 1962 M. BOBRICK 3,040,171

FABRICATED FLUORESCENT LIGHT FIXTURE

Filed April 20, 1959 4 Sheets-Sheet 1

FIG. 1.

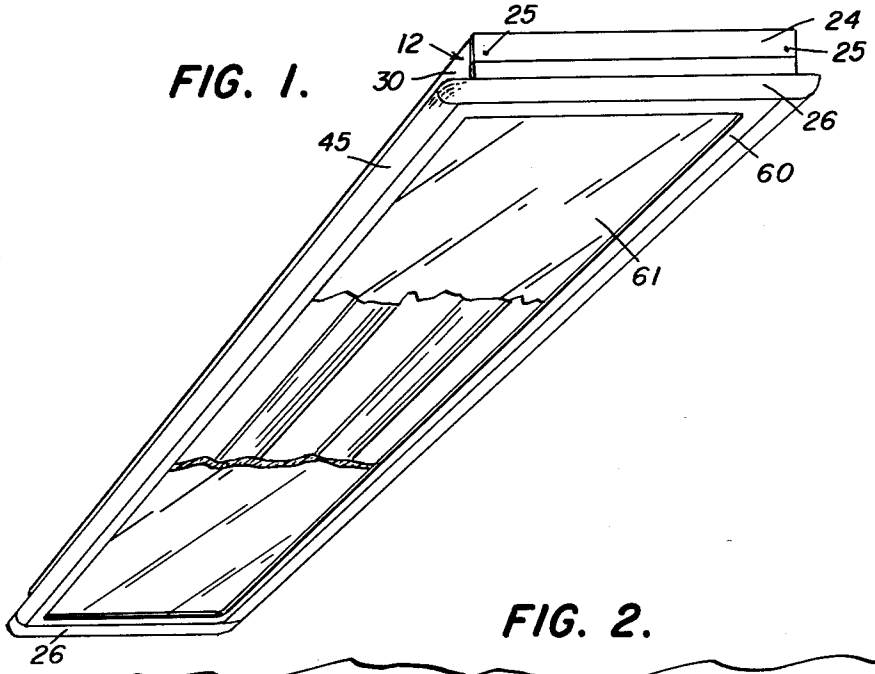


FIG. 2.

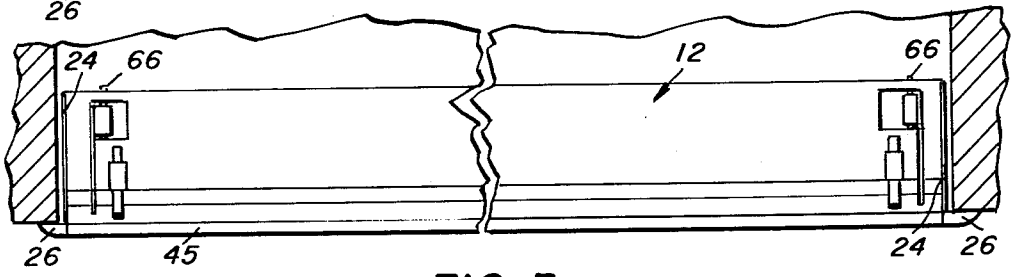


FIG. 3.

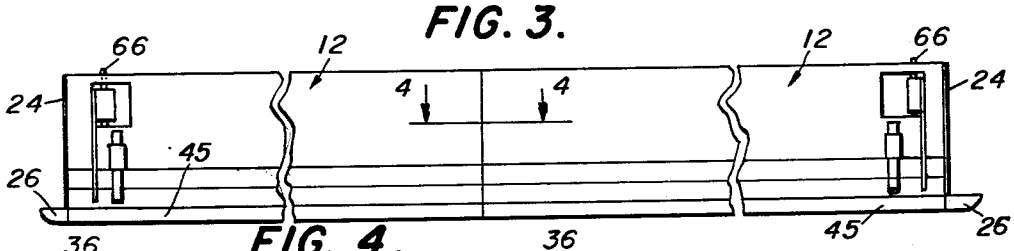
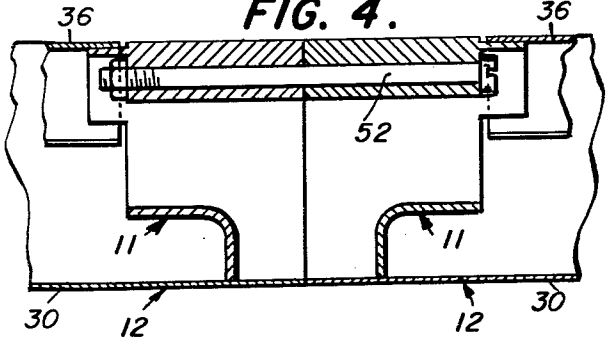


FIG. 4.



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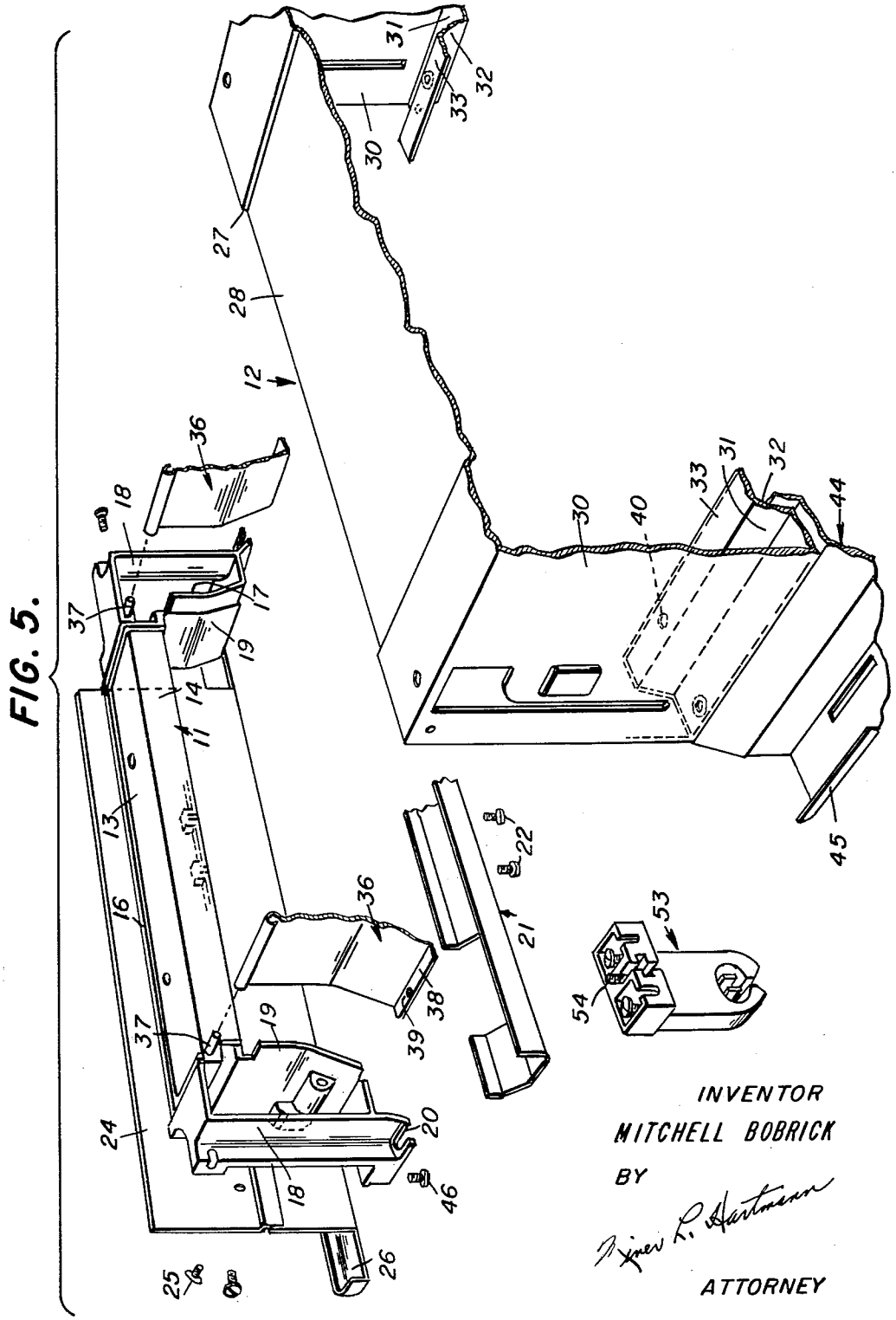


FIG. 5.

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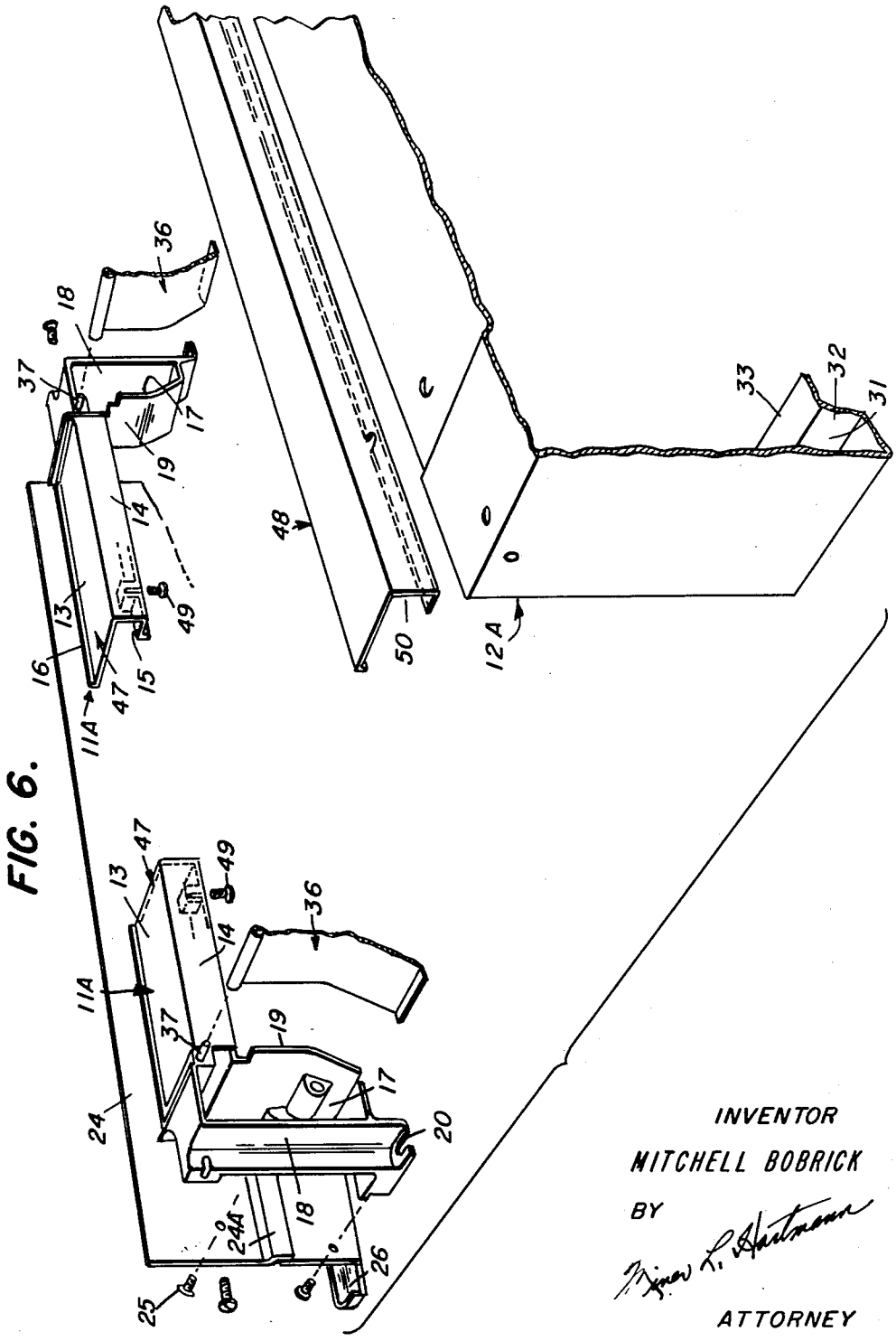


FIG. 6.

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FABRICATED FLUORESCENT LIGHT FIXTURE

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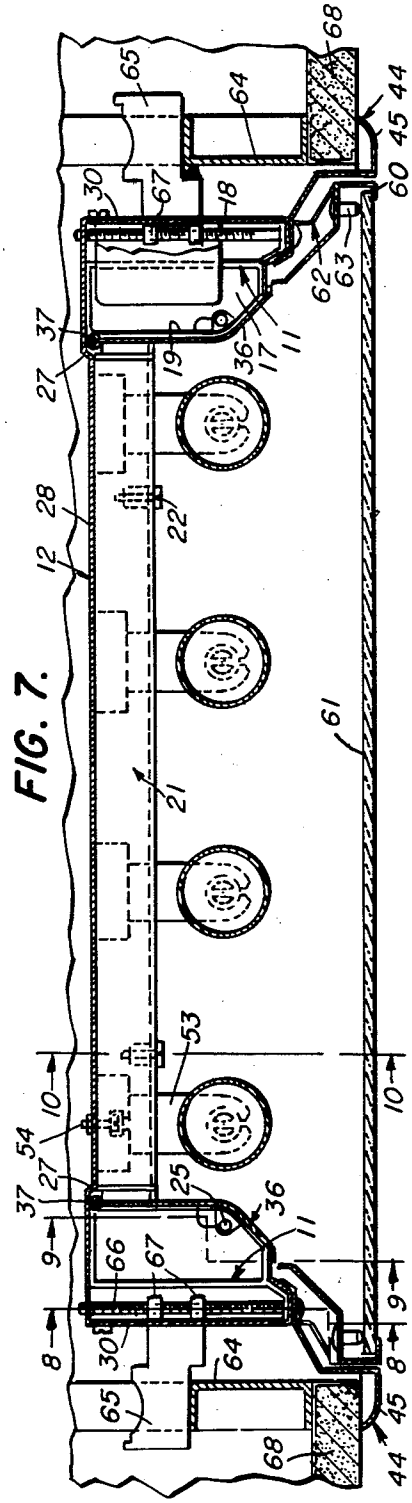


FIG. 7.

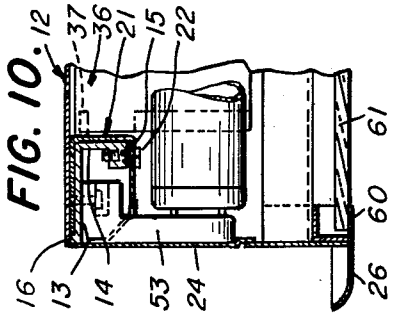


FIG. 10.

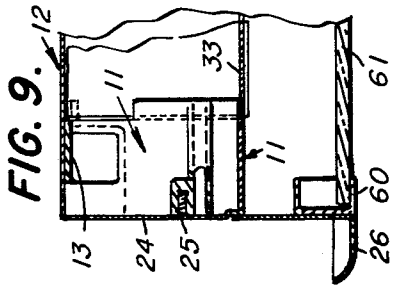


FIG. 9.

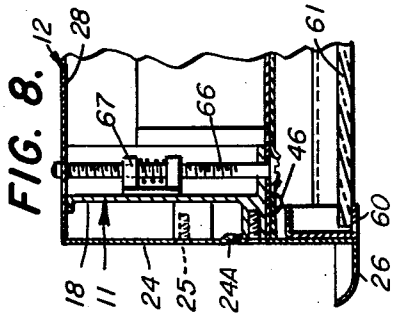


FIG. 8.

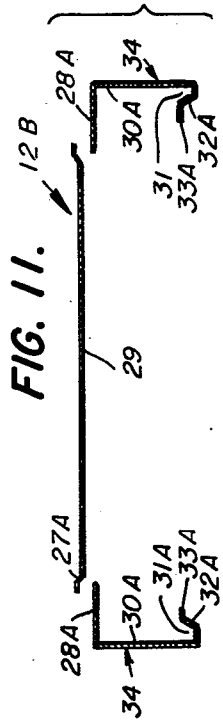


FIG. 11.

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United States Patent Office 3,040,171 Patented June 19, 1962

3,040,171

FABRICATED FLUORESCENT LIGHT FIXTURE

Mitchell Bobrick, Pacific Palisades, Los Angeles, Calif., assignor to Sunbeam Lighting Company, Los Angeles, Calif.

Filed Apr. 20, 1959, Ser. No. 807,594
4 Claims. (Cl. 240—51.11)

This invention relates to a recessed fluorescent light fixture which can be fabricated from standard parts to any desired width or length.

One object of the invention is to provide a recessed ceiling type fluorescent light fixture integrated from standardized parts, which may be fabricated for a single fixture to a selected width (to accommodate a selected number of parallel tubular lamps) or to a selected length (corresponding to standard lamp tube lengths), or to a plurality of end-to-end adjoined fixtures. Another object is to provide a fluorescent light fixture which requires for installation a minimum depth of recess in the ceiling. Another object is to provide a fluorescent light fixture in which integrally formed contour end members support or contain the essential electrical parts, wiring for the lamps, the fixture housing, the diffuser and the diffuser frame.

Referring to the drawings which disclose preferred forms of my invention,

FIG. 1 shows in perspective a fluorescent light fixture fabricated in accordance with this invention;

FIG. 2 is a side elevational view thereof;

FIG. 3 is a side elevational view showing the end joining of two similar units;

FIG. 4 is a cross sectional view taken on the line 4—4 of FIG. 3;

FIG. 5 is a perspective view in disassembly showing the principal elements of the structure of one end portion of the fluorescent light fixture;

FIG. 6 is a similar perspective view in disassembly showing, alternatively, means for adjusting the width of the fixture;

FIG. 7 is a transverse vertical cross-sectional view of the unit shown in FIG. 2;

FIG. 8 is a fragmentary sectional view taken on the line 8—8 of FIG. 7;

FIG. 9 is a fragmentary cross-sectional view taken on the line 9—9 of FIG. 7;

FIG. 10 is a fragmentary cross-sectional view taken on the line 10—10 of FIG. 7; and

FIG. 11 is a cross-sectional view in disassembly showing an alternative form of the "body" member of the fixture as made up of a pair of sheet metal side channels attached to and extending between the pairs of end members, and a plane metal cover sheet closing the opening through the fixture.

In general, the fabricated fluorescent light fixture of this invention consists of a pair of opposed contour end members which constitute the basic structural elements, a shaped sheet metal body extending between the end members, a pair of hinged wire-way closures along the side walls, a diffuser frame and lens covering the lower face of the fixture, and, in addition to the principal structural parts, there are tube sockets, ballast units, trim members, supporting tabs, diffuser frame catches, and other accessories.

Referring to the drawings, particularly FIG. 5, showing a preferred form of my invention, a pair of opposed contour end castings 11 defining the general contour of the fixture are provided, these being in the assembly spaced apart by the shaped sheet metal body 12. Each end casting consists of a top bar 13 having a depending flange 14 and turned-back margin 15, forming an inside

channel, there being also an up-turned flange 16 on the upper outside edge of the bar 13. An integral vertical member 18 is provided at each end of the top bar 13, there being also formed a wall 19 disposed inwardly of said vertical member 18 defining a wire-way terminal 17 which communicates with a cross wire-way formed between the top bar member 13 and a sheet metal trough 21 which is attached by screws 22 to the under side of the top bar 13. A notched lip 20 is provided at the bottom of the vertical member 18 to receive an elevator screw 66, as will be described.

An end sheet metal closure member 24 is attached by screws 25 to the end casting 11 and also to the terminal edges of the body member 12. An end trim member 26 is removably attached at the overlapping lower edge of the end closure member 24.

The body member 12 consists of a sheet metal cover portion 28 which is provided with offset bends 27 to conform to the recessed top surface of the end casting 11. The cover portion 28 is provided on both sides with depending side walls 30 which terminate on the inside of the fixture in the opposed longitudinal troughs 31 whose inner walls 32 are provided with horizontal rims 33.

Each wire-way terminal 17 in the end castings communicates with the trough 31 and forms a wire-way from one end of the fixture to the other, the wire-way being closed by the shield 36 which is pivotally mounted at its top edge on the pivots 37 provided in the opposed end castings 11, the shield being shaped to conform to the wire-way opening 17. The horizontal flange portion 38 at the bottom edge of the shield is arranged to engage under the horizontal rim 33 of the body, there being detent blisters 39 on the shield flange coinciding with holes 40 in the rim 33 by which the shield is removably held against the depending side walls 30 of the body, thus giving easy access to the wiring.

Side members 44 having a trim flange 45 adapted to engage the ceiling surface and extending from one end of the fixture to the other, and on both sides of the fixture, are attached to the lower face of the trough 31 of the body by means of screws 46.

In the alternative fixture structure shown in FIG. 6, the end castings 11 may be extended to any width by vertically severing them, preferably at the middle point thereof, making two members 11A, and then spacing the two parts laterally by means of a spacer bar 48 which fits over the (half) end portions 47, being attached thereto by screws 49. The spacer bar not only fits over the top surface of the portions 47 of the top bar member but also the spacer bar 48 is provided with a channel portion 50 which engages the under surface thereof. It will be clear that the body member 12A will also be provided in selected or different widths to correspond to the wider structure defined by the spacer bar 48.

As an alternative structure, the "body" member 12B may consist, as shown in FIG. 11, of a pair of sheet metal channel members 34, whose open side faces inwardly, which are adapted to engage the end vertical members 18, and the wire-way terminal, in the same manner as described for the one piece body 12. The top side strip 28A has the depending side wall 30A and the trough 31A with the inner wall 32A being provided with a rim 33A. An unattached sheet metal cover plate 29 rests upon the top bars 13 of the end castings 11 and upon the strip 28A, and may be provided with offset bends 237A to fit into the inside frame of the fixture. This alternative structure for the "body" portion of the fixture is advantageously used when very wide end pieces are provided by use of the spacer bar 48 (FIG. 6). The use of the separate top cover 29 permits easy access through the fixture to the space above the ceiling so that any necessary electrical connections can be made, or

adjustments of fixture elevation, or placement of hangers, may be made by the workman using the opening through the fixture. The cover **29** is easily removed and put back in place. The cover **29** may be removably attached by fastener means accessible from inside the fixture.

When a plurality of fixtures as described herein are to be placed in a continuous end-to-end row, the end closure members **24** are omitted, and the abutting contour end castings **11** are bolted together by bolts **52** as shown in FIGS. 3 and 4.

Tube sockets **53** are mounted by means of bolts **54** to the top bar member **13** (or alternatively to the spacer bar **48** when said spacer bar is used to widen the fixture).

The diffuser frame **60** is removably attached to the under face of the fixture by latch means **62**. The diffuser lens **61** is retained inside the frame by the push-in type retainers **63**.

The fixture is supported in the ceiling recess defined by the longitudinal structural members **64** by engagement with the flag tabs **65** which are mounted on the elevator screws **66**, by the threaded collars **67**. Each elevator screw **66** is mounted in a slot **20** of the end vertical member **18**, at each corner of the fixture, the head **67** of the screw **66** being accessible from the diffuser opening of the fixture. By elevating the fixture by means of the screw **66**, the end trim members **26** and the side trim members **44** are brought into contact with the surface of the ceiling surfacing or plaster **68**.

The advantages of this invention will be apparent. A fluorescent fixture of almost any size may be fabricated by the use of a limited number of standardized parts. The objectives of the invention have been attained.

I claim:

1. A fabricated fluorescent light fixture comprising a pair of opposed contour end members, each end member being a shaped metal casting having a top bar whose length defines the fixture width, and integral vertical members depending at each end of said bar member, the length of said vertical member defining the depth of said fixture, and said vertical members having inside spaced apart walls defining terminals for wire-ways extending along the sides of the fixture; a sheet metal body member extending across the end members and removably attached thereto, said body member extending endwise between said pair of end members, the length of said body member defining the fixture length, said body member consisting of a relatively flat cover member having depending side walls conforming to the contour of said end members, each of said side walls terminating in an inside wire-way trough conforming to the lower portion of spaced apart walls of the wire-way terminals in said end members, and shield members closing off the space between said wire-way trough and the cover member extending between said end members, said shield members being pivoted at their ends on said end members; end closure plates attached to the terminal faces of said end members; and a framed diffuser plate removably attached to the open face of said fixture.

2. A fabricated fluorescent light fixture comprising a pair of opposed contour end members, each end member consisting of two spaced apart shaped metal frame-like castings having an inwardly directed short top bar and an integral vertical member depending at the outer end of said short bar, the two spaced apart castings being removably connected by a spacer bar of selected length attached to the said two short top bars, the width of the fixture being defined by the outer faces of said vertical members, the length of said vertical member defining the depth of said fixture and said vertical members having inside spaced apart walls defining terminals for wireway troughs extending along the sides of the fixture; inside wireway troughs extending between opposed vertical members of said end members; a sheet metal body member extending across the end members and removably attached thereto, said body member extending lengthwise between said pair of end members, the length of said body member defining the fixture length, said body member consisting of a relatively flat cover member having depending side walls conforming to the contour of said end members, each of said side walls terminating in said inside wireway trough extending from end to end of the fixture; end closure plates attached to the outer faces of said end members; and a framed diffuser plate removably attached to the open face of said fixture.

3. A fabricated fluorescent light fixture comprising a pair of opposed contour end members, each end member consisting of two spaced apart shaped metal frame-like castings having open inner and outer faces and having an inwardly directed short top bar and an integral vertical member depending at the outer end of each said short bars, the two spaced apart castings being removably connected by a spacer bar of selected length removably attached to the said short top bars, the width of the fixture being defined by the outer faces of said depending vertical members, the length of said vertical member defining the depth of said fixture and said vertical members having inside spaced apart walls defining terminals for wireway troughs extending along the sides of the fixture; inside wireway troughs extending between opposed vertical members of said end members; a pair of sheet metal side body members extending between and removably attached to said pair of end members, the length of said side body members defining the fixture length, said side body member consisting of a side strip resting upon the upper ends of the end vertical members, with depending side walls conforming to the contour of said depending end members, each of said side walls terminating in said inside wireway trough extending from end to end of the fixture, and a removable cover plate extending over the opening defined by said pair of end members and said side strips; end closure plates attached to the terminal faces of said end members; and a framed diffuser plate removably attached to the open face of said fixture.

4. A fabricated fluorescent light fixture comprising a pair of opposed contour end members, each end member consisting of two spaced apart shaped metal frame-like castings having open inner and outer faces and having a short top bar and an integral vertical member depending at the outer end of said short bars, the two spaced apart castings being removably connected by a spacer bar of selected length, the width of the fixture being defined by the outer faces of said depending vertical members, the length of said vertical member defining the depth of said fixture, and each of said vertical members having inside spaced apart walls defining terminals for wireways extending along the sides of the fixture; inside wireway troughs extending between opposed vertical members of said end members; a pair of sheet metal side body members extending between and removably attached to said pair of end members, the length of said side body members defining the fixture length, each of said side body members consisting of a side strip resting upon the upper ends of the end vertical members, with depending side walls of said body members conforming to the contour of said end members, each of said side walls terminating in said inside wireway trough extending from end to end of the fixture, and a removable cover plate extending over the opening defined by said pair of end members and said side strips; end closure plates attached to the terminal faces of said end members; and a framed diffuser plate removably attached to the open face of said fixture.

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