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CEILING LAMP FIXTURE AND CONTINUOUS MOUNTING ARRANGEMENTS THEREFOR

Filed May 26, 1949

2 Sheets-Sheet 1

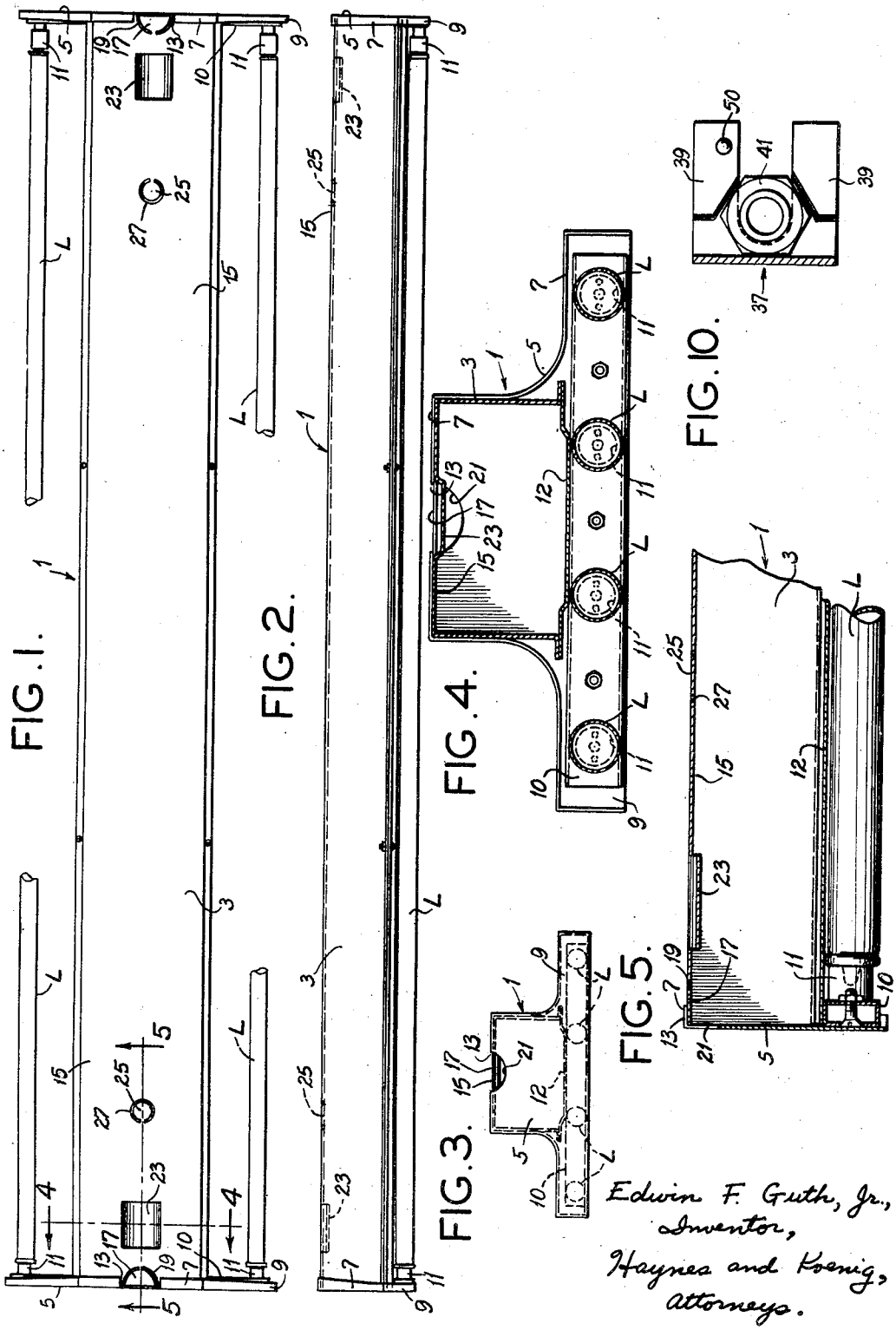

FIG. 1.

FIG. 2.

FIG. 4.

FIG. 10.

FIG. 3.

FIG. 5.

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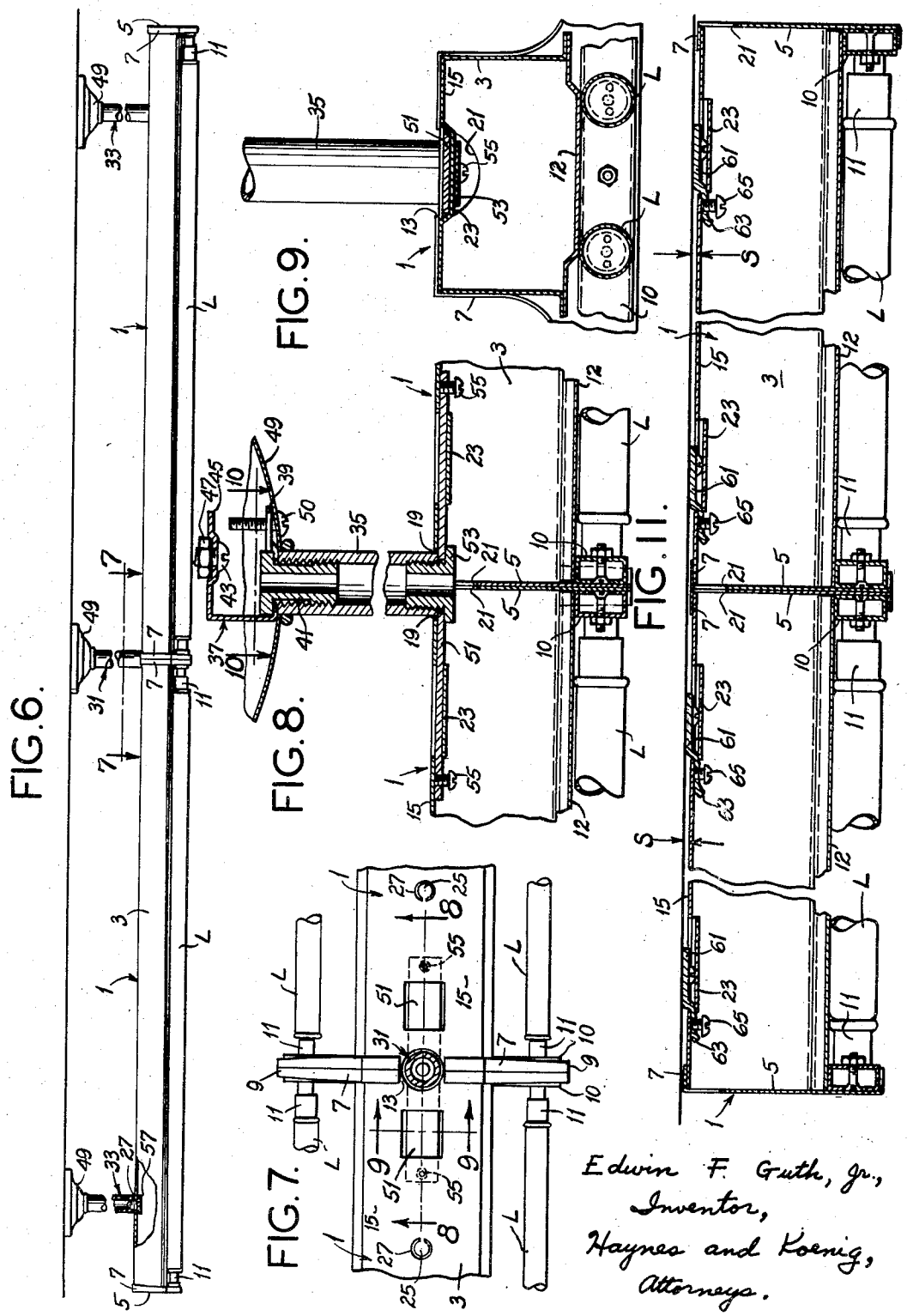

FIG. 6.

FIG. 9.

FIG. 8.

FIG. 11.

FIG. 7.

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CEILING LAMP FIXTURE AND CONTINUOUS MOUNTING ARRANGEMENTS THEREFOR

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11 Claims. (Cl. 240—51.11)

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This invention relates to ceiling lamp fixtures, more particularly to such fixtures for fluorescent lamps or the like, and to continuous end-to-end mounting arrangements therefor.

Briefly, the invention relates to a ceiling lamp fixture for fluorescent lamps particularly adapted for quick mounting in multiple with adjacent fixtures mounted continuously end-to-end in abutting relation, and modes of continuously mounting the fixtures of the invention. In general, the fixture comprises an elongate lamp-supporting member which is provided at least at one end with an eye for receiving a ceiling-mounted supporting member in such manner that the abutting ends of two adjacent fixtures in a suspended mounting arrangement may be carried by a single supporting member extending through the adjacent eyes of the two adjacent fixtures. These eyes also enable the fixtures to be quickly mounted in a ceiling mounting arrangement by means of ceiling clips having tongues which extend through the eyes. Openings are provided in the ends of the fixtures to receive supporting members and wires. Other features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the elements and combinations of elements, features of construction, and arrangements of parts which will be exemplified in the structures hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, in which several of various possible embodiments of the invention are illustrated,

Fig. 1 is a plan view of a ceiling lamp fixture embodying the invention;

Fig. 2 is a view in elevation of the Fig. 1 fixture;

Fig. 3 is an end view of the fixture;

Fig. 4 is an enlarged transverse vertical section taken on line 4—4 of Fig. 1;

Fig. 5 is an enlarged fragmentary longitudinal section taken on line 5—5 of Fig. 1;

Fig. 6 is an elevation on a reduced scale showing a continuous suspended mounting arrangement for two of the Fig. 1 fixtures;

Fig. 7 is an enlarged fragmentary horizontal section on line 7—7 of Fig. 6;

Fig. 8 is an enlarged longitudinal vertical section taken on line 8—8 of Fig. 7;

Fig. 9 is an enlarged transverse vertical section taken on line 9—9 of Fig. 7;

Fig. 10 is a horizontal section taken on line 10—10 of Fig. 8; and

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Fig. 11 is a longitudinal section illustrating a continuous ceiling mounted arrangement for a plurality of the Fig. 1 fixtures.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

First referring to Figs. 1–5, a ceiling lamp fixture embodying this invention is generally designated 1. The fixture is shown to comprise a lamp-supporting elongate sheet metal channel member 3 having end plates 5 forming walls closing its ends. These plates have flanges 7 and are attached to the ends of the channel as by spot welding the flanges to the channel. Each plate has a socket-carrying portion 9 wider than the channel and extending crosswise below the channel. On portion 9 is a socket-carrying bridge 10. Sockets 11 for the ends of fluorescent lamps L are fixed to the socket-carrying bridges 10. Within the channel may be mounted the usual ballast (not shown) for the lamps. At 12 is shown a reflector closing the bottom of channel 3.

The flange 7 of each end plate 5 is discontinuous at a gap 13 where it overlies the top wall 15 of the channel. The gaps are located centrally with respect to the width of the channel. The top wall 15 of the channel is provided at its ends at gaps 13 with generally semi-circular knockouts 17 adapted to be readily removed to provide generally semi-circular notches 19 in the ends of the top wall. Each end plate 5 has a generally semi-circular notch 21 at its upper edge providing an opening into the channel. The notches or openings 21 are centrally located with respect to the width of the channel, as are the knockouts 17, so that the openings 21 open into the notches 19 which result from the removal of the knockouts.

Adjacent each end of the top wall 15 of the channel, spaced inward from and in longitudinal alignment with the openings 19, portions of the top wall are struck inward to form generally flat U-shaped loops 23 extending transversely of the channel. These loops form eyes within the channel under its top wall 15 which open longitudinally of the channel in longitudinal alignment with the knockouts 17 (and notches 19) and the openings 21 in the end plates or walls 5. Spaced inward from and in longitudinal alignment with the eyes, the top wall is provided with circular knockouts 25 adapted to be readily removed to provide circular apertures 27.

Figs. 6–9 illustrate a continuous end-to-end suspended mounting arrangement of this invention for two of the above-described lamp fixtures

1. As shown, the two fixtures are carried by a central hanger generally designated 31 and two end hangers each generally designated 33. The central hanger 31 constitutes a common support for the abutting ends of the two fixtures. Each hanger 31 and 33 comprises a tubular hanger stem 35 suspended from a ceiling-mounted C-shaped bracket 37. This bracket has a bifurcated lower arm 39 receiving a headed tubular screw fastener 41 threaded in the upper end of the stem 35. A bolt 43 extends upward through the upper arm 45 of the bracket, being retained in assembled relation with this arm by a nut 47. The bolt 43 is provided to receive the usual screw threaded fastener (not shown) for attachment to the usual ceiling fitting. The bracket 37 is housed in the usual cup 49, the latter being fixed to the bracket by means of a screw 50 extending through the bottom of the member 49 and threaded through the lower bracket arm 39.

The abutting ends of the two fixtures are supported by a horizontal bar 51 attached at its center to the lower end of the stem 35 of the central hanger 31 by means of a headed tubular screw fastener 53 extending through an aperture in the bar and threaded in the lower end of the stem. The lower end of the stem is received in the circular opening formed by the notches 19 in the abutting ends of the top walls 15 of the channels 3 of the two fixtures. The openings 21 in the abutting end plates 5 of the two fixtures accommodate the head of the fastener 53. The bar 51 extends longitudinally under the top walls 15 through the eyes 23 adjacent the abutting ends of the two fixtures, the ends of the top walls resting on the bar. Screw fasteners 55 may be threaded into apertures in the bar outward of the eyes to lock the fixtures in place.

The outer ends of the two fixtures are supported by the end hangers 33. These are located in vertical alignment with the openings 27 provided by removal of the knockouts 25. Headed screw threaded tubular fasteners 57 are inserted through the openings 27 and threaded into the lower ends of the tubular stems 35 of the hangers 33, the top walls 15 of the fixtures bearing on the heads of the fasteners.

With the above-described mounting system, installation of a row of fixtures in end-to-end abutting relation may be quickly accomplished. Only one hanger 33 is required to support the abutting ends of two adjacent fixtures. The other end of any one fixture may be supported as by a hanger 33 and a fastener 57 or, where there are more than two fixtures, by another hanger 31 and a bar 51. Wires may be led into the fixtures at their abutting ends through the tubular fastener 41, the tubular stem 35, the tubular fastener 53 and the openings 21 in the abutting end plates 5 of the fixtures.

Fig. 11 illustrates a continuous end-to-end ceiling mounting arrangement for a plurality of the above-described lamp fixtures. As shown, the fixtures are supported by clips 61 which are fastened to the ceiling at spaced intervals corresponding to the spacing of the inwardly struck portions of the top walls 15 of the fixtures and have downwardly offset, horizontally extending tongues 63 which extend under the top walls through the eye openings defined by the loops 23. The tongues all extend in the same direction. The fixtures may be quickly mounted one after another after installation of the clips simply by sliding them endwise to enter the tongues 63 in the eye openings. Screw fasteners 65 may be threaded in apertures in the ends of the tongues to lock the fixtures in place. The tongues preferably are offset downward a distance greater than the thickness of the top walls of the fixtures so that there is some space S between the top walls and the ceiling. This makes it possible to ceiling-mount the fixtures even though the ceiling is somewhat uneven without distorting the fixtures.

Knockouts 17 and 25 are used to close the notches 19 and apertures 27 so that if any of the latter are not required in the installation, they remain closed to keep dust from settling into the fixture. It will be understood that, aside from this, they might be omitted.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As many changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. A ceiling lamp fixture for fluorescent lamps or the like comprising an elongate lamp-supporting member having end plates carrying sockets for supporting a lamp under the member, said lamp-supporting member being provided adjacent its ends on its under side with longitudinally aligned support-receiving eyes which open longitudinally of said member and also having notches at its respective ends in longitudinal alignment with the eyes, said end plates having openings longitudinally aligned with the eyes and opening into said notches, the opening and eye at each end of said lamp-supporting member being adapted for the reception of a supporting element inserted endwise through the opening and the eye, and the notch at each end of said member being adapted to accommodate a hanger carrying said element.

2. A ceiling lamp fixture for fluorescent lamps or the like comprising an elongate sheet metal lamp-supporting member having end plates carrying sockets for supporting a lamp under the member, said lamp-supporting member being provided adjacent its ends on its under side with longitudinally aligned support-receiving eyes which open longitudinally of said member and also having knockouts at its respective ends adapted to be readily removed to provide notches in longitudinal alignment with the eyes, said end walls having openings longitudinally aligned with the eyes and opening into the notches, the opening and eye at each end of said lamp-supporting member being adapted for the reception of a supporting element inserted endwise through the opening and the eye, and the notch at each end of said member being adapted to accommodate a hanger carrying said element.

3. A ceiling lamp fixture for fluorescent lamps or the like comprising a channel adapted to be mounted with the channel opening downward, end walls closing the ends of said channel and carrying sockets for supporting at least one fluorescent lamp or the like extending longitudinally under the channel, said fixture having adjacent its ends within the channel and under the top wall of the channel a pair of support-receiving eyes which open longitudinally of the channel, said end walls having support-receiving openings in longitudinal alignment with the re-

spective eyes, said top wall having notches at its respective ends which open into the openings in the end walls, the opening and eye at each end of said channel being adapted for the reception of a supporting element inserted endwise through the opening and the eye, and the notch at each end of the channel being adapted to accommodate a hanger carrying said element.

4. A ceiling lamp fixture for fluorescent lamps or the like comprising a sheet metal channel adapted to be mounted with the channel opening downward, end walls closing the ends of said channel and carrying sockets for supporting at least one fluorescent lamp or the like extending longitudinally under the channel, said fixture having adjacent its ends within the channel and under the top wall of the channel a pair of support-receiving eyes which open longitudinally of the channel, said end walls having support-receiving openings in longitudinal alignment with the respective eyes, said top wall having knockouts at its respective ends adapted to be readily removed to provide notches which open into the openings in the end walls, the opening and eye at each end of said channel being adapted for the reception of a supporting element inserted endwise through the opening and the eye, and the notch at each end of the channel being adapted to accommodate a hanger carrying said element.

5. A ceiling lamp fixture as set forth in claim 4 wherein the eyes are formed by integral portions of the top wall of the channel struck from the wall to form generally U-shaped loops.

6. A ceiling lamp fixture as set forth in claim 4 wherein the top wall is provided with knockouts spaced inward from the respective eyes adapted to be readily removed to form apertures in the top wall in longitudinal alignment with the eyes.

7. A continuous suspended mounting arrangement for at least two ceiling lamp fixtures, each of which comprises a channel adapted to be mounted with the channel opening downward, end walls closing the ends of said channel and carrying sockets for supporting at least one fluorescent lamp or the like extending longitudinally under the channel, each fixture having adjacent its ends within the channel and under the top wall of the channel a pair of support-receiving eyes which open longitudinally of the channel, said end walls having support-receiving openings in longitudinal alignment with the respective eyes, said top wall having notches at its respective ends which open into the openings in the end walls, said fixtures being arranged end-to-end in abutting relation, a supporting member extending downward from the ceiling

through the opening formed by the notches in the adjacent ends of the top walls of the fixtures, a horizontal bar carried at the lower end of said supporting member and extending through the openings in the abutting end walls of the fixtures and through the adjacent eyes of the fixtures, and means for supporting the other ends of the fixtures.

8. A multiple ceiling lamp fixture arrangement as set forth in claim 7 wherein the bar extends completely through the eyes, and wherein fasteners are attached to the bar at its ends which extend through the eyes to lock the fixtures in place.

9. A continuous ceiling mounting arrangement for ceiling lamp fixtures, each of which comprises a sheet metal channel adapted to be mounted with the channel opening downward, end walls closing the ends of said channel and carrying sockets for supporting at least one fluorescent lamp or the like extending longitudinally under the channel, each fixture having adjacent its ends within the channel and under the top wall of the channel a pair of support-receiving eyes which open longitudinally of the channel, said eyes being formed by integral portions of the top wall of the channel struck from the wall to form generally U-shaped loops, said fixtures being arranged end-to-end in abutting relation, and a plurality of ceiling mounted clips spaced at intervals corresponding to the spacing of the eyes having downwardly offset horizontal tongues all extending in the same direction, said tongues extending under the top walls of the channels through the eye openings.

10. A continuous ceiling mounting arrangement for lamp fixtures as set forth in claim 9 wherein the tongues are offset a distance greater than the thickness of the top walls of the fixtures so that there is some space between the top walls and the ceiling.

11. A continuous ceiling mounting arrangement for lamp fixtures as set forth in claim 9 wherein fasteners are attached to the ends of the tongues which extend through the eye openings to lock the fixtures in place.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,299,870	Arras	Oct. 27, 1942
2,383,007	Maurette	Aug. 21, 1945
2,413,505	Kilduff et al.	Dec. 31, 1946