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C. J. RICHARDS

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FIXTURE HANGER ASSEMBLY

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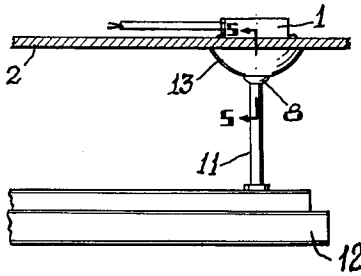


FIG. 1

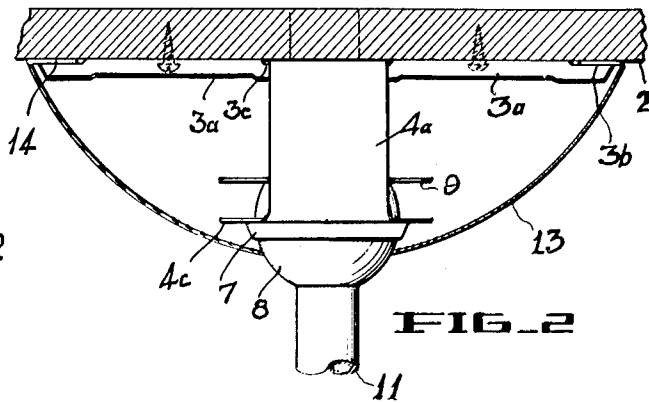


FIG. 2

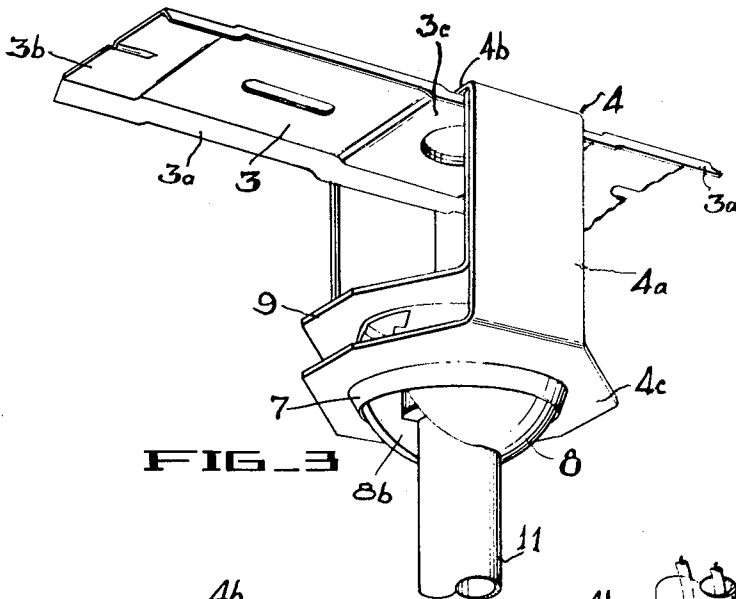


FIG. 3

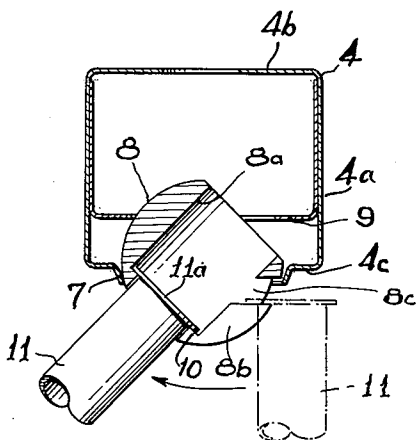


FIG. 4

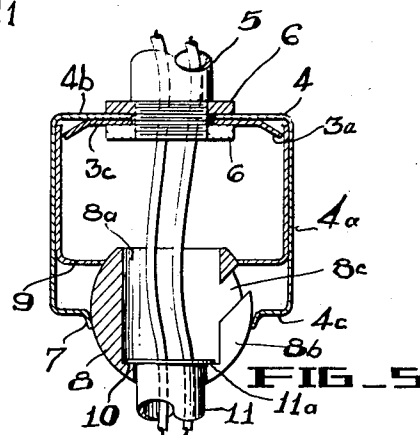


FIG. 5

INVENTOR.
CHARLES J. RICHARDS

BY

J. E. Tralucco
ATTORNEY

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FIXTURE HANGER ASSEMBLY

Charles J. Richards, San Francisco, Calif., assignor to Fluorescent Fixtures of California, a corporation of California

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3 Claims. (Cl. 248—324)

This invention relates to improvements in light fixtures and more particularly to a hanger assembly for supporting a light fixture.

Fixture hangers of the kind now commonly used in supporting fluorescent fixtures or the like from ceilings are not entirely satisfactory. Such hangers do not embody constructions permitting the quick and fairly easy mounting of light fixtures thereon. Neither are they self-adjusting to the extent that a light fixture may be supported in a level position from either an inclined or a horizontal ceiling.

The present invention provides an improved hanger assembly which overcomes the disadvantages of those fixture hangers now in common use. My hanger assembly embodies a novel self-adjusting fixture supporting member which makes it possible for a light fixture to be supported in a level position irrespective of whether the ceiling from which such fixture is suspended is inclined or horizontal. The simplified and novel construction of my improved hanger assembly makes it possible for a light fixture to be easily mounted thereon.

The primary object of my invention is to provide a novel fixture hanger assembly of the kind characterized, one which is adapted for use with either horizontal or inclined ceilings.

Another object of my invention is to provide an improved fixture hanger assembly having an adjustable fixture supporting member which makes it a simple procedure to mount a light fixture in an operative position thereon.

A further object of my invention is to provide a fixture hanger permitting a certain amount of flexibility in the support of a light fixture, one which allows movement of the fixture and also its automatic adjustment to a horizontal position.

Other and further objects of my invention will be pointed out hereinafter, or will be indicated in the appended claims or will be obvious to one skilled in the art upon an understanding of the present disclosure. For the purpose of this application I have elected to show herein certain forms and details of a fixture hanger assembly representative of my invention; it is to be understood, however, that the embodiment of my invention herein shown and described is for purposes of illustration only and that therefore it is not to be regarded as exhaustive of the variations of the invention in the art.

In the accompanying drawings:

Fig. 1 is a side elevation of my fixture hanger assembly, showing it in an operative position with respect to a ceiling support and a light fixture;

Fig. 2 is an enlarged elevational view of the hanger assembly, showing the concave canopy in section;

Fig. 3 is a perspective view of the hanger assembly;

Fig. 4 is a diagrammatic sectional view showing the adjusted position of the swivel member when the fixture supporting stem is being connected thereto; and

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 1.

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Referring to the drawing the numeral 1 designates a metal box mounted on an overhead supporting structure 2, such as a part of a ceiling. Secured as by screws to the supporting structure 2 is an elongated plate 3 which is formed with downwardly bent side edges 3a. The elongated plate 3 is formed with downwardly disposed offset end portions 3b and a downwardly disposed offset central portion 3c. Extending across and above the central offset portion 3c is the upper side of a bracket 4 of somewhat rectangular shape which comprises opposed vertical sides 4a, an upper side 4b and a lower enlarged side 4c. The central offset portion 3c of the plate and the upper side 4b of the bracket are formed with registering holes through which a short threaded metal pipe 5 is adapted to extend, the said pipe being normally arranged with its upper end projecting into the metal box 1. Electrical wires for supplying electricity to a lighting fixture suspended from the bracket ordinarily extend into the box 1 and downwardly through the pipe 5. Suitable nuts 6 threaded on the short pipe 5 are arranged in clamping engagement with the central offset portion 3c of the plate 3 and the upper side 4b of the bracket 4.

The lower enlarged side 4c of the bracket is provided with a large circular opening the sides of which are preferably bent downwardly to form a circular seat or socket 7 for supporting a swivel member 8 of semi-spherical shape. The swivel member, being larger in diameter than its seat 7, is supported on the latter with a substantial part thereof projecting downwardly through the circular opening. A retaining member 9 secured to the bracket 4 and formed with a hole through which part of the swivel member extends, is arranged to prevent the said swivel member from becoming unseated and detached from the bracket.

The semi-spherical swivel member 8 is formed with a central opening 8a, the lower end portion of which is smaller in diameter than the portion above, thereby providing an inwardly disposed shoulder 10. A side of the semi-spherical swivel member is formed with a side opening 8b which communicates with the central opening 8a, and the upper end of the side opening extends outwardly in opposite directions as at 8c. The side opening 8b is sufficiently wide to permit a tubular connecting stem 11 to be passed therethrough, and the outwardly disposed extensions 8c are of sufficient length and width to permit an enlarged head or end 11a on the connecting stem to pass therethrough. The central opening 8a of the semi-spherical swivel member 8 is slightly larger in diameter than the enlarged head 11a of the connecting stem and the shoulder 10 is so arranged as to intercept and support the said head. By turning the swivel member 8 about a substantially horizontal axis to a position shown in Fig. 4 the side opening 8b and the side extensions 8c thereof are carried to a position below the lower side 4c of the bracket 4, thereby permitting the connecting stem 11 and its head 11a to be passed through the open side of the swivel member into the central opening 8a thereof. The head 11a of the connecting stem becomes seated on the shoulder 10, and through the force of gravity the stem will automatically assume an upright position since the semi-spherical swivel member 8 is free to swivel on its seat 7.

The lower end of the connecting stem 11 is ordinarily secured to a lighting fixture 12 or any other device which is to be supported in a suspended position from an overhead structure. The electrical wires connecting the light source mounted on the lighting fixture to the source of electrical energy extend from the pipe 5 through the opening 8a in the swivel member 8 and through the tubular stem 11.

A semi-spherical or concave shell 13 having a central opening through which the swivel member 8 is adapted to project, is positioned to enclose and shield from view the

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bracket 4 and the plate 3. The concave shell 13 is provided at its upper edge with opposed inwardly extending spring clips 14 which are adapted to frictionally engage with the upper sides of the offset end portions 3b of the plate 3. The concave shell 13 is normally supported by the clips and the plate in the position illustrated in Figs. 1 and 2, thereby enclosing the bracket 4 and the plate 3.

What I claim is:

1. In a fixture hanger assembly, a bracket adapted to be mounted on a ceiling structure, a socket carried by the bracket, a semi-globular swivel member loosely mounted for pivotal movement in the socket, the said swivel member having a central opening extending therethrough and having also a side opening communicating with the central opening, a tubular fixture supporting element suspended from the swivel member having an enlarged head portion, the said head portion of the fixture supporting element being adapted to be passed through the side opening of the swivel member to a supported position inside the central opening in the said swivel member, and an inwardly protruding shoulder disposed inside the central opening of the swivel member, the said shoulder being constructed and arranged to support the head portion of the fixture supporting element.

2. In a fixture hanger assembly, a bracket adapted to be mounted on a ceiling structure, a socket carried by the bracket, a semi-globular swivel member mounted for pivotal movement in the socket, the said swivel member having a central opening therethrough and a side opening communicating with the central opening, a tubular fixture supporting element suspended from the swivel member having an enlarged head portion and an axial opening extending therethrough, the said head portion being adapted to pass through the side opening of the swivel member to a supported position inside the central opening, the said swivel member having sup-

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porting means inside the central opening for supporting engagement with the head of the tubular element, and the central opening of the swivel member and the axial opening of the tubular element being in communication with each other.

3. In a fixture hanger assembly, a bracket adapted to be mounted on a ceiling structure, a socket carried by the bracket, a semi-globular swivel member pivotally mounted in the socket and having an axial opening extending therethrough and having also a side opening communicating with the axial opening, a tubular fixture supporting element suspended from the swivel member and having a head portion adapted to pass through the side opening of the swivel member, the swivel member having a shoulder portion extending into the axial opening arranged to support the head portion of the tubular element, the axial openings through the swivel member and the tubular element being in communication with each other, and a retaining ring secured to the bracket and arranged in engagement with the upper portion of the swivel member, the inside diameter of the ring being smaller than the outside diameter of the swivel member taken along a plane at right angles to the axial opening therein.

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