June 7, 1960 J. A. PASCUCCI 2,939,669

HANGER ASSEMBLY FOR LIGHTING FIXTURES

Filed Oct. 29, 1956

Fig. 1.

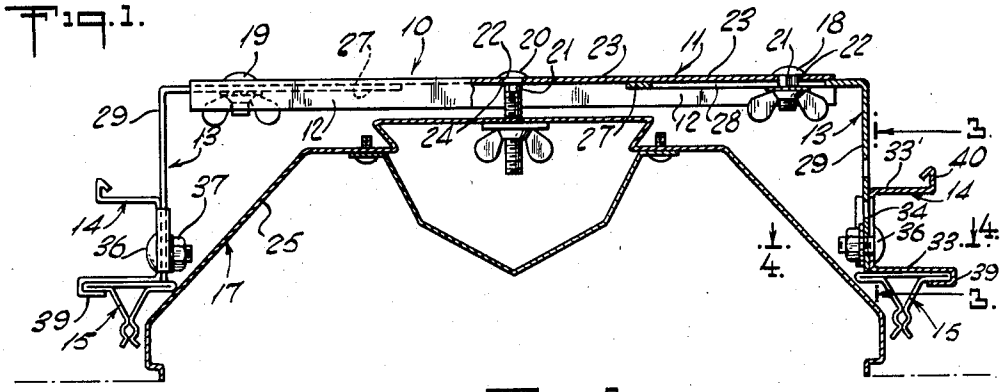


Fig. 5.

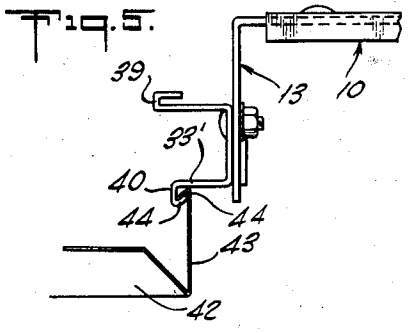


Fig. 6.

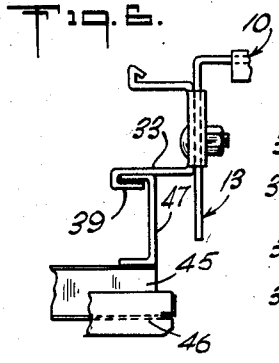


Fig. 3.

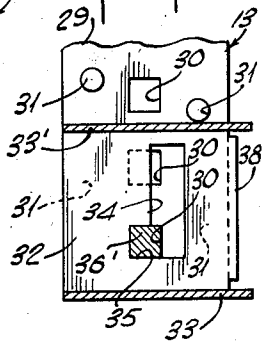
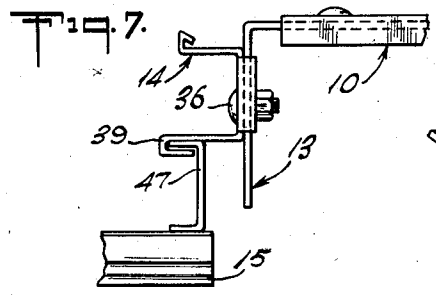


Fig. 7.



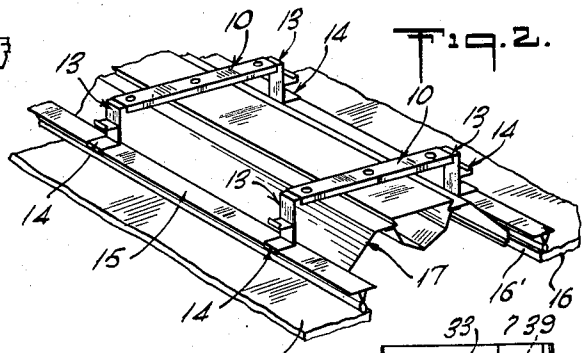
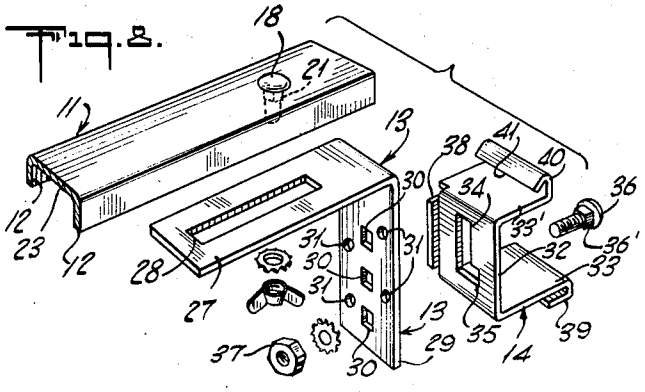


Fig. 2.

Fig. 8.



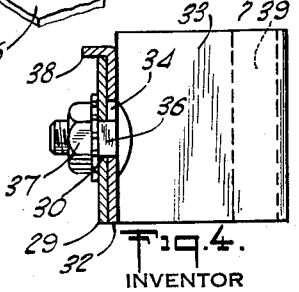


Fig. 4.

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HANGER ASSEMBLY FOR LIGHTING FIXTURES

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4 Claims. (Cl. 248—343)

This invention relates to lighting equipment of the type adapted to be recessed into ceilings and more specifically to an improved hanger assembly or yoke for supporting a lighting fixture in its recessed position.

The hanger assembly in accordance with the invention may be used for supporting lighting fixtures in a recessed position within permanent or false ceilings though it is particularly useful in connection with the installation and support of elongated fluorescent lighting equipment within false ceilings.

One object of the invention resides in the provision of a new and improved hanger assembly for lighting fixtures that is adjustable to accommodate a wide range of fixtures and that may quickly and easily be secured in position in either a false or a permanent ceiling through the opening provided for the installation of the recessed lighting fixture and without altering or modifying the supporting means for the ceiling itself.

Another object of the invention resides in the provision of an improved hanger assembly for lighting fixtures that is characterized by its simplicity, versatility and low cost. By reason of the improved arrangement and combination of elements, the hanger assembly may be utilized to support a wide variety of lighting fixtures of different sizes by attachment to structural members for supporting false and permanent ceilings of acoustic tile, lath and plaster, and the like.

Still another object of the invention resides in the provision of a new and improved hanger assembly for supporting lighting fixtures within ceiling recesses.

The above and other objects and advantages of the invention will become more apparent from the following description and accompanying drawings forming part of this application.

In the drawings:

Fig. 1 is an end elevational view in partial section of a hanger assembly in accordance with the invention;

Fig. 2 is a perspective view of the hanger assembly in accordance with the invention;

Fig. 3 is a cross sectional view of Fig. 1 taken along the line 3—3 thereof;

Fig. 4 is a cross sectional view of Fig. 1 taken along the line 4—4 thereof;

Figs. 5, 6, and 7 are partial side elevational views of the hanger assembly in accordance with the invention illustrating its attachment to structural members supporting different types of false ceilings; and

Fig. 8 is an exploded perspective view of one half of the hanger assembly shown in Fig. 1 to illustrate the arrangement in cooperation with the several elements of the assembly.

The hanger assembly in accordance with the invention provides an improved arrangement of components that facilitates its installation and attachment to the structural elements of a false or permanent ceiling either before or after the ceiling material has been applied as openings in addition to that required for accommodating the fixture itself. The versatility of this hanger assembly will become more apparent from the following description.

Referring now to the drawings and more particularly to Fig. 1, the hanger assembly generally denoted by the numeral 10 comprises essentially an inverted channel member 11 having depending side portions 12, a pair of L-shaped bracket members 13 and a pair of clips 14 carried by the bracket members 13 and adapted to engage the structural members 15 for supporting a ceiling. For illustrative purposes a pair of hanger assemblies is shown in Figure 2 supporting a fluorescent fixture in a recessed position on a false ceiling. It will be observed in this figure that the clips 14 engage the outer edges of a pair of parallel structural members 15 generally known as T-bars that are carried by permanent structural ceiling members and in turn support a false ceiling. The hanger assemblies 10 bridge the opening 16' in the false ceiling 16 and support a suitable fixture 17 within and closing said opening.

More specifically and with reference to Figures 1, 3, 4 and 8 the channel 11 of the hanger assembly is provided with a pair of narrow depending flanges 12 and three threaded studs 18, 19 and 20. Each of these studs is provided with a generally rectangular shank 21 engaging a rectangular opening 22 in the base 23 of the channel. These studs are preferably secured permanently to the channel by deforming the corner portions 24 of each stud, as shown more clearly in connection with the stud 22 of Figure 1, to prevent disengagement from the channel. The end studs 18 and 19 are somewhat shorter than the central stud 20 and are for the purpose of holding the L-shaped bracket members 13 in position on the channel. The central stud 20 is adapted to engage and extend through an opening in a reflective member 25 forming part of the lighting fixture 17 to be supported by the hanger assembly. In the illustrated lighting fixture, the reflector 25 is directly supported by the stud 20 and the wiring channel 26 which also holds the fluorescent lamp sockets is then attached to and supported by the reflector 25 in the usual manner.

The L-shaped bracket members 13 are identical and each is provided with a leg 27 having an elongated slot 28 therein for cooperation with one of the threaded studs 18 or 19 as the case may be. The elongated slot 28 permits lateral adjustment of the bracket members 13 with respect to the channel 11 so that the yoke assembly can be adjusted to fit the spacing between the T-bars 15 or other structural elements for supporting the ceiling 16. The width of the legs 27 of the brackets 13 is slightly less than the distance between the depending flanges 12 of the channel 11 and lie between the flanges so that they are locked against rotation relative to the channel 11. In this way, the bracket members can be fixedly secured to the channel by the studs 18 and 19.

The depending legs 29 of each bracket member 13 are provided with a series of rectangular openings 30 and a number of smaller openings 31. The openings 30 are provided for the attachment of the clips 14 while the openings 31 may be used for nailing or otherwise attaching the yoke assembly to rafters or other structural elements for the support of the lighting fixture 17.

The clips 14 are each provided with a relatively flat vertical member 32 and a pair of legs 33 and 33' extending outwardly therefrom. The member 32 includes an L-shaped slot 34 with the shorter leg of the slot 35 being arranged to accommodate the rectangular shank 36' of a bolt 36 to fasten the clip to the leg 29 of the bracket 13. When the shank 36' of the bolt 36 is inserted through the slot part 35, the rectangular shank will extend into one of the rectangular openings 30 and prevent the bolt 36 from turning when the nut 37 is tightened to securely fix the clip 14 in place on the hanger assembly. The

clip 14 further includes a flange 38 along one side thereof which extends in a direction opposite to that of the legs 33 and 33'. This flange 38 cooperates with one of the side edges of the bracket leg 29 and prevents rotation of the clip 14 relative to the remainder of the hanger assembly. The outer ends of the legs 33 and 33' of the clip 14 are formed to engage different types of structural elements used for supporting false ceilings. The leg 33 in this embodiment of the invention terminates on its outer end in a U-shaped structure 39 formed by bending the outer end of the leg through an angle of approximately 180 degrees with the bent portion being spaced from the leg proper. The leg 33' includes a V-shaped channel 40 with the terminal edge 41 being spaced from the leg proper to receive a suitable supporting element as will be shown more clearly in Figure 5.

In the installation of this improved hanger assembly for supporting a lighting fixture from so-called T-bars 15 the clips 14 are attached to the bracket members 13 as illustrated in Figure 1 with the bolt 36 engaging the appropriate opening 30 in the brackets 13 to position the channel member 11 at the desired height above the ceiling level. The nuts on the studs 18 and 19 are loosened and the brackets 13 are extended so that the ends of the legs 33 or 33', as the case may be, will project beyond the outer edges of the T-bars 15. The bracket members 13 are then moved inwardly so that the ends 39 of the legs 33 will engage the outer edges of the T-bars 15. Care is taken during this step in the procedure to be sure the channel 11 is approximately centered between the vertically disposed legs of the L-shaped brackets 13. The nuts on the studs 18 and 19 are then tightened to secure the hanger assembly or yoke securely in position on the T-bars 15. While the outer ends of the legs 33 firmly engage the T-bars 15 the weight of the lighting fixture 17 is borne by the legs 33 of the clips 14 resting flat against the upper surface of the T-bars 15. It will be observed that the nuts for the several bolts of this hanger assembly are in a position readily accessible through the fixture opening 16' and avoids the need for auxiliary openings of any type for installation purposes. Inasmuch as the brackets 13 cannot rotate relative to the clips 14 and since the brackets 13 and the channel 11 form a rigid structure, a firm, dependable mount is provided for the fixture notwithstanding the fact that the hanger assembly is not bolted, riveted or otherwise similarly secured to the T-bars 15. While the yoke assembly 10 can shift longitudinally of the T-bars, this longitudinal displacement is prevented by the installation of the fixture 17.

Fig. 5 illustrates the cooperation of the hanger assembly with a metal lath and plaster ceiling generally denoted by the numeral 42. The ceiling opening in this case is defined by an upwardly extending metal member or so called plaster rail 43 having a reversely formed flange part 44. This flange part is engaged by the V-shaped end part 40 of the leg 33' of the clips 14 and provides a firm support for the fixture.

Fig. 6 shows the application of a hanger assembly in accordance with the invention to a ceiling structure usually utilizing H-bars or runners 45 for the support of a ceiling 46 of Celotex or other similar material. In this case the H-bars are bridged by channel forming members 47 having one leg secured to the H-runners 45 for the support of the runners, and the U-shaped portion 39 of the clip leg 33 is used to engage the upper edge of the channel 47 in the same manner as illustrated and described in connection with Fig. 1.

Fig. 7 is along the lines of Fig. 6 and illustrates the utilization of a hanger assembly in accordance with the

invention wherein a fixture is to be installed transversely of a plurality of T-bars 15. In this case the channels 47 bridging the T-bars 15 in the support of the ceiling are used for attachment of the hanger assembly 10 in the same manner as shown in Figs. 1 and 5.

While only one embodiment of the invention has been illustrated and described, it is apparent that modifications, alterations and changes may be made without departing from the true scope and spirit thereof.

What is claimed is:

1. A hanger yoke for flush mounted ceiling lighting fixtures comprising an elongated inverted channel shaped member, fixture supporting means carried by said channel, a pair of L-shaped bracket members each having one leg adjustably secured to an end of said channel shaped member to form a U-shaped yoke, and clips adjustably secured to the other legs of said L-shaped brackets, each of said clips having a pair of spaced parallel legs connected by a base member, said base member overlying said other leg of the associated L-shaped bracket member with the spaced parallel legs extending outwardly therefrom, and outwardly and rearwardly formed hook-like means of different configurations carried by each of said spaced parallel legs, said clips being selectively positioned to engage yoke-supporting ceiling members.

2. A hanger yoke for flush mounted ceiling lighting fixtures comprising an elongated inverted channel shaped member, fixture supporting means carried by said channel, a pair of L-shaped bracket members, each having one leg adjustably secured to an end of said channel shaped member to form a U-shaped yoke, and clips adjustably secured to the other legs of said L-shaped brackets, each of said clips having a pair of spaced parallel legs connected by a base member, said base member overlying said other leg of the associated L-shaped bracket member with the spaced parallel legs extending outwardly therefrom, a flange along at least one edge of said base member and engaging an edge of the associated L-shaped member to fix the clip against rotation relative to said L-shaped member and outwardly and rearwardly formed hook-like means carried by each of said spaced parallel legs, said clip being selectively positioned to engage yoke-supporting ceiling members.

3. Clip means for attaching a lighting fixture supporting yoke to yoke supporting structural members comprising a base part, a pair of outwardly extending spaced parallel legs, means in said base part for attachment of the clip to a yoke to be supported, and structural member engaging means on the outer ends of each of said legs, the last said means constituting hook-like parts formed by bending the leg ends outwardly upon themselves.

4. Clip means according to claim 3 wherein one of said hook-like parts is of rectangular configuration defining a narrow channel of substantial uniform section throughout its extent and the other of said hook-like parts is of triangular configuration with the end of the bent portion being spaced from the outer surface of the associated leg.

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