

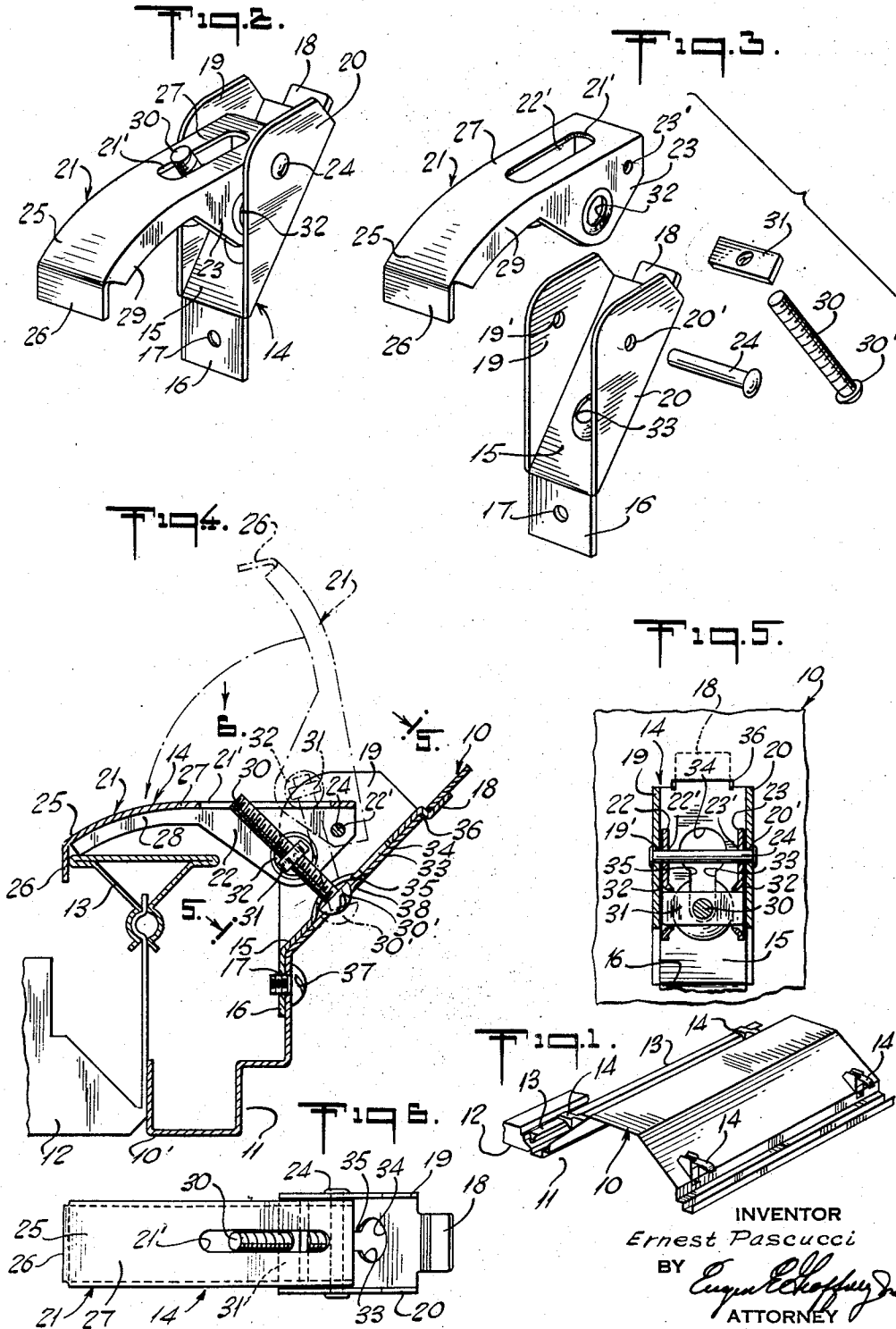
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LEVELING DEVICE FOR LIGHTING FIXTURES

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LEVELING DEVICE FOR LIGHTING FIXTURES

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1 Claim. (Cl. 240—78)

This invention relates to lighting fixtures and more specifically to a novel and improved device particularly useful for mounting flush type fluorescent and other electric lighting fixtures.

While the invention may be used for mounting many types of lighting fixtures, it is particularly useful for installing flush type fluorescent fixtures that are designed to be installed within a preformed ceiling opening. Heretofore fluorescent fixtures have been supported within ceiling openings by means of yokes or other similar devices adapted to span the ceiling opening. This arrangement further necessitates cooperating elements on the fixture and the yokes for support of the fixture which often complicated fixture design and materially increased fixture and installation costs. Furthermore, the yoke type of support is essentially a two-point support with the result that accurate alignment or leveling of the fixture relative to the ceiling was frequently difficult to accomplish, particularly when the ceiling and ceiling supporting elements were not accurately aligned one with the other.

The above and other difficulties have been overcome by this invention which affords a novel and improved device for supporting conventional elongated fluorescent fixtures. With this arrangement of elements, prior yoke assemblies are eliminated and the fixture may be secured directly to the ceiling members and accurately leveled relative to the ceiling with little or no difficulty.

Another object of the invention resides in the provision of an improved structure, adapted to be carried by a lighting fixture for flush ceiling mounting, that can be moved out of line with the fixture edge for insertion of the fixture into the receiving opening and then moved into engagement with a ceiling supporting member for support and alignment of the fixture.

A still further object of the invention resides in the provision of a novel and improved leveling and supporting device for fluorescent and other fixtures characterized by its simplicity, ease of operation and low cost.

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 a perspective view of a flush type fluorescent fixture having mounting means in accordance with the invention;

Fig. 2 is a perspective view of one embodiment of mounting means in accordance with the invention;

Fig. 3 is an exploded view of the embodiment shown in Fig. 2;

Fig. 4 is a cross sectional view of the invention illustrated in Figs. 1 and 2, mounted in position on a fluorescent fixture;

Fig. 5 is a cross sectional view of Fig. 4 taken along the line 5—5 thereof; and

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Fig. 6 is a top view of the apparatus shown in Fig. 4 taken in the direction of the arrow 6.

Referring to the drawings and more specifically to Fig. 1, there is illustrated a fluorescent lighting fixture 10 disposed within an opening 11 in the ceiling 12. The fixture is supported on ceiling rails 13, of the type customarily used for ceiling support, by four levelers or supports 14 in accordance with the invention.

The leveler 14 is shown more clearly in Figs. 2 through 6 and comprises a frame having a base 15, an angularly disposed mounting tab 16 including a threaded opening 17 and a second mounting tab 18 parallel to but offset from the base 15. The frame further includes a pair of outwardly extending flanges 19 and 20 carried by the base 15 for pivotally supporting an adjustable arm generally denoted by the numeral 21. This arm is generally channel shaped and preferably includes a slight curvature at its outer end to facilitate its cooperation with the ceiling rails or members 13.

More specifically the arm has a pair of downwardly extending flanges 22 and 23 adapted to be received between the flanges 19 and 20. A pivot pin 24 cooperates with aligned openings 19', 20' and 22' and 23' to hold the arm in position between flanges 19 and 20. As previously mentioned the outer end 25 of arm 21 is curved downwardly and terminates in a flange 26 generally at right angles to the flat part 27 of the arm. The illustrated embodiment of the arm 21 further includes optional side flanges 28 and 29.

Adjustment of the arm 21 relative to the base 15 is accomplished by a threaded screw 30 and cooperating nut 31. The nut 31 is loosely carried by openings 32 in the arm flanges 22 and 23 and is retained in place by the frame flanges 19 and 20. The base 15 of the frame includes a keyhole shaped opening 33 with the enlarged part 34 having an opening to pass the head 30' of screw 30 and a recessed narrow portion 35. The recessed portion 35 holds the screw head 30' in position when the leveler is in place supporting the fixture as shown in Figs. 4 and 5. In the instant embodiment of the invention the arm 21 is provided with an elongated slot 21' to accommodate the end of the screw 30.

The operation of the leveler 14 and its cooperation with the fixture 10 is shown more clearly in Fig. 4. The assembled leveler 14 as described above is secured to the side of the fixture and a screw 37 extending through an opening in the fixture and threadably engaging the opening 17 in tab 16. The screw head 30' is accessible from within the fixture through an opening 38 as shown in Fig. 4.

Four levelers would ordinarily be mounted at the four corners of a fixture 10 and the screws 30 rotated to move the arms 21 into the raised positions as illustrated in Fig. 4. This brings the ends of the arms inwardly toward the fixture so that they will not interfere with the placement of the fixture in the ceiling opening 11. After the fixture is in place in the ceiling, the screws 30 are rotated to bring the arms 21 into engagement with the ceiling rails 13. In the instant embodiment, the end flange 26 of each leveler extends beyond the rail or T-bar 13 and the flanges 28 and 29 bear against the upper surface. This prevents side slip of the fixture 10 and affords each leveler a firm grip on the cooperating rail. With the fixture held in place in the opening, each screw 30 is then further adjusted so that the peripheral edge 10' of the fixture is in precise alignment with the ceiling 12 as illustrated.

By reason of the unique arrangement of elements, the fixture once mounted in the ceiling will remain in the adjusted position and if desired can be removed by displacing the arms 21 upwardly and out of line with the

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edge of the fixture. In addition leveler 14 as shown and described can be arranged for attachment to other types of electric fixtures merely by modifying the configuration of the base 15. The arm 21 may also be shaped to meet a particular need.

What is claimed is:

The combination with a lighting fixture having a casing including a side wall having an opening, of a leveler secured to said side wall and overlying said opening, said leveler comprising a base member including means for attaching it to said fixture, a pair of spaced outwardly extending parallel side walls carried by said base, an arm, a pair of parallel wall members carried by said arm and spaced one from the other a distance less than the distance between the first said side walls, means pivotally attaching the wall members of said arm to said parallel side walls, said wall members each having an opening therein spaced from the pivotal means and at least partially overlapped by said parallel side walls throughout

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arcuate movement of the arm, a traverse member spanning said wall members and engaging said openings, said traverse member being retained in position in said openings by said parallel side walls and having a threaded opening therein, said base having an opening aligned with the last said threaded opening and the first said fixture opening and a screw extending through the fixture and base openings and threadably engaging said transverse member for moving said arm relative to said base.

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