June 19, 1962 F. E. NAGLE, SR 3,039,729

LIGHTING FIXTURE SUPPORT

Filed July 24, 1959 2 Sheets-Sheet 1

Fig. 1

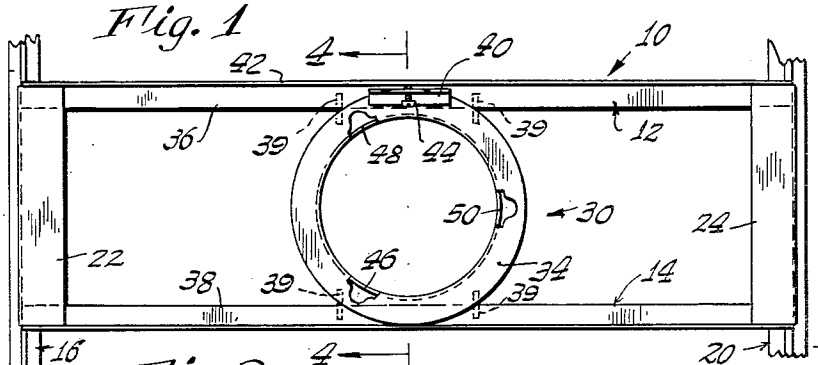


Fig. 2

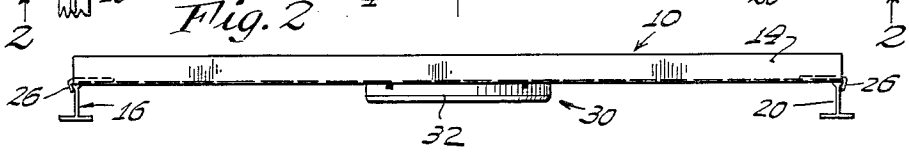


Fig. 3

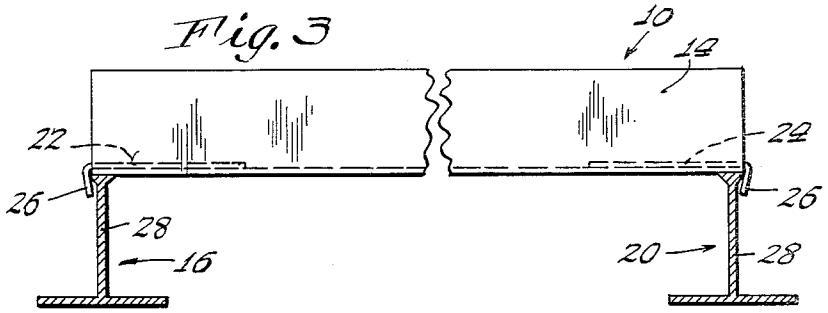


Fig. 4

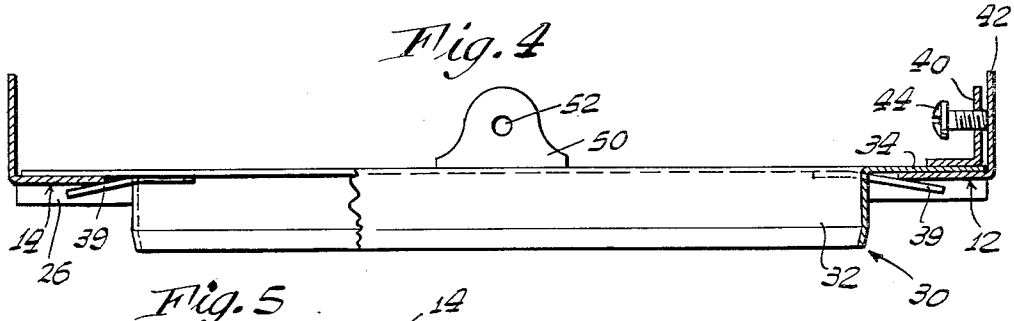
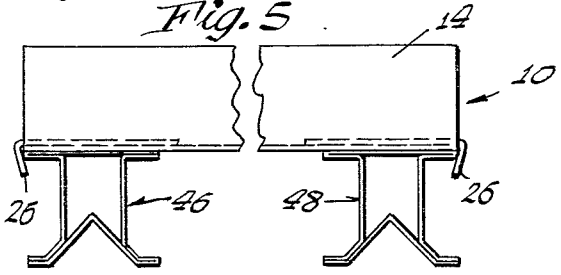


Fig. 5



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LIGHTING FIXTURE SUPPORT

Filed July 24, 1959 2 Sheets-Sheet 2

Fig. 6

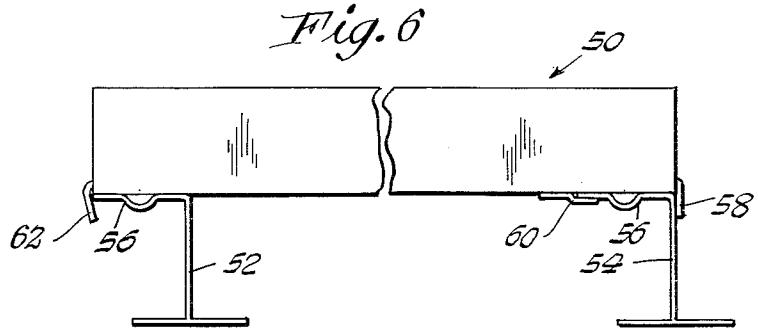


Fig. 7

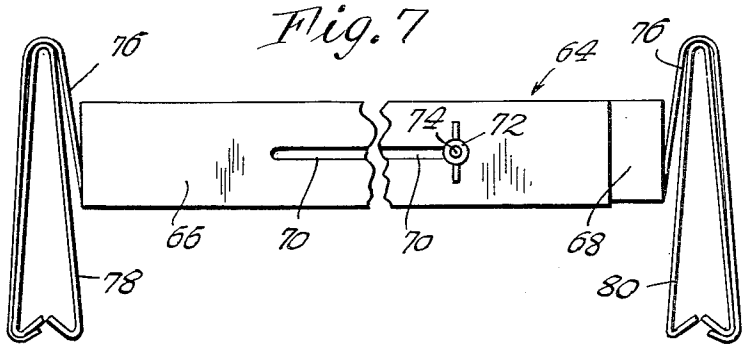
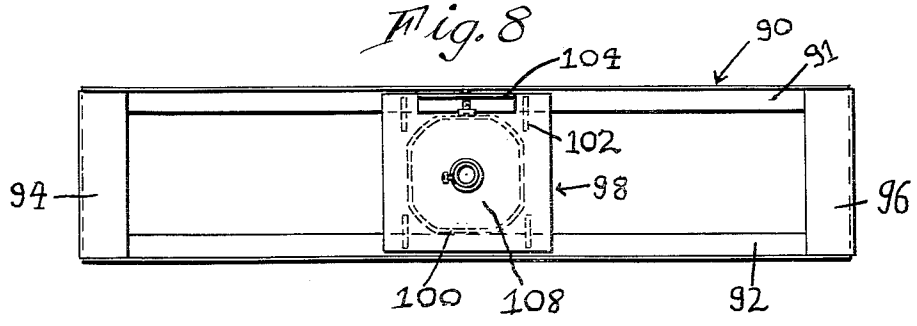


Fig. 8



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LIGHTING FIXTURE SUPPORT

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1 Claim. (Cl. 248—343)

This invention relates in general to lighting fixtures and in particular to a new and useful adjustable lighting fixture positioning and holding bracket.

When lighting fixtures are to be installed in a wall or a ceiling, it is first necessary to build a rough frame for the lighting fixture box at the desired location. This frame may be made by fastening wooden or metal cross members to the ceiling beams after the precise position for the lighting fixture has been accurately determined and measured. The outer portion or rough-box for the lighting fixture is then secured to the frame by nails or screws and the ceiling is finished as by plastering down to the lower level of the fixture rough-box. With such construction adjustments in the location of the frame for the fixture is difficult, it being necessary to tear down and reconstruct the cross member frame portions if changes are desired. Fine fixture positioning adjustments are not possible.

In accordance with the present invention there is provided a lighting fixture positioning and holding bracket including a rectangular frame portion which is adapted to be positioned over, and secured to, an adjacent pair of the ceiling or wall beams located in the general location in which the lighting fixture is to be located. Slideable along the frame members is a lighting fixture rough box holding bracket which is shaped to the general configuration of the lighting fixture rough-box, but made slightly larger to accommodate the rough box therein. Since the holding bracket may be slid to any location between the supporting beams the fixture may be accurately located at any desired location. Measurements from wall to wall or from one lighting fixture to the next may be made as the bracket is slid to the desired measured location. Means are provided to easily secure the rough box to the sliding holding bracket, and after it is so secured the ceiling may be finished as desired.

If desired the frame portions may be made in two pieces to permit adjustment of the frame to the spacing of the supporting beams.

Accordingly it is an object of this invention to provide an adjustable lighting fixture holding and positioning bracket.

A further object of the invention is to provide a lighting fixture holding and positioning bracket including a fixture holding bracket which is slideable in a supporting frame, the latter being adapted to be supported on adjacent beams of a wall or ceiling.

A further object of the invention is to provide an adjustable lighting fixture holding bracket which is simple in design, rugged in construction and economical to manufacture.

The various features of novelty which characterize the invention are pointed out with particularity in the claim annexed to and forming a part of this specification. For a better understanding of the invention, its operating advantages and specific objects attained by its use, reference should be had to the accompanying drawings and descriptive matter in which there are illustrated and described preferred embodiments of the invention.

In the drawings:

FIG. 1 is a top plan view of an adjustable lighting fixture holding and positioning bracket constructed in accordance with the invention;

FIG. 2 is a side elevation of the bracket indicated in FIG. 1;

FIG. 3 is a fragmentary enlarged side elevation of the

bracket showing the manner in which the frame is secured to ceiling supporting beams;

FIG. 4 is an enlarged partial elevation and section taken on the line 4—4 of FIG. 1;

FIG. 5 is a view similar to FIG. 3 but indicating the frame connected to another type of ceiling or wall support beams;

FIG. 6 is a fragmentary side elevational view of another embodiment of bracket supporting frame; and

FIG. 7 is a fragmentary side elevational view of another embodiment of bracket supporting frame.

FIG. 8 is a top plan view of the adjustable bracket of the present invention for surface mounted fixtures.

Referring to the drawings in particular, the invention embodied therein includes a rectangular supporting frame generally designated **10** having a pair of channel side members **12** and **14** which are positioned between ceiling support beams **16** and **20** which are located in the general vicinity of the desired location of the lighting fixture to be installed. The channel members **12** and **14** are joined together at each end by cross plates **22** and **24** respectively. The channel members **12** and **14** are made up to a length corresponding to the usual wall or ceiling beam or stud spacing to permit bent down end portions **26, 26** of each of the cross plates **22** and **24** to be stretched beyond the far side edges of the upstanding center portion **28** of T beams **16** and **20**.

In accordance with the invention a lighting fixture holding bracket generally designated **30** is mounted for sliding movement along the channel members **12** and **14** for accurate positioning at any desired location between the supporting beams **16** and **20**. In the embodiments illustrated in FIGS. 1 to 4 the holding bracket **34** includes a cylindrical upstanding portion **32** and an annular flanged portion **34** of a diameter great enough to permit it to be supported on horizontal portions **36** and **38** of the channel members **12** and **14**. The bracket **30** also includes downwardly extending tabs **39** which hold the bracket on the portions **36** and **38**.

Secured to one side of the flanged portion is an L-shaped member **40** which includes a vertical wall spaced inwardly slightly from a vertical wall **42** of the channel member **12**. A bolt or thumb screw **44** is threaded into the wall **40** and is tightened against the wall **42** when the holding bracket **30** is positioned at the desired location. The holding bracket **30** also includes three angularly spaced upstanding bosses **46, 48** and **50** having openings **52** to receive securing studs of a rough-box of a cylindrical lighting fixture.

It should be appreciated that the bracket **30** may be made with a rectangular or other shaped central opening to accommodate rectangular or other shaped lighting fixture rough-boxes.

In FIGURE 5 the channel members **12** and **14** are arranged to bridge specially shaped walls beams **46** and **48**. In FIG. 6 there is indicated a modified securing means for a supporting grame **50** to anchor the frame to ceiling beams **52** and **54** having laterally extending top portions **56**. In this embodiment the frame **50** includes a vertical lug **58** which fits on the outside of the vertical portions of the beam **54**. This end of the frame **50** is also provided with a cleat **60** which is slid over the portion **56** of the beam **54**. The other end of the frame **50** is provided with a bent lug **62** which is forced around the end of the portion **56** of the beam **52**.

In FIGURE 7 there is illustrated a modified frame generally designated **64** which includes on each side an outer channel member **66** and an inner channel member **68** which is slidable within the channel member **66**. Each channel member **68** and **66** is provided with a laterally elongated slot **70** to permit telescoping adjustment of the frame to permit it to bridge supporting beams of various

spacing. When the channel members **66** and **68** are extended to the proper length they are fastened in the extended position by tightening a ring nut **72** onto a bolt **74** which extends through the slots **70** of each channel member.

Secured to each end of the channel members **66** and **68** are cross plates (not shown) which carry tie straps **76** made of a material such as sheet metal which may be bent to conform to any contour of supporting beam such as beams **78** and **80**. The straps **76** are bent around the associated beams **78** and **80** and are bent upwardly at the bottoms of the beams to secure the ends at this location. If desired nails or screws may be used to anchor the tie straps **76** in place.

The bracket illustrated by FIG. 8 is particularly adapted for surface mounted fixtures. As shown, the bracket frame generally designated **90** includes channel members **91** and **92** for location between ceiling beams, not shown, in the same manner as the L bracket shown in FIG. 1. The channel members **91** and **92** are connected at respective ends by cross plate members **94** and **96**. In this embodiment a fixture bracket generally designated **98** is provided for mounting a junction box **100** on the underside thereof. The fixture bracket **98** includes tabs **102** at each corner which extend beneath the channel members **90** and **92** to guide the bracket for reciprocation therealong. The bracket includes an upstanding lug **104** having a threaded bolt extending therethrough for securing the bracket in the desired location as in the previous embodiment. The junction box **100** may be advantageously welded to the bracket **98** and an opening **106** is provided through each for electrical cables.

The present invention thus provides a means for quickly and accurately positioning a holding bracket for mounting a lighting fixture to either a wall or a ceiling. If desired a plurality of lighting fixture holding brackets may be slideably positioned on a supporting frame to bridge a whole ceiling or wall. Thereafter the brackets may be adjusted to the desired spacing and clamped in position. Lighting fixtures are then fastened to the brackets and they will be positioned at the precise location desired.

In constructing the supporting frame for the brackets the cross plate width is determined by the width of the fixture to be used and the beam spacing whereas the length of the channel members is determined by the beam spacing in the ceiling. If desired both the cross plates and the channel members may be made telescopically adjustable.

While specific embodiments of the invention have been shown and described in detail to illustrate the application of the invention principles, it will be understood that the invention may be embodied otherwise without departing from such principles.

I claim:

A device for supporting lighting and similar fixtures between wall or ceiling supporting beams comprising a pair of side channel members including horizontal and vertical portions adapted to extend over adjacent supporting beams, a cross plate member at each end of said channel members connecting said channel members, a fixture bracket including a central fixture mounting portion extending between said channel members and a flaged portion slideable on the horizontal portions of said members, a tab portion extending outwardly from each side of said fixture bracket below the horizontal portions of said channel members to confine said fixture bracket for movement along said channel members, and screw clamping means on the flanged portion of said fixture holding bracket to clamp said bracket to the substantially vertical portion of said channel members after it is positioned at the desired location along the length thereof.

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