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L. BADY ET AL

ADJUSTABLE HOLDING FIXTURE

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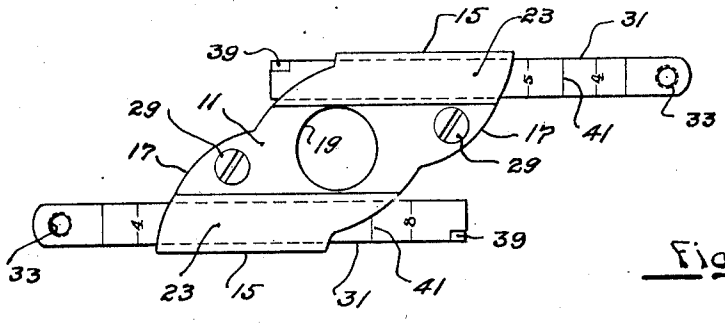


Fig. I

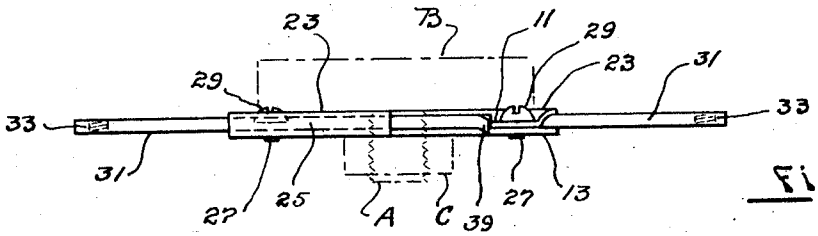


Fig. II

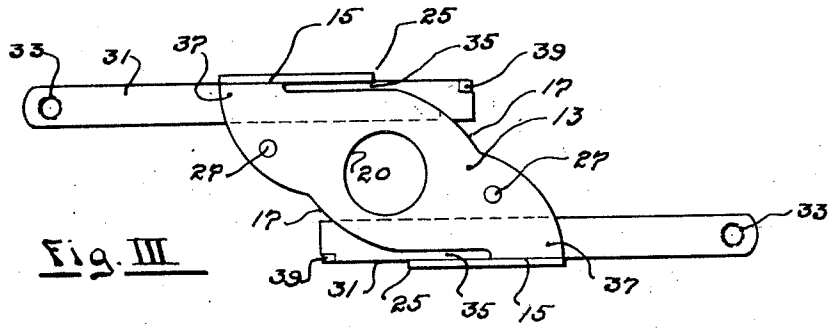


Fig. III

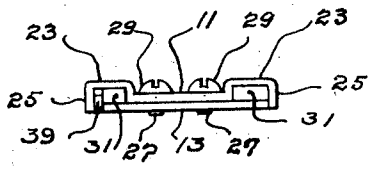


Fig. IV

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ADJUSTABLE HOLDING FIXTURE.

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This invention has reference to electric fixtures and pertains more especially to devices for supporting ceiling canopies and wall-brackets.

One of the objects of the invention is the production of an improved device of the character referred to, wherein adjustable canopy carriers are each held by single and independent means disposed in fixed relation to a common supporting member.

Another object is to produce a device of the kind specified in which the adjustment of the canopy carriers shall be unobstructed by the means holding them in such position.

A further object is to provide a device of the class described having canopy carriers enveloped by extended guides disposed in the same plane.

Still another object resides in producing a device of the type mentioned, arranged to have canopy carrying arms clamped intermediate of double guide members and the clamping pressure applied in proximity to the edges of the latter where the arms project outwardly therefrom.

A still further object is the provision in a device of the nature set forth, of imperforate, straight bodied canopy carriers, each held in offset relation, both transversely and longitudinally from the centre of the supporting member.

An additional object resides in providing a device of the species alluded to, possessing in one size thereof, a wide range of adjustability so as to accommodate canopies of widely varying dimensions.

A supplemental object is to supply a device of the sort implied, contractible to lie within the contour of the smallest canopies prevalently employed.

A subsequent object is to afford a device for the purpose in view capable of being accurately set, in advance of its erection, to the size of the canopy used therewith.

A general object is to furnish a practical device of the example given, of strong, rigid but light construction; convenient to assemble and adjust; readily and quickly installed; not liable to become disarranged; besides easily and economically manufactured.

Other objects and advantages of the invention will in part be obvious and in part be more fully brought out in the detailed description hereinafter contained.

The invention consists in the various combinations and subcombinations of elements, arrangements and interrelative disposition of parts, and peculiar features of construction pertaining to the improved device, as herein described, and defined in the appended claims.

A practical embodiment of the invention is illustrated in the drawing hereto annexed, wherein

Figure I is a top plan view of an adjustable holding device made in accordance with the invention;

Fig. II is a front view of the structure represented by the preceding figure, looking upwardly from the lower edge thereof;

Fig. III is a bottom plan view of the same structure, looking up from the underside of Fig. II; and

Fig. IV is an end elevation of the invention, as viewed from the right hand side of Figs. I and II.

Briefly outlined, the invention as it exists in the embodiment thereof herein exemplified, comprises a pair of plate members of substantially rhomboidal shape and provided centrally thereof with aligned openings adapted to take over the threaded shank of a ceiling outlet box. Adjacent to each of the longitudinal edges of the upper one of these plates are formed channelled guides disposed in diagonally offset relation to the opening within the aforesaid plates. Within the guides are adjustably received, bar elements affording carriers for a canopy, wall-bracket and the like suitably supported from the outer ends thereof. Screw means entering the lower plate from the opposite outer corners of the upper one serve to clamp the carrier bars in adjusted position. Graduations on the sides of the aforesaid bars facilitate the setting thereof to a predetermined size of canopy. Against the underface of the lower plate, abuts a nut which engages the before mentioned shank, being capable of holding the device to the outlet box referred to.

Obviously, the greatest benefit will be derived from the invention by using it in its entirety after the manner hereinabove expressed, although it may be noted that an operative device of acceptable design may be produced by employing a less number of parts, which corresponding diminished advantages. Further it will be observed by experts familiar with inventions of analogous import, that the combined supporting

members, carrier elements and clamping means herein disclosed, is susceptible of various modifications having the same end in view. Therefore, let it be understood, that the annexed drawing is offered by way of example only, and is not put forth as representing the sole means of reducing the invention to practice.

As illustrated on the said drawing, the device constituting the present embodiment of the invention includes a supporting member which as shown consists of a pair of coacting, upper and lower plates 11 and 13 respectively. Both of these plate members are of substantially rhomboidal formation, having the counterfacing sides thereof straight and lobe shaped, as denoted at 15 and 17 respectively. Centrally said plates 11 and 13 are provided with aligned openings 19 and 20 respectively, jointly adapted to take over the threaded shank A of a ceiling outlet box B, indicated by dot and dash lines in Fig. II.

Alongside each of and parallel with the hereinbefore mentioned straight sides 15 of the upper plate 11, which by preference is made of thinner material than the lower one, are struck up channel-like guides 23, disposed in diagonally offset relation one to the other and positioned equidistantly on each side of the opening 19 to which they are tangential. The outermost edges of these guides form lips or flanges 25 that depend below the body (11) of the plate member spoken of. The latter has the appearance of being recessed or depressed intermediate of the channels referred to.

In the opposite outer corners between the inwardly turned sides of the channel guides 23 and the edges of the adjacent lobe portions 17 of the plate 11, are clearance holes through which shanks 27 of screws are passed, the heads of the screws being indicated at 29. The shanks mentioned, are threaded into suitable apertures provided therefor in opposed relation through the corresponding lobes of the lower and thicker plate 13. The functions of the screws referred to, is to draw the lower plate towards the upper one, for the purpose of clamping therebetween, carrier elements 31. These elements are preferably composed of straight metallic bars having imperforate body portions.

The outer extremities of said bar elements 31 are provided with tapped orifices 33 adapted to receive the means usually supporting the canopy proper, which means may either directly engage the rim of the latter, or else through the instrumentality of a ring-shaped frame (not shown) wherein this rim rests, in a manner well known in the art. For the purpose of intensifying the clamping pressure exerted by the lower plate upon the underface of the carrier elements 31, the portions of the plates which lie in proximity to the inner sides of the hereinbefore recited flanged lips 25, are relieved as denoted at 35 for the major part of their lengths, in order to afford toes 37 which alone contact for their full width with the underside of the carrier bars 31 at the points where the same leave or overhang the coacting plate members. As will be best seen from Fig. III, the grooves (35) formed intermediate the flanges 25 and the cut-away or relieved portions of the lower plate, which is disposed in one plane, or in other words, is flat throughout its exposed face, offer unobstructed passage-ways for stops or detents 39 incorporated with the inner terminals of the said bars 31. The stops in question, are formed by slitting the ends of the said bar elements adjacent to the outer or remote side edges thereof, and bending down the material included between the slits and the last named edges. At such times as the carrier elements are fully extended to accommodate the largest size of canopy capable of being supported thereby, the stops 39 abut against the inside of the toes 37, thus limiting the adjustment of the said elements, besides preventing them becoming disassociated from the plate members.

With the object in view of enabling electricians putting up these devices, to quickly predetermine the settings thereof to a given dimension of a canopy, shell or frame, the bars 31 are furnished with graduations 41 on their larger side faces. From the foregoing, it will be understood, that instead of the fit and try method presently in vogue by lighting fixture erectors, the latter can save considerable time by positioning the graduations on the bars to the outermost overhanging portions of the plate members and thus obtain the required setting at once. By virtue of the rhomboidal shape of the plate members 11 and 13, the overhanging portions thereof previously referred to make it possible to reduce to a large extent the amount which the said bars reach out beyond the members. The flat or plain underface of the lower one of these members affords an adequate bearing surface for the nut C to abut against when the same is tightened up, incidental to securing the device in its entirety together with the canopy, in assigned position to the neck A of the outlet box B.

The peculiar disposition of the clamping means 27 permits either one of the carrier elements of being adjusted independently of the other and without interfering or reducing the amount of such adjustment. Furthermore, by reason of the fact that the said means are fixed relative to the members engaged thereby and is not shiftable with respect thereto, the erector is always sure to

find them in a certain position. On account of the carriers 31 being enclosed on all sides thereof, they are held more firmly than would otherwise be the case. Besides, these carriers are not as readily bent or distorted as when the clamping pressure is applied in one particular spot thereon. All of the above enumerated features contribute in making the device under consideration highly desirable in the saving of time required for the adjustment and erection thereof.

In its broader aspects, the invention herein disclosed is not limited to the precise features of construction and arrangement of parts shown and described, nor to the particular structual make-up or design by which it can be reduced to practice, as numerous changes may be made in the details without departing from the principles of the invention, or even sacrificing any of its chief advantages.

Having now described our invention, what we claim as novel therein and desire particularly to protect by Letters Patent of the United States, is:—

1. In a device of the class mentioned, a supporting member attachable to an outlet fixture, guides formed on the edges of said member, means overlying said guides coacting with the member, canopy carrying arms having their body portions received between the guides and said means, and other means co-operating with the latter and the said member serving to hold said arms in a predetermined position within the said guides.

2. In a device of the class mentioned, a central member attachable to the stud part of a ceiling fixture, extended guides formed in offset relation one to the other with the opposite edges of said member, another member conforming to said first named member coacting with the guides thereof bars receivable intermediate of said guides and said other member adapted to support a canopy from their free outer ends, and means engageable with both members capable of holding said bars in adjusted position.

3. In a device of the class mentioned, a central member comprising a pair of rhomboidally shaped plates jointly attachable to an outlet fixture, guides formed with the longitudinal edges of one of said plates imperforate elements receivable between said guides and the other one of the said plates, and means exerting a clamping pressure upon both plates to hold said elements in adjusted position, the outer ends of the latter being capable of sustaining a canopy therefrom.

4. In a device of the class mentioned, a member connectible to an outlet fixture, longitudinally and laterally offset guides formed with said member, a second member overlying said guides, bar elements receivable intermediate the guides and said second member adapted to sustain a canopy from their free outer ends, means coacting with both of the said members to hold said bars in adjusted position within the said guides, and other means co-operating with the said second member serving to limit the outward movement of the said bars.

5. In a device of the class mentioned, a pair of plates constituting a support attachable to an outlet fixture, guides formed in diagonally offset relation with one of said plates canopy sustaining bars having their body portions received intermediate of said guides and the other one of the said plates, means on said bars enabling them being set to a given size of canopy to be carried thereby, and means coacting with said pair of plates to clamp the said bars in required position.

6. A device of the class mentioned comprising a relatively flat plate, means for attaching the latter to a primary support, said plate having longitudinal guide channels projecting from one side thereof, supporting bars adjustably received within said channels, another plate coacting with the flat side of the first named plate, and means for clamping the said plates together to retain said bars in their desired adjusted positions.

7. A device of the class mentioned comprising a pair of superimposed plate members, means for holding the same to a primary support, independent arms adjustably received between said plate members and projecting in opposite directions therefrom, and means for frictionally clamping the plate members together to hold said arms in adjusted position.

8. A device of the class mentioned comprising a pair of superimposed plate members means for connecting the latter to a primary support, arms adjustably received between said members and projecting to opposite sides thereof, and means for clamping the plate members together to hold said arms in adjusted position, said means permitting independent adjustment of the arms.

9. A device of the class mentioned comprising a pair of superimposed plate members, means for affixing the same to a primary support, guide channels formed between said plate members, supporting arms extending to opposite sides of the latter and slidably received within said channels, and means for clamping said arms within the guide channels in their desired adjusted position.

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