June 2, 1931. N. L. URELES 1,807,641

LIGHTING FIXTURE

Filed Dec. 3, 1927

Fig. 1.

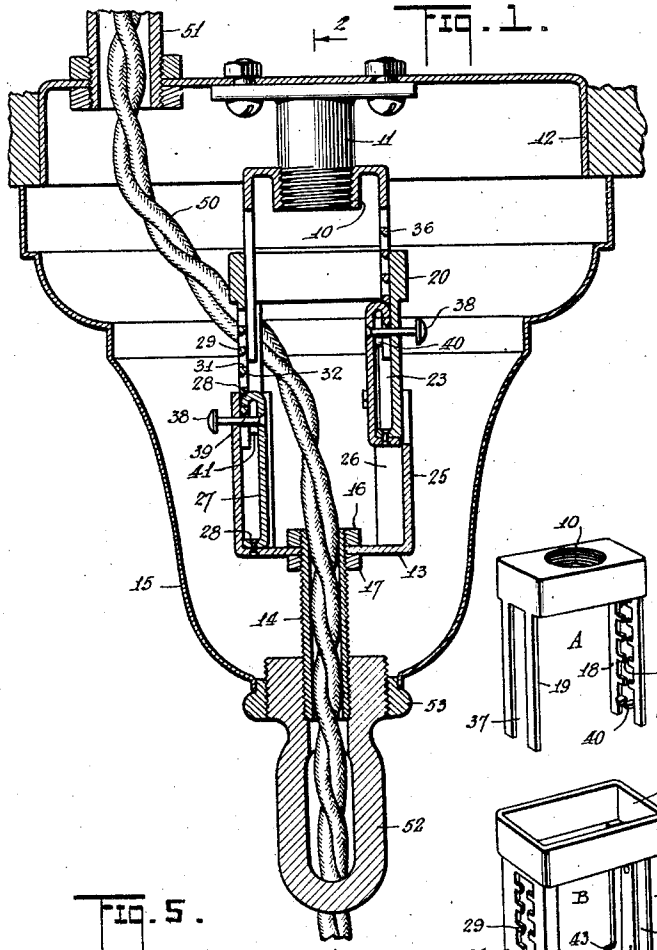


Fig. 2.

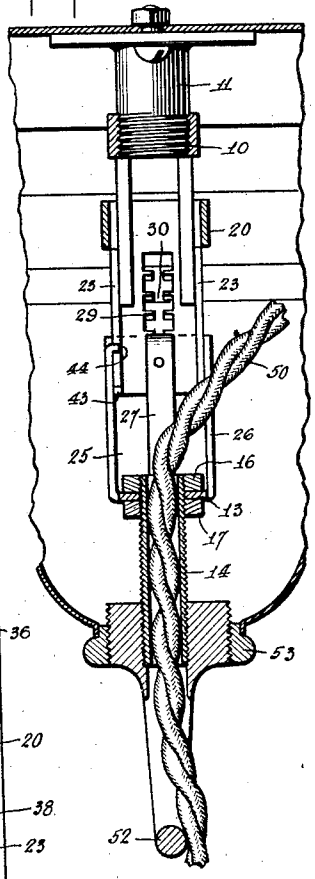
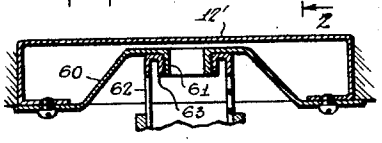


Fig. 5.



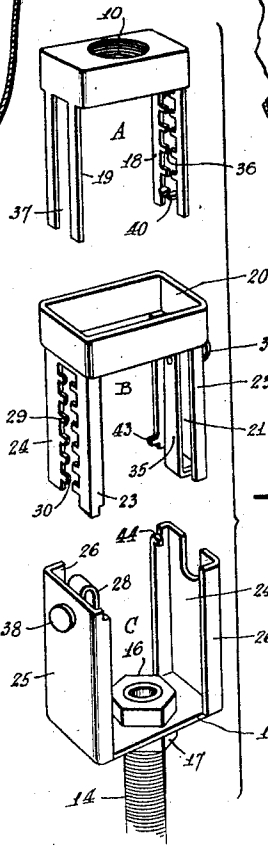


Fig. 4.

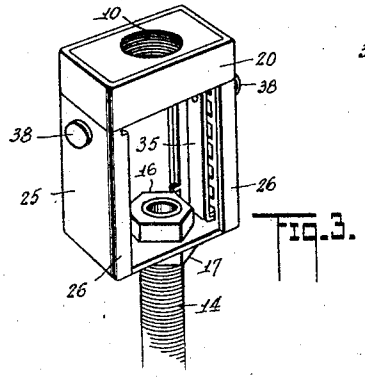


Fig. 3.

Inventor
Nathan L. Ureles

By his Attorneys
Dean, Fairbank, Ohlright & Hirsch.

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UNITED STATES PATENT OFFICE

NATHAN L. URELES, OF NEW YORK, N. Y.

LIGHTING FIXTURE

Application filed December 3, 1927. Serial No. 237,350.

My present invention relates to lighting fixtures and more especially to the mounting hickey for attaching such fixtures against the ceiling, wall or floor.

It is among the objects of the invention to provide a hickey on which the lighting fixture is carried and whereby the canopy, panel or other ceiling, wall or floor engaging piece of the fixture may be securely applied in position with the utmost facility, without exposure of any attachment screw, through the sides of the canopy or panel, or otherwise disfiguring the same or rendering the same unsymmetrical.

Another object is to provide a fixture attaching device of the above type, universal in its applicability to outlet boxes, canopies or panels of various heights or depths, without the need for special adjusting operations or attachment parts.

Another object is to provide a hickey of the above type, which does not interfere with the wiring of the fixture, and while securely locked in position for firm attachment of the canopy, panel or base, can yet be conveniently removed after use and reapplied for the same or for another fixture.

Another object is to provide a construction of the above type which is simple in the construction and assembly of its constituent parts, and which may be embodied in various applications with or without switches of various types.

According to the invention, I employ a self-locking collaspible fixture support which may be a hickey including a base or stud section adapted to be mounted to the stud or other part of the outlet box and an outer or head section, against which the canopy, panel, base or other piece is clamped. The various elements making up the hickey are interfitted to permit collapse to any degree, and to automatically resist extension thereof. The support structure being mounted in the outlet box, and extended to its utmost, the mere application of the canopy, panel or base will cause corresponding collapse of the support for adaptation to the combined depth of the outlet box and the canopy, panel or base, whereupon the assembly is completed by applying a nut or other screw threaded part to clamp such canopy or equivalent part in position.

Inasmuch as the various types of outlet box and canopies and panels present wide variations in depth, corresponding variations in the setting of a universal hickey or mount must be permitted, so that the hickey in fully extended state is considerably longer than in fully collapsed state. To this end, I prefer to form a hickey of two or more sections interfitting for collapse and extension thereof.

In the accompanying drawings in which is shown one of various possible embodiments of the several features of the invention,

Fig. 1 is a view in longitudinal cross-section showing a preferred fixture installed,

Fig. 2 is a sectional view taken along the line 2—2 of Fig. 1,

Fig. 3 is a perspective view of a preferred form of hickey mount in collapsed condition,

Fig. 4 is a dropped perspective view illustrating the constituent elements of the fitting, and,

Fig. 5 is a fragmentary detail of a modification.

Referring now to the drawings, I have shown a compound hickey, illustratively for a pendent lighting fixture. The hickey comprises a plurality, in this case illustratively three interfitting sections, A, B and C. The innermost of these sections A, which I call the stud section has illustratively an inturned threaded socket 10 for attachment on the stud 11 of an outlet box 12. The outer or canopy section C preferably includes the integral cross piece 13, through which is secured a nipple 14 for attachment of the panel or canopy 15. While the nipple may be formed integral with the head section of the hickey, I have shown said nipple attached by a pair of nuts 16 and 17 threaded thereon and clamped against opposite faces of the head 13.

The sections A, B and C of the compound hickey are preferably in telescoped relation and are shown embodied as yokes, the stud section A having a pair of upstanding lat-

eral yoke arms 18 and 19 encircled by the preferably rectangular open base frame 20 of the intermediate section B which has upstanding yoke arms 21 and 22 flanged over at 23 to form guides or tracks for the sliding movement thereof relative to the respective arms 18 and 19 of the stud section. Similarly the head section C has integral downwardly extending lateral yoke arms 24 and 25 with lateral flanges 26 to form tracks or guides for the flanges 23 of the intermediate section B. The arms of the respective yoke sections are preferably of substantially equal length, so that in fully collapsed condition as in Fig. 3, the hickey is of length little greater than that of one of the yoke arms while in fully extended position, the length of the hickey is nearly three times the length of an individual yoke.

I may employ a pawl and ratchet connection between successive yoke sections of the hickey. Illustratively, the head section has a pawl, preferably a spring arm 27, welded or soldered at its base end for coaction with ratchet teeth 29 in the corresponding arm 22 of the intermediate yoke piece B. In a preferred construction, the ratchet teeth 29 are struck out of the metal of the yoke arm, entirely between the sides thereof. Illustratively, the ratchet presents a herring bone shaped aperture presenting integral teeth 29 extending inward from opposite sides of an otherwise rectangular aperture 30. The teeth 29 present square edges 31 above (in Fig. 1) and oblique edges 32 below, so that the pawl will overrun the ratchet when the yoke pieces are pressed together and the square edges 31 of the ratchet teeth 29 will resist and prevent extension or separation of the yoke pieces, since the squared end of the pawl tooth cannot be pulled therepast.

I provide a second spring pawl 35 on the right arm of the intermediate section B, coacting with a ratchet construction 36 on the corresponding arm of the stud section A, and identical with the ratchet of the intermediate section B.

The opposite arm 19 of the stud yoke is preferably longitudinally bifurcated to afford a channel 37 through which extends pawl tooth 28 to engage the ratchet 31, even when the stud yoke is telescoped inward into the intermediate yoke, as in Fig. 3. As shown, the arms 19 and 22 of the stud and intermediate yokes respectively, extend between the yoke arm 25 and its pawl arm 27. Preferably, each of the pawl arms has rigidly affixed near the tooth end thereof a push button 38 on the outer end of a pin 39 affixed thereto and protruding from the corresponding yoke arm. Yoke piece A has inturned teeth 40 at the extremity of the ratchet 36 thereof, against which the tooth of the pawl 35 abuts in extreme extended position. Yoke ratchet 30 has similar teeth 41, similarly arresting the tooth of pawl arm 27. Yoke piece B has a tooth 43 at the end of its flange tracks 23 and arm 24 of the outer yoke piece has a similar tooth 44. The teeth 43 and 44 extend at right angles to each other and thus effectively limit the separation of yoke pieces B and C. The inturned tongues of the pawl arms 27 and 35 are of length such relative to those of push button shanks 39, that the pawl teeth will not clear the latter, even when the push buttons or either of them are depressed to the utmost, so that the yoke pieces will not become dis-assembled.

In the construction set forth, the compound hickey may be freely collapsed by mere thrust thereon, to the fully collapsed condition shown in Fig. 3, or it may be collapsed to any desired intermediate setting. Regardless of the setting of the compound hickey, it cannot be extended by mere pull or tension thereon, but to this end, it is necessary, to maintain the push buttons 38 depressed for disengaging the corresponding pawl with the ratchet, while drawing the yoke elements apart.

With the various type of canopies, panels or bases of lighting fixtures now in vogue, the three-section compound hickey affords the range of length required to accommodate any installation from the shallowest canopy on the shallowest outlet box to the deepest canopy on the deepest outlet box. Obviously, however, the concept of my invention may be carried forward, if necessary, to provide a compound hickey of four or more relatively telescoped sections. On the other hand, if desired, the hickey can be made in but two sections, a stud and a head section, directly connected by a pawl and ratchet or equivalent connection, which construction would accommodate a practical range of installations, in fact, would be suitable in all but the more extreme cases.

In Figs. 1 and 2, I have shown a preferred application of my hickey to a pendent ceiling fixture. The compound hickey is mounted in place by threading the stud-section 10 to the outlet box stud 11. The electric conductors 50 passed through bushing 51, are drawn from in back of the hickey through the nipple 14, as usual. The hickey being preferably in fully extended position, canopy 15 is applied thereover with the nipple 14 at the end of the hickey projecting therethrough. Thereupon the loop piece 52 is simply threaded at its nut end upon the protruding nipple end 14 and pushed inward, whereby the compound hickey will automatically collapse, the pawl teeth overriding the ratchet teeth, until the screw collar 53 upon the loop 52 engages the inner edge of the canopy. The loop being preferably held with one

hand, the screw collar 53 is then simply tightened against the canopy until the latter is securely pressed against the ceiling or other wall. The canopy cannot now be pulled down or out either by the weight of the pendent fixture or by manual tension, since the pawl and ratchet connections are securely locked to prevent extension of the compound hickey.

By my invention, it will thus be seen that the application of the canopy is accomplished with the utmost facility. No hickeys of special size need be kept in stock, nor need the universal hickey be adjusted or specially set by distinct preliminary operations, or adjustments or by the use of adapters, nor are successive approximations by trial and error necessary, nor groping to locate concealed screw holes. The complete installation of the fixture is accomplished in but a few seconds. The installed construction present no protruding screws or holes than tend to disfigure the canopy. The application, moreover, does not interfere in any way or render it more difficult to wire the fixture. The hickey is so strong as to sustain the weight of even the heaviest lighting fixture.

Disassembly is accomplished with the same facility as installation. For this purpose, the ring 53 of the loop is merely unscrewed, whereupon the canopy can be removed and the compound hickey unscrewed from the stud 11. With the hickey thus removed, it can be re-extended by pulling, while depressing finger piece 38. The hickey can then be re-applied to the same or to other fixtures in the manner above described.

In Fig. 5 is shown the mode of application to an outlet box, devoid of the usual stud. In this case, the outlet box 12′ is provided with a cross-bar 60 having a unitary upstanding threaded nipple 61 on which is threaded the socket end 63 of the stud section 62 of a compound hickey. The rest of the construction may be substantially identical with that of the other embodiment hereinabove more fully described.

It is obvious that other constructions may be substituted for the specific pawl and ratchet connections disclosed.

While I prefer to embody the hickey in the form of the multiple yoke construction substantially as shown, and may use pawl and ratchet connections between the successive elements substantially as shown, it will be understood that the invention is not limited to such specific constructions, and is of scope to embrace constructions that embody one-arm instead of two-arm yoke brackets, or pieces of other type, with other than pawl and ratchet connections,—all within the scope of the accompanying claims.

It will thus be seen that there is herein described apparatus in which the several features of this invention are embodied, and which apparatus in its action, attains the various objects of the invention and is well suited to meet the requirements of practical use.

As many changes could be made in the above construction, and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent of the United States is:—

1. In a lighting fixture, a compound extension fitting, comprising an inner mounting yoke having a part adapted for attachment upon an outlet box, an intermediate yoke having a frame displaceable along the arms of the first yoke and having arms protruding therebeyond, and an outer yoke part having arms slidable with respect to the arms of the intermediate part, and having an element for attachment of a fitting panel, and automatic lock means resisting relative separation of each of said parts relative to its neighbor and permitting approach of said parts to fully collapsed position.

2. A compound extension mounting fitting for a lighting fixture, comprising an inner mounting yoke having a body adapted for attachment upon an outlet box, and having a pair of arms protruding therefrom, an intermediate fitting part comprising a frame extending about said arms and having a pair of yoke arms therebeyond, and an outer yoke comprising a cross-piece having mounting means for attachment to a panel and a pair of arms slidably guided with respect to the arms of the intermediate piece, and ratchet pawl connections between the respective pieces to automatically lock the same in any setting thereof, while yielding freely to further collapse or contraction thereof.

3. A compound extension support for a lighting fixture, comprising a succession of yoke pieces, each of end dimensions to slidingly engage the exterior of the succeeding one, the innermost yoke having a threaded base for attachment to an outlet box, the outermost yoke having an integral cross piece for attachment thereto of a panel securing device, the intermediate yoke piece having an open frame base slidably encircling the yoke arms of the contiguous yoke piece, and means limiting the extension of said compound yoke from any intermediate setting thereof.

4. A compound extension support for a lighting fixture comprising an inner mounting yoke having a body adapted for attachment upon an outlet box, an outer yoke piece

having flanged yoke arms, an intermediate yoke piece having flanged yoke arms slidable in those of the outer piece, and an inner yoke piece having arms slidable in those of the intermediate yoke piece, said outer yoke piece having means for mounting a securing element for a fixture panel, said inner yoke having means for attachment to an outlet box, one-way connections between the respective yoke pieces, to automatically lock the same to limit extension from any setting thereof.

5. A lighting fixture hickey having a stud section with a base adapted to be threaded upon the stud of an outlet box, a head section with a cross bar having a centrally threaded stud, a canopy, and a nut to be threaded upon the nipple for placing the canopy in position, the successive sections of the compound hickey each comprising a yoke slidable with respect to the succeeding section, and pawl and ratchet connections between the successive yoke sections overrunning in the direction of collapse and locking to resist extension of the hickey.

Signed at Jersey City in the county of Hudson and State of New Jersey this 30th day of November, A. D. 1927.

NATHAN L. URELES.