Oct. 12, 1926.

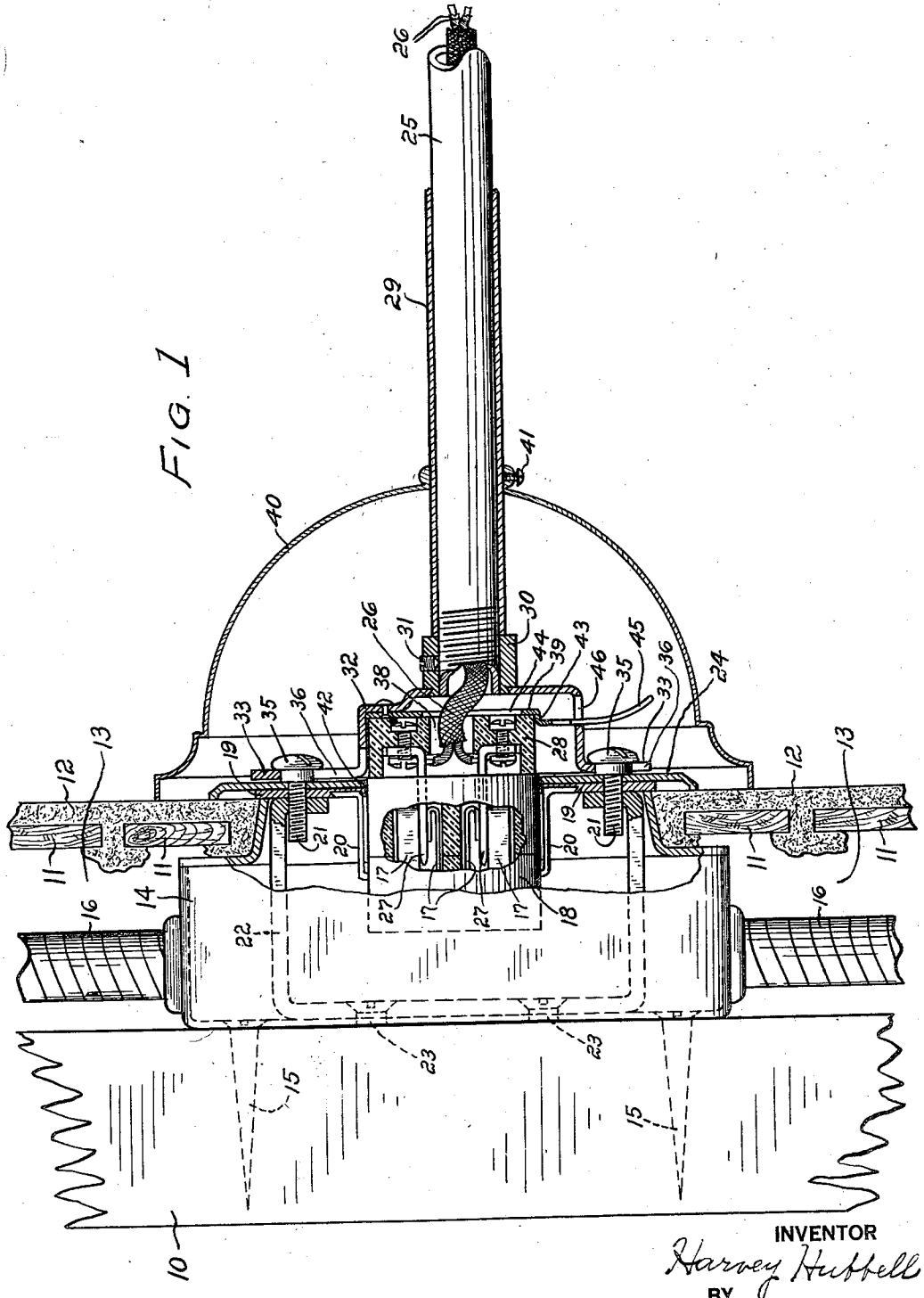
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H. HUBBELL

MEANS FOR ATTACHING FIXTURES TO OUTLETS

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FIG. 1



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FIG. 2

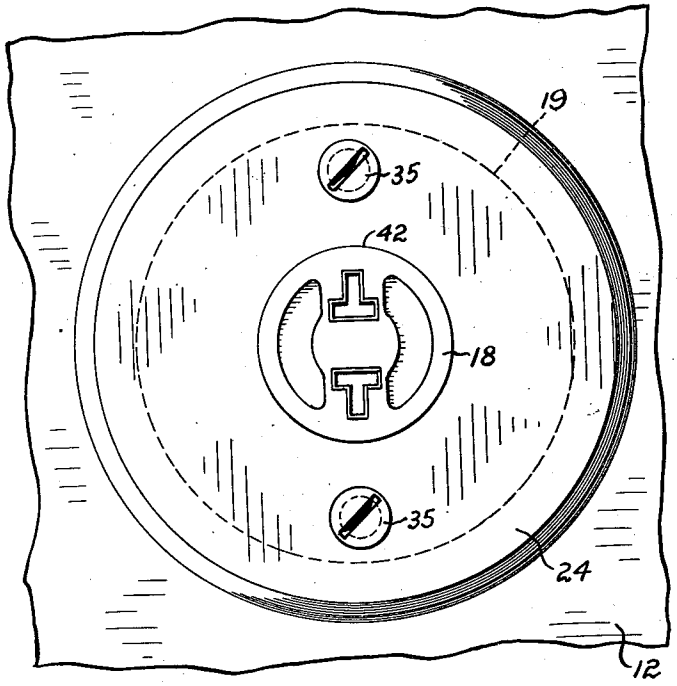


FIG. 3

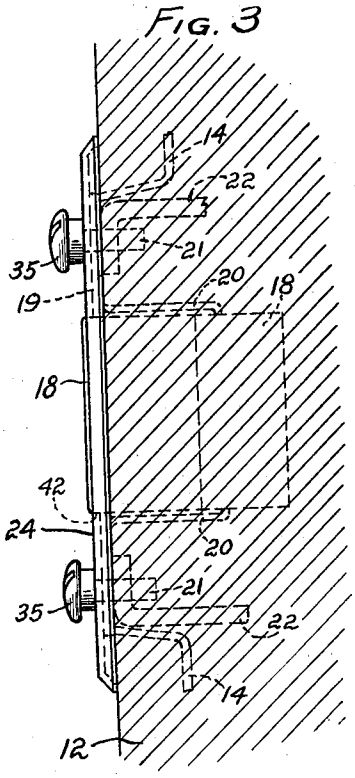


FIG. 4

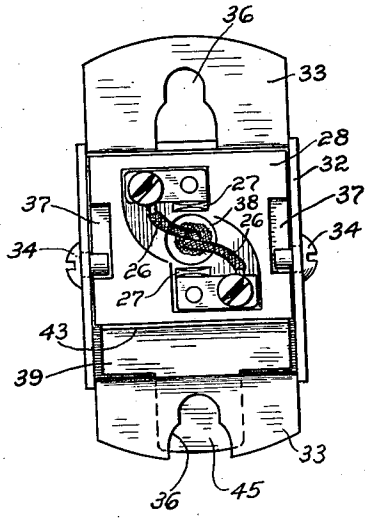
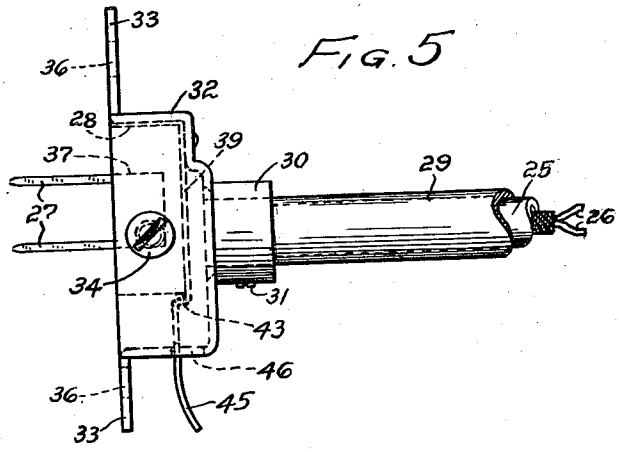


FIG. 5



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UNITED STATES PATENT OFFICE.

HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT.

MEANS FOR ATTACHING FIXTURES TO OUTLETS.

Application filed April 9, 1921. Serial No. 459,957.

This invention relates to means for attaching and supporting electric fixtures and for electrically connecting them with the house wiring, and is in the nature of an improvement on or modification of the construction disclosed in my prior application for Letters Patent filed March 1, 1921, Serial No. 448,784, wherein is shown and described a combined fixture support and current outlet or tap which may be readily put in place by the house wirer, and whereby the fixtures can subsequently be easily and quickly set up and the necessary electrical connections simultaneously made by a simple operation requiring no special skill or experience, the construction being such as to permit the fixtures to be interchanged at will and to present an inconspicuous and pleasing appearance when no fixture is attached.

In accordance with the present invention there is provided a device of the character above referred to wherein the attachment of the fixture may be effected by successive longitudinal and lateral movements thereof instead of by successive longitudinal and angular or rotary movements, as in my prior application above referred to, means being provided whereby, when the fixture is in place, the electric coupling members will be locked against the relative movement required in order to permit detachment of the fixture until intentionally unlocked for the purpose of removing said fixture.

The more particular objects of the invention, together with means whereby the same may be carried into effect, will best be understood from the following description of one form or embodiment thereof illustrated in the accompanying drawings, in which:

Fig. 1 is a central longitudinal vertical section of the complete device, showing the fixture attached.

Fig. 2 is a front elevation of the support and its associated outlet tap with the fixture removed.

Fig. 3 is a side elevation of the parts shown in Fig. 2.

Fig. 4 is a rear elevation and Fig. 5 a side view of the attaching and connecting devices carried by the fixture.

Referring to Fig. 1, 10 denotes the wall studding, 11 the lathing, and 12 the plastering between which and the studding 10 is the usual air space 13 containing an outlet box 14 of any suitable form secured to the studding 10 by screws 15 and into which lead the ends of the house wires enclosed in the usual conduits 16. The ends of said wires are electrically connected to the socket terminals 17 of a receptacle 18 composed of insulating material and of any usual or well known form, said receptacle constituting an outlet tap and forming one member of an electric coupling, the complementary member of which is carried by the fixture, as hereinafter described. 19 denotes a sub-plate connected with the receptacle 18, as by angle brackets 20 riveted to said plate and engaged in notches in said receptacle. The brackets 20 constitute means for carrying the receptacle 18. 21 denotes screws attaching the sub-plate 19 to the outlet box 14, as by engagement with threaded openings in ears formed at the outer ends of a frame or yoke 22 located in said outlet box and secured to the bottom thereof by screws 23. The sub-plate 19 is preferably of sufficient size to extend beyond the edges of the opening in the outlet box, and is covered and enclosed, when the support is fully assembled, by a face plate 24, (see also Figs. 2 and 3) of pleasing shape and finish. The face plate 24 is provided with a central opening 42 to receive the outer end of the receptacle 18 and is secured in place by the screws 21 which secure the sub-plate to the outlet box.

25 denotes the stem of an electric fixture which may be of any desired character and which is, therefore, not shown in detail herein. The stem 25 is of tubular form to enclose the wires 26 which lead to the lamps or other current consuming devices carried by the fixture. The stem 25 may, if desired, be covered by a finishing tube 29 and has a threaded inner end to receive a threaded collar 30 secured in place thereon by a set screw 31. The collar 30 has a swaged connection with a rectangular, box-like attaching member 32 (see also Figs. 4 and 5) having at its rear or open side upper and lower attaching flanges 33. The screws 21 are formed with shouldered heads 35 to constitute attaching studs which are received in alined, transversely disposed keyhole slots 36 in the flanges 33.

The fixture wires 26 are connected at their inner ends to plug terminals 27 carried by a slide 28 located in the attaching member 32 and guided for transverse or vertical movement therein, said slide being retained in said attaching member, and its movement

limited, by means of screw studs 34 carried by the side walls of the attaching member 32 and engaging grooves 37 in said slide. The box portion 32 of the fixture and the screws 34 constitute means for carrying the electric coupling member 28. The slide 28 is composed of insulating material and constitutes an electric coupling member complementary to the receptacle 18, being provided with a central opening 38 through which the wires 26 pass to the plug terminals 27, the flexibility of said wires permitting the necessary movements of the slide 28 in the attaching member 32. 39 denotes a flat spring latch riveted at one end to the attaching member 32 and having a shoulder 43 adapted, when the fixture is attached, to engage the slide 28 and hold the same against movement in the opposite direction in the attaching member and thus prevent removal of the fixture from its supporting means 35 without first releasing the latch 39. The spring 39 is provided with a central opening 44 for the passage of the wires 26 and with an operating finger piece 45 which extends through a slot 46 in the bottom wall of the attaching member 32.

The entire combined support and coupling may, if desired, be enclosed and covered by the usual ornamental canopy 40 secured in place upon the fixture stem by a set screw 41.

When the house is wired, the house wire terminals in the outlet box 14 are connected with the socket terminal 17 of the receptacle 18, and the sub-plate 19, by which said receptacle is carried, is secured to the outlet box by the screws 21, or, preferably, by other temporary screws employed for this purpose. The parts are left in this condition during the subsequent finishing of the walls, any marring of or other minor injury to the sub-plate 19 at this time being wholly immaterial inasmuch as said sub-plate is subsequently covered and concealed by the face plate 24. After the walls have been finished, the temporary screws are removed, and the face plate 24 attached by the screw studs 21, said screw studs also serving to permanently secure the sub-plate 19. The parts will then be in the position shown in Figs. 2 and 3 and may be so left if no fixture is to be attached. When it is desired to attach a fixture, the canopy 40 of such fixture is moved outwardly upon the fixture stem by loosening the set screw 41, and the spring latch 39 is released by operation of the finger piece 45 to permit the slide 28 to be moved transversely of the attaching member 32 into a position adjacent the lower end of the latter. The plug terminals 27 of said slide are then inserted in the socket terminals 17 of the receptacle or complementary coupling member 18, and the studs 35 at the same time introduced into the wider portions of the key hole slots 36. Thus said terminals are means for engaging the coupling members which means are engaged by a longitudinal movement of the fixture. Thereafter the fixture is given a transverse downward movement to carry the studs 35 into the narrower portions of the slots 36, the slide 28, whose plug terminals 27 are now in engagement with the socket terminals 17, remaining stationary, and therefore being relatively moved transversely of the attaching member 32 into the upper portion thereof, where it is automatically locked by the spring latch 39. The studs 35 and the slots 36 form a mechanical connection between the fixture and the stationary or fixed support which comprises the outlet box 14 and the bracket 22, so that the fixture is supported by said support. The canopy 40 is finally moved back against the wall and secured in place by the set screw 41, thereby completing the attachment and connection which, as will be seen, has been effectively but quickly and easily accomplished, the fixture being firmly supported and the necessary electric connections having been securely made. It will also be seen that any fixture can, if desired, be as readily detached by slipping the canopy 40 forwardly, releasing the latch 39, and lifting the attaching member 32 from the supporting studs 35. The fixed supporting devices will preferably be similar to one another throughout the building, as will also the attaching devices carried by the several fixtures, so as to render said fixtures readily interchangeable and permit any one to be detached and moved to another point or replaced by a different fixture as desired.

Having thus described my invention, I claim:

The combination with a fixture and a receptacle, of means for electrically connecting the fixture with respect to the receptacle, and mechanically connecting and supporting the fixture with respect to the receptacle, said means comprising a supporting plate, a connecting bracket, and a plug-in device having contacts for engaging the contacts of a receptacle, mounted for bodily sliding movement of the bracket, said bracket and plate being provided with interengaging means whereby said bracket may be connected to said plate by movement towards the receptacle and laterally with respect thereto, and means for holding the bracket in connected position, comprising spring means positively preventing sliding movement of said bracket with respect to said plug-in device.

In testimony whereof I affix my signature.

HARVEY HUBBELL.