May 27, 1924. 1,495,778

G. BUTZKE

LIGHTING FIXTURE

Filed Jan. 28, 1921

Fig. 1.

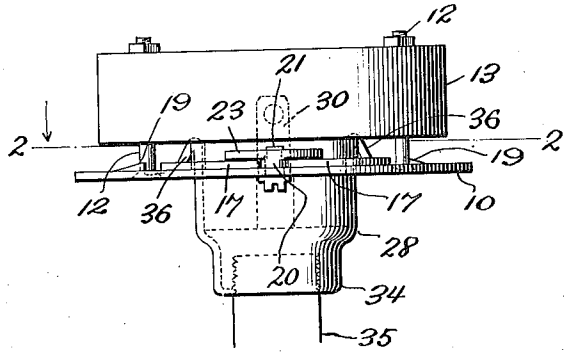


Fig. 2.

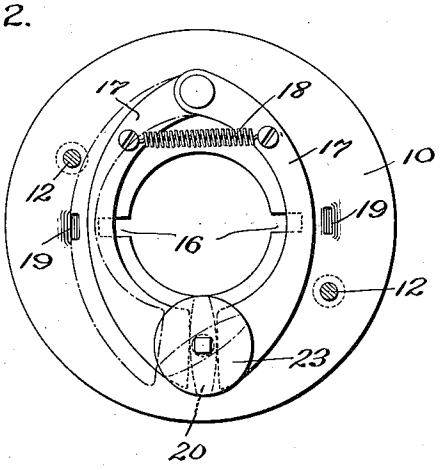


Fig. 5.

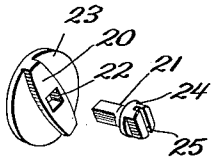


Fig. 4.

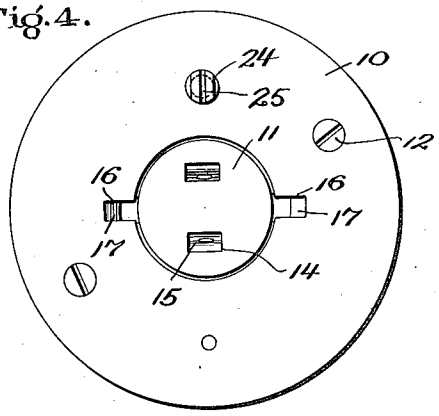
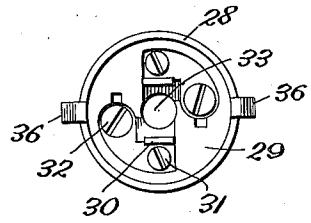


Fig. 3.



Inventor:
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UNITED STATES PATENT OFFICE.

GUSTAVE BUTZKE, OF ALPLAUS ROAD, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

LIGHTING FIXTURE.

Application filed January 28, 1921. Serial No. 440,763.

To all whom it may concern:

Be it known that I, GUSTAVE BUTZKE, a citizen of the United States, residing at Alplaus Road, in the county of Schenectady, State of New York, have invented certain new and useful Improvements in Lighting Fixtures, of which the following is a specification.

The present invention relates to lighting fixtures such as wall brackets, ceiling fixtures and the like, and particularly fixtures of the type wherein the wall or ceiling portion of the fixture comprises a wired unit and the bracket or hanging portion of the fixture comprises a second wired unit, the latter being adapted to be detachably connected mechanically and electrically to the former, electrical connection being made by means of a receptacle and plug connection.

The object of my invention is to provide an improved structure and arrangement in an apparatus of this character, and for a consideration of what I believe to be novel and my invention, attention is directed to the accompanying description and the claims appended thereto.

More particularly, the object of my invention is to provide an improved arrangement for attaching a lamp bracket or lamp hanging means to the wall portion of a fixture whereby the bracket or hanging portion of the fixture may be attached to and detached from the wall portion in a manner as simple and easy as that of attaching and detaching an ordinary plug to and from a receptacle whereby any person is enabled to mount the fixture in place or change it at will without the assistance of an electrician. At the same time the attachment of the fixture is strong and firm and imposes no strains on the electrical connections, this latter being of primary importance.

My invention relates more particularly to ceiling fixtures, and in the drawing I have illustrated it as applied to such fixture but it will be understood that it is not necessarily limited thereto.

In the drawing, Fig. 1 is a side elevation of a fixture embodying my invention; Fig. 2 is a view of the under side of a face plate, the section being taken on line 2—2 of Fig. 1; Fig. 3 is a face view of a combined attaching plug and supporting member; Fig. 4 is a face view of a flush plate receptacle as shown in Fig. 1, and Fig. 5 is a detail of a locking means.

Referring to the drawing, 10 indicates a face plate to which is attached a plug receptacle 11 by means of screws 12. Plug receptacle 11 may be located in or carried by a suitable outlet box as indicated at 13. The receptacle is provided with the usual openings 14 in line with which are spring contacts 15.

The foregoing may be taken as typical of any flush plate receptacle adapted to be fastened in a side wall or ceiling, face plate 10 being generally located flush with the surface.

In face plate 10 are two notches 16 and pivoted on the rear side of face plate 10 are two catches or locking arms 17 which project part way over notches 16 as shown in Fig. 2. Arms 17 are curved and entirely surround the central opening of the face plate. They are biased toward each other by a spring 18 and their outward movement is limited by suitable stops 19. Located between the free ends of arms 17 is a transverse strip 20 carried by a pin 21 pivotally mounted in face plate 10. The outer end of pin 21 is rectangular and enters a rectangular opening 22 in strip 20. Strip 20 may be formed on the lower surface of a disc 23 the edges of which disc lie over the free ends of arms 17 to form a guide and holding means for them. Pin 21 is provided with a head 24 which rests against the surface of face plate 10. In assembling the pin is first inserted through the face plate 10 after which strip 20 and disc 23 are inserted over the squared end and such end is then upset. This firmly fastens the strip 20 and disc 23 on the pin and the pin to face plate 10. In head 24 of the pin is a transverse slot 25 to receive a suitable tool such as a screw driven for turning strip 20 to spread apart the free ends of locking arms 17.

The combined plug and supporting member comprises a metallic shell or casing 28 of suitable shape, it being shown as round in the present instance. It is open at one end and fixed in it is a mounting block 29 of insulating material to which are attached contacts on contact blades 30 which project beyond such open end. Contacts 30 are fastened to the mounting block by screws 31 and are provided with binding screws 32

for lead wires. In the center of mounting block 29 is an opening 33 through which a cord connector can pass. The other end of casing 28 is drawn down to form a nipple 34 which is threaded to receive the upper end of a lamp fixture such as a rod which carries a chandelier at its lower end, or a hook from which supporting chains may be hung. In the present instance I have indicated a lighting fixture by the tube 35.

Formed integral with the edge of casing 28 are two hooks 36 which are adapted to enter notches 16 and hook over arms 17. The hooks have beveled edges which engage the sides of arms 17 to force them apart, spring 18 serving to snap the arms under the hooks when the hooks move beyond the arms.

In use, the wall portion of the fixture is permanently fastened to the wall and wired to the lighting circuit. The hanging portion of the fixture is also permanently connected together and wired as a unit, the lamp sockets of the fixture being wired to plug contacts 30. When it is desired to hang the fixture it is only necessary to push plug contacts 30 into engagement with receptacle contacts 15, the same as an ordinary plug is connected to a receptacle. During the final movement hooks 36 enter notches 16 pushing arms 17 to one side and when the hooks pass beyond the arms, the arms are pulled under then by spring 18. This locks the hanging portion of the fixture to the wall portion and hooks 36 serve to support it, so there is no strain on the contacts, the support being from the face plate. When the hooks are passing through notches 16, disc 23 serves to prevent arms 17 from moving away from plate 10 or from being bent. The only thing they can do is to spread apart turning on their pivots.

When it is desired to remove the fixture, a suitable tool is inserted in the slot in head 24 and the strip 20 turned to spread apart the ends of arms 17 as shown in dotted lines in Fig. 2. This moves arms 17 from under hooks 36 and the fixture can be removed then by pulling it away from the wall member.

In the use of my invention, the house will be provided with flush plug receptacles embodying my invention, at various points in the rooms where it may be desired to have fixtures and the bracket or hanging portion of the fixture will be permanently wired with my combined plug receptacle and supporting member. The bracket or hanging portion of the fixture may be applied then to any plug receptacle desired and can be easily changed whenever found desirable. When not used for hanging a fixture the plug receptacle may be used with standard plugs to connect lead wire to the house circuit.

The structure shown for carrying out my invention is simple and, as is obvious, the wiring of houses already wired can be easily changed to embody fixtures according to my invention.

In accordance with the provisions of the patent statutes, I have described the principle of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the apparatus shown is only illustrative and that the invention may be carried out by other means.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. In an apparatus of the character described, the combination of a plug receptacle having contacts, a face plate having a flat front associated with said receptacle, a plug having contacts adapted to engage the receptacle contacts, forwardly-projecting hooks carried by the plug, and spring catches located on the rear side of the face plate which engage said hooks when the plug is engaged with the receptacle.

2. In an apparatus of the character described, the combination of a plug receptacle having contacts, a face plate associated therewith and provided with slots, spring pressed catches mounted on the rear of said face plate and projecting over said slots, a casing having hooks formed thereon, a mounting block in the casing, and contacts carried by the mounting block, said mounting block contacts and hooks being adapted to be simultaneously inserted into the receptacle and slots respectively, said mounting block contacts engaging the receptacle contacts and said hooks engaging the catches.

3. In an apparatus of the character described, the combination of a plug receptacle having contacts, a face plate having a flat front associated with said receptacle, a plug having contacts adapted to engage the receptacle contacts, forwardly-projecting hooks carried by the plug, spring catches located on the rear side of the face plate which engage said hooks when the plug is engaged with the receptacle, and means operable from the front of the face plate for moving said catches from engagement with the hooks.

4. In an apparatus of the character described, the combination of a plug receptacle having contacts, a face plate associated therewith provided with slots, curved spring pressed arms pivoted on the rear of said face plate and projecting over said slots, a casing having hooks formed thereon, a mounting block in the casing, contacts carried by the mounting block, said mounting block contacts and hooks being adapted to be inserted simultaneously into the receptacle and slots respectively, the mounting

block contacts engaging the receptacle contacts and the hooks engaging the arms, and a member located between ends of the arms and operable from the front side of the face plate for moving the arms from engagement with the hooks.

5. In a lighting fixture, a wall portion comprising a plug receptacle having contacts adapted to be permanently wired to a lighting circuit, a face plate associated therewith, and catch members on the rear of the face plate, and a hanging portion adapted to be permanently wired comprising a lamp fixture, a plug having contacts, and hooks, said hanging portion being adapted to be attached to the wall portion by simultaneously pushing the plug contacts into engagement with the receptacle contacts, and the hooks into engagement with said catch members.

6. In a lighting fixture, a wall portion comprising a plug receptacle having contacts adapted to be permanently wired to a lighting circuit, a face plate associated therewith, and catch members on the rear of the face plate, a hanging portion adapted to be permanently wired comprising a lamp fixture, a plug having contacts, and hooks, said hanging portion being adapted to be attached to the wall portion by simultaneously pushing the plug contacts into engagement with the receptacle contacts and the hooks into engagement with said catch members, and means for releasing said catch members from the hooks, said means being operable from the front of the face plate.

In witness whereof, I have hereunto set my hand this 26th day of Jauary, 1921.

GUSTAVE BUTZKE.