Aug. 31, 1926. 1,598,038

R. B. BENJAMIN

ELECTRICAL FIXTURE SUPPORTING DEVICE

Filed May 20, 1921 2 Sheets-Sheet 1

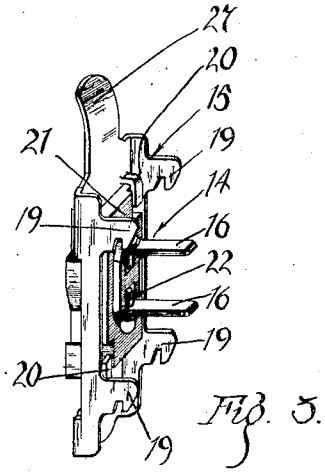


Fig. 5.

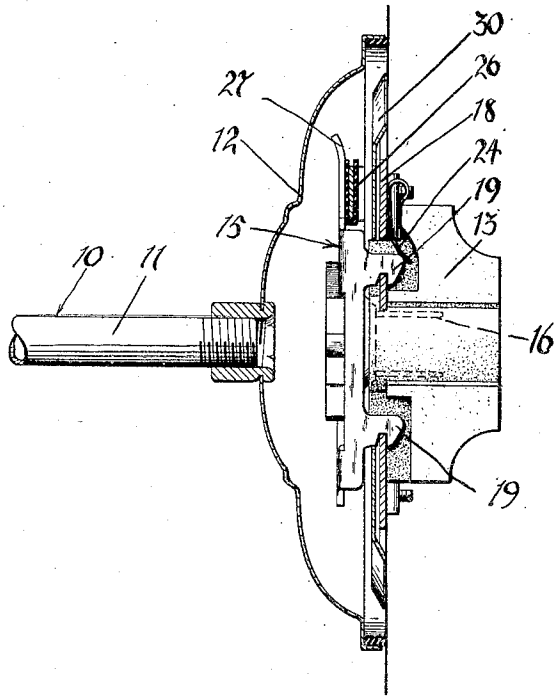


Fig. 1.

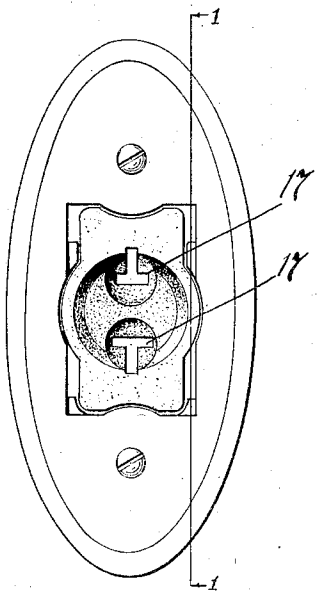


Fig. 2.

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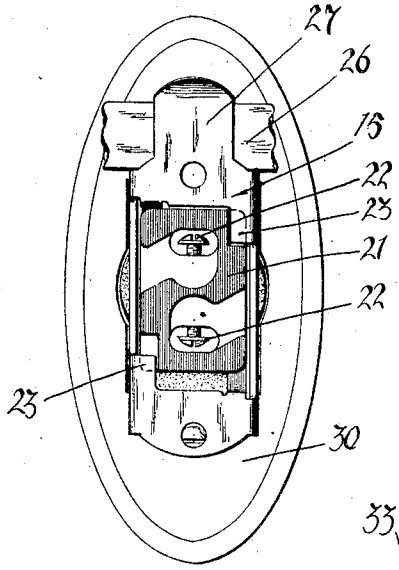


Fig. 4.

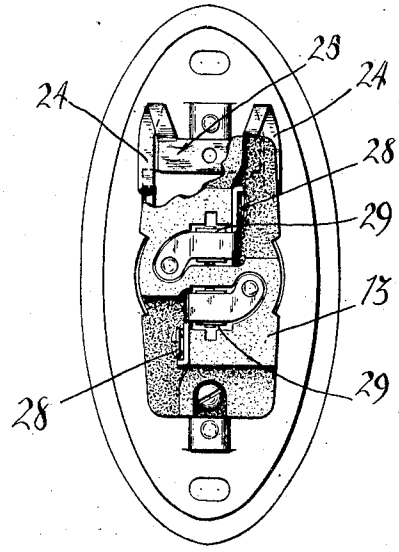


Fig. 5.

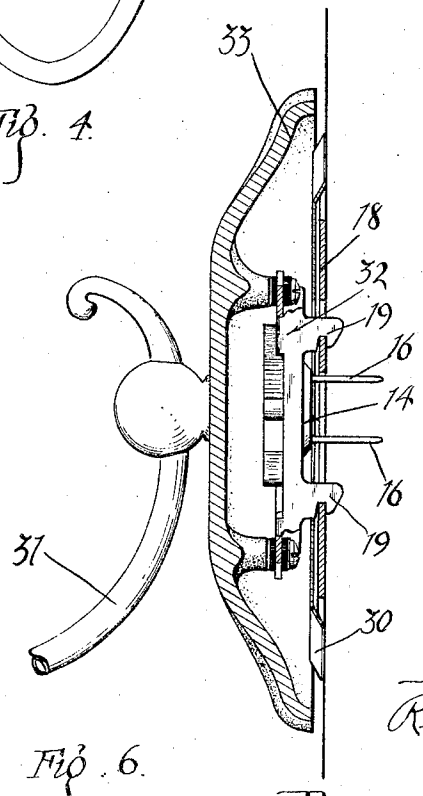


Fig. 6.

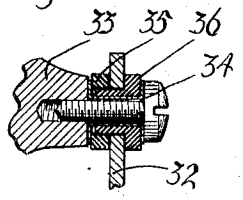


Fig. 7.

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UNITED STATES PATENT OFFICE.

REUBEN B. BENJAMIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO BENJAMIN ELECTRIC MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ELECTRICAL-FIXTURE-SUPPORTING DEVICE.

Application filed May 20, 1921. Serial No. 471,078.

My invention relates to electrical fixture supporting devices and connections therefor.

One of the objects of my invention is to provide an improved fixture supporting device in which the fixture can be readily connected and disconnected with respect to the receptacle both electrically and mechanically.

A further object of my invention is to provide such a device which will be simple in construction, cheap to manufacture and durable and efficient in use.

Further objects will appear from the detailed description to follow and from the appended claims.

In the drawings in which two embodiments of my invention are shown—

Fig. 1 is an axial section of an electrical fixture with a support and electrical connections, the section being substantially on the line 1—1 of Fig. 2;

Fig. 2 is a front view of the receptacle and face-plate;

Fig. 3 is a perspective view of the mechanical connector member and the plugs mounted thereon;

Fig. 4 is a front elevation showing the connector member in position with respect to the receptacle;

Fig. 5 is a rear view of the receptacle and face-plate;

Fig. 6 is a vertical sectional view showing a different form of fixture and connector device; and

Fig. 7 is a section showing the connection between the fixture and mechanical connector of Fig. 6.

Referring to Figs. 1 to 5 inclusive, the construction shown therein comprises a fixture 10 (the stem 11 and canopy 12 alone being shown) a receptacle 13, a plug-in device 14, for electrically connecting the fixture 10 with the receptacle 13, and a mechanical connecting and supporting member 15 in the form of a bracket for mechanically connecting the fixture with respect to the receptacle.

As shown in Fig. 3 the plug-in device 14 is carried by the mechanical connector member 15, being slidably mounted thereon, to permit the necessary movement of the mechanical connector 15 for making the mechanical connection without interfering with the insertion of the contact blades 16 of the plug-in device 14 into the openings 17 provided in the receptacle.

The mechanical connector member 15 is secured to a supporting plate 18 (which may be a sort of cover for the outlet box) by means of four hook members 19, which hook over the edges of the openings in the supporting plate 18. The connection between the member 15 and the supporting plate 18 is effected by two movements, a movement of insertion, to bring the hook members back of the plate 18, and a downward movement to engage the hook members with the edges of the opening.

The sliding connection between the plug-in device 14 and the mechanical connecting member 15 hereinbefore referred to permits the downward movement of the connecting member 15 without interference from the engagement of the blades 16 in the openings 17. This sliding engagement of the plug-in device 14 on the connecting member 15 is effected by means of a pair of lugs 20, struck up from the material of the connecting member 15, and overlying portions of the insulating base 21 on which the contact blades 16 are mounted.

The greater part of the front of the connecting member 15 is open as shown in Fig. 4 to permit access to the binding screws 22 which are screwed into the contact blades 16. However, retaining wings or ears 23 are formed on the supporting member 15 to hold the insulating base 21 in position, this insulating base being slidably mounted between the wings 23 and the lugs 20. The lugs 20 may be bent down after the insulating base 21 is placed in position.

In order to securely hold the connector member 15 in connected position, a pair of bent leaf springs 24 is provided. These springs may be formed as a part of an integral sheet metal stamping 25 secured in place between the receptacle 13 and the plate 18. The free ends of these springs 24 engage the upper hooks 19 to prevent the connecting member 15 from being accidentally lifted up and disconnected.

The fixture 10 is secured to the connector member 15 by means of a transversely extending strap 26 (Figs. 1 and 4) the ends of which are secured to the canopy 12 and

the central portion of which is slipped behind the upstanding post 27 which extends upwardly from the connector member 15.

Suitable binding screws 28 are provided for the contacts 29 of the receptacle 13. A suitable ornamental finishing plate or escutcheon 30 may be secured in front of the supporting plate 18.

In electrically and mechanically connecting the fixture with respect to the receptacle 13, the fixture is first wired sufficiently slack to permit the easy connection of the fixture in place. The connection is effected by presenting the connector member 15 in position with respect to the receptacle so that the blades 16 can be pushed into the receptacle 13, and the hooks 19 pushed through the opening in the supporting plate 18. After the hooks have been pushed in far enough, the connector member 15 is slipped down, to engage the hooks 19 in back of the plate 18. After the connector member 15 is in position, the fixture is secured to it by slipping the strap 26 in behind the post 27, the wiring for the fixture 10 being sufficiently slack to permit this manner of assembly.

The construction shown in Figs. 6 and 7 is substantially the same as that just described, except that here the fixture 31 is rigidly secured with respect to the mechanical connecting and supporting member 32, in the form of a bracket, by a connection shown in detail in Fig. 7. The plug-in device 14 is the same as in the form previously described, and its connection with the mechanical connector member is the same as in the form previously described. The connection between the mechanical connecting member and the supporting plate 18 is also the same as in the form previously described. In some cases it is necessary or required that the fixture 31 shall be insulated with respect to the outlet box. In the present instance, this is effected by the connection shown in detail in Fig. 7. The fixture plate 33 is secured to the connecting member 32 by means of a screw 34 threaded into the fixture plate, an insulating washer 35 and insulating bushing 36 being provided to insulate the fixture plate 33 from the connecting member 32.

The mechanical connecting members 15 and 32 may be formed of an integral sheet metal stamping having portions struck up to form the hook members 19, the retaining lugs 20 and the post 27.

In the construction shown in Figs. 6 and 7, the fixture is electrically and mechanically connected simply by pushing the blades 16 inwardly into engagement with the contacts of the receptacle, until the hook members 19 are in back of the supporting plate 18, and then drawing the fixture 31 and its supporting member 32 downwardly to engage the hook members 19 in back of the supporting plate 18.

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

1. A receptacle having contacts, a flat supporting plate in front of said receptacle, and having an opening therein affording access to said receptacle, said receptacle being substantially flush with said supporting plate, and means for mechanically supporting a fixture in position with respect to said receptacle comprising a bracket having hooks which pass through said supporting plate and hook in behind it and means for electrically connecting said fixture with respect to said receptacle comprising a plug, having contacts for engaging the receptacle contacts, slidably mounted on said bracket, whereby said hooks can be hooked behind said plate after the plug contacts have entered the receptacle, and latching means for holding said bracket connected with said plate, said latching means acting between said supporting plate and bracket being mounted on said supporting plate.

2. A receptacle having contacts, a flat supporting plate in front of said receptacle, and having an opening therein affording access to said receptacle, said receptacle being substantially flush with said supporting plate, and means for mechanically supporting a fixture in position with respect to said receptacle comprising a bracket having hooks which pass through said supporting plate and hook in behind it and means for electrically connecting said fixture with respect to said receptacle comprising a plug, having contacts for engaging the receptacle contacts, slidably mounted on said bracket, whereby said hooks can be hooked behind said plate after the plug contacts have entered the receptacle, and spring latching means for holding said bracket connected with said plate, said spring latching means acting between said supporting plate and bracket being mounted on said supporting plate.

In witness whereof, I have hereunto subscribe my name.

REUBEN B. BENJAMIN.