

June 14, 1927.

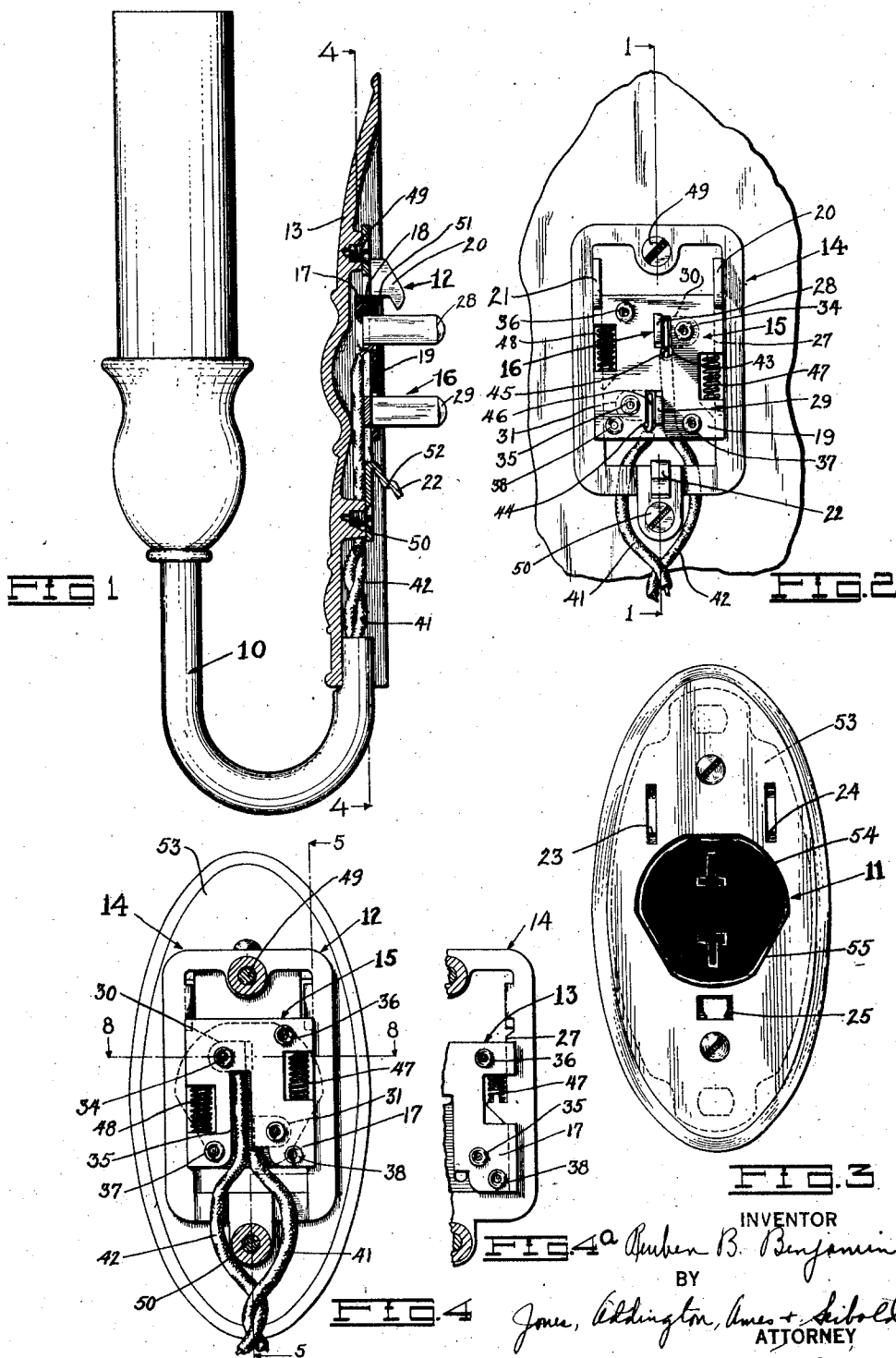
1,631,997

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ELECTRIC FIXTURE SUPPORT AND CONNECTER

Filed March 5, 1923

2 Sheets-Sheet 1



INVENTOR

BY

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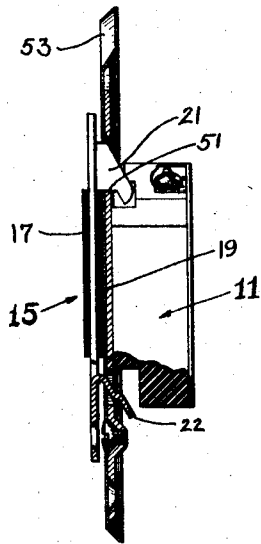


FIG. 5

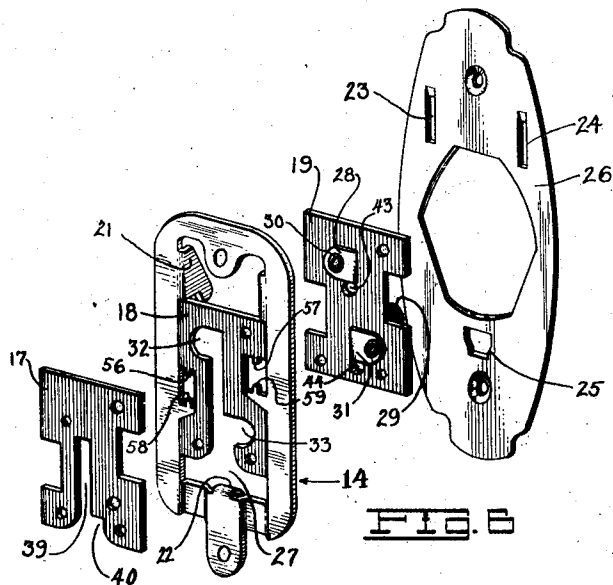


FIG. 6

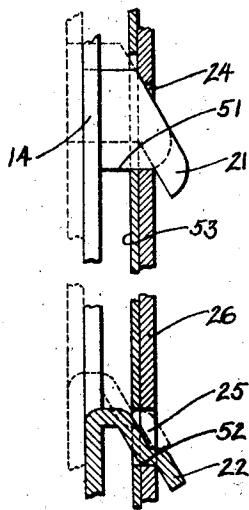


FIG. 7

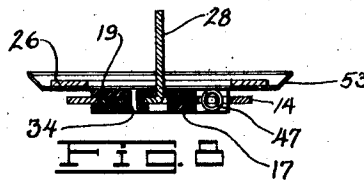


FIG. 8

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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.

ELECTRIC-FIXTURE SUPPORT AND CONNECTER.

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My invention relates to electrical fixture supports and connectors.

thin from front to rear, in order to get it 55 into the available space.

In order to accomplish this desired result, I make the supporting bracket 14, which mechanically supports the fixture, of sheet metal, and I make the insulating base 15 of the plug-in device 16 which electrically connects the fixture with the receptacle, of three superposed sheets 17, 18 and 19 respectively, (see Fig. 6) of insulating material, such as sheet fibre or the like, secured together, and mounted on the metal bracket 14 which mechanically supports the fixture. 65

In order that the hooks 20, 21 and 22 of the supporting bracket 14 may be engaged in the openings 23, 24 and 25 of the supporting plate 26 for the receptacle, it is necessary to mount the plug-in device 16 for sliding movement with respect to the supporting bracket 14. For this purpose the supporting bracket 14 is cut out at its central portion, as indicated at 27, to provide a vertical slide-way, in which the intermediate layer or sheet 18 of the insulating base 15 slides, the other two sheets or layers 17 and 19 lying on opposite sides of the bracket, and extending beyond the edges of the slide-way, to provide retaining and guide flanges on opposite sides of the bracket to hold the plug-in device in position on the bracket. 85

The contact blades 28 and 29 of the plug-in device, have bent-over foot portions or bases 30 and 31, which occupy openings 32 and 33 of the intermediate layer or sheet 18 of the insulating base, these foot-portions being held in place in said openings by superposed outer layers or plates 17 and 19, between which the foot-portions 30 and 31 are clamped by means of the eyelets 34 and 35 which extend thru registering openings in the foot-portions 30 and 31, and the outer insulating layers 17 and 19 of the insulating base. The contact blades are thus securely held in position on the insulating base. The two layers or sheets 17 and 18 are further secured together by means of additional eyelets 36, 37 and 38, which extend thru registering openings in all three of the layers 17, 18 and 19, so that the three layers are thus firmly secured together to slide as a unit in the slide-way in the bracket 14. The front layer 17 of the insulating base is cut away as indicated at 39 and 40 to 105

One of the objects of my invention is to provide an improved fixture support and connector which will be suitable for use with a flat type canopy or cover, in which there is very little room between the canopy and the face of the receptacle to accommodate the fixture support and connector.

A further object of my invention is to provide an improved electrical fixture support and connector device, which will prevent marring of the surface of the wall when the fixture is being put in place.

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

In the drawings in which an embodiment of my invention is shown—

Fig. 1 is a part sectional, part elevational view showing a fixture and the supporting end connection device;

Fig. 2 is a rear view of part of the construction shown in Fig. 1;

Fig. 3 is a front view of the receptacle;

Fig. 4 is a section on the line 4—4 of Fig. 1;

Fig. 4^a is a fragmentary view of parts shown in Fig. 4, but in a different position;

Fig. 5 is a section on the line 5—5 of Fig. 4;

Fig. 6 is an unassembled perspective view of the support and connector device and the supporting plate of the receptacle;

Fig. 7 is an enlarged view showing the way the hooks engage the supporting plate; and

Fig. 8 is a section on the line 8—8 of Fig. 4.

Referring now to the drawings in detail, the construction shown therein comprises a fixture 10, a receptacle 11, and a fixture-supporting and connector device 12, for supporting the fixture in proper position with respect to the receptacle 11 and electrically connecting it therewith.

The fixture 10 is of the type having a flat canopy or ornamental plate 13, which lies so close to the wall and to the surface of the receptacle that there is very little space between the canopy and the receptacle to receive the supporting and connector device 12. It is therefore necessary to make this supporting and connector device very

permit the feed wires 41 and 42 to be led along the front of the plug-in device to a position adjacent the contact blades 28 and 29, the intermediate plate also being correspondingly recessed, to provide clearance for the wires, and the rear plate 19 having passages 43 and 44 adjacent the foot-portions 30 and 31 of the contact blades, thru which the ends of the feed wires are led, the ends of these feed wires being soldered or otherwise secured to the foot-portions 30 and 31 as indicated at 45 and 46 in Fig. 2. As shown in Fig. 2, the rear insulating layer 19 is apertured to permit the passage of the contact blades 28 and 29 therethru, and also to expose a portion of the foot-portions 30 and 31 of the contact blades to permit the soldering of the wires referred to above.

A pair of coil compression springs 47 and 48 are provided, to hold the hooks 20, 21 and 22 in connected position with respect to the plate 26. The construction and operation of these springs will be described more in detail hereinafter.

The flat canopy 13 which carries the fixture 10, is secured to the supporting bracket 14 by means of a pair of screws 49 and 50. The hooks 20, 21 and 22, which engage the openings 23, 24 and 25 in the supporting plate 26 are so constructed that they prevent the ornamental plate or canopy 13 from scraping against and marring the surface of the wall adjacent the receptacle when the fixture is being connected. For this purpose, the hooks are made to incline downwardly and rearwardly from the supporting bracket and the holes in the supporting plate are made just large enough to receive these inclined hooks without allowing much play, so that the bracket has to be connected by means of an inward and downward slanting movement, the plate or canopy being thus forced to move with a parallel motion, which prevents any part of it scraping against the wall.

Each of the upper hooks 20, 21, is provided with a shoulder portion 51 and the lower hook 22 is provided with an offset forming a shoulder at 52, these shoulders 51 and 52 serving to limit the downward movement of the bracket as it is hooked into the openings in the supporting plate 26.

The receptacle 11 is secured to the rear face of the supporting plate 26 in any suitable manner. A suitable ornamental finishing plate 53 may be secured in front of the supporting plate.

In connecting the fixture, the blades 28 and 29 of the plug-in device are inserted into the openings 54 and 55 in the receptacle, the bracket 14 is slipped upwardly against the action of the springs 47 and 48, to the position shown in Fig. 4^a, to bring the points of the hooks 20, 21 and 22 above the edges of the openings 23, 24 and 25, the bracket

14 is then slid inwardly and downwardly, to bring the hooks from the dotted line position shown in Fig. 7, to the full line position, in which the hooks are securely connected to the plate 26 and the shoulders 51 and 52 of the hooks rest on the lower edges of the openings 23, 24 and 25.

The springs 47 and 48, previously referred to, hold the bracket 14 down, against any force which might otherwise accidentally jar the bracket loose from the plate 26; these springs being held in position by means of lugs 56, 57, 58 and 59 (Fig. 6) on the insulating base 15 and bracket 14.

It will be seen that I have thus provided a very thin construction of connector and plug-in device, which makes it suitable for use with a canopy or ornamental plate of the flat type, in which there is very little room between the canopy and the receptacle.

While I have shown but one form of my invention, it is obvious that it may be embodied in other forms covered and defined by the appended claims.

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

1. A plug-in device and fixture supporting bracket for cooperating with a receptacle having blade receiving openings and a supporting plate having hook receiving openings, said plug-in device having blades for entering said blade-receiving openings, and said fixture supporting bracket having hooks for entering said hook-receiving opening, said plug-in device being slidably mounted on said bracket, said plug-in device comprising an insulating base on which said contact blades are mounted, said insulating base comprising two sheets of insulating material on opposite sides of said bracket and secured together.

2. A plug-in device and fixture supporting bracket for cooperating with a receptacle having blade receiving openings and a supporting plate having hook receiving openings, said plug-in device having blades for entering said blade-receiving openings, and said fixture supporting bracket having hooks for entering said hook-receiving opening, said plug-in device being slidably mounted on said bracket, said plug-in device comprising an insulating base on which said contact blades are mounted, said bracket having an opening therein forming a slide-way, said insulating base comprising three sheets of insulating material, superposed upon each other, the intermediate sheet being slidable in said slide-way, and the outside sheets being located on opposite sides of said bracket, and extending beyond said opening to form guide flanges.

3. A plug-in device and fixture supporting bracket for cooperating with a receptacle having blade receiving openings and a sup-

porting plate having hook receiving openings, said plug-in device having blades for entering said blade-receiving openings, and said fixture supporting bracket having hooks
5 for entering said hook-receiving opening, said plug-in device being slidably mounted on said bracket, said plug-in device comprising an insulating base on which said contact blades are mounted, said insulating base
10 comprising two sheets of insulating material on opposite sides of said bracket and secured together, said blades having foot-portions clamped in place between said sheets.

4. A plug-in device and fixture supporting
15 bracket for cooperating with a receptacle having blade receiving openings and a supporting plate having hook receiving openings, said plug-in device having blades for entering said blade-receiving openings, and
20 said fixture supporting bracket having hooks for entering said hook-receiving opening,

said plug-in device being slidably mounted on said bracket, said plug-in device comprising an insulating base on which said contact
blades are mounted, said bracket having an
25 opening therein forming a slide-way, said insulating base comprising three sheets of insulating material, superposed upon each other, the intermediate sheet being slidable
30 in said slide-way, and the outside sheets being located on opposite sides of said bracket, and extending beyond said opening to form guide flanges, said bracket and the intermediate sheet of insulating material having
35 co-operating spring positioning means, and a spring held in place by said positioning means, for holding said hooks in connected position with respect to the plate.

In witness whereof, I have hereunto subscribed my name.

REUBEN B. BENJAMIN.