Oct. 25, 1927. 1,646,807

R. B. BENJAMIN

FIXTURE CONNECTER

Filed Aug. 22, 1921 2 Sheets-Sheet 1

Fig. 1.

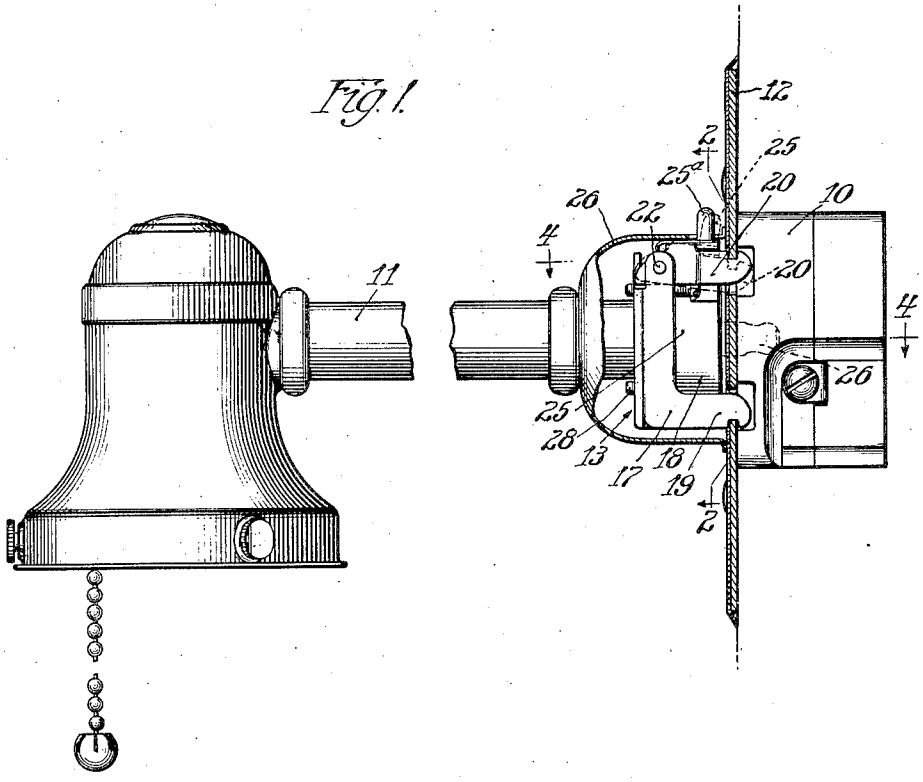
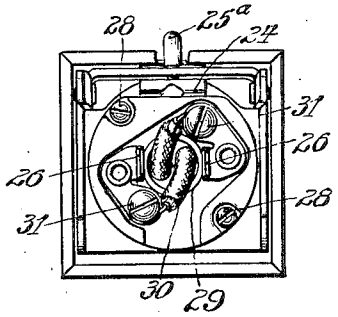


Fig. 2.



Inventor.
Reuben B. Benjamin
By Jones, Addington, Ames & Seibold Attys.

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R. B. BENJAMIN

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Filed Aug. 22, 1921 2 Sheets-Sheet 2

Fig. 3

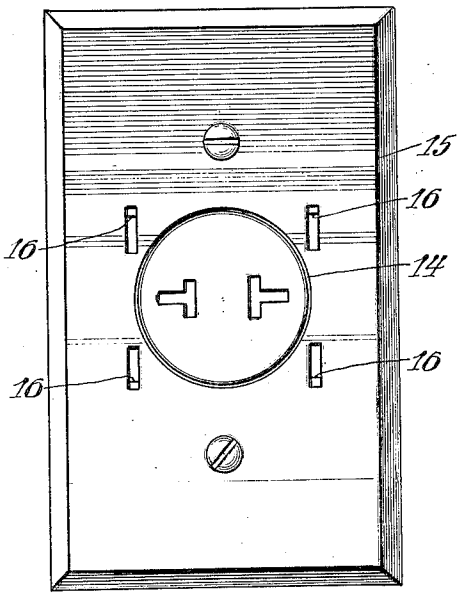


Fig. 4

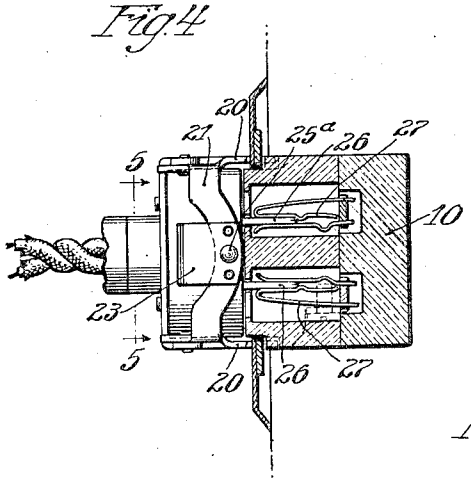


Fig. 5

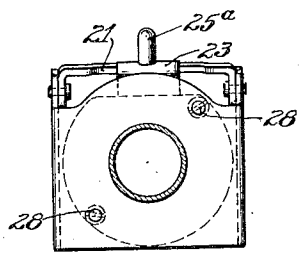


Fig. 6



Inventor
Reuben B. Benjamin
By Jones, Addington, Amos & Leib Attys.

Patented Oct. 25, 1927. 1,646,807

UNITED STATES PATENT OFFICE.

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

FIXTURE CONNECTER.

Application filed August 22, 1921. Serial No. 494,092.

My invention relates to fixture connecters.

One of the objects of my invention is to provide improved means for electrically and mechanically supporting a fixture with respect to a receptacle, whereby the fixture can be easily and quickly attached and detached without the necessity for making any wiring connection.

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

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—

Figure 1 is a part sectional part elevational view of a fixture, a receptacle, and a connecter;

Fig. 2 is a section substantially on the line 2—2 of Fig. 1;

Fig. 3 is a front elevation of the receptacle;

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

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

Fig. 6 is a perspective view of the latch spring.

The construction shown in the drawings comprises an electrical receptacle 10, (of a construction to receive the blades of a separable attachment plug), a fixture 11, a supporting plate 12, in front of the receptacle 10, and means 13 for mechanically connecting the fixture 11 with the plate 12, and electrically connecting the fixture 11 with the receptacle 10.

The plate 12 is provided with a circular opening 14 through which the receptacle 10 is accessible for making the electrical connection, the front face of the receptacle extending into the opening and being substantially flush with the plate. If desired, a suitable ornamental cover plate 15 may be provided outside of the main supporting plate 12. This cover plate, of course, is also provided with an opening registering with the opening 14 for affording access to the receptacle. The main supporting plate 12 is also provided with a plurality of holes, positioned and proportioned to receive hook members on the connecter means 13 as hereinafter described.

The connecter means 13 comprises a bracket member 17, for mechanically connecting the fixture 11 with the supporting plate 12, and a plug 18, mounted on the bracket 17, for electrically connecting the fixture 11 with the receptacle 10. The bracket 17 is provided with two lower hook members 19, rigid with respect to the fixture 11, which fit into the two lower holes 16 of the main supporting plate 12.

The upper hook members 29 which hook into the upper holes 16 are formed of an integral sheet metal stamping pivotally mounted at 22 with respect to the stamping on which the hook members 19 are formed. The upper hooks 20 in addition to their function of connecting the plate 12 serve also as latching members to hold the fixture 11 in connected position with respect to plate 12. For this purpose, a U-shaped leaf-spring 23 is provided, which bears upwardly on the hooks 20, causing the hook to remain in engagement with the plate 13. The spring 23 may be riveted to the transversely extending cross-bar portion of the stamping 21. The lower portion 24 of the spring bears on the insulating base 25 of the plug.

When the hook members 19 are in connected position, they fit rather snugly in the holes 16, that is to say, the upper edge of the hook member 19 is quite close to the upper edge of the opening 16, so that it is impossible to disconnect the hook by lifting straight up on it, and so that to disconnect this hook the bracket must be swung downwardly and outwardly to permit the hook member to free itself from the plate.

For releasing the hook members 20, to disconnect the fixture 11, a thumb piece or button 25^a is provided, secured to the stamping 21, and extending outwardly through the canopy or housing 26, so as to be accessible from the outside of this canopy. To release the hook members 20, the push-button 25^a is simply pushed down to the dotted line position shown in Fig. 1, which brings the hook members 20 into the dotted line position. This releases the hooks 20, permitting the fixture 11 to be swung downwardly about the lower hook members 19 on the pivot, until the upper hooks 20 are completely

out of the upper holes 16, until the bracket 17 has been swung outwardly and downwardly to a sufficient extent to permit the hooks 19 to be disengaged from the holes 16. The entire device, including the fixture, bracket and plug can then be pulled outwardly and disengaged from the supporting plate 12, the contact blades 26 on the plug at the same time being withdrawn from engagement with the contacts 27 of the receptacle 10.

It will be seen that a construction is provided which makes it impossible to disconnect the bracket 17 from the plate 12 without releasing the hook 20. A positive engagement between the bracket 17 and plate 12 is thus obtained, so that the fixture 11 cannot be accidentally dislodged and detached.

The plug 18 may be suitably secured on the bracket 17 by means of a pair of screws 28. The insulating base 25 is provided with an opening 29 through which the feed-wires 30 from the fixture are led to the binding-screws 31 for the contact blades 26 of the plug.

The manner of disconnecting the fixture has been outlined above. In connecting the fixture, the operation is reversed. The hooks 19 are first inserted in the lower holes 16. The bracket is then dropped down to engage the heads of the lower hooks in back of the supporting plate 12. The fixture is then swung upwardly about the lower hooks as pivots, until the upper hooks 20 enter the upper holes 16, and snap upwardly into latching engagement with the plate 12.

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, a flat supporting plate in front of said receptacle, having an opening affording access to said receptacle, said receptacle being substantially flush with said flat plate, means for mechanically connecting the lamp fixture with respect to said receptacle comprising a bracket on which said fixture is mounted, said bracket having a plurality of hooks for insertion through said supporting plate and for hooking in behind said supporting plate, said plate being apertured to receive said hooks, a plug mounted on said bracket and having blades for engaging the receptacle contact, and means whereby when said bracket is moved into position with respect to said supporting plate it will be automatically latched in position.

2. A receptacle, a flat supporting plate in front of said receptacle, having an opening affording access to said receptacle, and having a plurality of holes surrounding said opening and distinct therefrom, said receptacle being substantially flush with said flat plate, means for mechanically connecting a lamp fixture with respect to said receptacle comprising a bracket on which said fixture is mounted, said bracket having a plurality of hooks for hooking into the holes of said plate, a plug mounted on said bracket and having blades for engaging the receptacle contacts, and spring actuated latching means for holding said bracket connected with said plate.

3. A receptacle, a flat supporting plate in front of said receptacle, having an opening affording access to said receptacle, and having a plurality of holes surrounding said opening and distinct therefrom, said receptacle being substantially flush with said flat plate, means for mechanically connecting a lamp fixture with respect to said receptacle comprising a bracket on which said fixture is mounted, said bracket having a plurality of hooks for hooking into the holes of said plates, and a plug mounted on said bracket and having blades for engaging the receptacle contact, a number of said hooks having downwardly extending points.

4. A receptacle, a flat supporting plate in front of said receptacle, having an opening affording access to said receptacle, and having a plurality of holes surrounding said opening and distinct therefrom, said receptacle being substantially flush with said flat plate, means for mechanically connecting a lamp fixture with respect to said receptacle comprising a bracket on which said fixture is mounted, said bracket having a plurality of hooks for hooking into the holes of said plates, and a plug mounted on said bracket and having blades for engaging the receptacle contact, and means for holding said hooks connected with said plate, a cover and a reciprocable member operable from the outside of said cover for releasing said holding means.

5. The combination with a flush receptacle construction comprising a supporting plate, a finishing plate and a receptacle having an insulating face substantially flush with the face of the finishing plate and having openings affording access to the receptacle contacts, means for mechanically and electrically connecting a fixture with respect to said receptacle comprising a plug-in member having contact blades for insertion through the receptacle openings into engagement with the receptacle contacts and a bracket on which the fixture and plug-in device are mounted, said bracket being provided with rigid hook members and a movable spring latching member, said supporting plate having holes through which said hook members may extend and be hooked behind the plate, said supporting plate also having a hole into which said spring latching member automatically snaps when the bracket is moved into position with respect to the receptacle.

6. The combination with a flush receptacle construction comprising a supporting plate, a finishing plate and a receptacle having an insulating face substantially flush with the face of the finishing plate and having openings affording access to the receptacle contacts, means for mechanically and electrically connecting a fixture with respect to said receptacle comprising a plug-in member having contact blades for insertion through the receptacle openings into engagement with the receptacle contacts and a bracket on which the fixture and plug-in device are mounted, said bracket being provided with rigid hook members and a pivoting latch member, said supporting plate having holes through which said hook members may extend and be hooked behind the plate, said supporting plate also having a hole into which said pivoting latch member automatically snaps when the bracket is moved into position with respect to the receptacle.

7. A receptacle, a flat supporting plate in front of said receptacle, having an opening affording access to said receptacle, and having a plurality of holes surrounding said opening and distinct therefrom, said receptacle being substantially flush with said flat plate, means for mechanically connecting a lamp fixture with respect to said receptacle comprising a bracket on which said fixture is mounted, said bracket having a plurality of hooks for hooking into the holes of said plates, and a plug mounted on said bracket and having blades for engaging the receptacle contact, certain of said hooks being pivotally mounted on said bracket.

8. A receptacle, a flat supporting plate in front of said receptacle, having an opening affording access to said receptacle, and having a plurality of holes surrounding said opening and distinct therefrom, said receptacle being substantially flush with said flat plate, means for mechanically connecting a lamp fixture with respect to said receptacle comprising a bracket on which said fixture is mounted, said bracket having a plurality of hooks for hooking into the holes of said plates, and a plug mounted on said bracket and having blades for engaging the receptacle contact, and means for holding said hooks connected with said plate, comprising a pivoted sheet metal member having a hook formed integral therewith.

9. In a wiring fixture, the combination with a face plate, and a plug receptacle associated therewith, said face plate being provided with spaced openings and said receptacle with elongated openings with contacts in line therewith, of a combined plug and supporting member comprising a mounting block, a lug carried by the block and adapted to engage one of said face plate openings, contacts fixed to said block and adapted to pass into the receptacle contact openings, and a latch carried by the block and adapted to engage another of said face plate openings.

10. In a wiring fixture, the combination with a face plate, and a plug receptacle associated therewith, said face plate being provided with spaced openings and said receptacle with elongated openings with contacts in line therewith, of a combined plug and supporting member comprising a metal casing, a mounting block fixed in the casing, blade contacts carried by said block, a lug and a latch carried by the casing, said lug being adapted to be inserted at an angle into one of said face plate openings and the member then turned on the wall forming an edge of the opening as a pivot to bring the latch into engagement with the face plate through another of said face plate openings and the blade contacts into engagement with the receptacle contacts.

In witness whereof, I have hereunto subscribed my name.

REUBEN B. BENJAMIN.