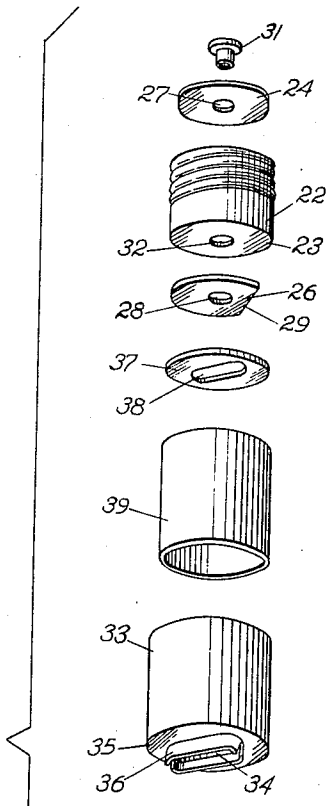
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C. D. McCANN

2,494,398

ELECTRICAL FIXTURE

Filed Oct. 12, 1946



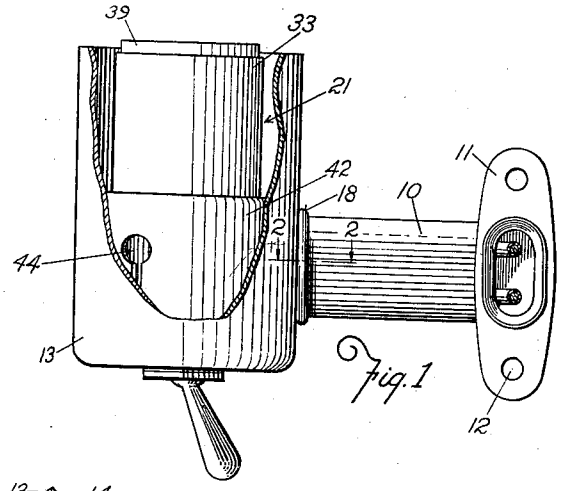


Fig. 1

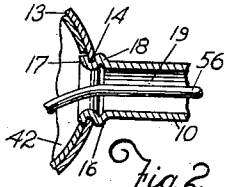


Fig. 2

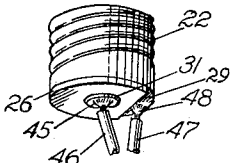
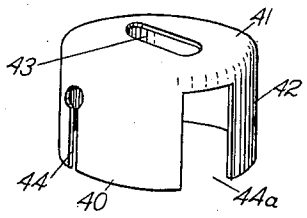


Fig. 5



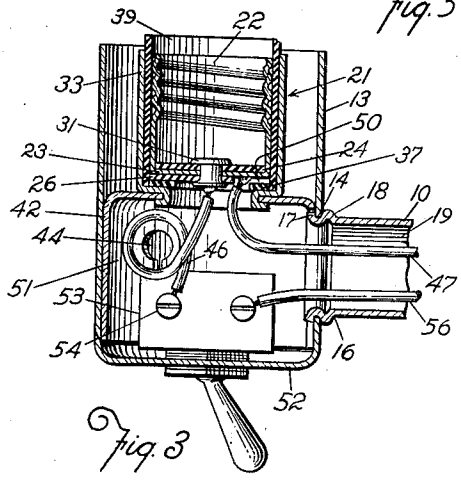


Fig. 3

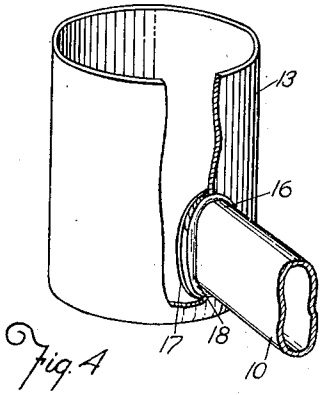


Fig. 4

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ELECTRICAL FIXTURE

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2 Claims. (Cl. 240—73)

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This invention relates generally to electrical fixtures and in particular to an electrical fixture having a hollow mounting bracket for supporting the fixture from the side wall of a room, a bathroom cabinet and the like.

An object of this invention is to provide an improved electrical fixture.

A further object of this invention is to provide an electrical fixture in which a socket unit is capable of being completely assembled within a housing therefor, without the use of screws or the like.

Still another object of this invention is to provide an electrical fixture so constructed that the parts thereof can be relatively assembled without danger to cutting or breaking any of the wire connections in the fixture.

Yet a further object of this invention is to provide an electrical fixture in which the insulation of wire connections is positively maintained during and after the assembly of the fixture.

A feature of this invention is found in the provision of an electrical fixture, having a cup shaped housing with a hollow supporting bracket, in which a preassembled socket unit is capable of being assembled within the housing against relative rotational movement by merely being inserted therein, and of a construction to provide for the wire connections thereof being extended outwardly from the housing through the supporting bracket.

A still further feature of this invention is found in the provision of a socket unit, receivable in a cup shaped housing mounted at one end of a supporting arm, in which a base member of an inverted cup shape has a yieldable side wall for frictionally engaging the housing. The supporting arm has one end projected within the housing for engagement with the opposite sides of an axial slot in the base member side wall to hold the socket unit against rotation within the housing, so that wire connections from a screw socket, mounted on the top of the base member, and extended from the base member outwardly from the housing through its supporting arm are positively prevented from being cut by any rotational movement of the base member relative to the housing.

Further objects, features and advantages of this invention will appear from the following description when taken in connection with the accompanying drawings, in which:

Fig. 1 is a rear elevational view of the electrical fixture of this invention with parts being broken away to more clearly show its construction;

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Fig. 2 is a fragmentary detail sectional view, as seen on the line 2—2 in Fig. 1;

Fig. 3 is a fragmentary longitudinal sectional view of the fixture in Fig. 1;

Fig. 4 is an exploded perspective view of the electrical fixture; and

Fig. 5 is a perspective view of a screw socket assembly forming part of the electrical fixture of this invention.

With reference to the drawings, the electrical fixture of this invention is illustrated in Figs. 1 and 3 as including a hollow mounting bracket or arm 10 provided at its outer end with a flange 11 having screw holes 12. The fixture is mounted on a wall surface by the extension of screws (not shown) through the holes 12.

A housing or casing member 13, of a substantially cup shape, is formed in one side with an opening 14 adapted to receive the inner end 16 of the supporting arm 10, and is secured in a supported position on the arm by rolling the arm end 16, as indicated at 17 and 18, against opposite sides of the housing at the opening 14 in a manner which is well known (Figs. 2 and 3). It is seen, therefore, that the roll 17 forms a substantially annular flange which is projected within the housing 13, and that the space or passage 19, within the arm 10, is open to the space within the housing 13.

Receivable within the housing 13, through the open top thereof, is a socket unit indicated generally as 21 in Figs. 1 and 3. The socket unit 21 (Figs. 3 and 4) includes a screw socket 22 capable of threaded electrical connection with a usual light bulb or plug. Arranged at opposite sides of the bottom wall 23 of the socket 22 are insulator discs 24 and 26. As best appears in Fig. 4, the disc 24 is formed with a single central opening 27 and the disc 26 is formed with a central opening 28 and a cut away side 29 for a purpose which will later appear. The discs 24 and 26 are secured against opposite sides of the socket bottom wall 23 by a hollow conductor rivet 31 inserted through their openings 27 and 28, respectively, and through an opening 32 formed in the socket bottom wall 23.

A shell 33 for the socket 22 is of a cup shape and has an elongated opening 34 punched out in its bottom wall 35. In the forming of the opening 34, and as best appears in Fig. 4, a peripheral lip or flange 36, defining the opening 34, is projected outwardly from the shell bottom wall 35. This bottom wall is insulated from the socket 22 by means including a disc shape insulator 37 having an opening 38 in registry with

the opening 34 in the shell bottom wall 35. The opening 38 is smaller than the opening 34 for a purpose which will appear later. Positioned within the shell 33, to insulate the side wall thereof, is an insulator lining 39 of a round tubular shape.

The shell and screw socket structure thus far described is mounted on the top wall 41 of a hollow base member 42 of a substantially inverted cup shape and composed of a resilient metal material (Fig. 4). Centrally located within the top wall 41 of the base member is an elongated opening 43 corresponding substantially in size to the opening 34 in the shell bottom wall 35. The lip portion 36, at the shell opening 34, is extended within the base member opening 43 and then rolled or pressed against the underside of the base member top wall 41, in a well known manner, to provide for a unit assembly of the shell 33 with the base member 42.

The side wall 40 of the base member 42 (Figs. 3 and 4) is formed with a series of axially extended slots 44, which are open to the bottom edge of such side wall. The slots 44 provide for the side wall portions therebetween having a spring action so as to be yieldably or resiliently movable radially of the base member 42. The diameter of the base member 42 is only slightly less than the inner diameter of the housing 13 and the slot indicated as 44*a* is of an enlarged size adapted to receive the roll or flange 17 at the inner end 16 of the arm 10.

In the assembly of the socket unit 21, the screw socket 22 and the insulator discs 24 and 26 are initially assembled together by the rivet 31 in the manner above described. To this assembly, as illustrated in Fig. 5, a usual wire connection 46 is soldered, or otherwise suitably secured at 45 to the conductor rivet 31 while a second wire connection 47 is soldered to the socket bottom wall 23 at the open portion 48 thereof provided by the cutaway side 29 of the disc 26.

On completion of this assembly of the screw socket 22, the shell 33 is mounted on the base member 42, as above described, and the tubular lining 39 inserted within the shell 33 and held in place by the insulator disc 37 which is located against the top side of the shell bottom wall 35 and within the liner 39. It is contemplated that the disc 37 be in a relatively tight fit within the lining 39 so as to provide for a frictional holding of the liner 39 and the disc 37 within the shell 33.

With the shell 33 and the base member 42 thus assembled, the wires 47 and 46 on the socket 22 are extended through the openings 38, 34 and 43 in the disc 37, shell bottom wall 35 and base member top wall 41, respectively, after which the socket 22 is inserted within the liner 39 until the insulator disc 26 is against the insulator disc 37. By virtue of the opening 38 in the disc 37 being of a smaller size than the openings 34 and 43 in the shell 33 and base member 42, respectively, the wires 46 and 47 are out of contact with the shell and the base member at their corresponding openings, and adapted for contact against the sides of the opening 38 in the insulator disc 37. Likewise, the bare end of the wire 47 connected to the socket portion 48, is completely insulated from the shell 33 by virtue of the insulated space 50 (Fig. 3) defined by the liner 39 and the discs 26 and 37, with such bare end being positioned between the discs 26 and 37 on extension of the wire 47 through the openings 38, 34 and 43.

In the event only the socket unit 21 is to be carried within the housing 13, the wires 46 and 47 are of a length to provide for their extension through the slot 44*a* in the base member side wall 40 and outwardly from the housing 13 through the hollow supporting arm 10 for connection with a suitable source of electrical supply. It is to be understood that the wires 46 and 47 are extended through the supporting arm 10 prior to the assembly of the socket unit 21 within the housing.

This assembly of the socket unit 21 within the housing 13 is accomplished by inserting the base member 42 within the open end of the housing 13 and manipulating the socket unit 21, as it is being inserted, to provide for the reception of the flange or roll 17 within the slot 44*a*. Concurrently with this manipulation of the socket unit 21, the wires 46 and 47 are drawn outwardly from the outer end of the supporting arm 10 to eliminate their being crowded within the compartment or space 51 formed by the base member 42 and the bottom wall 52 of the housing 13. Because of the spring action of the base member side wall 42 the socket unit 21 is frictionally held against upward movement out of the housing 13, while the engagement of the sides of the slot 44*a* with the flange 17 holds the socket unit 21 against rotational movement within the housing 13.

It is thus seen that the complete assembly of the socket unit 21, including its assembly with the wires 46 and 47, takes place without the use of any screws, and that this unit is positively assembled in a fixed relation with the housing 13 on insertion thereof within the housing. Further, all of the electrical conductor parts in the unit 21 are completely insulated and any cutting of the wires 46 and 47, by rotational movement of the base member 42 within the housing 13, is completely eliminated by the engagement of the flange 17 with the sides of the slot 44*a*.

In those instances where it is desired to use the electrical fixture of this invention for bathroom cabinet purposes, a switch unit, indicated generally as 53 (Fig. 3), may be mounted within the housing 13 on the bottom wall 52. The wire 46 is then connected with a terminal 54 on the switch unit, and the wire 47 and a lead in wire 56 to the switch unit 53 are extended through the hollow supporting arm 10. The assembly of the socket unit 21 with the housing 13 takes place in all respects similar to the assembly thereof as described above, with the switch unit 53, after such assembly being located in the compartment 51.

From a consideration of the above description it is seen that the invention provides an electrical fixture which is of a compact construction and capable of being completely assembled without the use of screws or like fastening means. All of the electrical conductor parts are positively insulated from each other, and the wire connections from the screw socket to a source of electrical supply are prevented from being cut, or otherwise impaired, by any relative movement between parts of the fixture through which they are extended. Although an electrical switch unit 53 has been illustrated and described, it is to be understood that other units, such as a usual plug-in socket, may be used in the fixture.

It is to be understood also that although the invention has been described with respect to a preferred embodiment thereof, it is not to be so limited since changes and modifications can be made therein which are within the full intended

scope of this invention, as defined by the appended claims.

I claim:

1. An electrical fixture having a hollow mounting bracket with a housing supported at one end thereof such that said bracket has one end projected within said housing, a socket means positionable within said housing including a socket member, a substantially inverted cup shaped base member, means securing said socket member to the top wall of said base member, with said base member being of a size to be frictionally received within said housing and having a slot in the side wall thereof for receiving the projected end of said bracket, and electrical connections for said socket means extended through said bracket and into said base member.

2. An electrical fixture having a cup shaped housing member carried on a hollow mounting arm such that one end of the arm projects within the housing, a socket unit including an inverted cup shaped yieldable base member insertable within said housing in frictional engagement therewith, with the side wall of said base member having an axial slot therein for receiving the one end of said arm, and the top wall of said base member having an opening therein, a screw socket mounted on said top wall, an insulator disc interposed between said base member and

screw socket having an opening therein smaller than the opening in said top wall, an electrical unit within the compartment defined by said base member and the bottom wall of said housing, and wire connections from said screw socket extended through said two openings into said compartment for connection with said electrical unit, and outwardly from said compartment through said mounting arm for connection with a source of electrical current.

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