Oct. 8, 1929. T. A. BOTH 1,730,600

COMBINATION ELECTRIC WALL FITTING

Filed Sept. 8, 1925

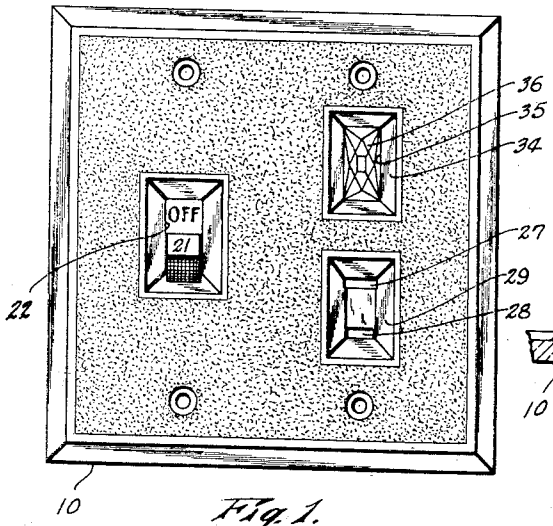


Fig. 1.

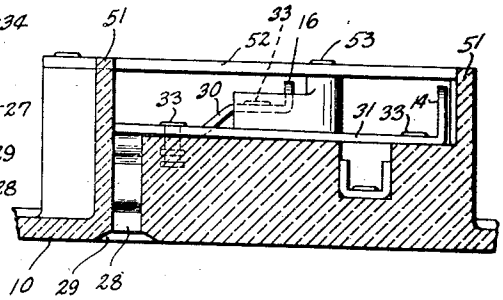


Fig. 4.

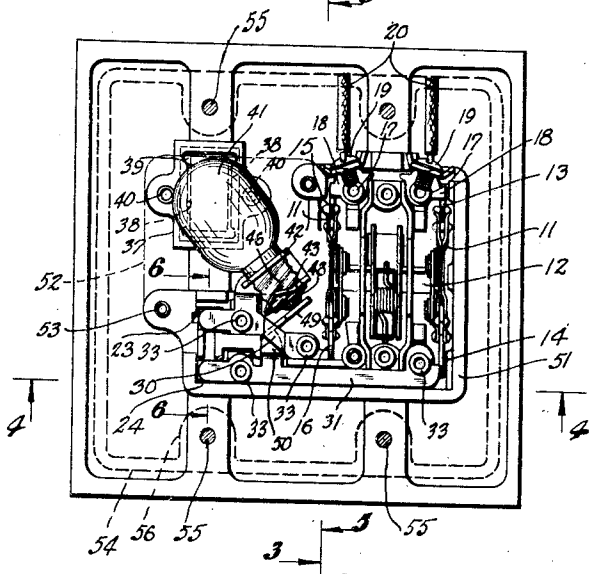


Fig. 2.

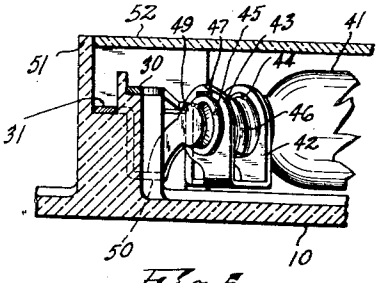


Fig. 5.

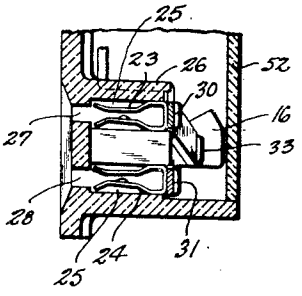


Fig. 6.

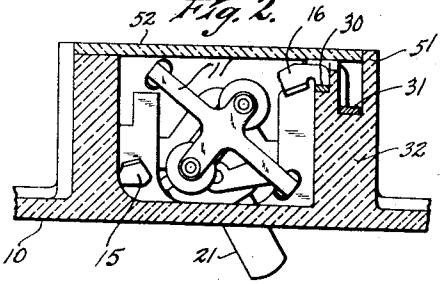


Fig. 3.

Inventor

Joujes A. Both

By Wooster & Davis

Attorneys

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UNITED STATES PATENT OFFICE

TONJES A. BOTH, OF STRATFORD, CONNECTICUT, ASSIGNOR TO THE CONNECTICUT ELECTRIC MANUFACTURING COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT

COMBINATION ELECTRIC WALL FITTING

Application filed September 8, 1925. Serial No. 55,027.

This invention relates to electric wall fittings, and has for an object to provide a construction and arrangement for a fitting comprising a plurality of electrical devices, which are so arranged that the fitting may be applied to a wall box of a smaller number of gangs than the number of separate devices in the fitting, and specifically to provide a fitting of this character which comprises a switch, a receptacle and a pilot light so constructed and arranged that the fitting as a unit may be applied to a two gang wall box and, therefore, does not require a three gang box as is ordinarily used with these devices, thus reducing the space required in the wall, and the size of the wall box, and therefore, reducing the cost of installation, besides allowing the use of a fitting equivalent to a three gang fitting in the space formerly used for a two gang fitting.

With the foregoing and other objects in view, I have devised the construction illustrated in the accompanying drawing forming a part of this specification, similar reference characters being employed throughout the various figures to indicate corresponding elements. In this drawing,

Fig. 1 is a front elevation of my improved fitting.

Fig. 2 is a rear elevation thereof showing a two gang wall box outlined in dotted lines.

Fig. 3 is a transverse section of the central part of the fixture substantially on line 3—3 of Fig. 2.

Fig. 4 is a similar section substantially on line 4—4 of Fig. 2.

Fig. 5 is a detail section on the same plane as Fig. 3 looking in the opposite direction as indicated by line 5—5 of Fig 3, and

Fig. 6 is a detail section substantially on line 6—6 of Fig. 3.

The fixture illustrated comprises a plurality of different electrical devices so constructed and arranged as to form a single unit, which is assembled and sold as a unit, and may be mounted in a wall box as a unit, and the elements of the unit are so arranged that the unit comprising a plurality of different electrical devices, specificially in the present case a switch, a receptacle and a pilot light, which in the old construction required a three gang wall box may in my construction be mounted in a two gang wall box. In the construction shown in the drawings my improved fitting comprises a cover plate 10, preferably of insulating material such as a phenolic condensation product, and is provided with rearwardly projecting walls molded in one piece with the cover plate on the rear side thereof for mounting the various electrical devices of the unit. The switch of the present device is a toggle switch of the type shown in the application of Alexander H. Trumbull, Serial No. 581,173, filed August 10, 1922 and has pivoted switch contacts 11 mounted on a pivotal support 12 which is operated with a snap action to close and open the switch. In the present construction there are two of these movable contacts 11, one of which is adapted to engage the stationary contacts 13 and 14 while the other is adapted to engage the stationary contacts 15 and 16. The contacts 13 and 15 are mounted on the rear of the cover plate by the members 17 molded in the walls of the plate and riveted over the body portions 18 of these contacts to secure them in position, and the binding screws 19 are connected to these contacts for connection to the lead wires 20 in the usual manner. The switch is operated by a toggle lever 21 extending through an opening 22 in the cover plate where it is accessible for manipulating the switch at the front of the plate in the usual manner.

Spaced laterally of the switch and in the opposite half of the plate are spaced spring contacts 23 and 24 forming receptacle contacts. They are mounted in pockets 25 in the rear of the extending wall 26 which pockets communicate with openings 27 and 28 through the cover plate for the entrance of contact blades of attachment plug caps to engage the contacts 23 and 24 for the purpose of supplying electric current to these attachments. These openings 27 and 28 are rectangular in shape and one of them, as the upper one 27 in the present showing, may be made longer than the lower for use with a polarized cap. The face of the cover

plate 10 is provided with a depression 29 about these openings the side walls of which are inclined toward the openings to assist in directing the blades of the cap to these openings. The contacts 23 and 24 are connected to metal bars 30 and 31 which are also connected to the switch contacts 16 and 14 respectively, and they may be secured to the rearwardly extending walls 32 by the securing elements 33 molded in the plate and riveted over these bars.

Above the depression 29 and the openings 27 and 28 the cover plate is provided with a similar depression 34 leading to and surrounding the rectangular opening 35 for a suitably colored glass jewel 36 which is seated in this opening and held therein by a metal plate 37 engaging the back of the jewel at the sides thereof by means of the sides 38 of the opening 39 in the plate, and this plate is secured to the back of the cover plate by the securing elements 40 molded in the plate with the free ends extending through openings in the plate 37 and riveted over against the back thereof. At the rear of this jewel is mounted a pilot light 41 so that when it is lighted it will illuminate the jewel to indicate this fact to an observer at the front of the plate. It is mounted in the spaced fingers 42 and 43 forming a lamp support, and which fingers are integral with the bar 30. The finger 42 has a straight opening 44 while the finger 43 has an opening 45 and the portions of this finger on the opposite sides of the opening are offset, as shown in Fig. 2, the distance between two threads 46 on the screw shell forming the outer lamp contact, and there is a notch 47 in the connection between these two offset portions of the finger 43 to allow for passage of this thread. Thus the screw shell of the lamp may be passed through the opening 44 in the finger 42 and threaded through the opening 45 in the finger 43 by which it is held in position, the two offset portions of the finger 43, seating in the grooves on the opposite sides of a screw thread, and the central or end contact 48 engages a spring contact 49 integral with the bar 31 through the connection 50. Thus the lamp contacts are electrically connected with the receptacle contacts 23 and 24, and the lamp contacts and the receptacle contacts are electrically connected with the switch contacts 14 and 16. Therefore, the switch controls the current to the receptacle contacts and the pilot light indicates whether the switch is open or closed, or whether there is any current being supplied to the receptacle contacts.

The switch mechanism and the various connections to the receptacle contacts are enclosed by the walls 51 molded integral with the cover plate 10 and extending rearwardly therefrom, and after the various elements are mounted in position they are enclosed by an insulating plate 52 mounted over these devices and secured in position by the securing elements 53 molded in the walls of the plate with their free ends extending through openings in the plate 52 and riveted over against the outer face thereof.

It will be apparent from the foregoing description that the switch occupies the space on the plate required for a so-called single gang, while the receptacle and the pilot light, being located one above the other, together occupy the space of a second single gang, so that with the construction and arrangement shown these three different electrical devices, instead of requiring the space of three gangs, and therefore, requiring a three gang wall box, are all of them located within the limits or confines of a two gang wall box, which box is shown in dotted lines 54 in Fig. 2. This makes a very neat, compact arrangement which gives the effect of a three gang fitting in the space of a two gang fitting, greatly reducing the space required for the same amount of apparatus and also reducing the cost of installation. Also the walls for mounting these various electrical devices are molded of insulating material integral with the cover plate 10, so that the whole fitting may be assembled as a unit at the factory and mounted in the wall box as a unit with no more labor than is required in mounting the separate cover plate in the ordinary installation, the cover plate being secured to the wall box by the screws 55 threaded in the ears 56 of the wall box in the same manner as in the ordinary cover plate. As the electrical devices are permanently mounted on the cover plate, and are in effect a part thereof, no adjustments are required in making the installation. Thus this improved construction greatly reduces the labor expense of installing. As the cover plate is of insulating material and securing screws having insulating heads may be used, this fitting gives an entirely dead front installation. As shown in Fig. 1 the impressions in the plate surrounding the openings 22, 27, 28 and 35 are made of the same shape to give a neat and attractive appearance, and it will, of course, be understood that the relative positions of the various electrical devices may be shifted on the plate if it is found more desirable than the arrangement shown.

Having thus set forth the nature of my invention, what I claim is:

1. An electric wall fitting comprising as a unit a cover plate of a size to cover the wall opening required for a standard two gang wall outlet box, an electric switch mounted at the rear of the portion of the plate adapted to cover one gang and having operating means extending through the plate, receptacle contacts mounted at the rear of the portion of the plate adapted to cover the other gang, said plate having knife blade openings leading to said contacts, a pilot light

mounted at the rear of the latter portion of the plate visible through an opening in the plate, and electrical connections for said switch, contacts and light, said switch, contacts and light being all mounted on said plate so that said fitting may be mounted as a unit in such wall box.

2. In an electric wall fitting, a cover plate of insulating material of a size to cover the wall opening required for standard two gang wall outlet box and having walls of insulating material extending rearwardly from the inner face thereof, a switch having stationary contacts enclosed by said walls and mounted at the rear of the portion of the plate adapted to cover one of said gangs, operating means for the switch extending through the plate, spaced receptacle contacts enclosed by said walls and mounted at the rear of the portion of the plate adapted to cover the other gang, said plate having openings for standard attachment plug blade contacts leading to said receptacle contacts, electrical conducting bars connecting the switch contacts with the receptacle contacts, lamp contacts connected to the receptacle contacts, said plate having an opening adjacent the lamp contacts, and means for securing a jewel in said opening.

3. In an electric wall fitting, an insulating cover plate of a size to cover a standard two gang wall outlet box and having an opening in the portion thereof adapted to cover one of said gangs, a toggle switch mounted on the rear of said portion of the plate and having an operating lever projecting through said opening, a pair of receptacle contacts and a pilot light electrically connected therewith mounted on the rear of the portion of said plate adapted to cover the other gang laterally of the switch and arranged one above the other, said plate having openings in alignment with the receptacle contacts and the lamp, means for securing the jewel in the lamp opening, and electrical connections mounted on the plate leading from the switch to the receptacle contacts.

4. In an electric wall fitting, an insulating cover plate of a size to cover the wall opening required for a standard two gang wall outlet box, and electrically connected receptacle contacts, pilot light and controlling switch for said light and contacts all mounted on the rear of said plate, the switch being mounted on the portion of the plate adapted to cover one gang of said box and the pilot light and receptacle contacts being mounted on the portion of said plate adapted to cover the other gang so that said fitting may be mounted as a unit in said box, and said plate being provided with an opening for the switch operating means and openings leading to the receptacle contacts and pilot light.

5. An electric wall fitting comprising a plate of insulating material having two pairs of openings spaced standard distances for securing screws for securing it to a standard two gang wall outlet box, said plate having an opening associated with one pair for a switch operating means in the portion of the plate adapted to cover one gang of such box, and a plurality of substantially aligned openings in the portion adapted to cover the other gang of the box, two of said openings being spaced to receive standard plug terminals and a third forming a pilot light opening, said plate being provided with walls extending rearwardly from the inner face thereof molded of insulating material integral with said plate, switch mechanism, means for supporting said mechanism on said walls, bus bars extending from certain of said switch contacts to a point adjacent said plug terminal openings, plug terminals adjacent said openings and connected to said bus bars, means for mounting said terminals on said walls, and pilot light terminals mounted on said walls and connected to said bus bars, said latter terminals adapted to support a pilot lamp behind said third opening.

6. An electric wall fitting comprising a plate of a size to cover the wall opening required for a standard two gang wall outlet box, means for securing the plate over the open side of said box, said plate having an opening for a switch operating means in the portion thereof adapted to cover one gang of such box, and a plurality of substantially aligned openings in the portion adapted to cover the other gang of the box, two of said latter openings being spaced to receive standard plug terminals and a third forming a pilot light opening, switch mechanism associated with said first opening, means on the back of said plate for supporting said mechanism, and bus bars extending from certain of said switch contacts to a point adjacent said plug terminal openings, plug terminals adjacent said openings and connected to said bus bars, and pilot light terminals connected to said bus bars between said switch and plug terminals adapted to support a pilot lamp behind said third opening.

7. An electric wall fitting comprising a plate having two pairs of openings spaced standard distances for securing screws for securing it to a standard two gang wall outlet box, said plate having an opening associated with one pair for a switch operating means in the portion of the plate adapted to cover one gang of such box and a plurality of substantially aligned openings in the portion adapted to cover the other gang of the box, two of said openings being spaced to receive standard plug terminals and a third forming a pilot light opening, switch mechanism, means on the back of said plate for supporting said mechanism, and bus bars extending from certain of said switch contacts to a point adjacent said plug terminal openings, plug termi-

nals adjacent said openings and connected to said bus bars, and pilot light terminals connected to said bus bars between said switch and plug terminals adapted to support a pilot lamp behind said third opening.

8. An electric wall fitting comprising a plate of a size to cover the wall opening required for a standard two gang wall outlet box, means for securing the plate to said box, said plate having an opening for a switch operating means in the portion thereof adapted to cover one gang of such box and a plurality of substantially transversely aligned openings in the portion adapted to cover the other gang of the box, two of said latter openings being spaced to receive standard plug terminals and a third forming a pilot light opening, switch mechanism associated with said first opening, means for supporting said mechanism on the back of the plate, plug terminals adjacent said plug terminal openings, electrical connections between said plug terminals and certain of said switch contacts, and pilot light terminals electrically connected with said plug terminals and adapted to support a pilot lamp behind said third opening.

9. An electric wall fitting comprising a plate composed of insulating material and of a size to cover the wall opening required for a standard two gang wall outlet box, said plate being provided with walls extending rearwardly from the inner face thereof molded integrally with said plate and forming switch and contact chambers, said plate having an opening for a switch operating means in the portion thereof adapted to cover a gang of such box, and a plurality of substantially aligned openings in the portion adapted to cover the other gang of the box, two of said latter openings being spaced to receive standard plug terminals and a third forming a pilot light opening, switch mechanism associated with said first opening, means for mounting said mechanism on said walls, bus bars mounted on said walls and extending from certain of said switch contacts to a point adjacent said plug terminal openings, plug terminals mounted on said walls adjacent said openings and connected to said bus bars, and pilot light terminals connected to said bus bars and adapted to support a pilot lamp behind said third opening.

10. An electric wall fitting comprising as a unit a cover plate of insulating material, said plate having rearwardly extending enclosing walls integral therewith, a switch mechanism mounted on the rear of the plate within said enclosing walls and having an operating lever projecting through the plate to the front thereof, said walls being also provided with pockets located laterally of the switch mechanism, receptacle contacts mounted in said pockets, said plate being provided with openings for attachment plug blades leading to said pockets, said plate being further provided with a pilot light opening in vertical alignment with said blade openings, a lamp support mounted on the rear of the plate arranged to hold a lamp in alignment with said pilot light opening and including lamp contacts, and electrical connections for said switch, receptacle contacts and said lamp contacts.

In testimony whereof I affix my signature.

TONJES A. BOTH.