March 20, 1951 H. P. ALLEN 2,545,508

PILOT LAMP MOUNTING

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FIG. 1.

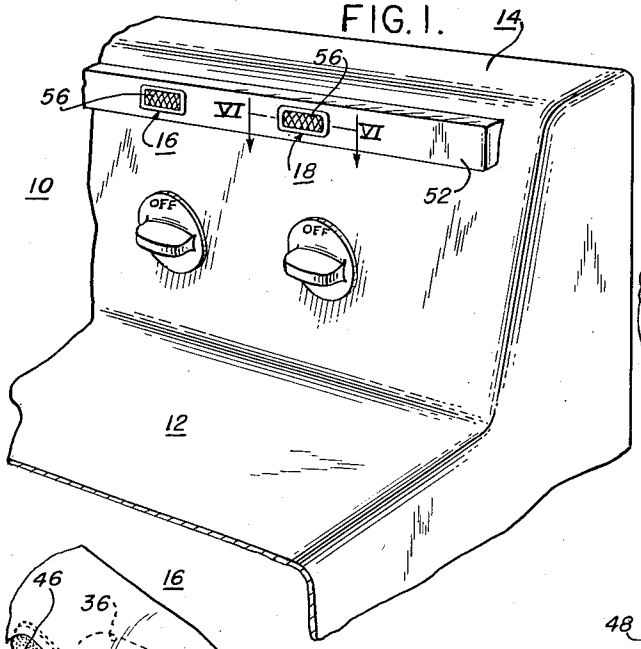
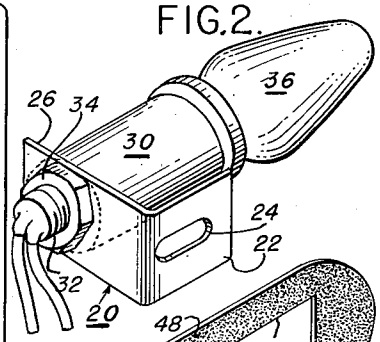


FIG. 2.



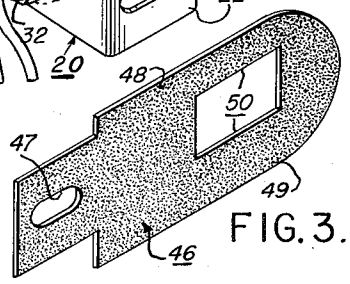


FIG. 3.

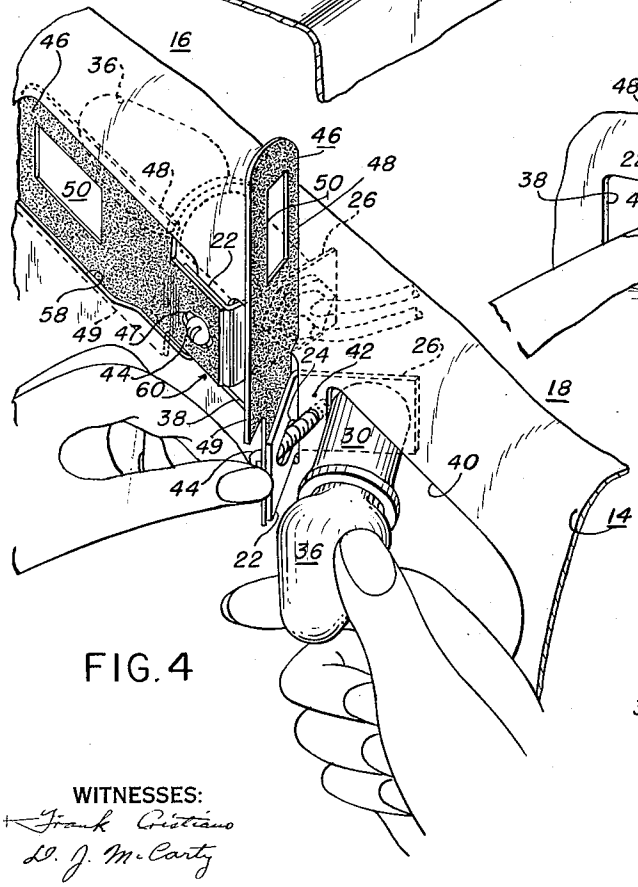


FIG. 4

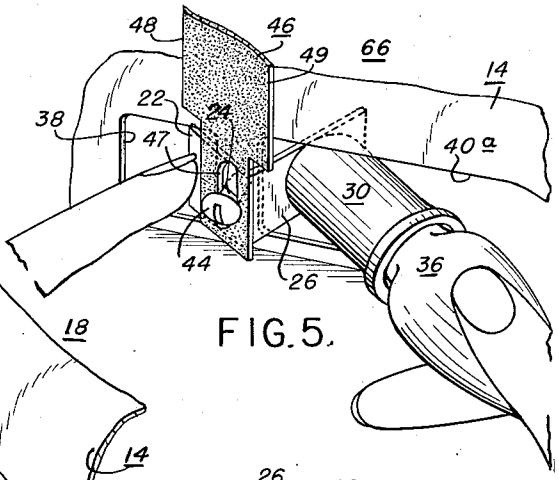


FIG. 5.

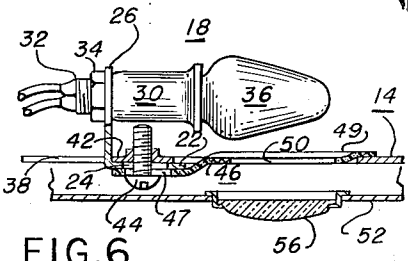


FIG. 6

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PILOT LAMP MOUNTING

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This invention relates to an arrangement for mounting a pilot lamp on a panel, and it has for an object to provide a structure whereby the lamp may be more easily removed and replaced, more particularly through an opening in the panel.

It is a further object of this invention to provide a pilot lamp mounting arrangement in which the lamp is normally firmly mounted but may be swung forwardly through an opening in a panel to a more accessible position for servicing.

A more specific object is to provide a pilot lamp mounting arrangement in which a single screw is utilized to act as a fastening member.

It is a still more specific object to provide a pilot lamp mounting arrangement which may be quickly locked in position or unlocked for replacing the lamp without completely removing the mounting screw.

In ranges, small electric appliances and radios, a pilot lamp is generally mounted behind a small opening in a panel, the opening being covered by a light transmitting glass or plastic lens. The lamp may serve to notify the operator that a circuit is on or off, or that the temperature of the appliance is too high, too low or as desired. Since the lamps are small and the panel openings are small also, it has heretofore been a difficult and delicate task to replace a defective lamp.

My improved pilot lamp mounting arrangement includes a hinged bracket which is held in position by a single mounting screw. When the screw is loosened, the bracket may be rotated, swinging the lamp through the panel opening where it may be easily removed and replaced.

For a more complete understanding of my invention, reference should be had to the accompanying drawing in which:

Fig. 1 is a perspective view of a portion of an electric range, with my invention incorporated therein;

Fig. 2 is a perspective view of a pilot lamp and bracket assembly;

Fig. 3 is a perspective view of a lamp shield;

Fig. 4 is a fragmentary perspective view of a panel, showing the manner in which a lamp is replaced;

Fig. 5 is a fragmentary perspective view of a panel, showing another embodiment of my invention; and

Fig. 6 is a section taken on line VI—VI of Fig. 1.

Referring to the drawing in detail, and especially Fig. 1, I have shown my invention incorporated in an electric range 10 having a top plat-

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form 12 formed with a backsplasher panel 14. Although any number of pilot lamps may be mounted, as desired, behind the panel 14, I have shown two pilot lamp structures 16 and 18 which are composed, in this instance, of identical parts and are the same except that the lamp structure 16 is a left-hand mount while the lamp structure 18 is a right-hand mount as will be explained later.

As best shown in Figs. 2, 4 and 6, lamp structure 18 has an L-shaped mounting bracket 20 comprising an arm 22 having an elongated slot 24 and an arm 26. A lamp socket 30 having an externally threaded ferrule portion 32 is mounted rigidly to the bracket arm 26 in such a manner as to be disposed within the bight formed by the bracket arms 22 and 26, the ferrule 32 being inserted in an opening in the arm and being locked therein by a nut 34. The lamp socket may be of the screw type or bayonet-lock type and has a lamp 36. It will be noted that the lamp socket is so mounted to the bracket 20 that it is disposed directly behind the bracket arm 22.

The panel 14 has an opening 38 adjacent and to the left of a somewhat larger opening 40, there being an integral rib portion 42 between the openings. The bracket 20 is clamped to the rib 42 by a screw 44 which is inserted through the opening 24, and is so disposed that the arm 26 extends inwardly through the opening 38. The arm 22 is preferably wider than the rib 42 and partly overlaps the opening 40 to provide an overhang grip portion for facilitating movement of the bracket as will be later explained.

The panel opening 40 is substantially larger than the lamp 36 to permit removal therethrough. To partially cover the opening, a shield 46 is mounted in registry therewith by the screw 44. An elongated opening 47 may be provided in the shield for this purpose. The screw 44 is substantially longer than the combined thickness of the rib 42, the arm 22 and the shield 46. In Figs. 3 and 4, I have shown the shield as having upper and lower marginal portions 48 and 49, respectively, which impart additional width to the shield sufficient to permit tucking in the shield behind the opening 40. When the shield is in its normal position, the upper and lower portions 48 and 49, respectively, will be disposed behind the panel 14 in abutting relation therewith. A rectangular opening or window 50 is also provided which is somewhat smaller than the lamp 36 and permits only a portion of the light to be transmitted to the front of the panel 14. The window thus acts to restrict the amount of visible light and

also acts to outline the shape of the pilot light as desired.

The pilot lamp structure 18 is completely hidden by a metal trim strip 52 which may be fastened to the panel 14 in any conventional manner. The trim strip is provided with an opening within which is mounted a glass or plastic light transmitting lens 56 in registry with the window 50. It will now be seen that when the lamp 36 is energized, its light will be transmitted through the window 50 to the lens 56 and through the lens to the observer.

To replace the lamp 36, the pilot lamp structure 18 is first exposed by removing the trim strip 52. The screw 44 is then partially withdrawn and the shield 46 is pulled away from the opening 40 and swung to a vertical position as shown in Fig. 4. With the shield in this position, a portion of the bracket arm 22 is exposed and may be grasped and pulled forward by the thumb of the left hand. The bracket will pivot about the rib 42 in clockwise direction looking down, causing the lamp socket 30 and its lamp 36 to swing forward through the opening 40. With the lamp in this position it is completely accessible and may easily be removed by the right hand. After the lamp is replaced, the above sequence of operations is reversed to restore the panel to its original condition. It will be noted that the slot 24 will permit the bracket 20 to swing through a wide arc. The length of the slot may be varied as desired to permit desired movement of the lamp.

The pilot lamp structure 16 is identical to the pilot lamp structure 18 already described. However, its manner of mounting to the panel 14 is such that it may be termed a left-hand mount, since the lamp 36 faces in the opposite direction, that is, to the left. As described in conjunction with pilot lamp structure 18, an opening 58 is provided in the panel 14 to the left of, and adjacent the opening 38, the two openings having a rib portion 60 therebetween. All other parts are the same, hence they need no further description. However, it will be seen that the lamp bracket 20 is disposed so that its arm 26 extends inwardly through the opening 38 and its arm 22 extends to the left. Thus, in the embodiment shown, the opening 38 serves both pilot lamp structures. The trim strip 52 is provided with a lens which may be identical to the lens 56.

To replace the lamp in the pilot lamp structure 16, the trim strip 52 is removed and the screw 44 is partially withdrawn as before. The shield 46 is then swung to a vertical position, exposing a portion of the bracket arm 22 which may be grasped by the thumb of the right hand and pulled forward. The lamp 36 and the socket 30 will be pivoted about the rib 60 and moved forwardly through the opening 58. In this position, the lamp may be removed and replaced with the left hand.

Although a right-hand pilot lamp structure and a left-hand pilot lamp structure have been described, it is obvious that either may be used as desired, and that they need not be formed in pairs.

The pilot lamp structures 16 and 18 already described may be designated the "pull-out" type; since as previously explained, the lamp 30 is swung through the panel opening by a pulling motion of the thumb.

Another embodiment of my novel pilot lamp structure, as shown in Fig. 5, may be termed a "push-in" type. In this embodiment, the lamp 36 may be swung forward through a panel opening by a pushing motion of the fingers. A pilot lamp structure generally designated 66 is shown, having component parts which may be identical with the parts comprising the pilot lamp structures 16 and 18. The lamp socket 30, however, is mounted to the L-shaped bracket 20 in such a manner as to be disposed outside the bight formed by the arms 22 and 26. An opening 40*a* is provided in the panel 14 adjacent to the opening 38. The opening 40*a* may be the same width as opening 40 previously described, but is preferably longer to accommodate the socket 30 in addition to the lamp 36. The bracket 20 is attached to the rib 42 in such a manner that the bracket arm 26 extends rearwardly through the opening 40*a* and the bracket arm 22 partially overlies the opening 38. All the other parts may be mounted in the same relationship as described in the first embodiment.

To replace an inoperative lamp in the pilot lamp structure 66, the trim strip 52 is first removed. The screw 44 is then partially backed out of the rib 42 a sufficient amount to allow the pilot lamp structure to be moved freely. The shield 46 is then disengaged from the panel opening 40*a* and swung out of the way to a vertical position. The lamp and socket is now unobstructed and may be swung forward through the opening 40*a* by pushing the left edge of the bracket arm 22 with a finger of the left hand. The lamp 36 may be easily replaced using the right hand.

From the foregoing, it will be understood that the pilot lamp structure 66 may be termed a "right-hand mount," since the lamp is manipulated with the right hand. Although a "left-hand mount" has not been shown or described in conjunction with the "push-in" type, obviously such a type may be provided by inverting the entire structure and panel openings 38 and 40*a*.

While I have shown my invention in several forms, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various other changes and modifications without departing from the spirit thereof.

What I claim is:

1. A pilot lamp mounting arrangement including, in combination, a sheet material panel having a first and a second opening and a common rib portion disposed between said openings, an angular bracket having a first and a second arm, said first arm extending rearwardly through said first opening and having a lamp socket adapted to support a lamp directly behind one of said openings, said second arm having an aperture for mounting purposes, a screw passing through said aperture and normally fastening said bracket to said rib, said screw being substantially longer than the combined thickness of said rib and said second arm, said aperture being larger than the cross section of said screw, angular movement of said bracket about said rib as a pivot being thereby permitted when said screw is partially withdrawn, and said one opening being of sufficient size to permit said socket to be moved at least partially therethrough by such angular movement.

2. A pilot lamp mounting arrangement including, in combination, a sheet material panel having a first opening and a second opening and a common rib portion disposed between said openings, an angular bracket having a first and a second arm, said first arm extending rearwardly

through said first opening and having a lamp socket mounted thereon, said socket being disposed within the bight of said bracket and adapted to support a lamp directly behind said second opening and said second arm having an aperture for mounting purposes, a screw passing through said aperture and normally fastening said bracket to said rib, said screw being substantially longer than the combined thickness of said rib and said second arm, said aperture being larger than the cross section of said screw, angular movement of said bracket about said rib as a pivot being thereby permitted when said screw is partially withdrawn, and said second opening being of sufficient size to permit movement of said socket at least partially therethrough to a position in which a lamp in the socket is accessible for removal.

3. The structure recited in claim 2 in which said second arm extends beyond said rib to provide an overhanging grip portion to facilitate the movement of said bracket.

4. The structure recited in claim 2 and further including a lamp shield member normally overlying said second opening and fastened to said second arm by said screw, said member having a window substantially smaller than said second opening.

5. The structure recited in claim 2 and further including a lamp shield normally overlying said second opening and fastened to said second arm by said screw, said shield having marginal portions adapted to engage the marginal portions of said panel defining said second opening.

6. A pilot lamp mounting arrangement including, in combination, a sheet material panel having a first opening and a second opening and a common rib portion disposed between said openings, an angular bracket having a first and a second arm, said first arm extending rearwardly through said first opening and having a lamp socket mounted thereon, said socket being adapted to support a lamp directly behind said first opening, and said second arm having an aperture for mounting purposes, a screw passing through said aperture and normally fastening said bracket to said rib, said screw being substantially longer than the combined thickness of said rib and said second arm, said aperture being larger than the cross section of said screw, angular movement of said bracket about said rib as a pivot being thereby permitted when said screw is partially withdrawn, and said first opening being of sufficient size to permit movement of said socket at least partially therethrough to a position in which a lamp in the socket may be removed.

7. The structure recited in claim 6 in which said second arm extends beyond said rib and partially overlies said second opening to provide an overhanging grip portion to facilitate the movement of said bracket.

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