Nov. 8, 1960 T. E. ANDREWS 2,959,668

JEWEL AND NEON INDICATOR LAMP MOUNTING

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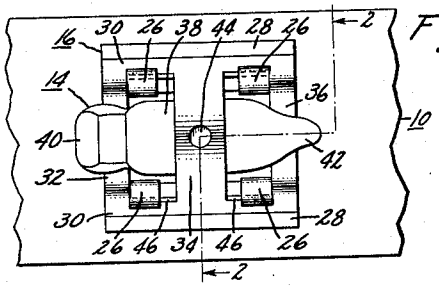


Fig. 1.

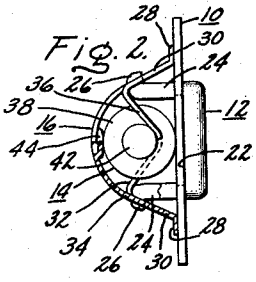


Fig. 2.

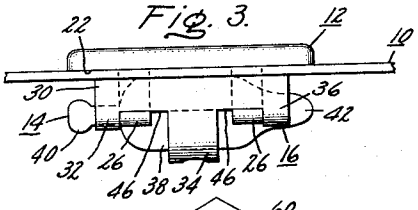


Fig. 3.

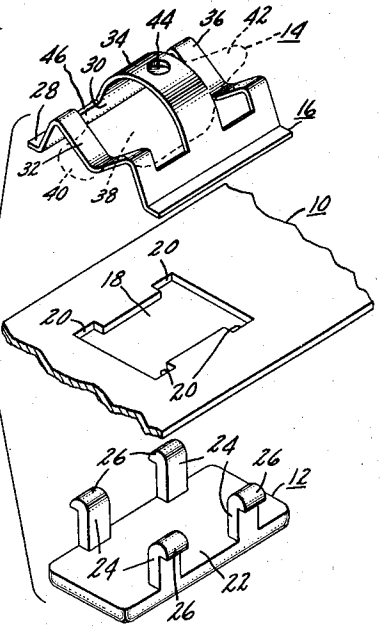


Fig. 4.

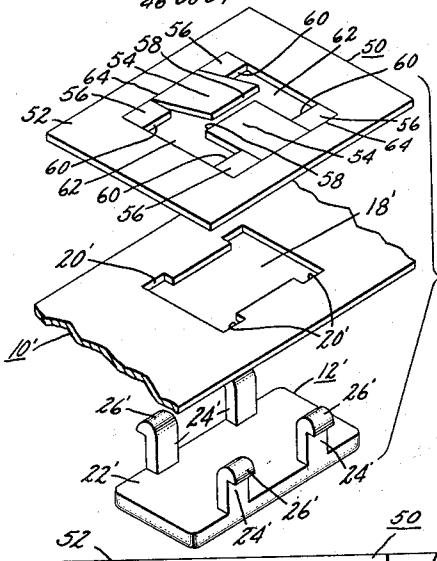


Fig. 5.

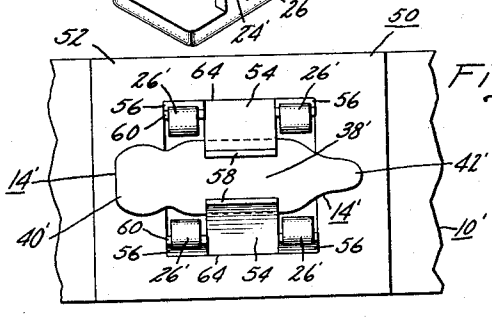


Fig. 6.

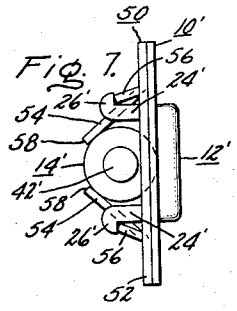


Fig. 7.

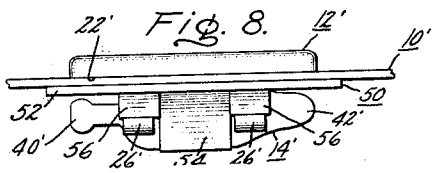


Fig. 8.

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JEWEL AND NEON INDICATOR LAMP MOUNTING

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8 Claims. (Cl. 240—152)

This invention relates to mountings for neon indicating lamps, sometimes referred to as "neon glow lamps," and indicating jewels, sometimes referred to as "lenses." These mountings are used in many articles, often in association with control panels for electrical devices, and they normally function, when the lamp is illuminated and the jewel thereby glows, to indicate various predetermined conditions of the devices. This signal is of significance to the user of the device being controlled; for example, in electrical household appliances of the food cooking variety, the signal may indicate the completion of a cooking operation or the attainment of a desired preset temperature.

Devices in which neon indicating lamps and indicating jewel mountings are utilized are normally sold in highly competitive markets, and, therefore, it is imperative to minimize their cost. Being in the nature of an auxiliary feature to the main purpose of the devices of which they form a part, these mountings are continuously scrutinized with a view to reducing their cost. Additionally, in view of the facts that when finally assembled in a device, they are normally so disposed as to locate the jewel on the exterior of the device and the neon indicating lamp on the interior thereof, and that the neon indicating lamp carries electrical current, it is desirable that the mountings be functionally effective, and yet aesthetically attractive; specifically, functionally it is desirable that the current carrying portions of the neon indicating lamp be electrically isolated from the remainder of the mounting, and aesthetically it is desirable that none of the fastening means be exposed on the exterior of the device.

It is an object of this invention to provide a neon indicating lamp and indicating jewel mounting which is satisfactory from: a functional point of view in that it provides a sound structural mounting and electrically isolates the current carrying portions of the neon indicating lamp from the remainder of the mounting structure; an aesthetic point of view in that none of the fastening means is exposed to view on the exterior of the device, and lastly an economic point of view in that it is simple in construction and assembly, and therefore, is relatively inexpensive compared with existing mountings of its type.

The object of this invention is generally achieved by providing in association with an apertured supporting wall, an indicating jewel, and a neon indicating lamp, a supporting member for both supporting the neon indicating lamp and fastening the jewel to the supporting wall.

The object of this invention in a preferred form is achieved by utilizing a flat, blanked and scored plate of electrical insulating, sheet material as the supporting member refered to in the preceding paragraph.

The above and other objects and further details of that which I believe to be novel and my invention will become apparent from the following specification taken with the accompanying drawing wherein:

Fig. 1 represents a rear elevational view of a neon indicating lamp and indicating jewel mounting viewed from within the device which the mounting is associated with;

Fig. 2 is a sectional view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a top plan view thereof;

Fig. 4 is an exploded view thereof, showing the neon indicating lamp in dotted lines assembled with the supporting member;

Fig. 5 is an exploded view of a modified neon indicating lamp and jewel mounting showing all the parts except the lamp;

Fig. 6 is a rear elevational view of the modified mounting;

Fig. 7 is a side elevational view of the modified mounting, and

Fig. 8 is a top plan view of the modified mounting.

In the drawing there is disclosed two modifications of the invention. Both of these modifications possess certain structural and functional similarities, the principal ones being that each utilizes a substantially identical supporting wall opening, a substantially identical neon indicating lamp, and a substantially identical indicating jewel; also each modification utilizes a single supporting member. The difference in the two modifications resides principally in differences in the construction and manner of functioning of the different supporting members. In the Figs. 1 through 4 modification, the supporting member is in the form of a bent springy member, whereas in the Figs. 5 through 8 modification, the supporting member is in the form of a flat, blanked and scored plate.

With specific reference to Figs. 1 through 4, it will be seen that the entire mounting of the first modification includes four parts: the supporting wall **10**, which may comprise the control panel of an electrical device, the indicating jewel **12**, the neon indicating lamp **14**, and the supporting member **16**. When fully assembled these four parts cooperate to mount both the jewel and the neon indicating lamp on the supporting wall **10** in the desired manner. In Fig. 2 the front of the jewel is the portion seen from the right-hand side of wall **10** and it will there be observed that the lamp **14** is disposed to the left of wall **10**, which may be considered to be the interior of a device.

The details of construction of most of the parts can best be seen in Fig. 4. The supporting wall **10** is preferably made of a rigid material, such as a suitable metal or plastic, and includes an opening which may be considered to be formed of a central rectangular portion **18** and four cutout corner portions **20**.

The indicating jewel **12** is preferably made of a resilient, translucent plastic material and comprises a flat wall **22**, which may be formed with a faceted face to provide the desired glowing effect when it is illuminated, and four, spaced, parallel, resilient locating legs **24**. At its free end, each of the locating legs has a laterally extending holding foot **26** formed. The precise configuration of jewel **12** can be clearly seen in Fig. 4, wherein it will be observed that two of the holding feet **26** extend laterally in one direction, and the other two holding feet **26** extend laterally in an opposite direction.

The supporting member **16** is bent out of springy metal into the configuration most clearly shown in Fig. 4; however, it could be made of a resilient plastic, if desired. Supporting member **16** comprises a pair of flat, co-planar, spaced mounting flanges **28**, a pair of converging side walls **30** extending from the flanges, and three spaced bands **32**, **34** and **36** which connect the side walls. The central band **34** is arcuate, and its concave side faces down as viewed in Fig. 4. The bands **32** and **36** include upwardly facing, V-shaped central portions. The bands cooperate to form a resilient support for the neon indicating lamp **14**.

The neon indicating lamp **14** may be of the conven-

tional variety and includes a glass receptacle, that generally comprises a central cylindrical portion 38 and reduced end portions 40 and 42; the three portions are contacted by the bands 34, 32 and 36, respectively, when the neon indicating lamp is mounted in the supporting member 16.

To assemble the mounting, the neon indicating lamp 14 may be slipped into the supporting member 16 into its dotted line position in Fig. 4. It should be understood that the bands of the supporting member 16 are dimensioned so as to securely support the neon indicating lamp with the reduced end portions 40 and 42 of the lamp receptacle supported in the V-shaped portions of the bands 32 and 36, and the central portion 38 of the lamp receptacle surrounded by the band 34. A downwardly projecting button 44, as viewed in Fig. 4, is formed in the band 34 and functions to resiliently urge the lamp receptacle against the V-shaped portions of the bands 32 and 36.

With the lamp 14 supported in the supporting member 16, the next step in assembling the mounting is to position the locating legs 24 of the jewel 12 in the cutout, corner portions 20 of the opening in the supporting wall 10. It will be understood that when positioning the legs 24 in the cutout portions 20, it may be necessary to flex the legs inwardly in order to have their feet 26 clear the opening in the supporting wall 10, and that such flexing is permitted by the resilience of the jewel material. With the locating legs 24 located in the cutout portions 20, the jewel is pushed toward the supporting wall 10 until one side of its flat wall 22 makes contact with one side of the supporting wall 10.

The next step is to move the assembled supporting member 16 and the lamp 14, associated as illustrated in Fig. 4, toward the assembled supporting wall 10 and the locating legs 24, from the side of the supporting wall to which the locating legs extend. The locating legs 24 are dimensioned and disposed relative to the supporting member 16, and particularly its bands, so that on moving the supporting member 16 toward the locating legs 24, the latter will move through the openings between the bands of the supporting member 16. The holding feet 26 will contact the inner faces of inclined side walls 30 of the supporting member, and a certain amount of force will be required to deflect the locating legs 24 toward each other until the holding feet 26 clear the edges 46 of the side walls 30. On the occurrence of the latter, the holding feet 26 will snap over the edges 46 into their final assembled position, illustrated in Figs. 1 through 3. When finally assembled, the jewel will be securely mounted on the supporting wall by the supporting member, which also supports the neon indicating lamp in its desired position adjacent to the jewel.

In Figs. 4 through 8, there is illustrated a preferred modification of the invention. To simplify an understanding of the Figs. 4 through 8 modification, the neon indicating lamp, the indicating jewel, and the apertured supporting wall, and their parts, have each been identified by reference numerals which correspond to the reference numerals of their counterparts in the Figs. 1 through 4 modification, but in order to distinguish them from their counterparts in the Figs. 1 through 4 modification, they have had a prime added to their reference numerals. The only part of the preferred modification which differs substantially from its counterpart in the Figs. 1 through 4 modification is the supporting member, which has been identified in the Figs. 5 through 8 modification by the reference numeral 50.

The supporting member 50 can best be seen in Fig. 5, wherein it will be observed that it comprises a blanked and scored plate 52. Plate 52 is preferably made of a vulcanized fiber sheet material which is blanked and scored so as to form a pair of opposed pivotal, central tabs 54, and two pairs of opposed, spaced, pivotal, end tabs 56. When the plate 52 is flat, blanked and scored, the tabs 54 have edges 58 which abut, and the tabs 56 have edges 60 which are spaced, due to the formation of the spaced openings 62 during the blanking and scoring operation. In addition to forming the openings 62, tabs 54, and tabs 56 during the blanking and scoring operation, a pair of spaced, scored lines 64 are formed on one side of the plate. In Fig. 5, the scored lines exist on the underside (unshown) of the plate, and it will there be observed that each scored line renders a tab 58 and a tab 56 on each of its sides independently pivotal about a common axis formed by the scored line. This has the effect of allowing each of the tabs as viewed in Fig. 5 to pivot upwardly, one of the tabs 54 being illustrated in a slightly upwardly pivoted position.

The steps of assembly of the preferred mounting are similar to those of the first modification in that the neon indicating lamp 14' may be mounted in the supporting member 50, the jewel 12' may be mounted on the supporting wall 10', and the assembled neon indicating lamp and supporting member may be mounted on the supporting wall by having the supporting member snapped onto the locating legs 24' of the jewel into final assembled position.

To mount the lamp 14' in the supporting member 50, the tabs 54 are pivoted outwardly and the lamp is slipped under them; when the lamp is mounted in the supporting member 50, its central portion 38' is disposed adjacent to the central tabs 54, which urge the lamp toward the remainder of the supporting member 50, and particularly urge the reduced end portions 40' and 42' into contact with portions of the plate 52 that are adjacent to the cutout portions 62.

The jewel 12' may be mounted on supporting wall 10' to have its locating legs 24' disposed in the cutout portions 20' of the opening in supporting wall 10', and extend through the supporting wall to the opposite side of the latter from the side which contacts the flat wall 22' of the jewel, in the same manner as in the first modification.

Assembled lamp 14' and supporting member 50 may then be moved toward the supporting wall 10' and jewel 12' from the side of the wall to which the locating legs 24' extend. The dimensional and dispositional relationship of the locating legs 24' and the tabs 56 of the supporting member 50 are such that on contact, the tabs 56 are pivoted until they clear the holding feet 26', at which time they snap back under the holding feet 26', as is best shown in Figs. 6 and 7. In Figs. 6, 7 and 8, the finally assembled position of the mounting is illustrated. It will there be observed that when finally assembled, the jewel 12' and the neon indicating lamp 14' are mounted on the supporting wall 10' in the desired manner by the supporting member 50.

In view of the foregoing, it will be apparent that effective economical, attractive mountings have been provided for a neon indicating lamp and a jewel, wherein these elements are mounted on opposite sides of a supporting wall, a single member is utilized to securely mount these elements in a desired manner with relation to each other and to the supporting wall, and none of the supporting means is visible from the exterior of the supporting wall (see Figs. 7 and 8). It should be particularly noted that in the preferred form of the invention, the cost of the materials, and fabrication and assembly of the mounting, is significantly reduced due to the use of a blanked and scored plate made of an electrical insulating, vulcanized fiber sheet for the supporting member. It should also be noted in connection with the preferred form, that the neon indicating lamp is completely insulated electrically when it is finally assembled.

As will be evident from the foregoing description, certain aspects of my invention are not limited to the particular details of construction of the examples illustrated, and I contemplate that various and other modifications and applications will occur to those skilled in the art. It is, therefore, my intention that the appended claims shall cover such modifications and applications as do

not depart from the true spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A mounting for an indicating jewel and an indicating lamp comprising: a flat supporting wall having an opening therein; an indicating jewel; said indicating jewel having a light diffusing wall and a plurality of spaced resilient legs extending generally perpendicularly away from one side thereof; said jewel being adapted to be supported by said supporting wall with said light diffusing wall disposed on one side of said supporting wall and generally parallel thereto, said legs having holding feet extending through said opening in said supporting wall to the other side thereof; and a supporting member on said other side of said supporting wall having means for supporting an indicating lamp on said other side and means for lockingly engaging said feet to thereby secure said jewel and said supporting member to said supporting wall.

2. A mounting as defined in claim 1 wherein said supporting member is formed of bent springy material.

3. A mounting as defined in claim 2 wherein said supporting member includes a pair of spaced mounting flanges, a pair of side walls connected to said flanges, and a plurality of spaced bands connecting said side walls; said bands are bent so as to form a support for said lamp, said side walls have a plurality of edge portions; said holding feet being arranged to lockingly engage said edge portions when said supporting member secures itself and said jewel to said supporting wall.

4. A mounting as defined in claim 1 wherein said supporting member comprises a blanked and scored, flat plate.

5. A mounting as defined in claim 1 wherein said supporting member is made of a vulcanized fiber material.

6. A mounting as defined in claim 1 wherein said supporting member comprises a plate having a plurality of pivotal tabs; whereby said tabs are adapted to lockingly engage said feet when said supporting member secures itself and said jewel to said supporting wall.

7. A mounting as defined in claim 6 wherein said plate is blanked and scored to form said tabs and additional tabs for supporting said lamp.

8. A mounting as defined in claim 6 wherein said supporting member is made of a vulcanized fiber material.

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