

[72]	Inventor	Jack D. McKim P.O. Box 149, Del Mar, Calif. 92014
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Primary Examiner—Samuel S. Matthews
Assistant Examiner—Alan Mathews
Attorney—Richard K. Macneill

[54] PANEL LIGHT ASSEMBLY
1 Claim, 3 Drawing Figs.

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[51] Int. Cl. H01r 13/50

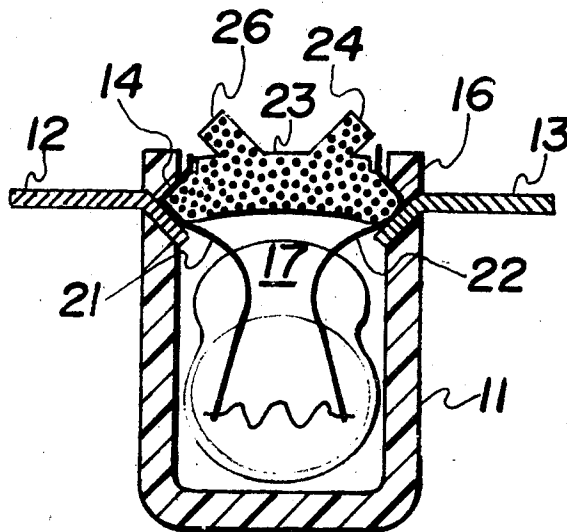
[50] **Field of Search**..... 240/2.1,
8.16, 52, 52.1, 151, 152; 339/176 L, 145; 248/27

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ABSTRACT: A panel light assembly having two embodiments, one of which employs a translucent receptacle-filter, which is colored for filtering having horizontally extending electrical contacts extending beyond the outside surface and in proximity to first and second recesses in the inner surface of the receptacle, the receptacle-filter being dimensioned for receiving a lamp having pliable leads extending toward the top of the receptacle-filter and a resilient wedge member dimensioned for a press fit within the recesses pressing the flexible leads of the lamp against the electrical contacts; a second embodiment wherein a base is provided with first and second electrical contacts passing therethrough being dimensioned for receiving the pliable leads of a lamp thereon and a cap-filter which is translucent and utilized as a filter dimensioned for receiving the lamp thereon and having recesses dimensioned for a press fit around the ends of the electrical contacts thereby pressing the pliable leads against the electrical contacts.



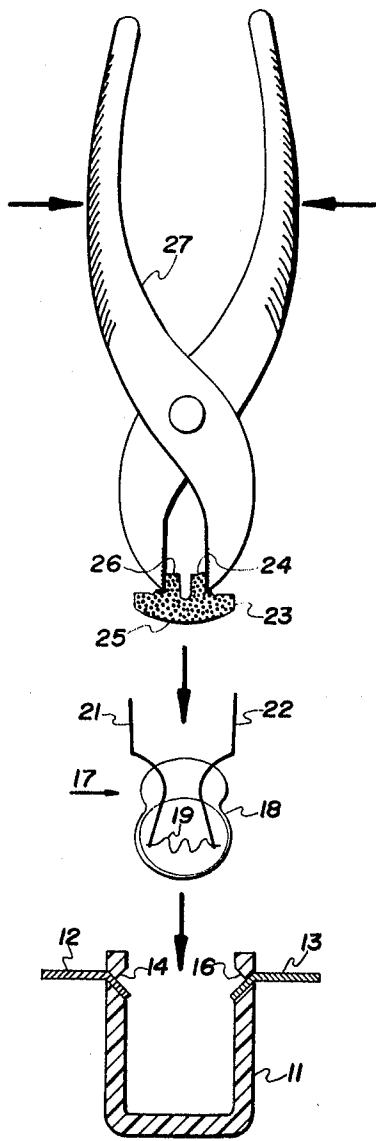


Fig. 1

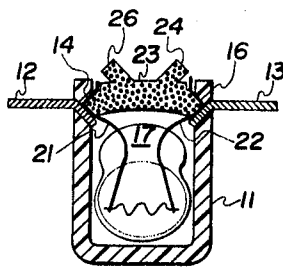


Fig. 2

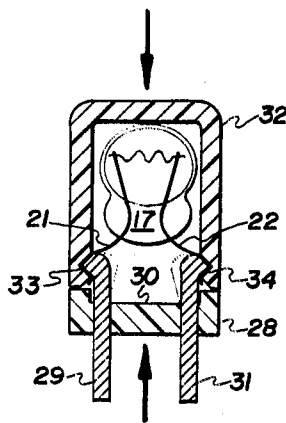


Fig. 3

INVENTOR.

JACK D. MCKIM

BY

Richard K. Macneill

PANEL LIGHT ASSEMBLY

BRIEF DESCRIPTION OF THE INVENTION

The present invention relates to a panel light assembly and more particularly to a panel light assembly having replaceable lamps.

Prior art panel light assemblies having replaceable lamps have been plagued with two main disadvantages. Both of these disadvantages stem from the complex contact systems employed which result in excessive expense and physical size. According to the invention, a panel light assembly is provided which in one embodiment utilizes a filter as a receptacle for receiving a lamp having pliable electrical leads extending therefrom. A pair of electrical contacts are imbedded within the walls of the receptacle extending both to the inside surface and beyond the outside surface thereof. A pair of recesses is provided in the inner walls of the receptacle and in proximity to the electrical contacts. When the lamp is placed within the receptacle, its pliable leads can be aligned across the top of the opening of the recesses and a resilient wedge member is press fit into the recesses wedging the electrical leads from the lamp against the electrical contacts imbedded into the receptacle. Should the lamp burn out, the wedge member is removed allowing easy replacement of the lamp itself.

A second embodiment utilizes a base member having electrical contacts imbedded therein and extending above and below the base member. The contacts are dimensioned for receiving a lamp on the top surfaces thereof and for wrapping the leads across and around the contacts. A filter dimensioned for fitting over the lamp as a cap having recesses for cooperation with the outer surfaces of the electrical contacts is then snapped over the lamp, the contacts press fitting the lamp leads against the contacts. When the lamp burns out, the filter can be removed leaving the lamp completely accessible for replacement.

An object of the present invention is a provision of a panel light assembly in which the lamp is easily replaceable.

Another object of the present invention is the provision of a panel light assembly in which electrical contact is made between the lamp leads and the electrical contacts by a press fit.

A further object of the present invention is the provision of a panel light assembly which is inexpensive to manufacture and extremely simple to install.

A further object of the present invention is the provision of a panel light assembly which is relatively small in physical size.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawing in which like reference numerals designate like parts throughout the FIGS. thereof and wherein:

FIG 1 is an exploded view of one embodiment of the present invention;

FIG. 2 is an assembled view of the embodiment of FIG. 1; and

FIG. 3 is an assembled view in cross section of another embodiment.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring to FIG. 1, a receptacle 11 has a pair of contacts 12 and 13 passing therethrough in communication with a pair of recesses 14 and 16, respectively, in the inner walls of receptacle-filter 11. Lamp 17 has an envelope 18 with a filament 19

and a pair of electrical leads 21 and 22 extending therefrom. Resilient wedge member 23 has a pair of gripping surfaces 24 and 26 adapted to be gripped by pliers 27. Surface 25 of wedge member 23 is preferably coated with a reflective coating for reflecting light toward receptacle-filter 11.

Referring to FIG. 2, filter 11 has lamp 17 therein with electrical leads 21 and 22 in communication with contacts 12 and 13. Wedge member 23 is press fit within recesses 14 and 16 holding electrical leads 21 and 22 against electrical leads 12 and 13.

Referring to FIG 3, the base 28 has electrical contacts 29 and 31 imbedded therein. Surface 30 of base 28 can be coated with reflecting material for reflecting light toward cap-filter 32. Lamp 17 has electrical leads 21 and 22 wrapped around the tops of electrical contacts 29 and 31. Filter 32 has recesses 33 and 34 for cooperation with the tops of electrical contacts 29 and 31 effecting a press fit thereto and pressing electrical leads 21 and 22 against electrical contacts 29 and 31.

OPERATION

Referring back to FIGS. 1 and 2, it can be seen that the diameter of the entire assembly is only increased over the diameter of the lamp itself by the thickness of the walls of filter 11 (these, of course, have been exaggerated in the interest of clarity). After the lamp 17 is placed within the filter 11, the leads being very pliable are placed in proximity with contacts 12 and 13 and recesses 14 and 16. The wedge member 23 is then flexed by pliers 27 applying pressure to surfaces 24 and 26 until it will fit within filter 11 whereupon by releasing pliers 27, it will flex into recesses 14 and 16 creating a positive electrical connection with electrical connectors 12 and 13. The connectors 12 and 13 are then further connected to a suitable electrical source for lighting lamp 17. When it is necessary to remove lamp 17, pressure is again applied via pliers at surfaces 24 and 26 flexing resilient member 23 into a dimension whereby it can be removed from filter 11. At this time, replacement of lamp 17 is obviously quite simple.

Referring back to FIG. 3, when lamp 17 is to be replaced, filter 32 is easily snapped off since both it and electrical contacts 29 and 31 are somewhat resilient. This will expose lamp 17 and render it easily replaceable after which filter 32 is snapped back into place as shown. Here, again, the diameter of the entire assembly is increased over the lamp diameter by the thickness of the walls of cap 32. Recesses 14, 16, 33 and 34 could each be formed as one annular groove on the inside surface of filter 32.

It should be understood, of course, that the foregoing disclosure relates to only a preferred embodiment of the invention and that it is intended to cover all changes and modifications of the example of the invention herein chosen for the purposes of the disclosure which do not constitute departures from the spirit and scope of the invention.

I claim:

1. A panel light assembly comprising:

an electrical lamp having pliable electrical leads extending therefrom;

a translucent filter member dimensioned for receiving said lamp therein, said filter member having first and second recesses for receiving said pliable electrical leads;

first and second electrical contacts extending radially from said translucent filter member in proximity to said first and second recesses; and

a resilient insulative wedge member received by said first and second recesses for pressing said first and second leads against said first and second electrical contacts.