

Dec. 18, 1945.

R. G. MAURETTE

2,391,325

LIGHTING DEVICE

Filed March 29, 1943

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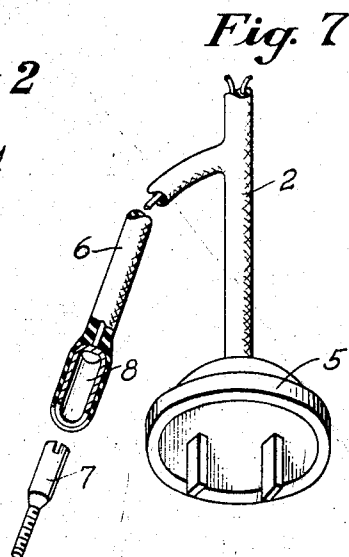
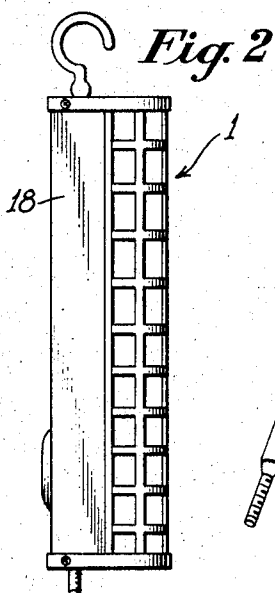
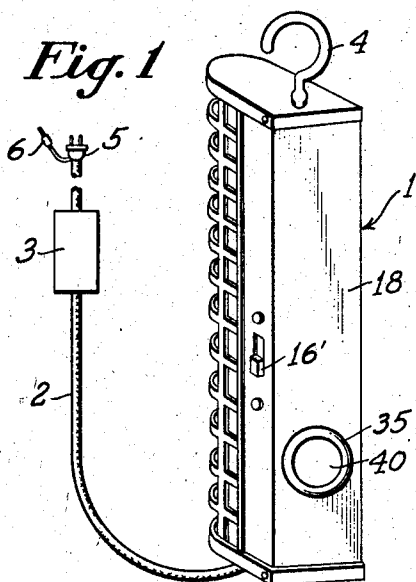


Fig. 5

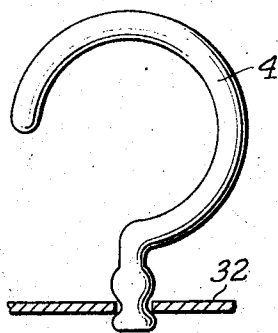
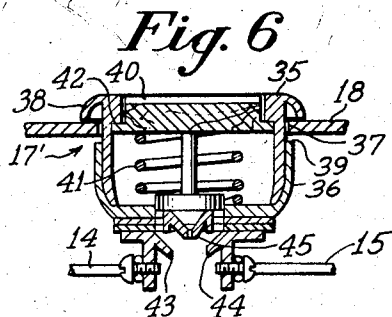
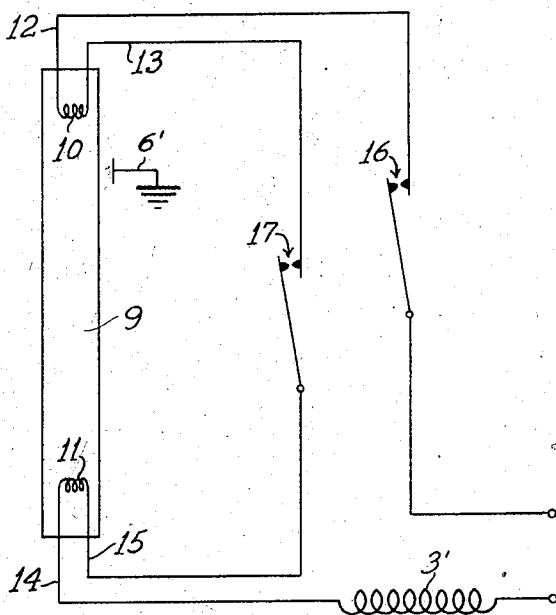


Fig. 3



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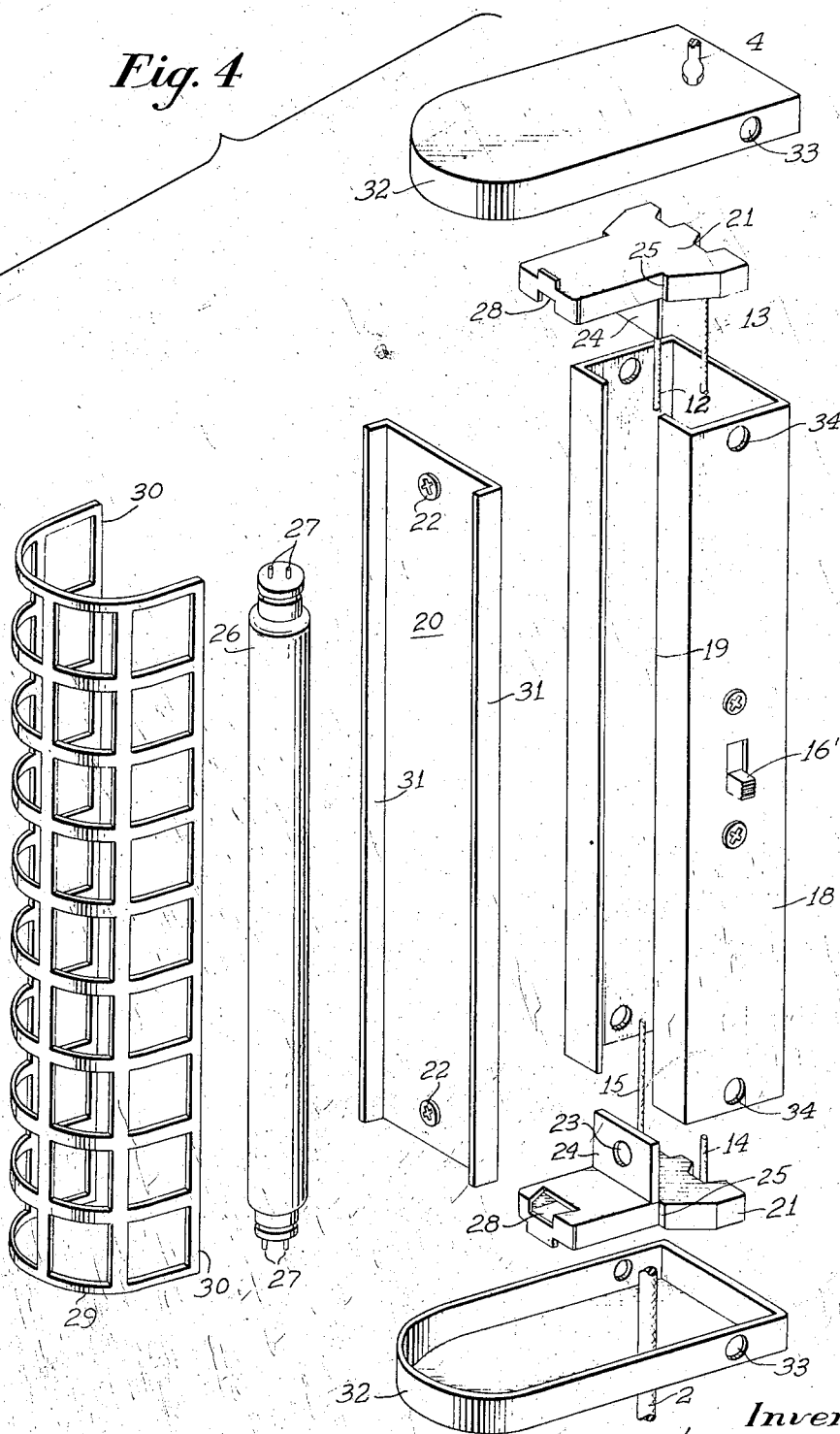
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Fig. 4



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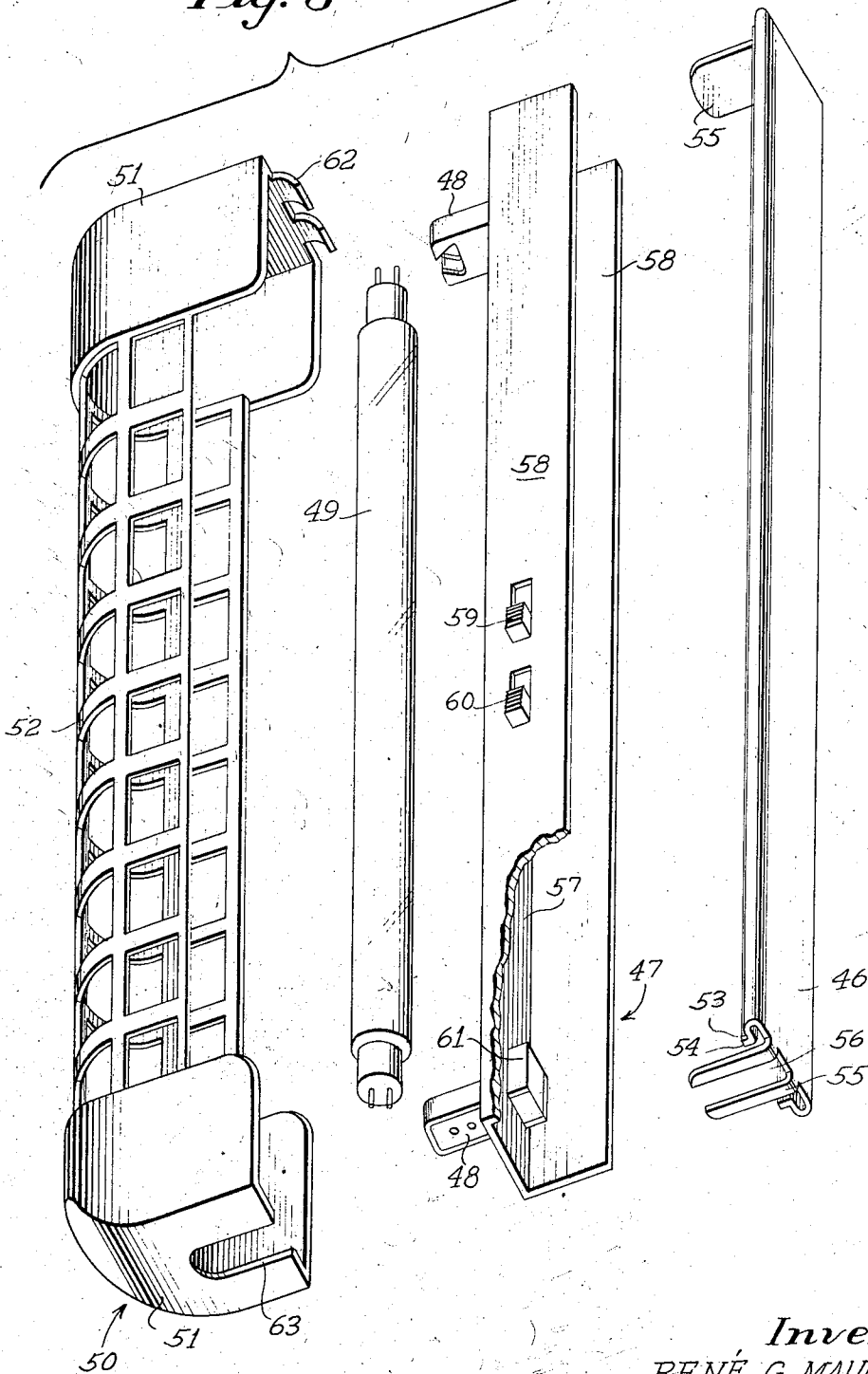
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Fig. 8



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UNITED STATES PATENT OFFICE

2,391,325

LIGHTING DEVICE

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2 Claims. (Cl. 240—11.4)

This invention relates to lighting devices, and has particular reference to luminescent lighting devices.

An object of this invention is to provide an improved luminescent lighting structure.

Another object is to provide an effectively portable luminescent lighting structure.

Another object is to provide a fluorescent lighting unit which may be moved about in a variety of positions and locations without interrupting its illuminating action.

Further objects, advantages and features will be apparent from the following specification taken in conjunction with the accompanying drawings, in which:

Figure 1 is an isometric rear view of an illustrative embodiment of this invention;

Figure 2 is a side elevation of the structure of Figure 1;

Figure 3 is a schematic wiring diagram of the electrical system used in the structure of Figure 1;

Figure 4 is an exploded isometric front view of the structure of Figure 1;

Figure 5 is a view of the assembly of the supporting hook of Figures 1, 2 and 4;

Figure 6 is a section through the starter button assembly of the structure of Figure 1;

Figure 7 is an illustration of the end of the connection cord for the structure of Figure 1, showing the arrangement of the ground connection; and

Figure 8 is an exploded view similar to Figure 4, in illustration of an alternate structure.

The illustrative embodiment of this invention as disclosed in the drawings shows a fluorescent lamp which may be moved about to various positions and locations, within the limits of the cord length. This structure is particularly useful to a workman moving about, or when it is desired to illuminate hard to get at or confined areas or objects. It may, however, be used as a stationary fixture, if desired.

A 6 watt lamp in this structure provides a convenient portable lighting device. In referring to portability it is intended to express that the device is effectively portable. That is to say, it is portable within the limits imposed by its flexible electric connection cord. The references to the position of the device are intended as specifying its arrangement, that is, whether the lamp is vertical, horizontal or facing up or down.

The references to location are intended to be indicative of bodily movement of the device from one spot to another.

As in Figure 1, the illustrative embodiment of this invention comprises a fluorescent lamp unit 1, a flexible electrical connection cord 2, and a ballast unit 3, mounted on the cord 2 in series connection with one of the wires therein. The unit 1 is provided with a hook 4 for hanging the unit on a support, and the cord 2 has an end plug 5 and a branch lead 6 as a ground connection (Figure 7) for the body of the unit 1. The ground plug 7 may be threaded in as a permanent fixture, and the branch lead 6 is provided with a contact sleeve 8 for receiving the head of the plug 7.

The circuit diagram of this device is shown in Figure 3, in which the lamp envelope 9 is provided with a pair of filamentary electrodes 10 and 11, having leads 12 and 13 and 14 and 15 respectively. Lead 14 includes ballast 31, lead 12 includes a snap action primary starter lamp switch 16, and leads 13 and 15 jointly include a spring button secondary starter lamp switch 17, as at 171 in Figure 6. The ground lead 61 in Figure 3 is illustrative of the lead 6 of Figure 7.

In assembly, the lamp unit, shown as exploded in Figure 4 comprises a box-like base 18 which has a longitudinal slot 19 in its top, and which supports an assembly of an upwardly facing trough-like reflector 20 and lamp sockets 21. The reflector 20 is joined with the sockets 21 by means of bolts 22 threaded in openings 23 in the mounting platforms 24 of the sockets 21. The sockets 21 have their lower portions within the base 18 so that the shoulders 25 engage the under side of the top of the base 18, adjacent the slot 19. The platforms 24 lie within the slot 19, and the reflector 20 rests on the top of the base 18.

The lamp 26 has base pins 27 which are engaged for support and electrical connection, in the openings 28 of the sockets 21. An arched grill 29 is mounted over the lamp 26 and sockets 21 and on the reflector 20 with its body slightly sprung to move its side edges 30 toward each other. The edges 30 are thus contained in the trough of the reflector 20 and held against lateral movement by the reflector side walls 31. The slightly sprung condition of the grill body causes the edges 30 to press outwardly against the reflector side walls 31.

The end caps 32 contain the ends of the body 18 and the grill 29. The caps 32 are joined to the base 18 as by bolts through openings 33 and 34, and when thus assembled, hold the grill 29 against any substantial longitudinal movement

or movement which would remove the grill edges 30 from the trough of the reflector 20.

The hook 4 is pivotally mounted in one of the end caps 32, as in Figure 5. The cord 2, and leads 12, 13, 14, and 15 are shown in Figure 4 to illustrate their general location in the assembly.

The primary starter snap switch 16¹ is mounted on the base 18 as shown in Figures 1 and 4 and corresponds to the switch 16 of Figure 3.

The spring button secondary starter switch 17¹ is also mounted on the base 18, as in Figures 1 and 6. This switch assembly comprises a housing formed by a pair of telescoping members 35 and 36 mounted through a circular opening 37 in the body 18 and clamping the edges of the opening 37 between an annular edge overhang 38 of the member 35 and the annular end 39 of the member 36.

The member 35 is substantially tubular and contains a button 40 urged by spring 41 against a shoulder 42. The electrical leads 14 and 15 are connected to contacts 43 and 44 respectively and pressure on the button 40 bridges contacts 43 and 44 with a contact 45 to close the switch.

The lamp may be put in operation, see Figure 3, by closing the snap switch 16 and the spring button switch 17, thus completing a circuit through the filaments 10 and 11. The filaments are heated in this manner preparatory to supporting an arc through the envelope 9, and, after a time period of the order of a few seconds, the spring button is released, switch 17 opens, and an arc is struck through the envelope 9 across the filaments 10 and 11 to produce the usual fluorescent lamp illumination.

The alternate assembly of Figure 8 comprises a base 46, a base cover 47 on which lamp sockets 48 are mounted, a lamp 49 to be mounted in sockets 48, and an overall cover and shield 50 comprising endcaps 51 and grill 52.

The base 46 is in the form of a flat strip with laterally over and intumed side edges as at 53, terminating in upwardly extending flanges 54. Upwardly extending end tongues 55 are also formed on the base 46 with one, as at 56, vertically slotted to receive a lead cord extending from a power source to the sockets 48. The tongues 55 are resilient, and, in assembly, extend upward within the endcaps 51 of the cover 50 in end-wise outward gripping engagement therewith.

The base cover 47 is formed as an open-ended, downwardly facing channel with a top 57 and sides 58. The sides 58 fit over the side flanges 54 so as to bring the sides of the endcaps 51 into substantially flush relation with the sides of the base 46. The lateral separation of the sides 58 is such, with respect to the lateral separation of the side flanges 54 of the base 46, that a lateral

gripping action exists therebetween when assembled, either from a force fitting or resilient gripping action, so that the base 46 and base cover 47 may thus be held together in subassembly.

Switches 59 and 60 are ordinary snap switches mounted in one of the side walls 58 of the base cover 47, and correspond to switches 16 and 17 of Figure 3.

The top 57 of the base cover 47 is provided with openings through which sockets 48 extend in their assembly with the cover 47. The sockets have lower, forwardly extending shelf portions as at 61 which extend beneath the top 57 and are secured thereto. The shelf 61 corresponds to the shelves 24 of Figure 4 and may be formed in duplication thereof if desired.

The cover 50 is an integral unit with the end caps 51 secured to and joined by the grill 52. One endcap has inwardly extending tongues as at 62 for engagement with the underside of the base 46. The cover 50 is assembled by first mounting the tongued end cap over the end of the base 46 and then pushing the other endcap of the cover 50 over the base tongue which is slotted as at 56. This latter endcap has a slot as at 63 for alignment with slot 56.

What I claim is:

1. A portable fluorescent lamp device comprising: a base plate with edge flanges; a channel-shaped base cover with its open portion facing said base cover and its edges in mechanical contact with said flanges; lampholders extending from each end of said base cover; a grill extending in an arch over said lampholders from one longitudinal edge of the top portion of said channel-like base cover to the other; end caps at each end of said base cover to enclose the ends of said grill and base cover and having tongues to engage said base plate, hook-like means for temporarily securing the lamp device in operating position and a flexible cable for conduction power to the lamp.

2. A portable fluorescent lamp device having a flexible cable to supply power to the lamp and means for temporary attachment of the lamp to a support; comprising a substantially flat base plate, a channel-shaped base cover member disposed with its open face toward said base plate, flanges struck up from said base plate engaging the free longitudinal edges of said base cover member to form a hollow enclosure, a pair of lamp holders projecting through the top of said enclosure to hold a lamp, a perforated metallic arch shaped protective grill extending over said lamp holders, a pair of end caps embracing the ends of said grille and extending over and forming end closures for said enclosure and means for securing said bottom plate to said end caps to unite the complete device.

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