Aug. 4, 1942. G. B. BENANDER 2,292,038

COMBINED ATTACHMENT CAP AND LAMP HOLDER

Filed April 22, 1941

Fig. 1.

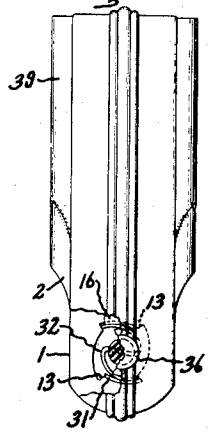


Fig. 2.

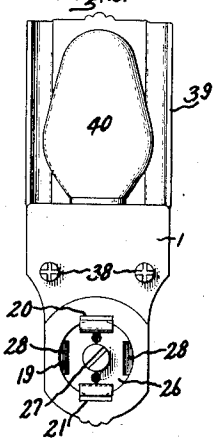


Fig. 3.

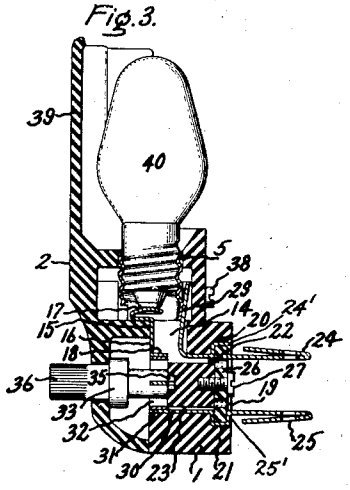
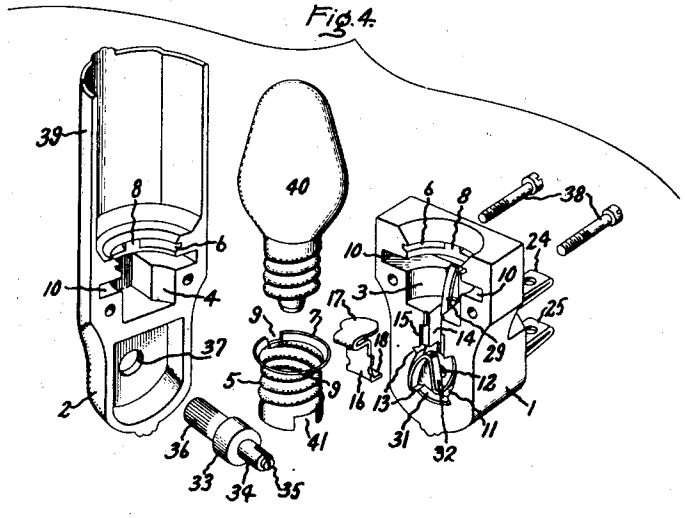


Fig. 4.



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UNITED STATES PATENT OFFICE

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COMBINED ATTACHMENT CAP AND LAMP HOLDER

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Application April 22, 1941, Serial No. 389,770

4 Claims. (Cl. 173—350)

The present invention relates to combined attachment caps and lamp holders, termed usually "night lights," and has for its object to provide an improved construction in a device of this type which is simple in structure, embodies a minimum number of parts capable of being quickly and easily assembled, and which can be manufactured at low cost.

For a consideration of what I believe to be novel and my invention, attention is directed to the following specification and the claims appended thereto.

In the drawing, Fig. 1 is a front view of the device with a part of the cover broken away to show the parts beneath; Fig. 2 is a face view looking at the device from the side opposite to that shown in Fig. 1; Fig. 3 is a longitudinal sectional view, and Fig. 4 is a perspective exploded view of the several parts.

Referring to the drawing, the body of the device comprises two parts molded from suitable insulating material, a base 1 and a cover 2. Base 1 has a semicylindrical recess 3 which, in cooperation with a similar recess 4 in cover 2, forms a cylindrical housing for a screw shell 5. Recesses 3 and 4 are provided with grooves 6 to receive the flange 7 of the screw shell and with plugs 8 in the grooves which fit into notches 9 in flange 7 to hold shell 5 from turning. Recesses 10 in these portions of the base and cover are for the purpose of decreasing the amount of molding material required. They perform no mechanical function in the completed device. Also, in base 1 is a switch recess 11 having a pivot well 12 in the center of its bottom wall and four spaced ratchet teeth 13 in its side wall. Connecting recesses 3 and 11 is a relatively deep slot 14 provided with shoulders 15 which provide a shallow recess in which is positioned a connector strip 16 which at one end has integral with it a center lamp contact 17 and at the other end a switch contact 18 which extends at right angles to strip 16 and lies against the side wall of switch recess 11 between two of the ratchet teeth 13.

In the outer face of base 1 opposite switch recess 11 is a shallow recess 19 provided on opposite sides with a pair of notches 20 and 21. Extending through the base in line with notch 20 is a passage 22 which connects with slot 14 and extending through the base in line with notch 21 is a passage 23 which connects with switch recess 11 adjacent to its side wall at a point opposite to switch contact 18 and between two of the ratchet teeth 13.

Carried by base 1 are two uprights or cap prongs 24 and 25 provided with rectangular reversely bent portion 24' and 25' respectively which seat in notches 20 and 21 respectively with the open sides of the reversely bent portions facing inwardly toward each other. The uprights are locked in position in recess 19 by a locking disk 26, the edge of which lies in the rectangular recess formed by the reversely bent portions of the uprights. It is fastened in place by a screw 27. In the edges of disk 26 are notches 28 for use in assembling the uprights on the base. In assembling, the uprights are first placed in position with the reversely bent portions located in notches 20 and 21, after which disk 26 is inserted with its notches 28 in line with the uprights and then turned to bring the edge of the disk into the reversely bent portions of the uprights after which screw 27 is screwed up tight. This forms a simple means for attaching the uprights to the base, one quickly and easily assembled, and one which holds the uprights firmly in position.

The inner end of upright 24 is provided with a relatively long extension 29 which extends through slot 14 at right angles to the upright and terminates between screw shell 5 and the adjacent wall of the base, it being firmly in engagement with screw shell 5 to make good electrical contact therewith. In assembling this upright in position, the extension 29 is initially straight and is inserted directly through passage 22 after which it is bent over to the position shown in Fig. 3. At this time, the cap is not in place on the base so that this operation is easily performed. The inner end of upright 25 is provided with an extension 30 which extends through passage 23 and is provided at its inner end with a slightly curved portion 31 which lies against the side wall of switch recess 11 to form a second terminal for the switch.

In switch recess 11 is a Z-shaped movable switch member 32 comprising a cross bar and two curved arms which latter engage the side wall of recess 11 and cooperate with the ratchet teeth 13 and the switch contacts 18 and 31. For turning the switch member 32, there is provided an actuator comprising a disk 33 having on one side an integral pin 34 provided with a slot which fits over the cross bar of switch member 32 and on its inner end with an extension 35 pivoted in well 12. On the opposite side of disk 33 is a hand piece 36 which projects out through an opening 37 in cover 2. The actuator for the switch is positioned between the cover and the bottom wall of recess 11, the cover engaging disk 33 to hold pivot extension 35 in well 12. The opening 37 in cover

2 and well 12 form bearings for the actuator. By turning the hand piece 36, the switch member can be moved to successive open and closed positions, it snapping from position to position by reason of the inclined walls and the ratchet teeth 13.

Cover 2 is fastened in position on base 1 by two screws 38 which extend through openings in base 1 and thread into openings in cover 2. Formed integral with cover 2 is a reflector or shade 39 for a lamp, such as lamp 40.

Screw shell 5 is provided with a notch 41 which stands in line with center contact 17 so that the shell and center contact are spaced the needed distance apart.

In assembling the construction, the uprights are first assembled on the base after the manner already described after which the movable switch member 32, the contact 16 with its integral parts, the screw shell and the switch actuator are put in position on the base and the cover placed on the base and attached by the screws 38. Thus, the parts are quickly and easily assembled and as will be noted but two screws are used for holding the parts assembled.

The number of parts required are minimized by the extensions on the uprights, one of which extensions connects directly to the screw shell and the other of which forms one of the terminals for the switch. These extensions are easily provided at low cost and are held firmly in position by the mounting means for the uprights. I regard this arrangement as being one of the important features of my construction.

In use, the uprights may be plugged into a standard convenience outlet thus connecting the uprights to the two sides of the circuit. When so connected, the circuit may be closed and opened through the lamp by means of the switch, as is well understood.

In addition to being simple in structure and capable of being manufactured at low cost, my improved construction has the additional advantage that it is rugged and not likely to get out of order.

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

1. In a combined attachment cap and lamp holder, a base having opposed inner and outer flat surfaces, the inner flat surface being provided with a switch recess and the outer flat surface being provided with a locking recess, the wall defining said flat surfaces being provided with spaced openings connecting said recesses, a cover fixed to the base and defining therewith a lamp socket housing, a screw shell and a center contact in said lamp socket housing, an upright having its inner end positioned in one of said openings and having an integral extension extending into direct contact with said screw shell, a second upright having its inner end positioned in the other of said openings and having an integral extension located in the switch recess, means in said locking recess for fastening the uprights to the base, and means including a switch in said switch recess for connecting the second-named extension to said center contact.

2. In a combined attachment cap and lamp holder, a base having a flat outer surface, a cover for the inner surface, walls of the cover and base defining a switch housing and a lamp socket housing at an angle to the switch housing, a screw shell and center contact in the lamp housing, said base having spaced openings extending from said flat outer surface to the switch housing, uprights the inner ends of which extend through said openings, one of said uprights having an integral angular extension which extends into direct electrical contact with the screw shell and the other having an integral switch terminal located in the switch housing, switch means in the switch housing for connecting said switch terminal to said center contact, and a locking disk fixed to the flat outer surface and engaging the uprights to hold them in position.

3. In a combined attachment cap and lamp holder, a base having opposed inner and outer flat surfaces, the inner flat surface being provided with a switch recess and the outer flat surface being provided with a locking recess, the wall defining said flat surfaces being provided with spaced openings connecting said recesses, a cover fixed to the base and defining therewith a lamp socket housing, a screw shell and a center contact in said lamp socket housing, an upright having its inner end positioned in one of said openings and having an integral extension extending into direct contact with said screw shell, a second upright having its inner end positioned in the other of said openings and having an integral extension located in the switch recess, a flat disk fastened in said locking recess for holding the uprights in position on the base, and means including a switch in said switch recess for connecting the second-named extension to said center contact.

4. In a combined attachment cap and lamp holder, walls defining a switch housing having a flat outer surface on one side provided with openings communicating with the switch housing, and a lamp socket housing, a movable switch member in the switch housing, a screw shell and a center contact in the lamp socket housing, an upright having an end in one of said openings and an extension integral with said end extending into direct engagement with said screw shell, a second upright having an end in the other of said openings and an extension integral with said end extending into the switch housing and forming a switch terminal, said uprights having stops which engage said flat outer surface to position the uprights, and means engaging said stops and fastened to said switch housing for holding the uprights in position.

GEORGE B. BENANDER.