Dec. 1, 1959 G. P. LEWIS 2,915,744

FLASHLIGHTS

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FIG.1.

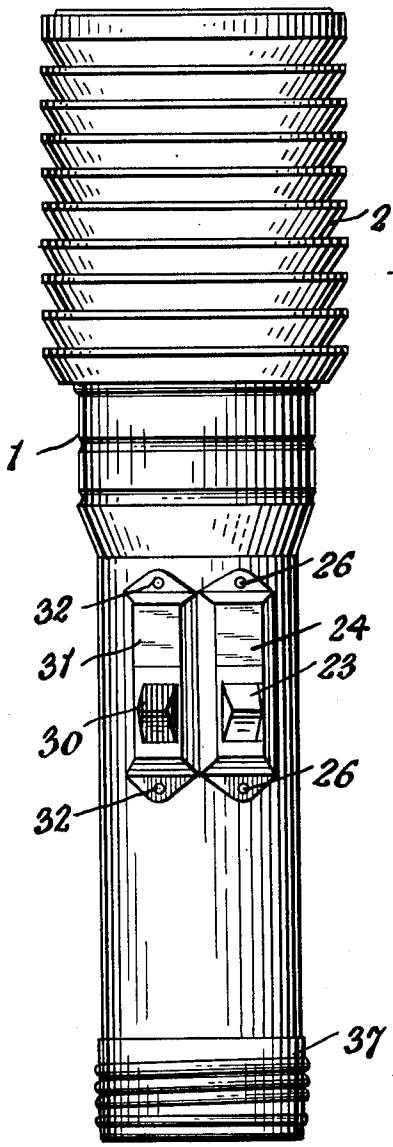

FIG.2.

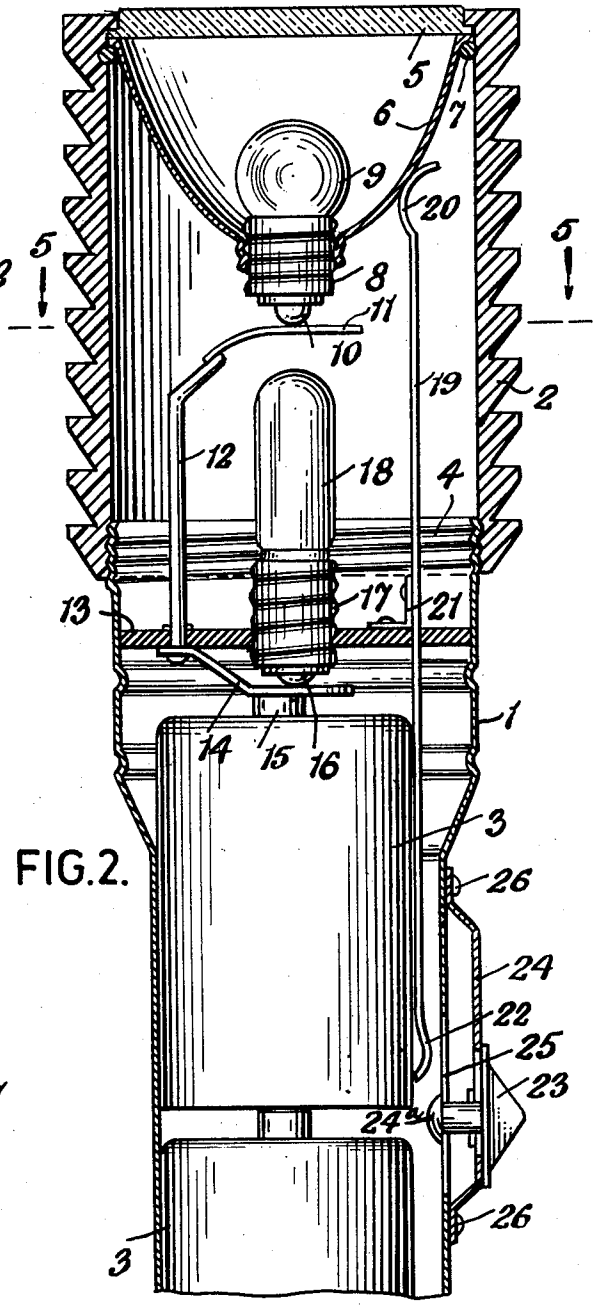

FIG.3.

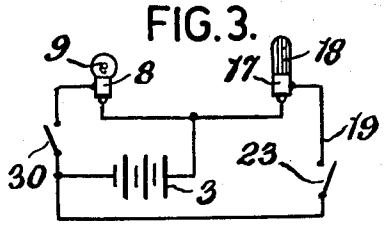

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FIG. 4.

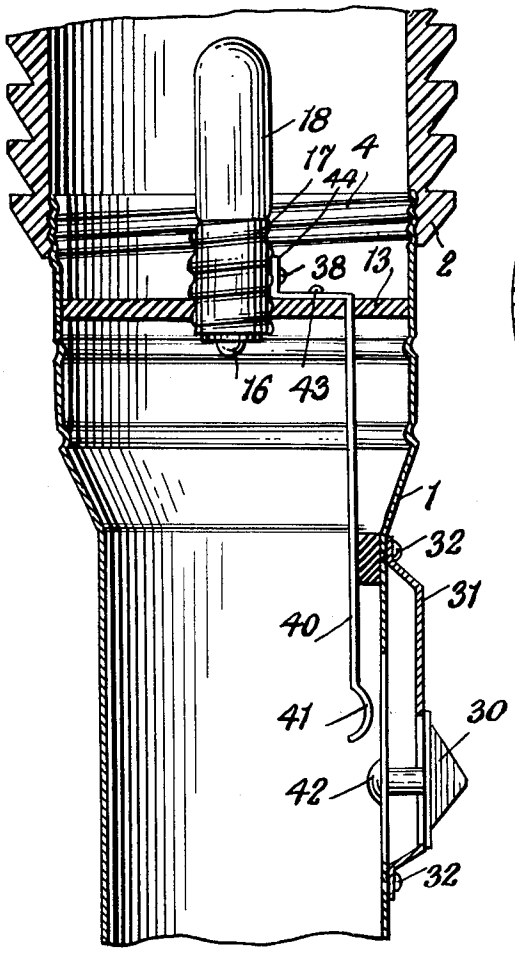
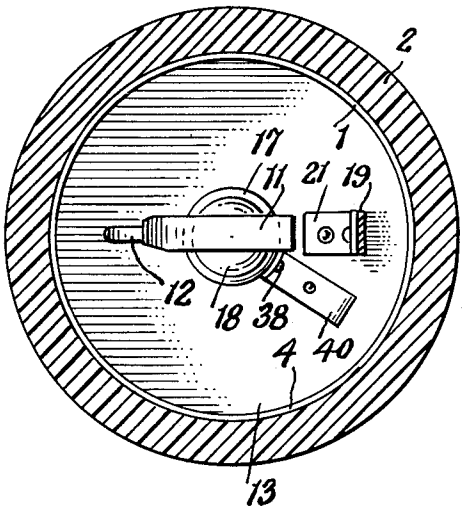


FIG. 5.



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FLASHLIGHTS

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2 Claims. (Cl. 340—321)

This invention relates to flashlights, and more particularly to a type which employs a plurality of lamps or bulbs capable of being separately illuminated, or else simultaneously illuminated from the same current source, such as a single set of dry batteries.

It is one of the objects of the present invention to provide a flashlight of this character which will be provided with two bulbs or lamps, such as for example, a red bulb and a white bulb, both of which are electrically connected to the batteries contained in the casing of the flashlight and each of which is controlled by its own switch, whereby either lamp may be illuminated by the closing of its controlling switch or else both lamps may be illuminated by the closing of both switches.

In is another object of the invention to provide a flashlight constructed as above described, and in which one of the lamps, such as the red lamp, shall be of the intermittent type, whereby the same will be intermittently and automatically flashed to thereby serve as a warning or danger signal when required. It is another object of the invention to provide a flashlight constructed as above described and which shall be capable of optional operation either as a conventional white beam light or as a flashing signal, this dual operation being attained from a single source of current, such as a single set of batteries.

With these and other objects to be hereinafter set forth in view, I have devised the arrangement of parts to be described and more particularly pointed out in the claims appended hereto.

In the accompanying drawings, wherein an illustrative embodiment of the invention is disclosed,

Fig. 1 is an elevational view of a flashlight constructed in accordance with the invention;

Fig. 2 is a vertical sectional view of the same, with certain parts of one of the switching devices omitted to more clearly disclose construction;

Fig. 3 is a diagram of the electrical circuit;

Fig. 4 is a vertical sectional view of a portion of the flashlight, showing the parts of the switch mechanism for the second switch;

Fig. 5 is a sectional view, taken substantially on the line 5—5 of Fig. 2, looking in the direction of the arrows.

Referring to the drawings, 1 indicates the body of the casing of the flashlight, the same being preferably, but not necessarily of the conventional cylindrical type made of metal and contained within the casing 1 are the conventional dry batteries 3, placed end-to-end, with the lowermost battery establishing contact with the casing 1 through the threaded-on closure cap 37 and the coil spring conventionally provided in this type of cap on most flashlights.

At its upper end, the casing 1 is threaded, as indicated at 4 to enable it to removably engage with a transparent lantern body 2, which may be of the serrated type disclosed or of other form, and is preferably, but not necessarily red in color. At its forward end is fitted a lens or other transparent bezel member 5 through which the

light rays from the lamp or bulb 9 can pass. Said lamp or bulb 9 is threadably fitted in a socket 8, secured at the center of a metal reflector 6 held in the lantern body 2 by means of a retaining ring 7 or other suitable means.

The lower end of the base of the lamp 9 extends through the bottom of the socket 8 to an extent to enable its center contact 10 to rest against a spring contact finger 11 secured at the end of a post 12 having its opposite end fixed in a disk 13 of insulating material. The disk 13 is fixed within the casing 1 near its threaded end 4.

Secured to the lower end of the post 12 is a spring contact finger 14, so positioned that it contacts with the center post 15 of the first dry battery 3. Said contact finger 14 also bears against the center contact 16 of an intermittently-flashing lamp or bulb 18 threadably fitted in the socket 17 fixed in the insulating disk 13. This arrangement is such that one pole of the batteries is electrically connected to the center contacts 16 and 10 of the lamps 18 and 9 respectively.

Provided on the casing 1 are two switches of known type, and indicated respectively at 23 and 30. That shown at 23 controls the flow of current to the white lamp 9, while that shown at 30 and provided with a red operating button, controls the flow of current to the red, intermittently-flashing lamp 18. The button of the switch 23 is slidable in the switch casing 24 in the conventional manner, and is connected to the contact member 24a which is adapted, when the button is moved forward to "on" position to establish contact with the curved end 22 of a contact strip 19. The contact strip 19 is mounted on the insulating disk 13 and is spaced from the body of the casing 1, and at its opposite end it is provided with a curved portion 20 contacting with the metal reflector 6. With the arrangement described it will be obvious, as will be apparent from the circuit diagram shown in Fig. 3, that when the switch 23 is moved forwardly or to "on" position circuit will be closed from the batteries 3 to the white lamp 9 and said lamp will be illuminated to project its rays through lens 5 as the beam of a conventional flashlight.

The switch shown at 30 is preferably, but not necessarily mounted on the casing 1 in close proximity to the switch 23 and its connections, which have been omitted in Fig. 2, are clearly shown in Fig. 3. It will be therein noted that the switch casing 31, secured by rivets or other equivalent fastening elements 32 to the casing 1, carries the switch button, which can be colored red to readily identify it with the illumination of the red flashing lamp 18.

The switch 30 is provided with a contact member 42 adapted, when the switch is in its forward or "on" position, to establish contact with the rounded or curved end 41 of a spring contact strip 40. Said strip 40 is secured to the insulating disk 13 by rivet 43 or other suitable means, and it is formed with an off-set end 44 fastened to the side of the socket 17 in which the base of the lamp 18 is threadably fitted.

From the foregoing, the structure and operation of the improved flashlight will be readily apparent. When the switch 23 is urged forwardly or to its "on" position, circuit will be closed from the batteries 3 to the white lamp 9 and the same will project its beam through the lens 5 in the conventional manner. When the switch 30 is advanced to "on" position, it will cause illumination of the red lamp 18 which will project its rays through the serrated red lantern member 2. The lamp 18 may be of the intermittently-operated type and thus when current is supplied to it from batteries 3 and as a result of closure of the switch 30, it will intermittently flash and serve as a danger signal of particular use, for example, to stranded automobilists. If it is desired to illuminate both lamps simultaneously, both of the switches 23 and

30 may be closed or moved to "on" position, whereupon one of the lamps will be lit continuously and the other intermittently flashed.

While I have thus shown and described a single embodiment of the invention, various departures may be made therefrom without departing from the spirit of the invention. For example, the switches employed may be of known types other than those shown; the connections establishing an electric curcuit from the batteries to the lamps may be otherwise than those illustrated and various other changes are possible as is comprehended by the scope of the claims appended hereto.

What I claim is:

1. A flashlight having a cylindrical battery casing adapted to be held in the hand, a tubular lantern body secured to one end of the casing and forming a concentric forward extension of the same, a lamp socket centrally mounted in the battery casing at the rear end of the lantern, an intermittently flashing lamp fitted in said socket and facing forwardly, a reflector mounted in the forward end of the lantern and provided with a forward lamp socket, said last-mentioned socket receiving a lamp, the two sockets being located one directly behind the other and both being directed forwardly, the intermittently flashing lamp being located within and surrounded by the lantern and behind the reflector, the reflector serving to close the forward end of the lantern around the forward socket to thereby cause the direction of light rays from the flashing lamp solely through the lantern, and a pair of switches located on the side of the battery casing in close side-by-side relation, said switches being in circuit with batteries in the casing, whereby one switch controls the operation of one of the lamps and the second switch controls the operation of the second lamp.

2. A flashlight having a cylindrical battery casing, batteries contained within the same, a tubular lantern body of colored transparent material secured at and forming a forwardly-projecting tubular extension of the casing, a lamp socket centrally carried at the forward end of the lantern body and surrounded by a reflector, a lamp fitted in the socket, a second socket in the casing at the rear end of the lantern body behind the reflector, said second socket containing a lamp, the lamps being arranged coaxially and both lamps being directed forwardly, the reflector within the lantern body behind the forward socket serving to close the forward end of the lantern body around the forward socket to thereby cause direction of the rays from the rear lamp solely through the lantern body, the lamp at the rear of the lantern body projecting forwardly from its socket toward the front of the flashlight to an extent to project into the lantern body to direct its rays therethrough, and a pair of switches on the side of the battery casing and connected to the batteries to thereby respectively control the illumination of the two lamps.

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