Jan. 21, 1941. A. J. DESIMONE 2,229,495

FLASHLIGHT

Filed Jan. 11, 1939

Fig. 1.

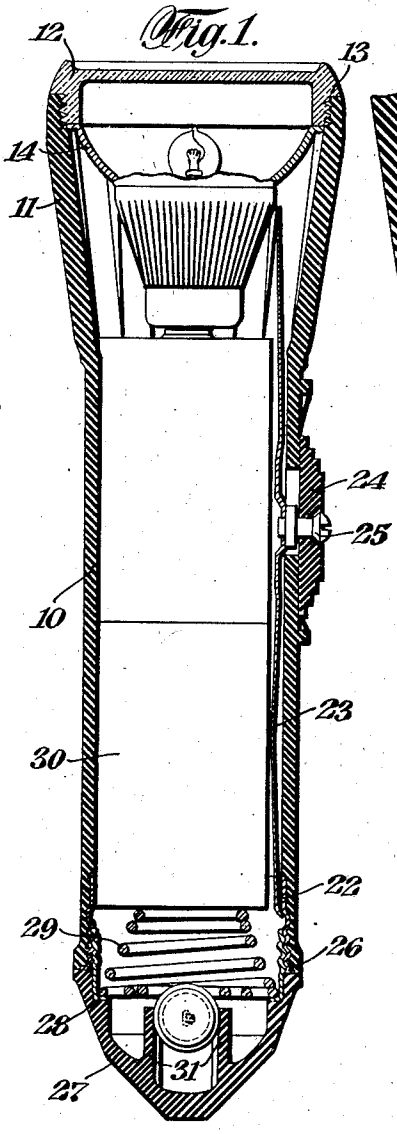


Fig. 2.

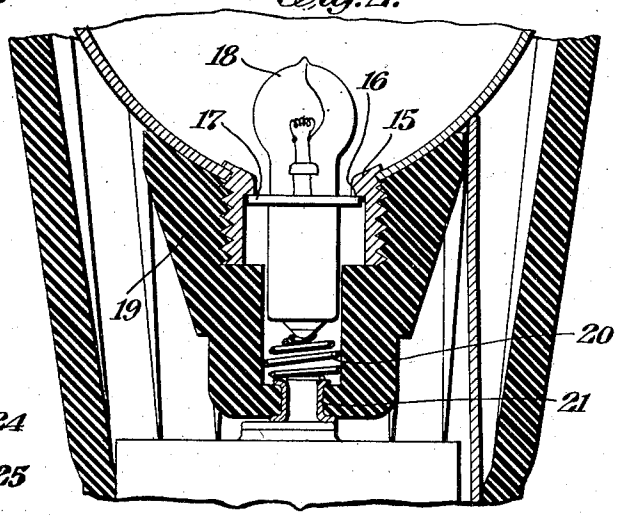
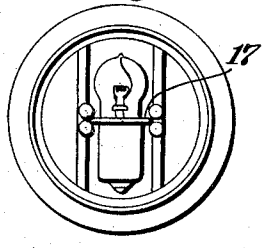


Fig. 4.



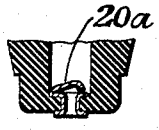
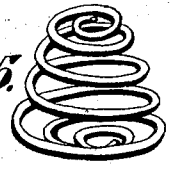


Fig. 3.

Fig. 5.



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UNITED STATES PATENT OFFICE

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FLASHLIGHT

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Application January 11, 1939, Serial No. 250,255

2 Claims. (Cl. 240—10.6)

This invention relates to flashlights of the well-known tubular type utilizing prefocused bulbs.

An object of this invention is an improved reflector and bulb assembly for such type flashlight.

In a flashlight embodying the invention, the reflector is equipped with a threaded boss in alinement with an aperture in the reflector, there being an inwardly projecting shoulder in the boss. The bulb is of the prefocused type and has as one of its terminals a flanged tube which engages said shoulder so as to locate the filament in proper relation to the reflector surface. An interiorly threaded cap of insulating material is screwed on to said boss and carries a contact member engageable with the central terminal of the bulb. The contact member may be rigid, but preferably is resilient and in the form of a spiral spring. The base cap is composed of molded insulating material and in the preferred form a metal sleeve threaded at one end is molded into said cap with the threaded portion exposed, the sleeve having an inwardly projecting flange at its inner end. A spiral spring member is seated in said sleeve on said flange and serves to make the electrical contact between the sleeve and the battery. The cap beyond the flange is hollow except for integral guide members forming a spare bulb socket and the spring has an extension overlying said socket to hold a spare bulb therein.

Other objects, novel features and advantages of this invention will become apparent from the following specification and accompanying drawing, wherein:

Fig. 1 is a longitudinal section through a flashlight embodying the invention;

Fig. 2 is an enlarged longitudinal section through the reflector and bulb assembly;

Fig. 3 is a similar view of a modification;

Fig. 4 is an end view of the base cap of Fig. 1 with the battery-supporting spring removed, and

Fig. 5 is a view of the battery spring.

The flashlight comprises a tube 10 of molded insulating material such, for example, as cellulose acetate in the form known commercially as "Lumarith," said tube having a flaring head 11 interiorly threaded at its end. A transparent closure or lens 12 of unbreakable material such, for example, as cellulose acetate, has a threaded portion 13 screwed into the flared end 11 and engaging the rim of the reflector 14 to hold the latter in the head.

The reflector has a central aperture through which extends one end of a threaded boss 15, a portion of the boss being spun over the reflector to connect the boss to the reflector. The boss is of two different diameters to form a shoulder 16 which is engaged by the flange 17 of the outer terminal of a fixed focus bulb 18. An interiorly threaded cap 19 of molded insulating material is screwed on to the boss 15 and is provided with a contact member 20 which engages the center terminal of the bulb 18. An eyelet 21 extends through the wall of the cap 19 into engagement with the contact 20 and has a projecting portion engageable by a battery in the tube 10. Preferably, the contact member 20 is in the form of a resilient member such as the spiral spring of Fig. 2, but may be in the form of the plate 20*a* shown in Fig. 3.

In the end of the tube 10 opposite the flared head 11 is molded a threaded ferrule 22. A contact strip 23 engages the ferrule 22 and extends toward the reflector 14. The strip 23 has an offset portion extending into a slot in the tube 10 and is connected to a button 24 of insulating material through the medium of a screw 25. The strip 23 is moved into and out of engagement with the reflector 14 through the medium of the button 24 for the purpose of opening and closing the bulb circuit, the strip 23 being always in contact with the ferrule 22.

A metal sleeve 26 threaded at one end is molded into the hollow base cap 27 of molded insulating material with the threaded portion projecting beyond the cap, this threaded portion being screwed into the threaded portion of the ferrule 22. The sleeve 26 has an inwardly directing flange 28 on which is seated the largest diameter coil of double spiral spring 29. The end of one spiral portion of the spring 29 engages the battery 30 to press it against the eyelet 21 and the other spiral portion of the spring overlies the spare bulb socket, later to be described, to hold the spare bulb therein. Beyond the flange 28, the cap 27 is hollow except for integral guide members 31 which are so shaped as to receive the flange 17 of a spare bulb and hold it in the interior of the cap.

An advantage of the base cap structure resides in the fact that electrical contact is established between the ferrule 22 and the spring 29 immediately upon engagement between the threads of the cap on the tube. It is not necessary to completely thread the cap on to the tube before such contact is established as is the case in the other two forms.

It is of course understood that various modi-

fications may be made in the structure above described without in any way departing from the spirit of the invention as defined in the appended claims.

I claim:

1. In a flashlight, a reflector having a central opening, an exteriorly threaded boss attached at one end to said reflector in alinement with the said opening, said boss having two portions of different interior diameter forming a shoulder, a bulb in said boss having as one of its terminals a flanged tube engaging said shoulder and having its other terminal arranged centrally of the first terminal, a hollow cap of insulating material threaded on to said boss and completely enclosing said tube, a conductor extending from the interior to the exterior of said cap, and a resilient contact member in said cap interposed between said conductor and the center terminal of said bulb.

2. In a flashlight, a reflector having a central opening, an exteriorly threaded boss having one end extending through said opening and spun over the reflector to interconnect said boss and reflector, said boss having two portions of different interior diameter forming a shoulder, a bulb in said boss having as one terminal a flanged tube engaging said shoulder and having its other terminal arranged centrally of the first terminal, a hollow cap of insulating material threaded on to said boss and completely enclosing said tube, a conductor extending from the interior to the exterior of said cap, and a resilient contact member in said cap interposed between said conductor and the center terminal of said bulb.

ANTHONY J. DESIMONE.