June 26, 1923.

1,460,149

E. R. BARANY

FLASH LIGHT

Filed July 8, 1922

Fig. 1.

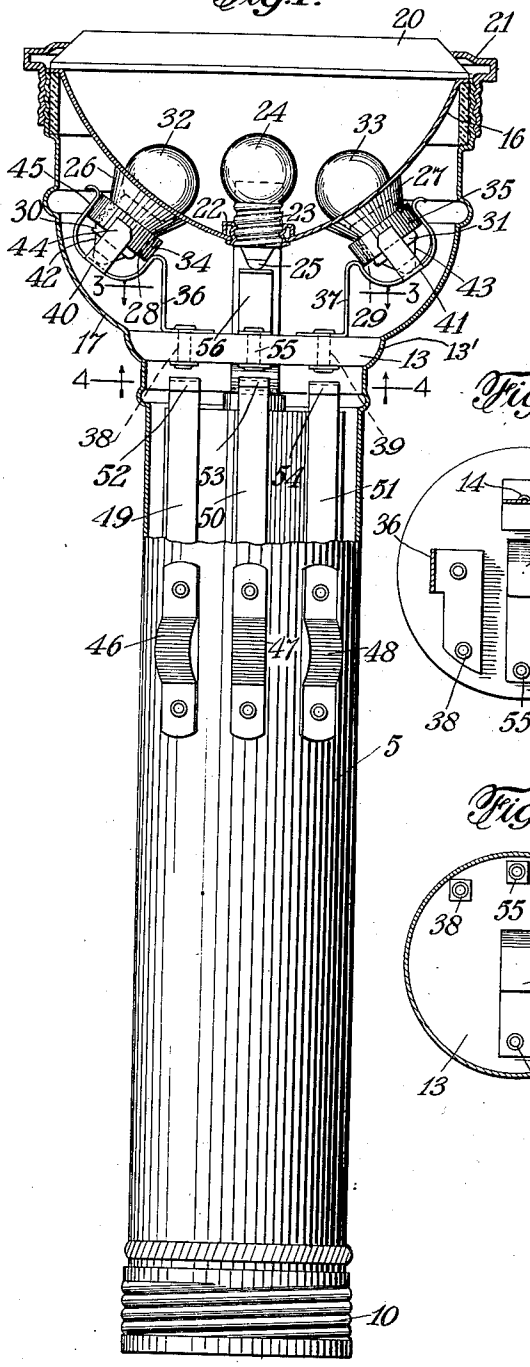


Fig. 2.

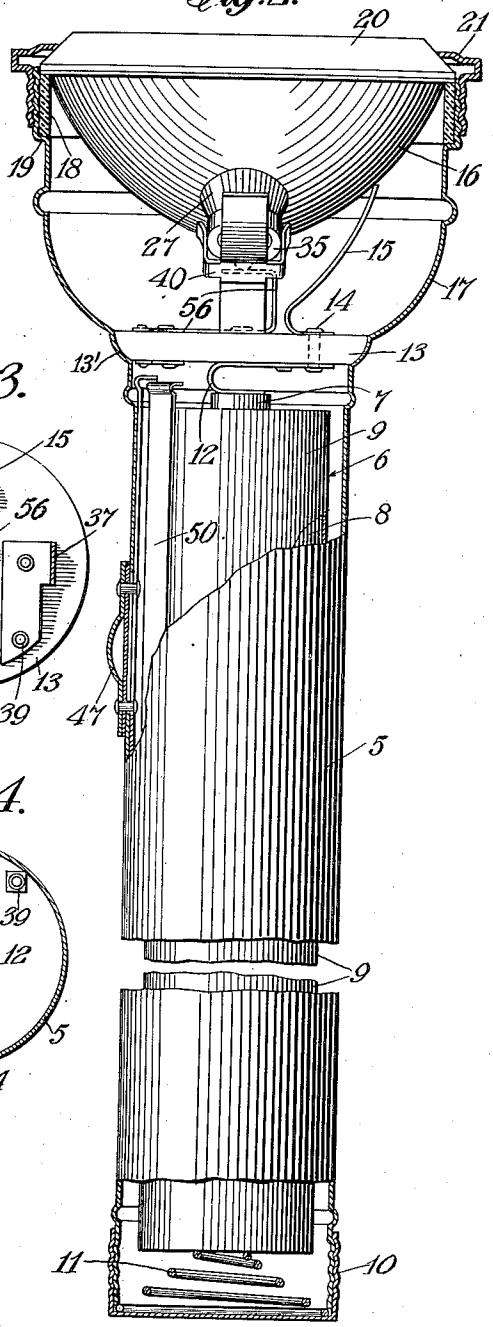


Fig. 3.

Fig. 4.

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By his Attorneys

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UNITED STATES PATENT OFFICE.

EDMUND R. BARANY, OF BROOKLYN, NEW YORK, ASSIGNOR TO FRANCO ELECTRIC CORPORATION, A CORPORATION OF NEW YORK.

FLASH LIGHT.

Application filed July 8, 1922. Serial No. 573,685.

To all whom it may concern:

Be it known that I, EDMUND R. BARANY, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Flash Lights, of which the following is a specification.

This invention relates to portable electric lamps of the type generally referred to as flashlights.

An important object of the invention is to provide in a flashlight an improved means for mounting a plurality of electric bulbs together with their several associated cooperative elements, and a novel and improved means for controlling the independent circuits leading to said lamps from a suitable source of electric energy.

Other objects and certain advantages of the invention will become apparent from the following description when taken in connection with the accompanying drawings in which;

Figure 1 is a view partly in section and partly in elevation of a flashlight embodying my invention.

Figure 2 is a fragmental sectional view illustrating the flashlight as viewed from the right in Figure 1.

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 1.

Figure 4 is a transverse sectional view taken on line 4—4 of Figure 1.

In the drawings wherein is shown what I at present consider the preferred form of my invention, the numeral 5 indicates an elongated casing, within which is arranged the usual form of cell 6, the carbon electrode 7 of which is arranged centrally within the customary zinc container 8 which forms the opposite electrode of the cell. The cell 6 is provided with a cardboard or other insulating sleeve 9, which, as will be readily understood, serves to insulate the cell from the casing 5. It may be remarked that while I have shown the source of electrical energy as consisting of a single cell, a plurality of cells may be employed and maintained in an end to end relation within the casing 5 in accordance with usual practice. In order to retain the cell 6 or other suitable source of electrical energy such as a plurality of cells, properly positioned within the casing, I employ the usual form of screw threaded cap 10 which is carried at one end of the casing and provided with a thrust spring 11, one end of which engages the bottom of the zinc electrode 8. The spring 11 which is arranged to exert a longitudinal thrust upon the cell 6 tends to maintain the carbon electrode 7 thereof in intimate electrical engagement with a U-shaped conductor strip 12, which is carried by an insulating disc 13, and suitably connected thereto by means of a rivet 14 which also serves to retain a reflector engaging conductor 15 in position upon the obverse side of the disc 13. This insulating disc is readily removable and is arranged upon a seat 13′ formed at one end of the casing 5. It will be readily appreciated that by this construction rapid assembly of the device is made possible. The reflector engaging conductor 15 projects an appreciable distance above the upper face of the disc 13 and at its free end is maintained in engagement with a reflector 16 which is arranged centrally within a reflector head 17, carried by the casing 5. The reflector 16 in this particular type of flashlight is insulated from the casing by means of an insulating ring 18, which is adapted to rest upon a ledge 19, formed in the reflector head relatively near the outer end thereof. Upon the reflector 16 there is arranged the usual form of lens or closure 20 which is retained in position by means of a lens ring 21 having screw threaded engagement with the reflector head 17 at the outer end thereof.

The reflector 16 is provided centrally with a screw threaded support 22 adapted to receive the screw threaded outer contact 23 of an electric lamp 24, the central contact 25 of which projects a slight distance into the reflector head 17, as clearly shown in Figure 1. Adjacent the lamp 24 there is provided a pair of auxiliary lamp supports 26 and 27 which project an appreciable distance into the reflector head 17. These supports are screw threaded at their lower ends as shown at 28 and 29 and are adapted to receive respectively the screw threaded outer contacts 30 and 31 of electric lamps 32 and 33. The lower ends of the supports 26 and 27 are provided with insulating rings 34 and 35 which are adapted to prevent short circuiting between the lamps 32 and 33 and conductors 36 and 37 respectively.

The conductors 36 and 37 are carried by

the insulating disc 13, and are rigidly attached thereto by means of rivets 38 and 39. These conductors, which are substantially identical, are bent to provide contact bases 40 and 41 adapted to engage respectively the central contacts 42 and 43 of the lamps 32 and 33. The contact bases 40 and 41 are provided with oppositely disposed resilient fingers 44 and intermediate resilient arms 45 which are grouped about the insulating rings 34 and 35 when the reflector 16 is placed in position within the reflector head 17. It will be appreciated that by reason of the position of the fingers 44 and the arms 45, the conductors 36 and 37 may be utilized to a certain extent to insure a correct positioning of the reflector 16 when the device is being assembled. Since the conductors 36 and 37 are more or less resilient they function also as a means for effectively retaining the insulating support 13 properly positioned upon its seat 13' under all conditions when the lens ring 21 is run down into its proper position as shown in Figures 1 and 2.

As a means for closing the circuit through the several lamps I provide a plurality of slides 46, 47 and 48 which are mounted upon the casing 5 in the usual manner and provided respectively with elongated conductor strips 49, 50 and 51, arranged within the casing 5. These strips are, at their upper ends, bent to provide feet 52, 53 and 54. By moving the intermediate slide 47 the strip 50 is so moved as to bring its foot 53 into contact with a rivet 55, which serves to secure a conductor strip 56 to the disc 13, which conductor strip is bent into a U-shape at one end and adapted to engage the central contact 25 of the lamp 24. By so actuating the slide 47 current from the cell 6 or other source of electrical supply is permitted to pass through the conductor 12, the reflector engaging conductor 15, the reflector 16, the outer contact 23 of the lamp 24 from whence it travels through the filament thereof to the central contact 25, thence through the conductor 56 to the conductor 50 and back to the zinc container 8 by way of the casing 5 and the spring 11. If the central lamp 24 should burn out the secondary lamp 32 may be readily placed in circuit by so moving the slide 46 as to bring the foot 52 of the conductor 49 into engagement with the rivet 38 in which case the current from the cell 6 or other source of supply is permitted to travel through the conductor 12, the reflector engaging conductor 15, the reflector 16, into the lamp 32 through the outer contact 30, out of the lamp 32 through the central contact 42 to the conductor 36 from whence it travels through the conductor 49 and back to the zinc electrode 8 by way of the casing 5, and the spring 11. Should it be desired to place the lamp 33 in circuit, the slide 48 is so moved as to bring the foot 54 of the conductor 51 into engagement with the rivet 39 thereby permitting the current to travel through the conductor 12, the reflector engaging conductor 15, the reflector 16, into the lamp 33 through the outer contact 31, out of the lamp 33 through the central contact 43 to the conductor 37, through the conductor 51 back to the zinc electrode 8, by way of the casing 5 and the spring 11.

It will be noted that the circuit through any one of the lamps 24, 32 and 33 may be closed independently of each other in the event that it is desired to place only one lamp in circuit with a source of electrical supply. If, on the other hand it is desired to place two or more of the lamps in circuit this may be accomplished by so moving the required number of slides as to close the circuit through the lamps which have been selected to function collectively as a source of illumination.

Having thus described my invention I claim:

1. A flashlight comprising a casing adapted to receive a source of electrical energy, a reflector associated with said casing, a support arranged at the rear of said reflector, a plurality of lamps associated with said reflector, conductors supported by said support and leading individually to said lamps, said conductors cooperating with said lamps to retain said support properly positioned at the rear of said conductor, and means for placing said lamps in circuit with said source of energy through said conductors.

2. A flashlight comprising a casing adapted to receive a battery, a reflector associated with said casing, a support arranged at the rear of the said reflector, a plurality of lamps associated with said reflector, conductors supported by said support and leading individually to said lamps, said conductors cooperating with said lamps to retain said support properly positioned at the rear of said conductor, and a plurality of circuit closures adapted to cooperate with said conductors for electrically connecting said lamps individually in circuit with said battery.

3. A flashlight comprising a casing adapted to receive a battery, a reflector associated with said casing, an insulating support arranged at the rear of said reflector, a plurality of lamps associated with said reflector, conductors supported by said insulating support and leading individually to said lamps, a contact finger supported by said insulating support and electrically engaging said reflector, said finger being electrically connected to said battery, and manually operated means for connecting said lamps in circuit with said battery through said conductors and contact finger.

4. A flashlight comprising a casing, hav-

ing a support receiving seat, a battery within said casing having one electrode thereof electrically connected to said casing, a support seated upon said seat at one end of said casing, a reflector having a lamp associated therewith, a conductor carried by said support and leading to said lamp, said conductor being adapted to retain said support in position upon said seat, means electrically connecting said reflector to one electrode of said battery, and a slidable circuit closure electrically connected to said casing and adapted to be moved into electrical engagement with said conductor to place said lamp in circuit with said battery through said reflector and conductor.

5. A flashlight comprising a casing, a battery within said casing having one electrode thereof electrically connected to said casing, a support at one end of said casing, a reflector having a lamp associated therewith, a conductor carried by said support and leading to said lamp, means electrically connecting said reflector to one electrode of said battery, a slidable circuit closure electrically connected to said casing and adapted to be moved into electrical engagement with said conductor to place said lamp in circuit with said battery through said reflector and conductor, and means for insulating said reflector from said casing.

6. A flashlight comprising a casing having a support receiving seat, a battery within said casing having one electrode thereof electrically connected to said casing, a support seated upon said seat at one end of said casing, a reflector having a plurality of lamps associated therewith, conductors carried by said support and leading to said lamps, said conductors cooperating with said lamps to retain said support seated upon said seat, means electrically connecting said reflector to one electrode of said battery, a slidable circuit closure electrically connected to said casing and adapted to be moved into electrical engagement with said conductor to place said lamp in circuit with said battery through said reflector and conductor, and means for insulating said reflector from said casing.

In testimony whereof, I have affixed my signature to this specification.

EDMUND R. BARANY.