July 28, 1931. F. A. WEIDMAN 1,816,065

FLASH LIGHT

Filed May 29, 1928

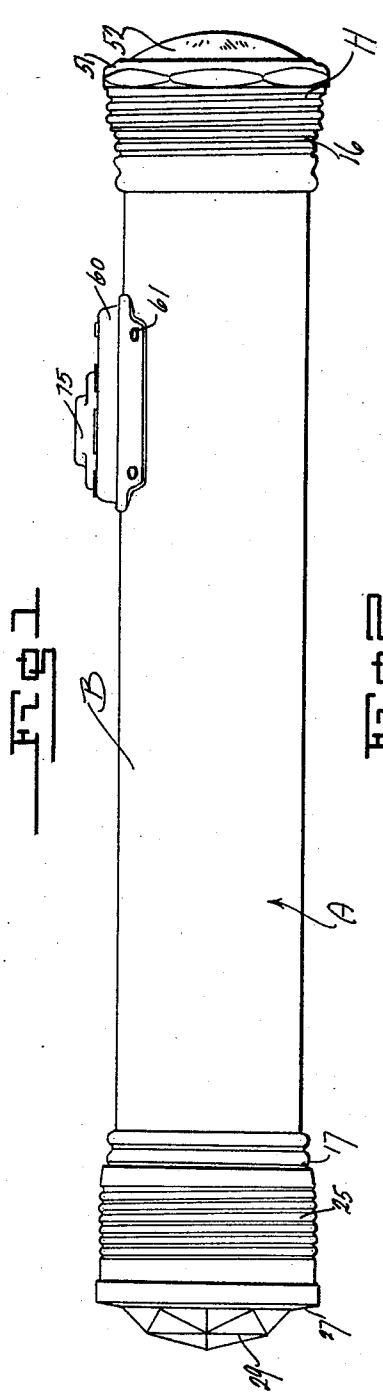


Fig 1

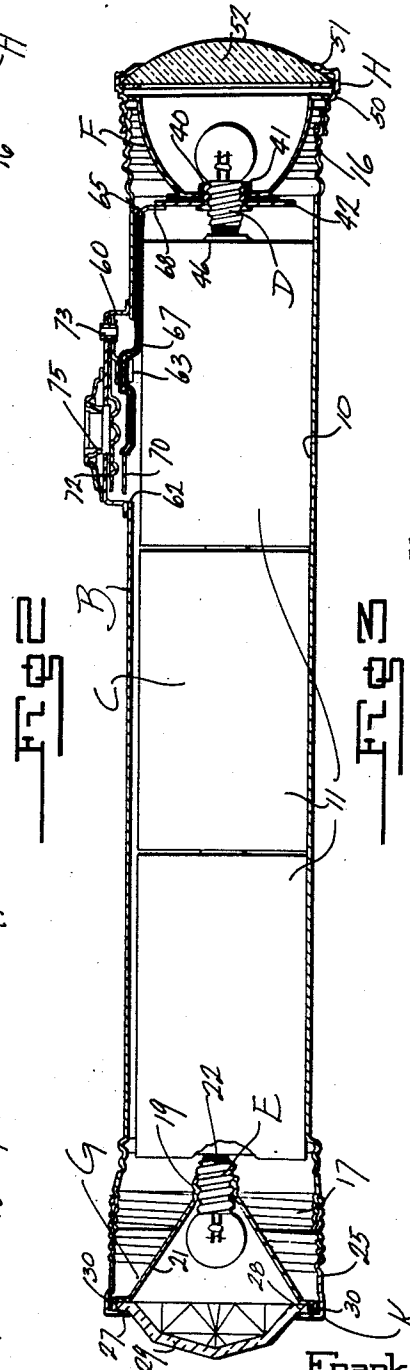


Fig 2

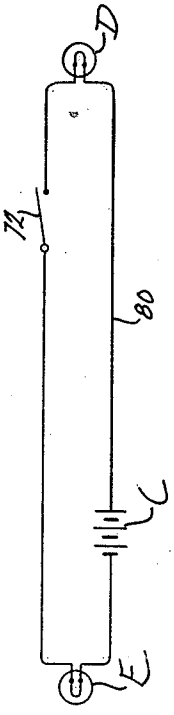


Fig 3

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UNITED STATES PATENT OFFICE

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FLASH LIGHT

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This invention relates to improvements in flashlights.

The primary object of this invention is the provision of an improved flashlight by means of which with a single battery or set of batteries different colored signals may be simultaneously flashed from opposite ends of an elongated flashlight casing by the action of a single switch.

A further object of this invention is the provision of an improved flashlight, of the conventional shape, except that at opposite ends there are positioned signal lamps, one end having therein a clear lens and the other having a red lens, with bulbs adjacent thereto connected in series and operated simultaneously by means of a single switch.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the drawings, wherein for the purpose of illustration is shown only a preferred embodiment of the invention,

Figure 1 is a side elevation of the improved flashlight.

Figure 2 is a longitudinal sectional view taken through the improved flashlight.

Figure 3 is a diagrammatic representation of the circuit of the improved flashlight.

In the drawings, wherein similar reference characters designate corresponding parts throughout the several views, the letter A may generally designate the improved flashlight, which may consists of a casing B adapted to receive a set of batteries C therein, which are adapted to operate bulbs D and E placed in opposite ends of the casing and mounted on reflectors F and G respectively, which are held in position by lens supporting closures H and K respectively.

The casing B is of conventional formation, preferably being formed of conducting material, although it may be formed of insulation material and suitable conducting strips placed therealong to carry out the object of this invention. It is of elongated cylindrical formation, providing a compartment 10 therein open at both ends of the casing, and adapted to receive a plurality of conventional flashlight cells 11 therein constituting part of the battery C. These cells 11, as is well known, have one end thereof provided with a negative terminal and the opposite end provided with a positive terminal, so that the cells may be connected in series. The casing B at opposite ends thereof is screw threaded, as at 16 and 17, said opposite screw threaded ends 16 and 17 being of the same pitch, and adapted to respectively receive the screw threaded closures H and K.

The reflector G is of funnel-shaped formation, provided with a screw threaded socket 19 at one end thereof adapted to receive the screw threaded portion of the bulb E. The inner outwardly converging walls 21 of the reflector G are provided with a reflecting surface, which receive the incident rays from the filament of the bulb E. The socket 19 is of course open so that one terminal 22 of the bulb E may abut in a conducting relation against one terminal of a battery 11. The screw threaded part of the bulb E is of course grounded within the socket 19.

The cover G includes the cylindrical body portion 25, screw threaded externally upon the threaded portion 17 of the casing B, and at its outer end the cap body 25 is provided with an annular flange 27 annularly overhanging the space within the cap body, for receiving the annular flange 28 of the lens 29 therein, by means of which the lens 29 may be supported in a projecting relation beyond the outer face of the cap body 25, as shown in Figures 1 and 2 of the drawings. The reflector G abuts against the flange 28 of the lens 29 to hold the same in place, and it is to be noted that the reflector G has portions 30 which engage the cap body 25, which is preferably of conducting material, in order to ground the filament of the bulb E on the casing B.

The reflector F at the opposite end of the casing B is of usual formation and is provided with a screw threaded socket 40 centrally thereof, insulated from the reflector F by an insulation bushing 41. A metallic conductor disc or washer 42 is clamped by the conductor socket 40 against the insulation bushing 41 in an insulated relation from the reflector F, as is so that the same cannot con-

tact with the casing B when inserted therein. The bulb D is screw threaded into the socket 40 so that the filament lies within the reflector F, and the central terminal of the filament on the socket engages the terminal 46 of the adjacent battery cell 11. The closure H is provided with a screw threaded body 50, adapted to externally screw thread on the threaded end 16 of the casing B, and it is provided with suitable flange means 51 for detachably supporting a clear lens 52. It is apparent that the bulb D is grounded on the socket 40 and the disc 42, but not on the reflector F or the casing B, the same being insulated therefrom by the bushing 41.

A switch housing 60 is secured as at 61 over an opening 62 in the casing B; the compartment in said housing 60 facing the compartment in the housing B and therein being provided with a bracket 63 which supports a contact strip 65. The contact strip 65 is covered with insulation 67 at the bracket 63 and therealong, except at the opposite ends; the one end being inturned at 68 to engage the contact disc 42 of the reflector F. The opposite end 70 of the contact strip 65 is exposed within an end of the switch housing 60 for engagement by a flexible contact arm 72, which is secured at 73 in the housing 60, and is operated by means of a slidable control member 75 which is provided with lugs having a cam action to cause a flexing of the switch arm 72 to engage or disengage the end 70 of the contact strip 65, in a manner which is well known to those skilled in the art.

The reflectors F and G may be interchangeably positioned in either end of the casing B, and the screw threaded caps H and K are interchangeable at either end of the casing B. The filaments of the bulbs E and D are in series in the circuit diagrammatically shown at 80 in Figure 3 of the drawings, and this circuit is closed by the switch arm 72 to simultaneously flash both the bulbs E and D. The lenses 29 and 52 are contrastingly colored, preferably being red and clear respectively.

From the foregoing description of this invention it is apparent that a novel type of flashlight has been provided, which will find its use by pedestrians walking upon highways where there are little, if any, illumination. In fact, it has been recommended and proposed by legislatures that pedestrians walking in darkness on highways, where there is no illumination, be required to carry some light by means of which vehicular drivers may distinguish such pedestrians. With the improved flashlight the pedestrian need only to throw the switch 72 to close the circuit and carrying the flashlight conveniently in his hand, there will be thrown forwardly a clear light to illuminate the path ahead of the pedestrian and to the rear a rear danger signal.

Various changes in the shape, size, and arrangement of parts may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the claim.

I claim:

In a flashlight the combination of a flashlight casing of conductive material and of cylindrical elongated formation of a diameter that will enable a person to place the same bodily in his or her hand and carry it in the palm between the ends of the casing, a dry cell battery arrangement in the casing having directly opposed positive and negative terminals facing the ends of said casing, an electric bulb in one end of the casing having a terminal thereof in direct engagement with the adjacent terminal of the battery and the other terminal of said bulb being insulated from said casing, switch means for operatively grounding the said last mentioned terminal of the said bulb direct upon the conductor casing, a lens on the flashlight casing for said bulb, a second bulb, means supporting the second bulb in the casing at the opposite end from the first mentioned bulb in direct contact with the terminal of the battery adjacent said end of the casing, the second mentioned bulb having its other terminal grounded directly on the flashlight casing at all times, and a lense over the end of the casing for the second bulb, of a contrasting color with respect to the lens first mentioned.

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