

Dec. 24, 1940.

O. T. WOOD

2,226,353

FLASHLIGHT

Filed May 20, 1938

3 Sheets-Sheet 2

FIG. 6.

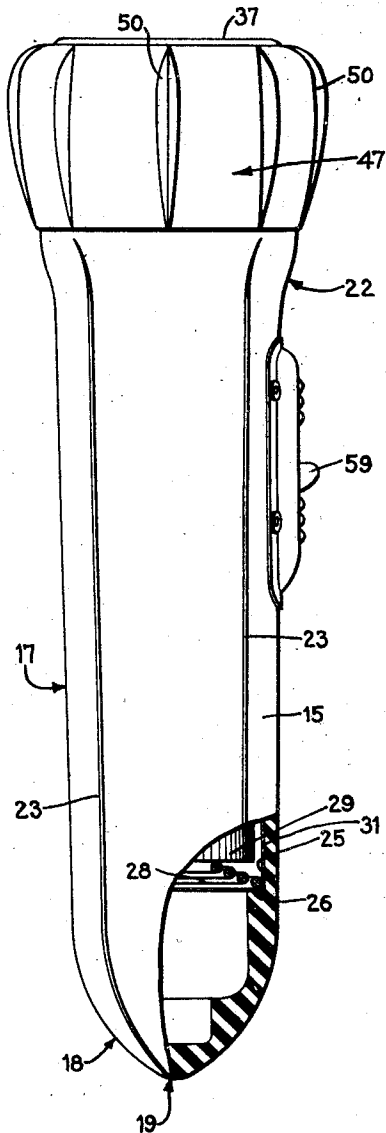


FIG. 7.

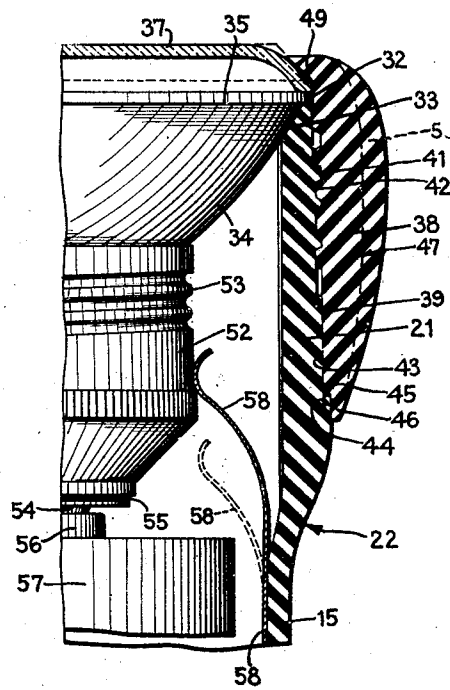
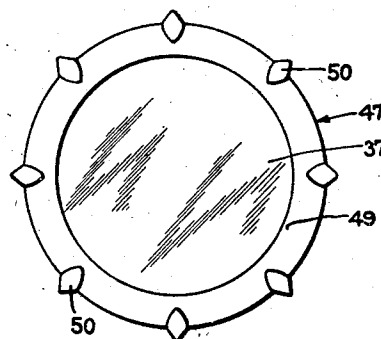


FIG. 8.



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FIG. 9.

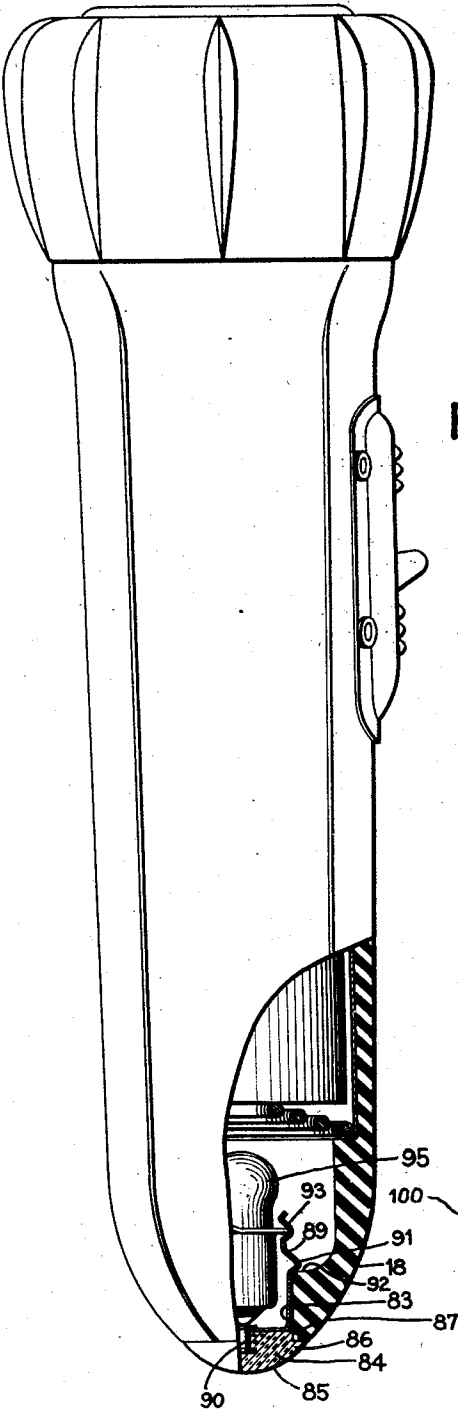


FIG. 10.

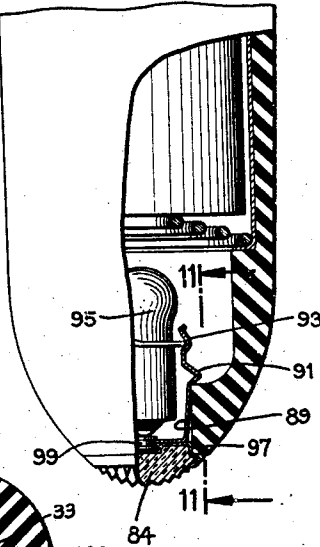


FIG. 12.

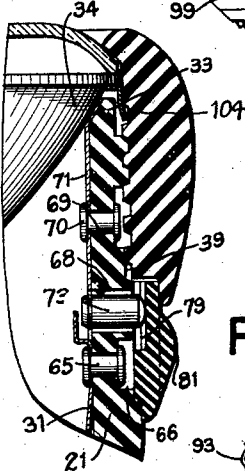


FIG. 11.

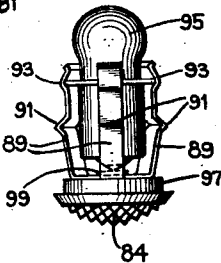
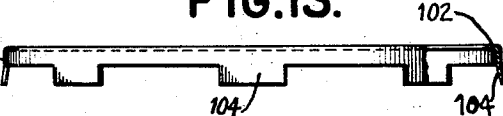


FIG. 13.



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2,226,353

FLASHLIGHT

Orville T. Wood, Clinton, Mass., assignor to
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Mass., a corporation of Massachusetts

Application May 20, 1938, Serial No. 209,034

7 Claims. (Cl. 240—10.6)

This invention relates to flashlights and more particularly to flashlights in which the casing is formed of a moldable material, such as a synthetic resinoid.

Many problems present themselves in the creation of a flashlight or electric hand lantern of moldable material since such flashlights must make use of the standard flashlight cells and other parts which are readily purchased in the open market for replacement. In every flashlight must be found a lens, a reflector, a miniature incandescent lamp, the dry cells aforesaid and some form of circuit closing device. The use of moldable material, such as a synthetic resinoid, is desirable for a variety of reasons. It is not conductive and hence may be used in working around electrical apparatus with no danger of creating a short circuit if the flashlight is inadvertently laid down upon a piece of the apparatus or if it is found necessary to place the flashlight in a position to throw the light upon the part being repaired or adjusted. A flashlight, if comprised of exposed metallic parts, might create a serious short circuit. Moreover, synthetic resinoids are now available in many colors and ornamental and pleasing effects may be obtained which have not heretofore been possible with the metallic, hard rubber or fiber cases heretofore used. The question of price, in an era of sharp competition, is also material and the molding of a unitary casing affords opportunities for a reduction in the cost of manufacture.

In the art of molding, however, the designer is restricted by reason of the necessity of adapting the shape of the article to molding practice and to the necessity of providing for the removal of the molded article from the mold. The requirement, therefore, of adapting a molded article to the usual tubular form of flashlight making use of common flashlight practice and utilizing standard parts, presents problems which this invention seeks to overcome.

One object of the present invention is a flashlight comprising a one piece molded body of tubular cross-section for use as a flashlight casing containing the standard type of flashlight dry cell.

Another object of the invention is to facilitate the assembly of the component parts such as batteries, lamp socket support, reflector and lens in a molded casing. To this end, the flashlight casing of this invention comprises a tubular flashlight casing body open at its upper end through which the battery, lamp socket support, reflector and lens may be inserted and retained in proper position by means of a single removable member.

It is also an object of the invention to provide lens retaining means whereby the parts may be retained in proper position. In carrying this aspect of the invention into effect, the peripheral surface of the upper open end of the flashlight is formed with threads adapted to cooperate with threads formed on the lens retaining element, here illustrated as a sleeve telescoping over the upper end of the flashlight casing.

A further object of the invention is to provide circuit closing devices completing the circuit between the battery and the lamp applicable in a situation where the casing is of molded material. In carrying this aspect of the invention into effect, a ring encircling the flashlight casing may conveniently carry a radially acting circuit closing element into one position, which element may move within a passage or aperture formed in the molded flashlight casing during manufacture.

The invention also seeks means for completing the circuit between the battery and the lamp and to this end, in the preferred embodiment, the central terminal of the battery is maintained in electrical contact with the central terminal of the lamp by a battery positioning spring held by the battery against a shoulder molded within the flashlight casing.

The invention further seeks a flashlight in which a spare lamp is carried in the molded flashlight casing of this invention. Accordingly, the end of the flashlight casing remote from the lens may be provided with a passage normally closed by an end closure member or plug adapted to be releasably retained within the opening and to support a spare lamp within the flashlight body. Conveniently, the closure or plug is retained in position by resilient latching means which may, if desired, be also utilized to support the spare lamp.

Yet another object of the invention is to provide the flashlight of this invention with a reflecting surface which may be used as a signal, for instance, with reflected light and to this end the end closure for the end of the casing remote from the lens may, if desired, comprise a colored reflecting button which not only has the utilitarian purpose of reflecting light, as will be understood, but adds an ornamental feature to the flashlight enhancing its appeal to the purchaser.

It is still another object of the invention to provide a molded flashlight casing of ornamental appearance which is practical from the standpoint of ease and cheapness of manufacture and convenience and durability in use.

These and other objects of the invention and

the means for their attainment will be more apparent from the following detailed description, taken in connection with the accompanying drawings illustrating various embodiments by which the invention may be realized, and in which:

5 Figure 1 is a view in side elevation showing one form taken by the invention;

Figure 2 is a view on an enlarged scale and in longitudinal section taken on a diameter and showing details of construction of the upper or lens carrying end of the flashlight;

Figure 3 is a view looking from above in Figures 1 and 2, parts being broken away to show details of construction;

15 Figure 4 is a fragmentary detailed sectional view, taken in the plane indicated by the line 4—4 of Figure 2 and looking in the direction of the arrows;

Figure 5 is a fragmentary detail sectional view taken in the plane indicated by the line 5—5 of Figure 1 and looking in the direction of the arrows and showing one of the longitudinal superficial ribs, which may conveniently be molded on the flashlight casing not only to enhance the appearance thereof but to facilitate handling the flashlight;

Figure 6 is a view similar to Figure 1 but showing certain differences of surface and construction, parts being broken away to show the interior;

Figure 7 is a fragmentary longitudinal sectional view of the flashlight shown in Figure 6;

Figure 8 is a view showing the flashlight of Figures 6 and 7, looking from above;

35 Figure 9 is a view showing one form taken by the flashlight of this invention, in elevation, the lower portion of the casing being in section to show details of construction of the lower end whereby a spare lamp carrier may be used;

Figure 10 is a view showing another form taken by the spare lamp carrier of this invention;

Figure 11 is a fragmentary sectional view taken in the plane indicated by the line 11—11 of Figure 10 and looking in the direction of the arrows;

45 Figure 12 is a fragmentary view similar to the right hand side of Figure 2 but showing a modified form of circuit closing device, the parts being in open circuit position; and

Figure 13 is a view showing, in side elevation, a retaining device for retaining the reflector in the lens ring whereby when the lens ring is removed, the lens and reflector assembly are held in the lens ring and the assembly removed as a unit.

It will be obvious as the description proceeds that the invention is not limited to any particular moldable composition for the material of the casing nor to the specific shape of the flashlight casing.

Referring first to Figure 6, the flashlight casing of this invention may take the form of a generally elongated tubular casing 15 which, in its simplest form, is closed at its lower end and open at its upper end, as viewed. While the casing may be of constant diameter, both from the standpoint of molding and for the sake of appearance, it is desirable that the casing taper slightly, as at 17, toward the lower end which tapers, as at 18, more sharply to a blunt or rounded point 19. The open upper end 21 of the flashlight casing is conveniently of increased diameter, both inside diameter and outside diameter, the outer surface being of progressively reduced diameter, as shown at 22, to merge with the surface 17 of the main body portion to present a smooth, unbroken surface.

Commencing proximate the lower end, spaced longitudinally extending superficial ribs 23 may be provided which conveniently are of triangular cross-sectional area (Figure 5) so that the ribs terminate in a relatively sharp longitudinal edge. These ribs may, if desired, terminate at the upper end, merging with the outwardly flaring portion of the upper open end, and similarly merge with the surface of the blunt end 19. The ribs are provided not only for appearance sake but for convenience in grasping the body, the surface of which is extremely smooth because of the character of the material of which it is formed.

Referring first to the simplest form taken by the invention, to wit, that shown in Figures 6, 7 and 8, the inner surface 25 is conveniently of gradually narrowing diameter and at its lower end may be so formed as to provide a shoulder 26 on which may seat the helical spring 28 which engages the bottom of the battery and urges it toward the open upper end. This spring 28 conveniently serves as a portion of the electrical circuit connecting the outer zinc cup terminal 29 of the battery with a conductive strip 31 extending upwardly to the circuit closing instrumentalities.

The upper or open end of the flashlight casing (Figure 7) is flat, as at 32, for at least a portion of its surface and then conveniently may taper downwardly and inwardly, as at 33, to receive the reflector 34 the rim 35 of which rests on the rim 32 of the casing. The tapered or bevelled surface 33 has the same curvature as the conical reflector 34; the surface 33 provides an annular seat for the outer conical surface of the reflector. The rim 35, upper edge 32 of the casing, and bevelled surface 33 provide a seat for the reflector in which seat the reflector is self-centering; the areas of contact provided by surface 33 and the reflector give a strong and stable seat for the reflector. As is usual, a lens 37 rests on the rim 35 of the reflector 34. In the illustrated embodiment, Figure 7, the lens 37 takes the form of a transparent or light transmitting closure, somewhat dish-shape in form. This lens may be formed of any molded or cast material and in the illustrated embodiment, a synthetic resinoid is molded in a generally dish form and disposed in inverted position on the rim 35 of the reflector.

The lens and reflector are held on the flat upper end surface 32 of the casing as by a removable lens ring 38 shown as a generally annular or cylindrical member of an interior diameter substantially equal to the external diameter of a cylindrical surface 39 forming the outer peripheral surface of the upper open end 21 of the flashlight casing 15. This surface 39 is formed with threads 41, as by molding the threads thereon, which threads are adapted to mesh with cooperating threads 42 formed on the inner cylindrical surface 43 of the lens ring 38. The internal diameter of the lens ring, as defined by the surface 43 is such as to fit down over or receive the cylindrical surface 39 of the molded casing end 21. Conveniently, this surface 43 is of a diameter slightly less than the general outer peripheral surface of the flashlight casing above the reducing surface 22, whereby a shoulder 44 is defined which serves as a stop for a corresponding shoulder 45 formed on the lens retaining ring 38 to limit relative movement of the parts in one direction, as will be understood. The shoulder 45 is disposed inwardly of the lower end or rim of the lens retaining ring 38 whereby this lower end 46 may

overlie the surface 22 and substantially merge with it, that is, the surface 47 of the lens ring is so formed as to merge generally with the surface 22 and form, in effect, an unbroken and continuous surface therewith.

The upper end or rim of the lens ring 38 is formed with an inwardly directed flange 49 which may be tapered, so to speak, with its lower surface upwardly and inwardly inclined so as to engage at, say, a line contact with the surface of the lens 37 and define a round light transmitting orifice and whereby, as the lens retaining annulus 38 is screwed down on to the upper open end of the casing 15, the lens and reflector are retained on their seat 32 and held against movement.

For convenience in manipulating the lens retaining annulus 38, the outer surface 47 is provided with a plurality of longitudinally extending and laterally spaced superficial ribs 50 which, similar to the ribs 23 on the casing may, if desired, be of generally triangular cross-sectional area and of progressively decreasing radii, both upwardly and downwardly, in longitudinal planes, so that the ribs merge with the upper and lower surface portions of the surface 47 of the lens ring.

In the embodiment illustrated in Figures 6 and 7, the lamp socket support comprises generally a cup-shaped member 52 removably secured, as by the threads 53, with the reflector and provided with a central contact 54 for electrical connection with the central terminal 56 of the battery 57. The cup-shaped portion 52 is insulated, as at 55, from the terminal member 54 whereby the cup-shaped portion 52 may serve as a contact surface in electrical connection with one terminal of the incandescent lamp while the contact 54 is in electrical connection with the other contact of the lamp, all as shown, described and claimed in the copending application Serial Number 191,664.

In this modification, the electrical circuit from one terminal of the lamp includes the terminals 54 and 56, aforesaid, the zinc cup terminal 25, battery positioning spring 28 and conductive strip 31 together with a contact strip 58 movable from the circuit making position shown in full lines in Figure 7 to circuit open position shown in dotted lines in that figure by the manipulatable actuator member 59.

The modification of the invention illustrated in Figures 1 through 5 does not differ materially in outward appearance and general form from that illustrated in Figures 6, 7 and 8 and corresponding reference characters are affixed to corresponding parts. Insofar as the peripheral surface of the lens retaining ring is concerned, instead of longitudinally extending ribs disposed on a generally cylindrical surface, the lens retaining ring has longitudinal ribs formed by a plurality of concave surfaces 61. The lens ring in this instance is given the reference character 62 and differs from the lens ring hereinbefore described in that its lower edge is rabbeted, to a greater extent, as at 63, for a purpose which will be brought out more fully hereinafter.

The conductive strip 31 is secured at its upper end, in this modification, by a rivet, eyelet or the like 65 fastened through a countersunk aperture 66 formed in the casing portion 21. The aperture 66 is countersunk so that the head of the rivet or eyelet 65 lies below the outer peripheral surface of the upper open end of the flashlight. In the same diametrical plane with the aperture 66, is another and larger aperture 68 and also in the same plane and immediately thereabove is another countersunk aperture 69 adapted to receive a

rivet or eyelet 70 by which a resilient conductive strip 71 is held in place. This conductive strip 71 is shown as extending upwardly and outwardly over the tapered end 33 so as to be in electrical contact with the reflector 34. The lower end of the strip 71 is free and extends across the aperture 68 and in register with the aperture 66 so that the lower end 72 of this conductive strip 71 is adapted to make contact with the rivet or eyelet 65 in one position of the leaf spring-like contact 72 to serve as a circuit closing element to complete the circuit between the reflector 34, a part of which, as will be understood, makes contact with one terminal of the incandescent lamp, and the rivet 65 which is at all times in electrical connection with the zinc terminal of the battery through the conductive strip 31. Fixed on the contact member 72 is a lug member 73 of a length greater than the thickness of the wall 21. Thus, when the circuit closing element 72 is in contact with the rivet 65, the outer end of the lug member 73 extends outwardly beyond the surface 39 of the upper open end of the casing.

Encircling the casing in the transverse plane of the circuit closing actuating member 73 is an annulus 76 formed with a rabbeted portion 77 adapted to engage the shoulder 44 on the casing whereby downward movement of the ring 76 is prevented. The inner surface of the ring 76 is such as to receive and rotate on the surface 39 of the casing but this inner surface 39 is formed with a portion of an increased interior diameter, as at 78, while, at one point, the diameter is reduced to form the cam 79. The surface 78 is such as to permit the lug member 73 to move outwardly in a radial direction a sufficient distance to permit the contact member 72 to engage the contact member 65 to complete the circuit and illuminate the lamp. However, when the ring 76 is turned about the casing end 21 and the cam member 79 brought into engagement with the lug member 73, the lug member 73 is moved inwardly to carry the contact portion 72 out of contact with the contact member 65 to open the electrical circuit. Thus the ring 76 serves as a switch actuating member. It is conveniently manipulated by providing a plurality of lugs or ribs 81 which extend in the longitudinal direction of the flashlight. These ribs are, in effect, merely lugs capable of engagement with the thumb or finger to facilitate actuation of the ring, as will be understood. The rabbeted portion 63 of the lens retaining member 62 overlaps the actuating ring 76 as will be obvious from an inspection of Figure 2. The rabbeted portion 44 of the casing 15 serves as a stop for a shoulder 77 on the switch ring to position the same, as will also be understood.

In Figure 12, a modified circuit closing device is illustrated which differs from the previously described modification only in that the circuit is closed by camming inwardly the end of the flexible member.

In Figure 9 a modified form of the invention is illustrated which, except for the lower end thereof, may be identical with the modifications described in connection with Figures 1 to 8. In this modification, the lower end of the flashlight casing is open, as a bore 83 of reduced diameter. This bore is adapted to be closed by a plug or closure member 84 serving as a bottom closure member. The surface 85 of the closure member merges with the surface 18 of the casing. As shown, the closure member 84 is provided with an outwardly

extending portion 86 overlapping the end surface 87.

The closure member 84 may be of any suitable material. It may be of a material such as colored glass or ruby colored reflecting or lens material whereby light from an exterior source may be reflected therefrom. This closure member 84 may conveniently be removably retained on the end of the casing to close that open end, as by a plurality of spring fingers 89 secured in some convenient fashion as by a rivet or eyelet 90 embedded in the material of the closure 84. The fingers 89 are shown as formed with an outwardly deflected portion 91 serving as detents or latch members which, when the material of the fingers 89 is of resilient material, snaps over the bottom surface 92 of the casing to retain the closure member 84 in position.

Two or more such spring fingers may be provided which may conveniently be bent in substantially U-shape and secured at their midpoint by the rivet 90. These latch members 89, 91 may serve, conveniently, as retaining devices for a spare lamp 95 in which event the ends of the spring fingers may be formed with another reversely bent or a corrugated portion 93 adapted to engage an outwardly extending surface portion of the lamp base, such as threads or a flange thereon, to hold the lamp against displacement. When it is necessary to replace a lamp, it is only necessary to remove the closure 84 which brings with it the lamp 95, withdrawing it from the bore 83.

A similar end closure and spare lamp carrier is illustrated in Figures 10 and 11. In this instance, however, the closure member 84 is supported by the latch members 91. A metallic member 97 is bent at its periphery about the closure portion 86 and to this member are secured, as by a rivet 99, the spring fingers 89. Otherwise the parts of this spare lamp carrier are the same as that previously described and corresponding reference characters are affixed thereto. The spare bulb holder and closure member shown in Figs. 9 to 11 is claimed in my copending application, Serial No. 247,191, filed Dec. 22, 1938.

It may be found desirable, in some situations, to retain the lens and reflector assembly with the lens ring as a unit so that when the lens ring is removed, the lens and the reflector assembly may be removed as one part. As shown in Figure 13, an annular retainer may be provided which is substantially cylindrical in general form as shown at 100. The cylindrical portion 100 is formed with an inturned flange or rim 102 defining an opening of a diameter such as to receive the reflector 34. The external diameter of the cylindrical portion is substantially equal to the diameter of the rim 35 on the reflector. Depending from the cylindrical portion 100 and integral therewith are spaced outwardly flared spring fingers 104. As seen in Figure 12, after the lens and reflector are inserted in the lens ring, the retainer 100—104 is pushed into the lens ring until it engages the reflector. The outwardly flared spring fingers of the reflector retainer catch under the thread of the lens ring to thus releasably secure the lens and the reflector assembly in the lens ring so that when the lens ring is removed, the lens and reflector assembly will be removed with it. Through the instrumentality of this retainer, the end closure as a whole is conveniently removed to facilitate replacement of the battery.

It will thus be seen that a flashlight casing has

been provided which is adapted to receive standard flashlight parts and yet may be made of a molded material.

Various modifications will occur to those skilled in the art in the composition, configuration and disposition of the component elements going to make up the invention as a whole as well as in the selection and/or combination of particular features and no limitation is intended by the foregoing description or illustrations in the accompanying drawings except as indicated in the appended claims.

What is claimed is:

1. A flashlight comprising a moulded tubular casing member open, at least, at its upper end, a lens supported by the rim of the open upper end of the casing member, a moulded tubular lens retaining member telescoping over the open upper end of the casing member, the proximate surfaces of the lens retaining member and the casing member being formed, respectively, with interengaging threads, the threaded surface of the body member being of reduced diameter to define an upwardly facing shoulder, said lens retaining member being rabbeted, said open upper end being formed with an aperture, a circuit closer actuating member in the aperture and normally protruding outwardly of the casing member, an annulus encircling the said end and having a portion within the rabbeted portion of the lens retaining member, the inner surface of said annulus being formed with a recess to receive the actuating member and a cam surface to engage and move the actuating member, said annulus being rabbeted to engage and overlie the shoulder formed on the casing.

2. A flashlight comprising a moulded tubular casing member open, at least, at its upper end, a lens supported by the rim of the open upper end of the casing member, a moulded tubular lens retaining member telescoping over the open upper end of the casing member, the proximate surfaces of the lens retaining member and the casing member being formed, respectively, with interengaging threads, the threaded surface of the body member being of reduced diameter to define an upwardly facing shoulder, said lens retaining member being rabbeted, said open upper end being formed with an aperture, a circuit closer actuating member in the aperture and normally protruding outwardly of the casing member and having a portion received within the rabbeted portion of the lens retaining member, an annulus encircling the said end, the inner surface of said annulus being formed with a recess to receive the actuating member, a cam surface to engage and move the actuating member, a resilient conductive strip in electrical connection with one lamp terminal and movable with the actuating member and a contact in electrical connection with the other lamp terminal and so disposed as to be engageable by the resilient conductive strip in circuit closing position.

3. A flashlight comprising a tubular casing of moulded dielectric material having an open upper end, a reflector supported on the open upper end, a lens carried with the reflector, a tubular lens retaining member of moulded dielectric material telescoping over the open upper end of the casing having an inturned rim to engage the lens, the proximate surfaces of the casing and lens retaining member being formed with interengaging threads, a conductive strip extending longitudinally of the casing inwardly thereof, said casing being formed with a passage proximal

mate the upper end of the strip, resilient conductive strip in contact with the reflector and whereof an end overlies the upper end of the first named strip, an actuating pin carried by the resilient strip and disposed in the passage and of a length greater than the length of the passage and a moulded annulus encircling the casing end in the transverse plane of the passage, said annulus being formed with a recess to receive the end of the pin when the strips are in contact to close the electrical circuit and having a surface to engage the pin to separate the strips to open the electrical circuit.

4. A flashlight comprising a tubular casing of moulded dielectric material having an open upper end, a reflector supported on the open upper end, a lens carried with the reflector, a tubular lens retaining member of moulded dielectric material telescoping over the open upper end of the casing having an intumed rim to engage the lens, the proximate surfaces of the casing and lens retaining member being formed with interengaging threads, a conductive strip extending longitudinally of the casing inwardly thereof, said casing being formed with a passage proximate the upper end of the strip, a resilient conductive strip in contact with the reflector and whereof an end overlies the upper end of the first named strip, an actuating pin carried by the resilient strip and disposed in the passage and of a length greater than the length of the passage and a moulded annulus encircling the casing end in the transverse plane of the passage, said annulus being formed with a recess to receive the end of the pin when the strips are in contact to close the electrical circuit and having a surface to engage the pin to separate the strips to open the electrical circuit, a rim of said lens retaining member being rabbeted to receive an edge of the annulus and a rim of the annulus being rabbeted to engage a shoulder formed on the casing.

5. A flashlight comprising a tubular casing of moulded dielectric material having an open upper end, a reflector supported on the open upper end, a lens carried with the reflector, a tubular lens retaining member of moulded dielectric material telescoping over the open upper end of the casing having an intumed rim to engage the lens, the proximate surfaces of the casing and lens retaining member being formed with interengaging threads, a conductive strip extending longitudinally of the casing inwardly thereof, said casing being formed with a passage proximate the upper end of the strip, a resilient conductive strip in contact with the reflector and whereof an end overlies the upper end of the first named strip, an actuating pin carried by the resilient strip and disposed in the passage and of a length greater than the length of the passage and a moulded annulus encircling the casing end in the transverse plane of the passage, said annulus being formed with a recess to receive the end of the pin when the strips are in contact to close the electrical circuit and having a surface to engage the pin to separate the strips to open the electrical circuit, a rim of said lens retaining member being rabbeted to receive an edge of the annulus and a rim of the annulus being rabbeted to engage a shoulder formed on the casing.

mate the upper end of the strip, a resilient conductive strip in contact with the reflector and whereof an end overlies the upper end of the first named strip, the ends of the respective strips contacting in circuit closing position, an actuating pin carried by the resilient strip and disposed in the passage and of a length greater than the length of the passage and a moulded annulus encircling the casing end and circumferentially rotatable thereabout in the transverse plane of the passage, said annulus being formed with a recess to receive the end of the pin when the resilient strip is in one position and having a circumferentially spaced surface to engage the pin to move the resilient strip to the other position.

6. A flashlight comprising a tubular casing of moulded dielectric material having an open upper end, a reflector supported on the open upper end, a lens carried with the reflector, a tubular lens retaining member of moulded dielectric material telescoping over the open upper end of the casing having an intumed rim to engage the lens, the proximate surfaces of the casing and lens retaining member being formed with interengaging threads and a flanged retaining annulus formed with an aperture to receive the reflector and resilient fingers formed on the edge of the retaining annulus and adapted to engage a thread of the lens retaining member whereby the lens, reflector and lens retaining member may be removed as a unit.

7. A flashlight comprising a moulded tubular casing member open, at least, at its upper end, the end surface of the casing member being flat in a transverse plane proximate its outer periphery, the inner portion of said end member being bevelled to provide an annular tapered portion, a frusto-conical reflector formed with a peripheral flange seated on said flat end portion of the casing member, said tapered portion and said conical reflector having substantially the same curvature and having annular contacting areas, for providing an annular seat for the outer conical surface of the reflector in which annular seat the reflector is self-centering, a lens supported by the rim of the reflector, a moulded tubular lens retaining member telescoping over the open upper end of the casing member, the proximate surfaces of the lens retaining member and the casing member being formed, respectively, with interengaging threads.

ORVILLE T. WOOD.

CERTIFICATE OF CORRECTION.

Patent No. 2,226,353.

December 24, 1940.

ORVILLE T. WOOD.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 4, second column, lines 52 and 53, claim 2, strike out the words "and having a portion received within the rabbeted portion of the lens retaining member" and insert the same after "end" and before the comma in line 54, same claim; page 5, first column, line 1, claim 3, before "resilient" insert --a--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 18th day of February, A. D. 1941.

(Seal)

Henry Van Arsdale,
Acting Commissioner of Patents.

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