

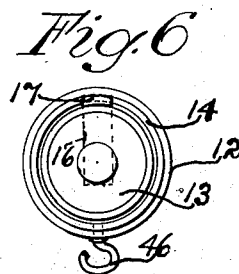
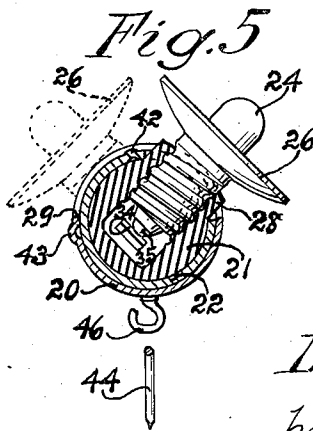
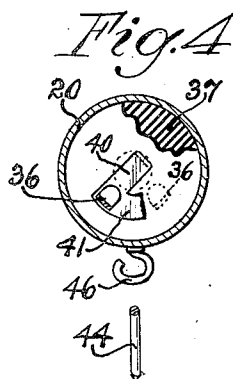
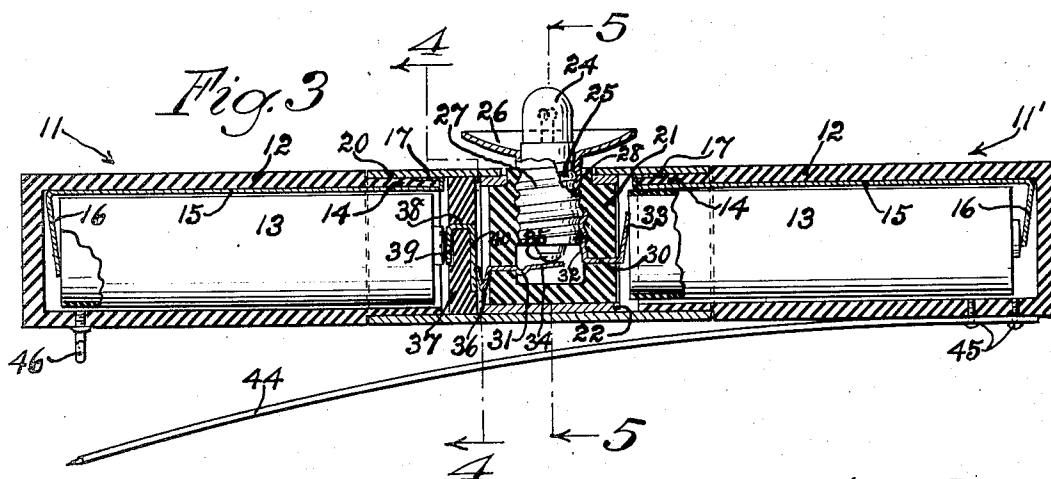
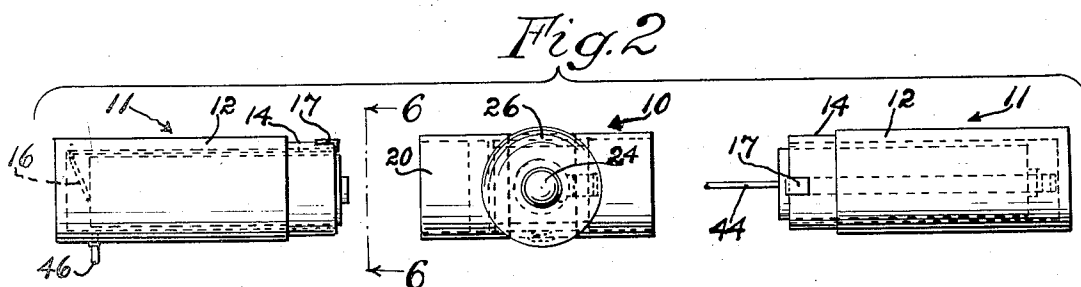
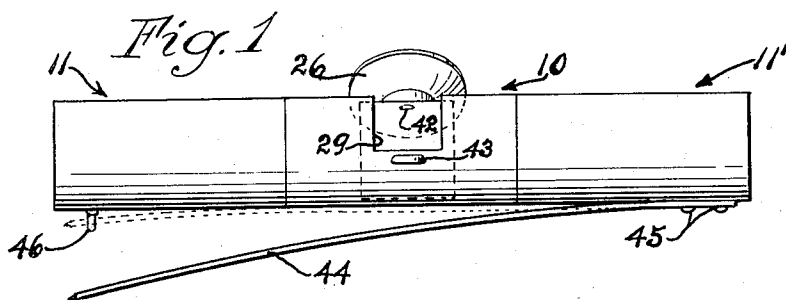
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FLASHLIGHT

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FLASHLIGHT

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10 Claims. (Cl. 240—10.6)

This invention relates to improvements in flashlights.

One of the objects of this invention is to provide an efficient and economical flashlight, wherein the lamp is adjustable so that the direction of its light beam may be varied.

Another object of this invention is to provide such a flashlight which comprises three main units combined and arranged so that these units can be readily connected and disconnected and the elements therein can be readily assembled and disassembled, so as to effect economy in the manufacture and use thereof.

Another object of this invention is to provide such a variable beam flashlight which is especially adapted for use in women's handbags, valises, briefcases, and the like; and which comprises means for readily and detachably mounting it therein, in such a manner that the light beam may be directed down into the bag and likewise up into the user's face.

These and various other objects and advantages are attained with this invention, as will be apparent from the following description, taken in connection with the accompanying drawing wherein the invention is shown in its preferred form, it being evident that other forms of construction and modifications may be adopted in carrying out the objects and purposes of this invention.

In the drawing:

Fig. 1 is a plan view of a flashlight embodying my invention in its preferred form of construction, comprising three tubular units operatively connected.

Fig. 2 is a view thereof showing the three units separated, two of said units being turned 90° relative to the third unit.

Fig. 3 is a sectional view taken longitudinally thru the flashlight.

Figs. 4 and 5 are cross-sectional views thereof, taken, respectively, on lines 4—4 and 5—5 of Fig. 3.

Fig. 6 is an end view of one of the outer units, taken along line 6—6 of Fig. 2 and on a slightly enlarged scale.

As illustrated in the drawing, this improved flashlight comprises three main units which are tubular and are firmly but detachably connected. These units consist of a central unit 10, and two end units 11 and 11' which are similar and are connected to the two opposite ends of said central unit.

Each one of these two end units comprises an insulating barrel 12 containing a battery 13

therein, and having its open end 14 reduced and turned inward to fit snugly in the end of the central unit 10. A metal contact strip 15 extends longitudinally along the battery and has its outer end part 16 bent over and bearing against the outward terminal of the battery, and its inner end part 17 is bent over and is pressed into a notch provided in the outer side of said reduced end 14 of the barrel to be flush with the surface of said end.

The central unit 10 comprises an outer metal sleeve or cylindrical casing 20 which has its two ends snugly seated upon the reduced ends 14 of the two barrels 12, and said sleeve makes contact with the inner end parts 17 of the two contact strips 15; said sleeve being firmly and safely held by a tight fit upon said two ends 14, but also being readily attachable thereto and detachable therefrom.

A cup-shaped socket 21 of insulating material is mounted movably in the sleeve 20, preferably by the use of a ring 22 which surrounds the socket and fits snugly in the sleeve but is turnable therein with said socket.

A lamp bulb 24 is carried by the socket 21, having its stem 25 positioned therein, and it is preferably provided with a reflector 26, said reflector preferably including an integral collar 27 which has the lamp stem 25 threaded therein and is detachably threaded in said socket, for convenient removal therefrom with the lamp bulb. Said stem 25 and collar 27 together with a surrounding insulating annular part 28 on the socket 21 are movable in a slot 29 provided in the metal sleeve 20, from the "on" position as shown in full lines in Fig. 5 to the "off" position as shown in dotted lines therein.

Two contact members or arms 30 and 31 are extended thru the opposite wall parts of the socket 21; whereof the arm 30 has an inner contact part 32 which contacts the collar 27 and therethru establishes contact with the threaded surface terminal of the lamp stem 25, and also has an outer contact part 33 which makes contact with the second terminal of one of the batteries. The other arm 31 has its inner end or contact part 34 in engagement with the central or end terminal 35 of the lamp stem, and has its outer end part doubled or bent over at a slant to provide a resilient contact finger 36, which is positioned off-center or offset from the longitudinal axis of the sleeve 20 and the barrel 12.

An insulating member 37, preferably in the form of a disk, is mounted in the sleeve 20, ad-

adjacent the socket 21 and its ring 22; and thru said member extends a contact arm 33 including an outer bent part or contact part 39 which engages the second terminal of the second one of said batteries, and also includes an inner bent part 40 having an arcuate finger 41 thereon which is positioned off-center or offset from said longitudinal axis of the sleeve and barrel, arranged to be engageable by the offset finger 36 on the socket when that is turned in the sleeve.

In Figs. 4 and 5 of the drawing the full line positions of the parts indicate how the contact finger 36 is placed in contact with the arcuate finger 41 when the socket with the lamp therein is turned to the operative or circuit-closed position in the sleeve; and there is indicated in dotted lines how the contact finger 36, as shown in Fig. 4, is separated from finger 41 when the lamp is fully turned to the limit of its movement, as shown in Fig. 5. Said fingers will remain in contact during the main part of such turning movement, due to the length of said arcuate finger 41, thus enabling the turning or swinging of the socket and lamp upwardly and downwardly during the operative position of the lamp.

Co-operating elements, including a boss 42 on the ring 22 and an indentation 43 in the sleeve for receiving said boss, are provided for firmly and more securely holding the socket and its lamp in the inoperative or circuit-open position.

This flashlight is furthermore provided with mounting means so that it can be conveniently but detachably mounted in a handbag, a valise, and the like, and this means preferably comprises a pin 44 having one end secured to one of the barrels, as at 45, and being engageable in a hook 46 provided on the other barrel, said pin being bent inwardly at its center to provide a firm hold on the material of the device to which the flashlight is attached.

It may be noted that the two batteries with the lamp therebetween are arranged in series; and also that this construction provides an economical and very useful flashlight.

I claim:

1. A tubular flashlight comprising, a central unit and two end units connected to the opposite ends thereof, the two end units each comprising an insulating barrel containing therein a battery and a contact member engaging one terminal of the battery and having a part extending to the outer part of the barrel, the central unit comprising an outer metal sleeve which receives the end portions of the barrels and engages the two outwardly extending contact parts, an insulating socket mounted turnably in said sleeve and carrying a lamp bulb, a pair of contact members carried by the socket and being in engagement each with a terminal of the bulb, one of the last said contact members engaging the second terminal of one of the batteries and the other of said members having a contact finger positioned outward of the socket, and insulating means in the sleeve carrying contact means engaging the second terminal of the other of the batteries and including a contact finger adapted to engage the first said finger, whereby said two contact fingers may be brought into engagement to complete the circuit thru the two batteries and the lamp when the socket is turned in the sleeve.

2. A tubular flashlight comprising three main units, a central unit and two end units detachably connected to its opposite ends, the two end units each comprising an insulating barrel con-

taining therein a battery and a contact strip including means at its outer end engaging the outward terminal of the battery and having means on its inner end extending to the outer part of the barrel, the central unit comprising a metal sleeve which has the ends of the two barrels firmly but detachably mounted therein and engages said two inner end means of the two contact strips, an insulating socket turnable in the sleeve and carrying a lamp bulb, a pair of contact arms extending thru the socket and being in engagement with the two terminals of the bulb, one of said arms contacting the inward terminal of one of the batteries and the other arm having an off-center finger positioned outward of said socket, and an insulating member in the metal sleeve provided with a contact element which engages the inward terminal of the other of the batteries and includes an off-center contact finger adapted to engage the other finger, whereby the two contact fingers may be brought in engagement to illuminate the lamp by turning the socket in the sleeve.

3. The subject matter set forth in claim 2, wherein the socket is provided with a surrounding ring whereby it is mounted in the sleeve to facilitate turning therein, and one of the contact fingers has an extended arcuate contact part to enable turning the socket and lamp thru an extended arc without breaking the circuit.

4. A tubular flashlight consisting of three substantially tubular units composed of a central unit and two end units connected to the opposite ends thereof, the two end units each comprising an insulating barrel having a reduced end portion and containing a battery and a contact strip which engages with its outer end portion the outward terminal of the battery and has its inner end portion extending to the surface of said reduced portion of the barrel, the central unit comprising a metal sleeve which receives said two reduced portions and engages the two inner end portions of the two contact strips, an insulating socket mounted with a surrounding ring turnable in the sleeve, a lamp bulb carried in the socket and movable in a slot provided in the sleeve, a pair of contact arms extending thru the opposite wall parts of the socket and being in engagement with the two terminals of the bulb, one of said arms contacting the inward terminal of one of the batteries and the other arm having a contact finger outward of the socket, and an insulating disk in the metal sleeve between the socket and the other of the batteries and having a contact element extending therethru with its outward part engaging the battery and at its inward part having a contact finger adapted to engage the finger on the socket, whereby the two contact fingers may be brought into engagement to complete the circuit thru the two batteries and lamp by turning the socket in the sleeve.

5. The subject matter set forth in claim 4, wherein the lamp is provided with a reflector which has an integral metal sleeve threaded in the socket and has the stem of the lamp bulb threaded therein.

6. The subject matter set forth in claim 4, and additionally comprising a curved pin secured on one of the barrels and a co-operating hook secured on the other of the barrels, whereby to mount the flashlight securely but detachably in a handbag and the like.

7. The subject matter set forth in claim 4, and also comprising means for readily and de-

tachably mounting the flashlight in a handbag and the like, and wherein said contact fingers are offset from the longitudinal axis of the barrels and one thereof has an extended arcuate contact portion to enable turning the lamp thru an extended arc in the sleeve without breaking the circuit.

8. A flashlight comprising a central unit and two end units connected to the opposite ends thereof, each end unit comprising an insulating member containing a battery and a contact element engaging one terminal of the battery and having a part extending beyond said member, the central unit comprising an outer connecting member which receives and holds the juxtaposed end parts of said two members and also provides an electric connection between said extending parts of the contact elements, insulating means mounted turnably in said connecting member and carrying a lamp bulb, a pair of contact means carried by said insulating means and being in engagement each with a terminal of said bulb, one of said contact means engaging the second terminal of one battery and the other contact means having a contact finger extending beyond said insulating means, and other insulating means mounted in said connecting member and being provided with contact means engaging the second terminal of the other battery and having a part adapted to be engaged with said contact finger, whereby to close the circuit thru the lamp bulb and the pair of batteries upon turning said bulb with its insulated carrying means in said connecting member.

9. A flashlight comprising a plurality of battery units and a lamp unit connected thereto and retaining them in position, each battery unit comprising an insulating member containing a battery therein and also contact means engaging one terminal of the battery and having means extending beyond said insulating mem-

ber, the lamp unit comprising a connecting member which is detachably connected with the insulating members and is arranged to provide an electric connection between the said extending means, a lamp bulb and means turnably supporting it in said connecting member, a plurality of contacts carried by said supporting means and being in engagement each with a terminal of the bulb, one of said contacts engaging a terminal of one battery and another of said contacts including a contact element extending beyond said supporting means, and means engaging a terminal of another battery and being engageable by said contact element, whereby to open and to close the circuit thru the batteries and the bulb by turning the latter in its unit.

10. A flashlight comprising lamp carrying means and battery carrying means connected thereto for convenient detachment, the latter means comprising outer insulating means having battery means mounted therein to be readily removable therefrom and being provided with electric conductor means extending from the first terminal means of said battery means outward beyond the insulating means, the lamp carrying means comprising a tubular member capable of conducting electricity and which detachably engages and retains said outer insulating means and also forms an electric connection with said conductor means, movable insulating means carrying a lamp bulb therein and being therewith rotary in said tubular member, and means, including contact means connected with the second terminal means of the battery means and also cooperating contact means movable with said insulating means and bulb, for opening and closing the circuit thru the battery means and the bulb by rotating the latter in the tubular member.

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