Aug. 28, 1951 A. F. YANDT 2,566,280

TWIN BEAM FLASHLIGHT

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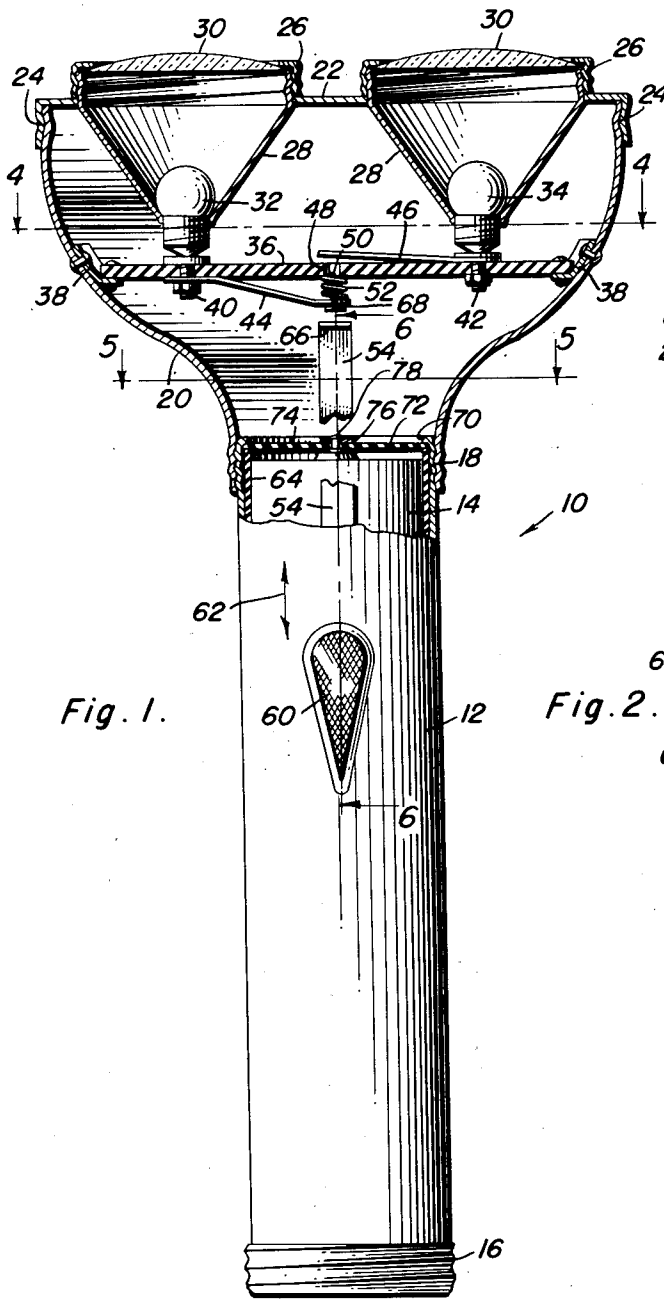


Fig. 1.

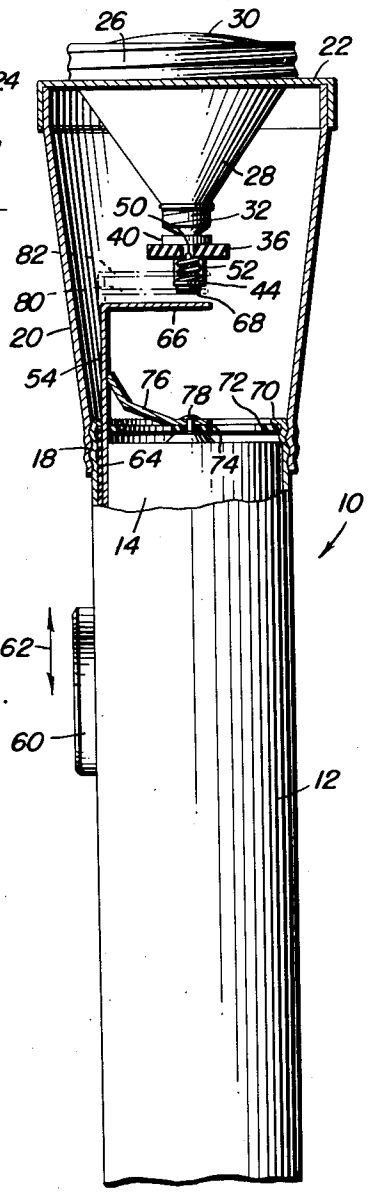


Fig. 2.

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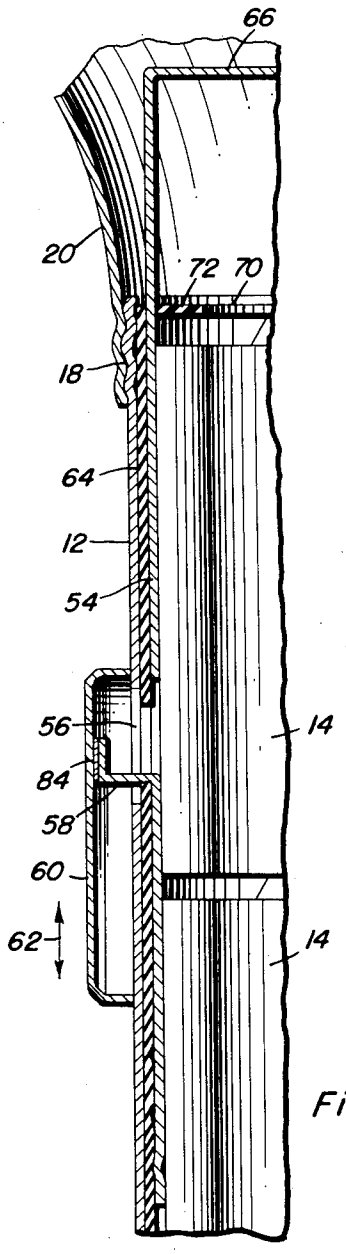


Fig. 6

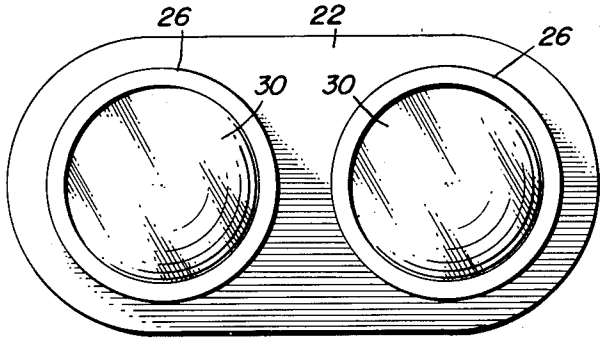


Fig. 3.

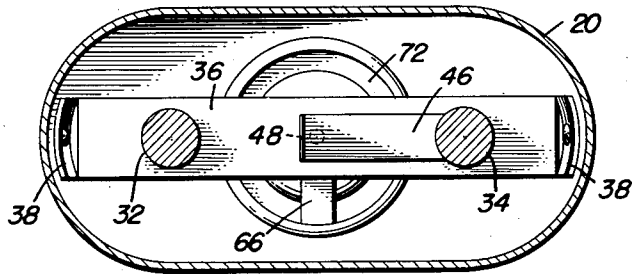


Fig. 4.

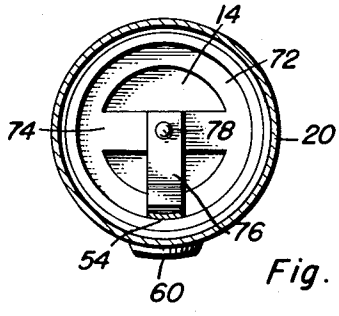


Fig. 5.

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Patented Aug. 28, 1951 2,566,280

UNITED STATES PATENT OFFICE

2,566,280

TWIN BEAM FLASHLIGHT

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Application March 31, 1949, Serial No. 84,623

2 Claims. (Cl. 240—10.6)

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This invention relates to new and useful improvements and structural refinements in flashlights, and the principal object of the invention is to provide a flashlight capable of casting, independently or simultaneously, two beams of light.

This object is achieved by the provision of a flashlight embodying two separate incandescent lamp units, and the primary feature of the invention resides in the provision of a switch mechanism whereby one or both of the lamp units may be selectively energized as desired.

One of the advantages of the invention resides in its ability to provide illumination of two different intensities, while another advantage thereof is in the arrangement whereby one incandescent lamp unit is still available for use in the event the second lamp unit becomes inoperative by reason of lamp failure, or the like.

Some of the other advantages of the invention reside in its simplicity of construction, in its convenient operation, and in its adaptability to economical manufacture.

With the above more important objects and features in view and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially in the construction and arrangement of parts as shown in the accompanying drawings, in which:

Figure 1 is a front elevational view of the invention, the same being partially broken away so as to reveal its construction;

Figure 2 is a side elevational view thereof, also partially broken away;

Figure 3 is a top plan view of the device shown in Figures 1 and 2;

Figure 4 is a cross-sectional view taken substantially in the plane of the line 4—4 in Figure 1;

Figure 5 is a cross-sectional view, taken substantially in the plane of the line 5—5 in Figure 1; and

Figure 6 is a cross sectional view taken substantially in the plane of the line 6—6 in Figure 1.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention consists of what may be referred to as a twin beam flashlight, designated generally by the reference character 10, the same embodying in its construction a substantially tubular housing 12 which is adapted to accommodate one or more "dry cell" batteries 14 which are in a series electrical circuit in accordance

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with conventional practice. The lower end portion of the housing 12 is screw-threaded to receive a removable cap 16 which not only serves to retain the batteries 14 in position in the housing, but also provides means for grounding the batteries to the housing in the conventional manner.

The upper end portion of the housing 12 is also screw-threaded as at 18 to receive the minor end portion of an enlarged head 20 configurated substantially as shown, the major end of this head being open and being provided with a removable cover 22 which is retained in position on the head by a plurality of indented detents 24 which are engageable with complementary indentations in the head, as will be clearly apparent from Figure 1.

The cover 22 is formed with a pair of openings surrounded by internally screw-threaded and inturned flanges 26, each of these being adapted to accommodate one of a pair of substantially frusto-conical reflectors 28 together with a lens 30.

The reflectors 28 provide sockets for a pair of incandescent lamps 32, 34, it being understood that the metallic bases of the lamps are grounded to the body of the flashlight through the medium of the reflectors 28, cover 22, head 20 and the housing 12.

What may be referred to as a switch plate 36 is formed from insulating material and is secured in the head 20 under the lamps 32, 34 by means of suitable brackets or cleats 38, this plate carrying a pair of flat-headed studs 40, 42 which are adapted to be in electrical contact with the terminals of the respective lamps 32, 34, as is best shown in Figures 1 and 2.

A pair of contact elements assuming the form of resilient strips or springs are provided, these being designated by the reference characters 44, 46 and being secured to the plate 36 by the respective studs 40, 42, matters being so arranged that the strip 44 is disposed below and the strip 46 above the plate 36, as illustrated in Figure 1. The plate 36 is provided intermediate the studs 40, 42 with an aperture 48 and free end portions of the strips 44, 46 respectively underlie and overlie the aperture 48, as shown.

Needless to say, the strips 44, 46 are in electrical contact with the lamps 32, 34, respectively, and it is to be noted that the free end portion of the underlying strip 44 is equipped with an upwardly projecting contact pin 50 which is slidably receivable in the aperture 48 and is adapted to engage the strip 46, as will be hereinafter de-

scribed. However, a compression spring 52 is positioned on the pin 50 between the under surface of the plate 36 and the strip 44, whereby the pin 50 is urged out of contact with the strip 46, as will be clearly apparent.

A switch member assuming the form of a flat bar 54 is slidable longitudinally in the housing 12 and an intermediate portion thereof is struck out and angulated to slidably project through a slot 56 with which the housing 12 is provided, this struck out and angulated portion constituting a tongue 58 which is rigidly secured to an externally manipulable switch knob 60. The latter is disposed, of course, exteriorly on the housing 12 and it will be apparent that by simply sliding the knob 60, the member 54 may be slid longitudinally in the housing, as indicated by the arrow 62.

An insulating strip 64 is provided between the member 54 and the housing 12, while an insulating tab 84 is disposed between the tongue 58 and the knob 60 so that the latter is not electrified.

It is to be noted that the upper end portion of the switch member 54 is laterally angulated as at 66, the portion 66 being engageable with the head 68 of the aforementioned pin 50.

It is to be noted that the upper end of the housing 12 terminates in an inturned flange 70 which provides a keeper seat for an annular member 72 formed from insulating material, this member including a diametrically extending portion 74 to which is secured a resilient contact brush or strip 76 by means of a rivet 78. The latter, in turn, is in electrical contact with the battery or batteries 14, and it will be apparent from the foregoing that the brush 76 serves to establish an electrical connection between the batteries and the slidable switch member 54.

When the invention is placed in use and the knob or button 60 is disposed in its initial position as illustrated in Figures 1, 2 and 6, the switch member 54 is electrified through the medium of the brush 76, but the angulated portion 66 of the switch member is separated from the head 68 of the pin 50 and, accordingly, the lamps 32, 34 are not energized.

However, by simply sliding the knob 60 upwardly to an intermediate position, the angulated portion 66 of the switch member 54 is brought in contact with the head 68 of the pin 50, and accordingly, electric current is delivered through the medium of the switch member 54, contact strip 44, and the stud 40 to the lamp 32, thereby energizing the latter while the lamp 34 remains inactive.

Finally, by sliding the knob 60 to its ultimate or uppermost position, the engagement of the switch member portion 66 with the pin 50 will slide this pin upwardly through the aperture 48 into engagement with the contact strip 46, whereby the lamp 34 as well as the lamp 32 will be energized, as will be clearly apparent.

By virtue of this arrangement, the switch mechanism is capable of energizing the lamps 32, 34 selectively, so that either the lamp 32 or both of the lamps 32 and 34 may be illuminated as desired.

For illustrative purposes, the position of the switch member portion 66 has been illustrated in Figure 2 by full lines when the switch member is in its initial or lowered position, while the phantom lines 80, 82 designate the position of the switch member portion 66 when the switch member is in its intermediate and ultimate positions respectively, as above explained.

It should be added that the brush 76 may be suitably arcuated or angulated as shown in Figure 2, so that it frictionally engages the switch member 54 and establishes an electrical contact between the member and the batteries 14.

It is believed that the advantages and use of the invention will be clearly apparent from the foregoing disclosure, and, accordingly, further description thereof at this point is deemed unnecessary.

Having described the invention, what is claimed as new is:

1. In a flashlight, the combination of a housing, a battery therein, an enlarged head provided on said housing, a pair of incandescent lamps mounted in said head in juxtaposed relation, a transverse switch plate provided in said head and formed with an aperture, a pair of resilient contact strips secured to the opposite sides of said plate and each in circuit with one of said lamps, said strips having free end portions underlying and overlying said aperture, a switch member slidable in said housing and in circuit with said battery, said switch member being slidable from an initial inoperative position to an intermediate position wherein it engages the contact strip underlying said aperture, and a contact pin provided on the last-mentioned contact strip and slidable in said aperture to contact the remaining strip upon sliding of said switch member from the intermediate to an ultimate position.

2. The device as defined in claim 1 together with a compression spring positioned on said pin between said plate and the underlying contact strip for urging the pin out of contact with the strip overlying said aperture.

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