March 28, 1950 H. R. SEGAL 2,502,105

FLASHLIGHT

Filed Feb. 6, 1947

Fig. 1

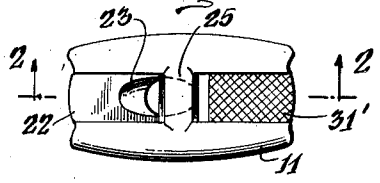


Fig. 2

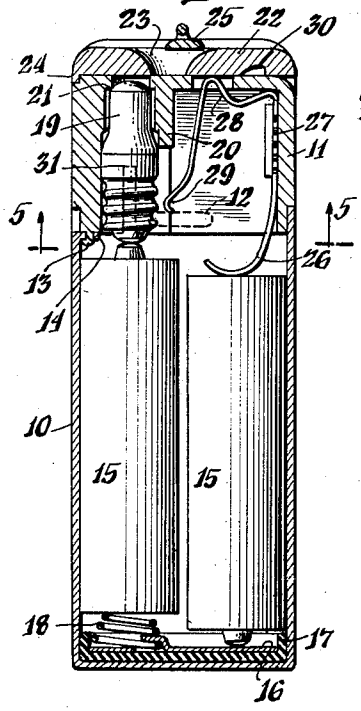


Fig. 3

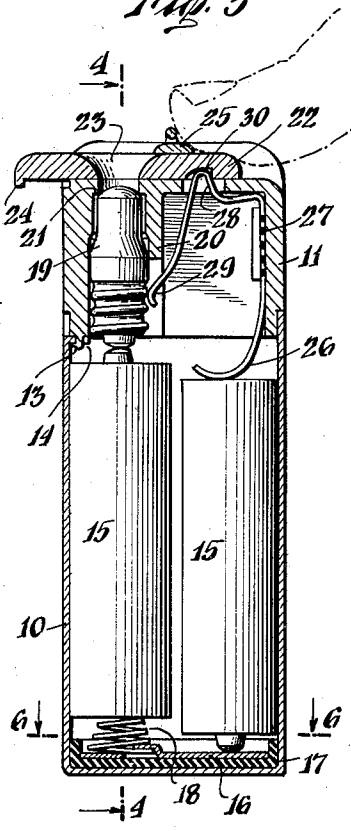


Fig. 4

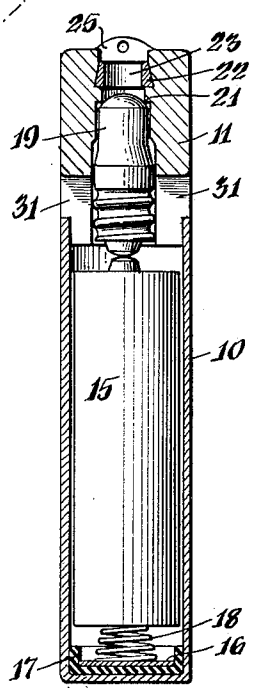


Fig. 5

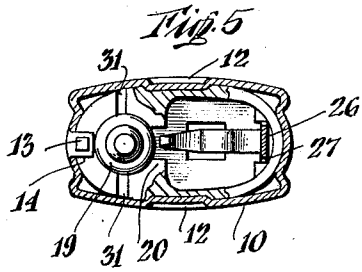
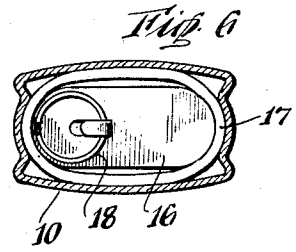


Fig. 6



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FLASHLIGHT

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Application February 6, 1947, Serial No. 726,833

3 Claims. (Cl. 240—10.65)

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This invention relates to a structurally and functionally improved flashlight.

It is an object of the invention to provide an assembly of this nature and in which the operating parts will be reduced to a minimum; such parts being of rugged and simple design to furnish a structure which may be readily operated and in which the several parts requiring renewal may be replaced when necessary.

A further object is that of furnishing a flashlight in which a very simple operation will serve to establish or interrupt the bulb-energizing circuit; such operation involving merely the shifting of a slide which obscures or renders visible the bulb.

A still further object is that of furnishing a unit of this type which will include relatively few parts, each individually simple and rugged in construction, these parts being capable of manufacture by unskilled labor and by quantity production methods, and when assembled cooperating over long periods of time with freedom from all difficulties.

With these and other objects in mind, reference is had to the attached sheet of drawings illustrating one practical embodiment of the invention and in which:

Figure 1 is a top plan view of a flashlight;

Figure 2 is a sectional side view taken along the line 2—2 and in the direction of the arrows, as indicated in Figure 1;

Figure 3 is a view similar to Figure 2, but showing the parts in a different position;

Figure 4 is a transverse sectional view taken along the lines 4—4 and in the direction of the arrows as indicated in Figure 3;

Figure 5 is a sectional view taken along the lines 5—5 and in the direction of the arrows as indicated in Figure 2; and

Figure 6 is a sectional top view taken along the lines 6—6 and in the direction of the arrows as indicated in Figure 3.

In these views the reference 10 indicates a casing to which a head 11 is secured. Such attachment may be effected by notches and instruck portions as indicated at 12. Additionally, the head portion may be provided with a hook-shaped extension 13 cooperable with the slot of a forked portion 14 forming a part of the casing 10. The foregoing parts may be formed of any desired material. Preferably, however, the head 11 is constructed of an aluminum alloy. It may be treated so that its surface will be electrically non-conducting. As shown in Figure 6, the edge

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of the casing may be curved to provide bearing surfaces for dry cells 15.

A metallic layer 16 and an insulating layer 17 may be provided to properly support and isolate the parts. Also, a spring 18 may be furnished to resiliently bear against the base of one of the cells. This cell is conveniently in electrical contact with the base portion of an electric bulb 19. The latter may be disposed within a suitable cavity defined by a wall 20 in the head portion 11. It will be observed that the end of this cavity terminates in an opening 21 of an area smaller than the bulb end. Accordingly, the latter will not be projected through this opening.

The front edge of the head presents a groove or slot. The side faces of the latter may be undercut so as to accommodate a slide member 22 which is conveniently dove-tailed or flared in cross-section. This member presents an opening 23 which is capable of being aligned with the opening 21. A lip portion 24 may form a part of the slide and be engageable with the head 11 to provide a stop as shown in Figure 2. Conveniently the edge portions of the head which define the outer ends of the groove extend substantially beyond the slide. Also, a bar or arch portion 25 may extend between these edges of the head. This arch serves to conveniently receive the end of a chain (not shown) in order to permit the unit to be secured against loss.

Also, as indicated in dotted lines in Figure 3, it serves as to stop for the thumb or finger of the operator, so as to arrest movement of the slide in a direction from right to left as viewed in these figures.

In order to provide a switch controlling operation of the circuit a spring strip may be employed. This strip conveniently has one of its ends curved as indicated at 26 so as to resiliently engage the base of adjacent cells 15. It may be anchored to a wall of the head portion by means of teeth 27 which engage surfaces of that wall. It is bent upwardly as indicated at 28 and extends thence downwardly to terminate in a curved portion 29. This portion lies adjacent to the stem of the bulb 19 and projects through a slot in the wall or partition 20. The slide 22 is formed with a notch 30 in its underside. This notch presents a cam surface cooperable with the projecting portion 28 of the spring.

In use, it will be understood that an operator will separate the casing 10 from the head 11. Cells 15 will be disposed in the casing and the bulb 19 will be mounted in the position illustrated. If it is necessary to remove the bulb,

this may readily be accomplished by inserting a proper instrument through either of the slots 31 of the head 11. With such insertion the tool may engage the bulb and be shifted laterally, resulting in the displacement of the latter from within its socket. Thereupon, a new bulb may be disposed in place. Thereafter, the head may be coupled to the casing.

If, now the parts are in the position shown in Figure 2, it will be observed that the opening 23 is not in registry with the opening 21. Therefore, light rays which might emanate from the bulb will be obscured. However, under such circumstances, the projecting portion 28 of the spring-switch will be engaged by the main lower face of the slide 22. Accordingly, this switch will assume the position shown in Figure 2 in which the curved end portion 29 of the strip is spaced from the side face of the bulb stem. Therefore, the circuit will be open. However, should the slide be shifted from the position shown in Figure 2 to that illustrated in Figure 3, then it is apparent that the extended portion 28 will shift into the recess 30. Under such circumstances the end 29 will shift into contact with the stem of the bulb to thus close the circuit. Finally, the opening 23 will simultaneously align with the opening 21 so that the light rays may pass beyond the casing. Incident to the curved end 29 of the strip, it will be understood that there will be no danger of this strip jamming or scraping against the stem of the bulb.

The surface or a portion of the surface of the slide may be knurled as indicated at 31' to facilitate a shifting of the slide. It will also be understood that the opening 23 in the slide may be of any desired configuration or area. However, it is preferred that it be not of such area as to obstruct the opening 21 and the end of the bulb when the latter is de-energized.

Thus, among others, the several objects of the invention as specifically aforenoted are achieved. Obviously, numbers of changes in construction and rearrangement of the parts might be resorted to without departing from the spirit of the invention as defined by the claims.

I claim:

1. A flashlight including a hollow body presenting a grooved surface and a bulb-receiving socket terminating in an opening substantially in the base of the groove, a slide for obscuring said opening, the height of said slide being less than the height of the walls defining said groove and an arch member having its ends connected to said walls and extending across said slide to provide a retaining element.

2. A flashlight including a hollow body presenting a grooved surface and a bulb-receiving socket terminating in an opening substantially in the base of this groove, a slide for obscuring said opening, the height of said slide being less than the height of the walls defining said groove, and an arch member having its ends connected to said walls and extending across said slide, said arch being disposed along the length of said walls at a point such that it will act as a stop for the thumb of the operator to limit the movement of the slide substantially to a position where it uncovers said opening.

3. A head portion for a flashlight including a relatively narrow hollow body formed with an opening through which a spring may extend and also formed with a bulb-receiving socket terminating in a second opening, a slide shiftably mounted upon said head and being formed with an opening which may be aligned with said last-named opening, said slide being formed with a cam-shaped recess alignable with said first-named opening and a spring-switch mounted within said head and having a portion extending through said first-named opening and cooperable with the cam surfaces of the slide recess.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,321,026	Freed	Nov. 4, 1919
1,392,163	Hoffmann	Sept. 27, 1921
2,166,282	Benjafield	July 18, 1939
2,318,650	Penfold	May 11, 1943
2,329,063	Lockwood	Sept. 7, 1943
2,412,313	Battersby et al.	Dec. 10, 1946
2,426,962	Witchger	Sept. 2, 1947

FOREIGN PATENTS

Number	Country	Date
110,209	Australia	July 25, 1928
112,962	Australia	Apr. 18, 1941