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2,416,558

FLASHLIGHT

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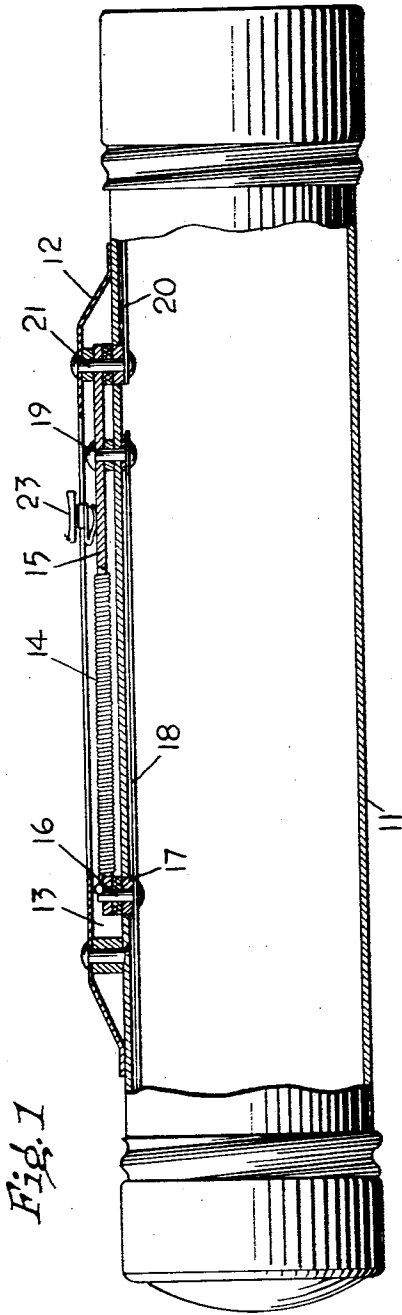


Fig. 1

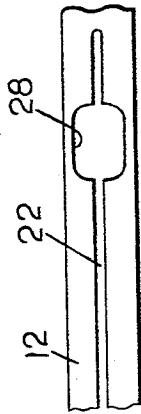


Fig. 2

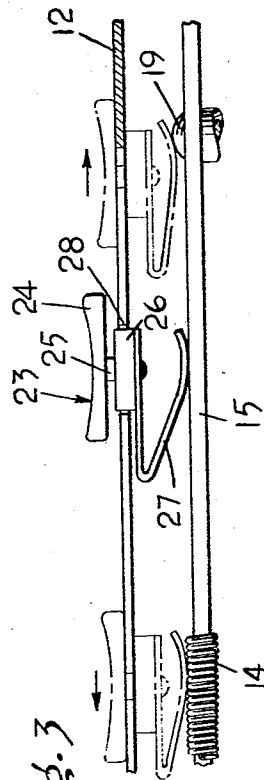


Fig. 3

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# UNITED STATES PATENT OFFICE

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## FLASHLIGHT

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1 Claim. (Cl. 201-62)

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This invention relates to flashlights, and more particularly to a flashlight having means for regulating the intensity of the light beam thereof.

A main object of the invention is to provide a novel and improved flashlight having means incorporated therein for readily controlling the energization of the flashlight, said means including a control device for regulating the intensity of the flashlight beam.

A further object of the invention is to provide an improved flashlight structure of simple design wherein a manually controlled rheostat is provided in series with the lamp circuit for controlling the amount of energizing current in said circuit, said rheostat being combined with switch means for turning the flashlight on and off.

Further objects and advantages of the invention will appear from the following description and claim, and from the accompanying drawings, wherein:

Figure 1 is a side elevational view, partly in cross-section, of a flashlight constructed in accordance with this invention.

Figure 2 is a detail view of a portion of the rheostat housing employed in the flashlight of Figure 1.

Figure 3 is a detail view showing the rheostat slider member and its relationship to the other rheostat elements as employed in the structure of Figure 1.

Referring to the drawings, 11 designates the flashlight housing, which may be of metal, plastic, or other suitable material. Said housing is adapted to contain a plurality of conventional flashlight battery cells. Secured to the side portion of housing 11 is a metal trough shaped member 12 forming an auxiliary housing 13. Mounted in auxiliary housing 13 is a resistance element 14 comprising a coil of resistance wire wound on an elongated fibre core strip 15, said resistance coil being connected at one end thereof to a rivet 16 which extends through an insulating bushing 17 into housing 11 and engages an elongated metal conductor strip 18 at an intermediate point thereof. One end of strip 18 is connected to the shell of the lamp socket and the other end thereof is connected to a rivet 19 which secures the end of strip 18 in position within housing 11 and which has a head portion located on the top surface of fibre strip 15 longitudinally spaced from the free end of resistance element 14. An additional conductor strip 20 is provided in housing 11, one end of which is secured by a rivet 21 in electrical connecting relation to auxiliary housing element

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12 and the other end of which is electrically connected to the grounded terminal of the end cell of the series of flashlight batteries.

Housing member 12 is formed with a longitudinal slot 22 in which is slidably mounted a slider member 23 having a button portion 24, a neck portion 25 adapted to fit slot 22, an enlarged portion 26 and a depending leaf spring contractor portion 27 bearing on strip 15 and adapted to contact the resistance element 14 when the slider member 23 is moved forwardly in its slot. Slot 22 extends forwardly to the forward end of resistance element 14 and rearwardly to a point adjacent to rivet 19 so that slider member 23 may be moved either forwardly for the full length of resistance element 14 or rearwardly into contact with rivet 19. Slot 22 is formed with an enlarged portion 28 intermediate the free end of resistance element 14 and rivet 19, said enlarged portion being adapted to receive portion 26 of slider member 23 to lock said slider member in open-circuit position, as shown in Figure 3.

In operation, button member 24 is pressed inwardly to release portion 26 from recess 28 and the slider member is moved either forwardly into contact with resistance element 14 or rearwardly into contact with rivet member 19. In the rearward position of the slider member, the flashlight lamp will be energized at full brilliancy. In the forward position, the brilliancy of the lamp will be reduced in accordance with the amount of resistance element 14 which is present in the lamp circuit. In this manner the intensity of the beam may be regulated over a wide range of brilliancy.

While a specific embodiment of a controlled brilliancy flashlight has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention other than as defined by the scope of the appended claim.

What is claimed is:

1. In a flashlight battery casing, the combination, which comprises an elongated button housing having a slot with an enlargement therein extending lengthwise of said housing spaced from the casing and parallel thereto, posts mounting said button housing on said casing, a contact extending from one of said posts to an end of the casing providing conducting means from the end of the casing to the button housing, a button slidable in the slot of the housing having a shoulder adapted to snap into the enlargement of said slot

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to locate the button in a neutral position, a brush on the inner end of said button, a bar of insulating material positioned for sliding contact by the brush of the button spaced from the wall of the casing and parallel thereto, spaced posts mounting said insulating bar on said casing, a contact element connected to the inner ends of the spaced posts providing conducting means from the insulating bar to the interior of the casing, said posts positioned to be contacted by the brush on the inner end of the button with the button at the extreme ends of said slot, and a rheostat winding on said insulating bar with one end thereof connected to one of said posts and with the other end spaced from the other of said posts,

said rheostat winding positioned to be contacted by the brush of said button.

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