

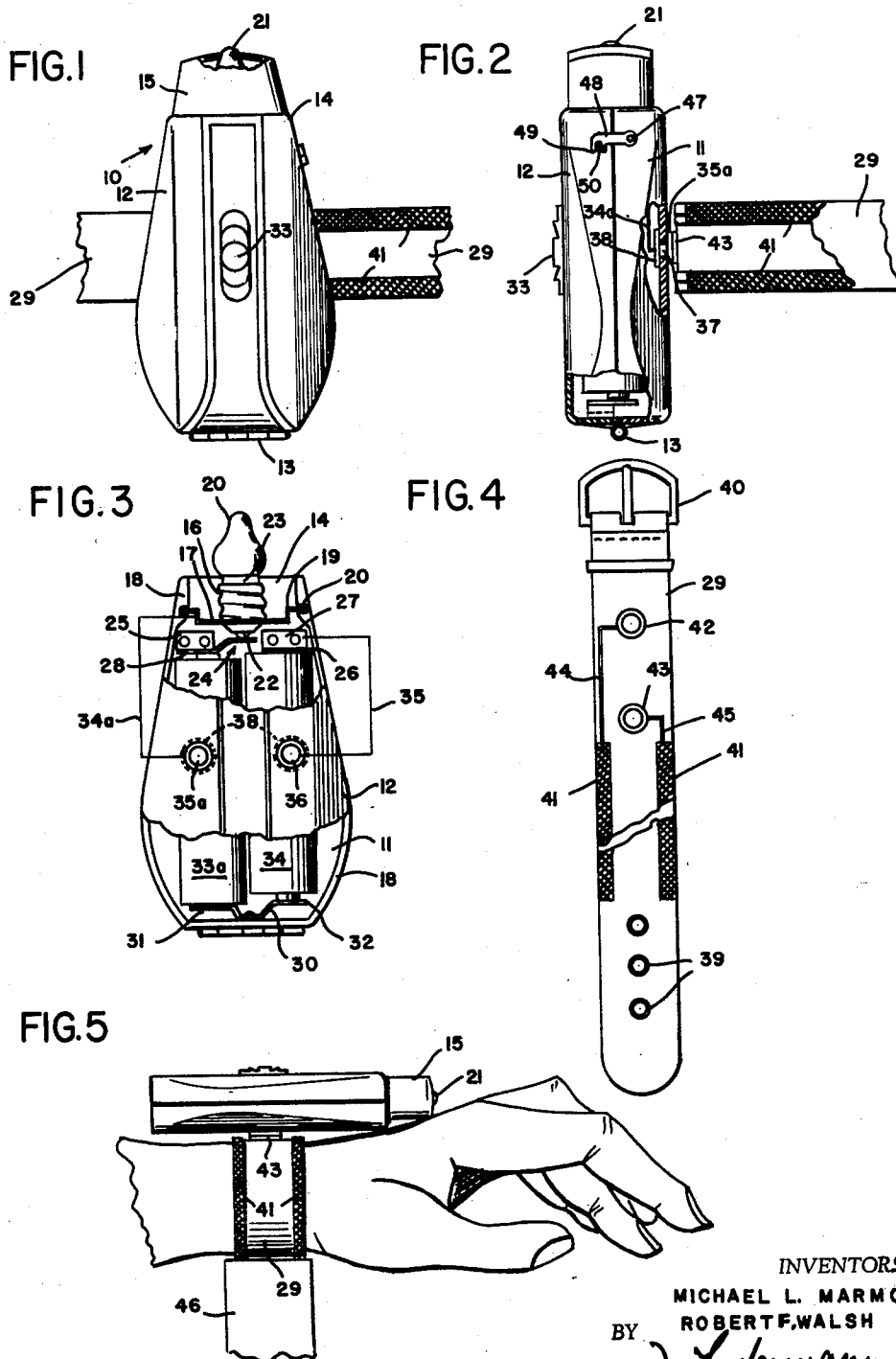
Dec. 3, 1963

M. L. MARMO ETAL

3,112,889

WRIST SUPPORTED FLASHLIGHT

Filed Oct. 4, 1961



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3,112,889

WRIST SUPPORTED FLASHLIGHT

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Filed Oct. 4, 1961, Ser. No. 142,859
6 Claims. (Cl. 240—59)

This invention relates to flashlights, and more particularly to flashlights which are adapted to be carried or worn on the wrist and supported about the wrist by a strap.

A primary object of the invention is the provision of a wrist flashlight including a strap for attaching the flashlight to the wrist, wherein the outer surface of the strap is provided with spaced parallel flexible metallic strips which are connected in series with the flashlight battery and light bulb so that when the hand is positioned to engage any portions of the two contact strips with a metallic object or surface the circuit is automatically closed to energize the bulb.

The flashlight of the present invention is adapted for many uses. For example, route men such as those who deliver milk in the dark hours of early morning, into metallic milk boxes, instead of having to carry a standard flashlight in one hand to look into the box, for, say, a written note from the householder as well as for empty bottles of milk or cream or other containers, they need merely rest the wrist upon the top edge of the box whence the light is energized to light up the box. Also, since both hands are free instead of having one occupied holding the flashlight, the route man has both hands free with obvious consequent advantages. The light may likewise be automatically energized by contacting the metallic conductor strips with metal door knobs, iron railings, belt buckles, and many other metallic objects.

As a consequence of having the light thus energized while worn on the wrist without obstructing the use of both hands, so that the energization is had only at and for the brief time it is needed, the life of the battery is greatly increased.

The above broad as well as additional and more specific objects will be clarified in the following description wherein reference numerals refer to like-numbered parts in the accompanying drawing. It is to be noted that the drawing is intended primarily for the purpose of illustration and that it is therefore neither desired nor intended to limit the invention necessarily to any or all of the exact details shown or described except insofar as they may be deemed essential to the invention.

Referring briefly to the drawing, FIG. 1 is a top plan view of a flashlight embodying features of the present invention, with parts broken away and parts in section.

FIG. 2 is a side view of the same.

FIG. 3 is a fragmentary bottom plan view of the flashlight per se, with parts broken away and including a wiring diagram.

FIG. 4 is a bottom view of the laid out strap per se.

FIG. 5 is a view illustrating how the flash light may be worn on the wrist.

Referring in detail to the drawing, the numeral 10 indicates the flashlight housing which is preferably made of insulating material such as, for example, a plastic material, and which is illustrated as being formed of two complementary shells 11 and 12 mutually hinged together at 13. The two shells are formed so as to leave an opening 14 at the end opposite the hinged end when they are closed together. In this opening a hollow translucent cap 15 registers frictionally or otherwise.

A threaded socket 16 extends in the form of a tube or sleeve from the opening in an annular metallic cage 17, integral with the cage, the latter being supported in opposed side walls 18 of the shell 11 by having opposed

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lugs 19 registering complementarily in recesses 20 in the walls 18.

A light bulb 21 is shown screwed into the socket 16 with its lower contact tip 22 projecting below the cage 17 and its threaded shell 23 is, of course, thus in electrical contact with the socket. A Z-shaped spring contact finger 24, anchored to the shell 11 by its base 25, has its extremity in contact with the bulb tip 22. A second spring finger 26 is secured by its base 27 to the shell 11; the fingers 24 and 26 extend from their bases and hence from the floor of the shell 11 into the interior of the shell.

Secured to the shell 11 at the hinge end thereof is a metallic spring member having opposed raised spring fingers 31 and 32. Two battery cells 33 and 34 are shown, which are clamped, respectively, between the metallic members 23 and 31, and 26 and 32, the member 23 constituting a portion of the finger 24.

The structure so far described or its equivalent is common to flashlights, and in addition thereto flashlights are commonly provided with connections, not shown, with a slide button or switch exemplified by the switch button 33 on the outside of the shell 12. In the present invention, however, conductors 34a and 35, which are shown only diagrammatically in FIG. 3, lead from the cage 17 and the base 27 of the finger 26, respectively.

Transversely spaced on the underside of the shell 12, two male snap button members 35a and 36 are mounted having integral stems 37 passing through the shell and terminating inside the shell in contact heads 38. The lead 34a is connected to one head 38 and the lead 35 is connected to the other head 38.

The strap 29 by means of which the flashlight is attached to the wrist, consists of the usual elongated band of insulating material such as, for example, leather, flexible plastic, etc., having the usual spaced holes 39 and buckle 40. Secured to and projecting a short distance from the surface of the back of the strap, are two spaced longitudinal strips 41 of bare flexible metal, preferably made of woven wire or wire mesh. Anchored in suitably spaced longitudinal positions on the same side of the strap are two female snap button members, spaced apart at the same distance as the spacing of the members 35a and 36, indicated at 42 and 43. A flexible wire 44 connects one strip 41 with the member 42 and a flexible wire 45 connects the other strip 41 with the member 43. Thus, as is readily apparent, the strap may be attached to the flashlight by snapping the male button portions against the female portions, or vice versa, with the strap thus positioned at right angles to the axis of the flashlight, so that the flashlight may be worn on the wrist as illustrated in FIG. 5 with the bulb 21 aiming its light forward in the direction of the hand.

With the flashlight thus worn on the wrist, it is apparent that when the hand is so held that the two strips 29 are in contact with a metallic object such as shown at 46 in FIG. 5, the light will be energized.

Means, not part of this invention, is required to maintain the two shells 11 and 12 in closed position. Merely by way of example such a means is illustrated in FIG. 2 in the form of a hook pivoted at 47 to the shell 11 and including an arm 48 provided with a bifurcated projection 49 engageable with a pin 50 on the shell 12. This locking means may be provided on both sides of the flashlight, if desired.

The flashlight may also be equipped so that it can be continuously energized as by the slide switch 33, but since the use of such a switch on a flashlight is common practice no details thereof have been shown nor any connections between the same, the battery and the light bulb. Such connections or circuit would, of course, merely be a circuit parallel with the circuit illustrated. For such use the flashlight may obviously be readily detached from the

strap 29 and it may as readily be reattached to the strap.
The invention having thus been described, what is claimed and desired to be secured by Letters Patent is as follows:

1. In combination with a flashlight including a housing having a light bulb at one end thereof, a battery mounted in the housing, one terminal of the battery being electrically connected with one terminal of the bulb, a strap of flexible insulating material having spaced longitudinal flexible metallic strips secured to one side thereof, two snap buttons each including two interengageable portions, one portion of each snap button being secured to said housing and the other portion of each snap button being secured to said one side of the strap, the spacing between the portions of the snap buttons on the housing being equal to the spacing of the portions of the snap buttons on the strap, leads connecting said strips with said other portions of the snap buttons, a lead connecting the other terminal of the battery with one of the snap button portions on the housing, a lead connecting the other terminal of the bulb with the other of the snap button portions on the housing, the strap being secured to the housing by interengaging the snap button portions of the strap with the snap button portions on the housing whereby when the strap is worn about the wrist said metallic strips are positioned on the outer surface of the strap.

2. A combination according to claim 1, said snap button portions on the housing being positioned in a line transverse to the axis of the light bulb.

3. In combination with a flashlight including a housing having a front end and a rear end, a light bulb in said front end, a battery in the housing and electrical conductor means connecting one terminal of the battery with one terminal of the bulb, a wrist strap for securing the flashlight to the wrist having one side thereof secured to the housing, the strap having said one side thereof provided with transversely opposed flexible metallic strips extending longitudinally across the intermediate portion of the strap, electrical conductor means connecting one of said strips with the other terminal of the battery, and electrical conductor means connecting the other of said strips with the other terminal of the bulb, whereby when the flashlight is worn on the wrist and the wrist rests against a metallic object with the metallic object serving

as a bridge between the strips the circuit through the light bulb is closed.

4. In combination with a flashlight including a housing having a front end and a rear end, a light bulb in said front end, a battery in the housing and electrical conductor means connecting one terminal of the battery with one terminal of the bulb, a wrist strap of flexible insulating material for securing the flashlight to the wrist extending transversely of the housing, the strap having one side thereof secured to the housing and having on said side a pair of transversely spaced metallic contacts positioned substantially intermediate the length of the strap, electrical conductor means connecting one of said pair of contacts with the other terminal of the battery, and electrical conductor means connecting the other of said pair of contacts with the other terminal of the bulb, whereby when the flashlight is worn on the wrist and the wrist rests against a metallic object with the metallic object serving as a bridge between the pair of contacts the circuit through the light bulb is closed.

5. In combination, a flashlight including a housing, a light bulb, and a battery within the housing, a wrist strap of insulating material for securing the flashlight to the wrist having one side thereof secured to the housing, a pair of spaced metallic contacts on said one side of the strap so positioned longitudinally with respect to the strap that when the flashlight is worn on the wrist the contacts are positioned approximately diametrically opposite the housing, the battery, the light bulb and said contacts being connected in series whereby when the flashlight is worn on the wrist as aforesaid and the wrist rests against a metallic object which serves as a bridge between the contacts the circuit through the light bulb is closed.

6. A combination according to claim 5, wherein said contacts are spaced transversely with respect to the strap.

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