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VEST POCKET TYPE FLASH LIGHT

Original Filed March 9, 1929

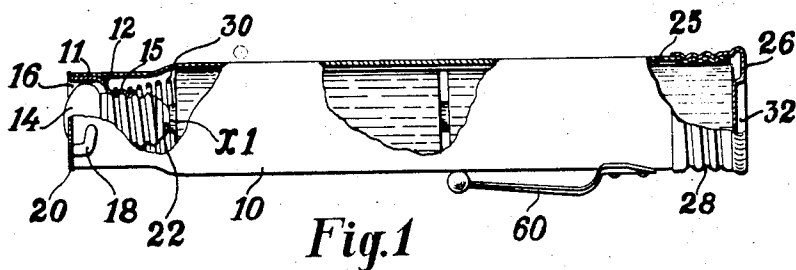


Fig. 1

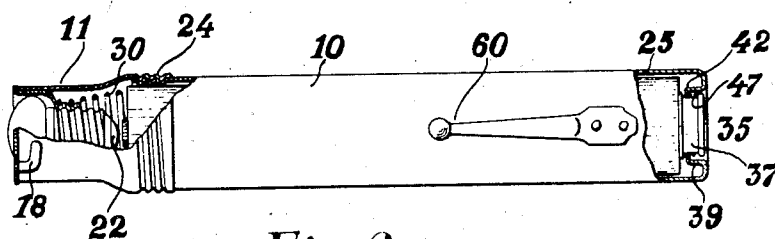


Fig. 2



Fig. 3

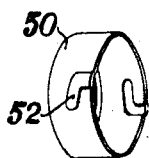


Fig. 4

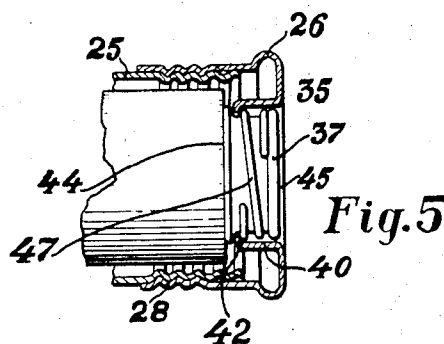


Fig. 5

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VEST POCKET TYPE FLASH LIGHT

Application filed March 9, 1929, Serial No. 345,752. Renewed July 20, 1932.

This invention relates to flashlights of the vest pocket type and provides improvements therein.

The invention provides a flashlight of the type referred to utilizing to the fullest extent the interior space for receiving the cells or battery used for supplying current, whereby to furnish a flashlight of relatively small diameter of maximum capacity.

10 The invention further provides an improved switch construction, whereby sustained or momentary light can readily be obtained at will, and whereby accidental closing of the circuit and consequent wastage of the battery is avoided.

15 Other features of improvement will be hereinafter pointed out in connection with the description which follows.

Several embodiments of the invention are 20 illustrated in the accompanying drawing, wherein,

Figure 1 is a view in side elevation (with parts shown in section) of one embodiment.

Fig. 2 is a similar view of a second embodiment.

25 Fig. 3 is a similar view of a third embodiment.

Fig. 4 is a detail view of a part shown in Fig. 3.

30 Fig. 5 is a longitudinal sectional view illustrating still another embodiment.

Referring to said drawing, numeral 10 designates a casing, conveniently formed of a tube of thin sheet metal, and preferably made 35 about the length of a fountain pen, and preferably of a diameter approximating that of a large-barrel fountain pen. A socket 12 is provided at one end 11 of the casing for receiving a miniature incandescent lamp 14. 40 As shown in Figs. 1 and 2, the socket member 12 may be formed as a separate part, and also preferably made detachable from the casing. The socket member 12 is provided with means 15 for engaging and holding the 45 lamp, here shown as screw threads, and is also provided with a recess 16 adapted to receive and house the glass bulb of the incandescent lamp. The detachable form of socket member 12 is connected to the casing by suitable 50 able means, as for example a bayonet joint

as indicated at 18. The outer edge 20 of the socket member 12 is conveniently flanged outwardly to extend slightly beyond the outer wall of the casing 10, and also preferably knurled, so as to facilitate the grasping and 55 turning of the said socket piece in connecting and disconnecting it from the casing. The socket piece 12 is open at its bottom, so that the center contact 22 of the lamp may extend, or be reached, therethrough, 60 as usual.

As shown in Fig. 1, the end portion 11 of the casing may be made as an integral part thereof, of slightly reduced diameter. The part 11 may also be formed as a separate 65 part, preferably having a screw-thread engagement with the main body of the casing 10, as indicated at 24, the screw threads being of sufficient number and pitch to permit of movement of the part 11 through a small 70 fraction of an inch without danger of disengagement or weakening the connection, for a purpose shortly to be described.

As shown in Fig. 1, the end 25 of the casing may be provided with a cap 26, having a 75 screw-thread connection therewith, as indicated at 28, the number of threads and the pitch being such as to permit of a movement of the cap on the casing of a small fraction of an inch without weakening the connection. 80

A spring 30 is provided within the casing 10, in such manner as to bear upon the upper face of one of the cells α , and normally press it away from the lamp contact 22, the spring 85 30 preferably being a spiral spring surrounding the lamp and bearing against the socket member 12 at one end, and against the upper face of the cell α at the other end as already described. Normally the spring 30 presses 90 the cell or cells lengthwise of the casing into a position where the middle contact α^1 of the cell is out of contact with the contact 22 of the lamp, thus breaking circuit. To complete the circuit, contacts α^1 and 22 are 95 brought together against the tension of the spring 30. In the construction shown in Fig. 1, this is effected by turning the cap 26, which through the screw threads pushes the cells bodily into contact with the contact 22 100

of the lamp. The screw-threaded cap 26 provides a means for making a permanent (or sustained) contact between the lamp and the cells, the cap being provided with an inward projection 32 bearing on the uncovered bottom of one of the cells to make a contact with the zinc pole of the cell, as usual in flashlight construction, and providing a grounded connection between the lamp-socket 12 and the zinc pole of the cell or battery through the casing 10 and cap 25.

Means 35 may be provided for making a momentary contact between the cell contact α^1 and lamp contact 22. This means conveniently comprises a push-button 37 which is preferably completely housed in a recessed portion 39 formed in the end 25 of the casing, as shown in Fig. 2, or in a recessed portion 40 in cap 26, where a cap is used to close end 25 of the casing, as shown in Fig. 5. The recessed portion 39 (or 40) is preferably provided with an in-turned flange 42, and the push button 37 is preferably provided with out-turned flanges 44, 45 on either side of flange 42, whereby said push-button 37 is retained in said recess. A spring 47 may be provided for pressing back said push button 37 after being pushed in, but the spring 47 may be readily omitted and spring 30 relied on for pressing back said push-button. The push-button 35 is preferably of metal, and makes contact with the uncovered zinc bottom of a cell, and also with the metallic casing 10, or casing 10 and metallic cap 26, thereby providing a grounded connection between the lamp socket 12 and the zinc pole of the battery or cell.

The lamp recess 16 may be provided with a glass-covered cap 50, as shown in Figs. 3 and 4, which may be connected to the end 11 of the casing, as by means of a bayonet-joint connection 52. As shown in Fig. 3, the end 11 may be formed as an extension 30, and the socket-member 11 may be formed as an integral part thereof, as shown.

For confining the flashlight in a vest-pocket, a spring clip 60 may be provided on the side of the casing 10, in similar manner to the spring clip on a fountain pen.

What is claimed is:—

In a vest pocket flash-light of the type comprising a long tubular casing of relatively small diameter, a lamp-socket at one end adapted to hold a lamp in such position that the center terminal of the lamp is in line with the carbon terminal of a cell within the casing, and a spring in the top of the casing adapted to normally press the aforesaid terminals of the lamp and cell away from one another; means, at the end of the casing opposite the socket, for pushing on the bottom of a cell against the force of said spring to make contact between the aforesaid lamp and cell terminals, said means comprising a base-piece having an inwardly projecting tubular

sleeve of substantially less diameter than the inside diameter of said casing, and a push button within said sleeve adapted to make contact with the bottom of said cell, said push-button being an inverted cup having at both ends outwardly extending flanges, the flange at the inner end being adapted to bear against the inner end of said sleeve and the one at the outer end adapted to slide against the inner side of said sleeve, said sleeve also having an inwardly extending flange at its inner end, and further comprising a spring adapted to bear against said flange on the inner end of said sleeve and said flange on the outer end of said button.

In witness whereof, I have hereunto signed my name.

MAX E. BUCHHOLZ.