June 26, 1951 J. W. CROCKETT 2,558,606

PURSE LIGHT

Filed Sept. 24, 1949

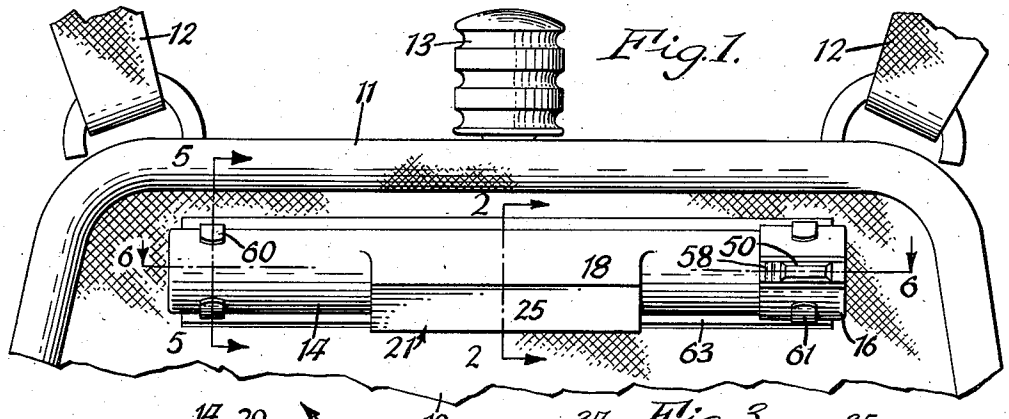


Fig. 1.

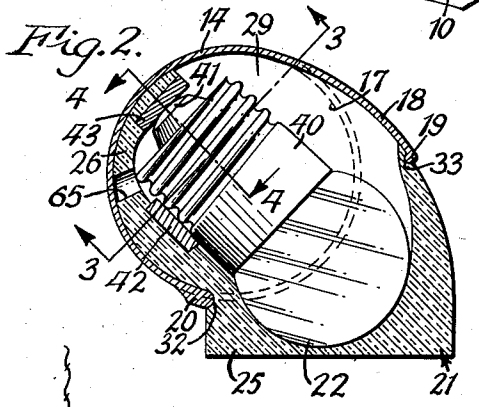


Fig. 2.

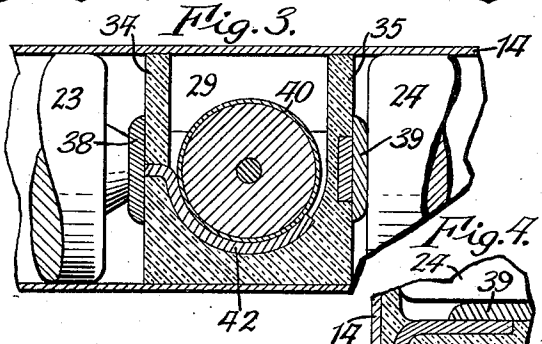


Fig. 3.



Fig. 4.

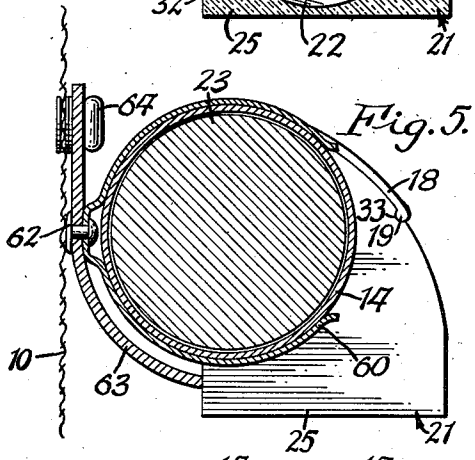


Fig. 5.

Fig. 7.

Fig. 8.

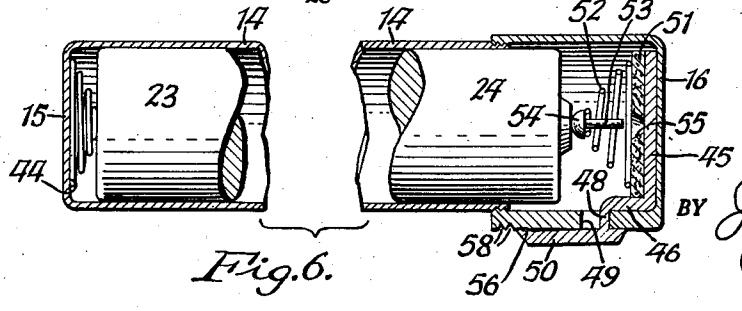


Fig. 6.

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PURSE LIGHT

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1 Claim. (Cl. 240—10.6)

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This invention relates to a device for illuminating the interior of a receptacle, and more particularly to a purse light.

The primary object of the invention is to provide an illuminating device which is compact in design and can be conveniently arranged on the inner side of one wall of a receptacle for illuminating the interior thereof.

Another object is to provide such an illuminating device which is movably mounted on the receptacle wall so that its beam of light can be directed as desired.

Another object is to provide such an illuminating device which is simple in construction, inexpensive to manufacture, easy to install and easy to disassemble for the replacement of batteries and the lamp bulb.

To these various primary aims, and others hereinafter appearing, the invention further contemplates the provision of certain novel structural and mechanical features and combinations hereinafter described and illustrated in the accompanying drawing constituting one form of the invention as reduced to practice.

In the accompanying drawing:

Fig. 1 is a front elevational view of an illuminating device embodying the invention and showing this device mounted on the inner side of one wall of a lady's hand bag or purse, this wall being fragmentarily illustrated.

Fig. 2 is a vertical transverse sectional view, on an enlarged scale, through the illuminating device shown in Fig. 1 and taken on line 2—2 of Fig. 1.

Figs. 3 and 4 are fragmentary sectional views thereof taken on the corresponding numbered lines of Fig. 2 and showing the electrical contact means for the lamp bulb.

Fig. 5 is a fragmentary vertical transverse sectional view, on an enlarged scale, through the illuminating device near one end thereof and showing the means for mounting the device on the fabric wall of the purse, this view being taken generally on line 5—5 of Fig. 1.

Fig. 6 is an enlarged fragmentary horizontal longitudinal sectional view of the device with the central portion broken away to show only the end portions, this view being taken on line 6—6 of Fig. 1.

Fig. 7 is a perspective view of the removable center member in which the electric bulb or lamp is arranged, this view looking at the rear or inner side and one end thereof.

Fig. 8 is a perspective view of the combination switch and spring device shown in Fig. 6.

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While the illuminating device has been illustrated as being applied to and within a lady's hand bag or purse, it will be understood that it can be used with any bag, satchel, trunk or other luggage piece or suitable receptacle.

The hand bag or purse fragmentarily illustrated in Fig. 1 has the usual flexible side walls movable toward and from each other to open and close the hand bag, the numeral 10 representing one of these walls having a marginal frame member 11 to which the ends of a strap 12 are suitably connected for carrying the hand bag. The hand bag or purse is held closed in the usual manner by a latch device one element of which is illustrated at 13.

The illuminating device embodying the present invention is shown as arranged on the inner side of the flexible side wall 10 adjacent the frame member 11 and is generally in the form of a flashlight adapted to be turned on and off at will.

This illuminating device is shown as comprising a metal casing or housing 14 in the form of an elongated cylindrical tube closed at one end by the integral end wall 15 as shown in Fig. 6, and open at its other end. This open end is closed by a removable cap or cover 16, the mouth of which is provided with internal threads which engage external threads on the tubular casing 14 as shown in Fig. 6, although any other suitable connection between this casing and cap can be employed.

Centrally between its ends, the tubular casing 14 is provided with an opening 17 generally rectangular in outline and preferably formed by cutting the casing wall longitudinally a certain distance and also cutting the casing wall laterally through about half its circumference from each end of this longitudinal cut and turning out the piece of casing wall or tab bordered by this continuous three sided cut thereby to provide a hood 18 overhanging the opening 17. As best shown in Fig. 2, the hood 18 curves outwardly and downwardly from the upper side of the casing 14 and the lower longitudinal edge of this hood 18 has an inwardly directed bead 19. The longitudinal edge of the casing wall 14 forming the lower boundary of the opening 17 is shown in Fig. 2 as built up in thickness to form the bead 20.

A member, represented generally by the numeral 21, is removably arranged in the opening 17 in the casing 14. This member 21 serves as a transparent or translucent holder for a lamp bulb 22 and also carries electrical conductive elements

for electrically connecting the lamp bulb 22 with dry cell batteries 23 and 24. The member 21 is made of a suitable transparent plastic material such as methyl methacrylate resin and is preferably molded as a one piece article having the shape shown in Fig. 7. As there shown, the member 21 has a rectangular base section 25, a cylindrical central section 26, and an upper section 28 on either side of the central section 26 and extending laterally therefrom along and rising from the front of the base section 25. The cylindrical central section 26 has its periphery conforming to the inner surface of the tubular casing 14 and is adapted to be received in this casing through the opening 17 therein, this central section being recessed from the top as indicated at 29 to receive the lamp bulb 22. The rear portion of the cylindrical central section 26 projects rearwardly of the rear face of the base section 25. The rear face 30 of each upper section 28 is cylindrically concave and conforms to the curvature of the inner surface of the tubular casing 14. The front face 31 of each upper section 28 is convex and conforms with the inner surface of the hood 18. The rear upper longitudinal edge of the base section 25 is provided with a continuous groove 32 to receive the bead 20 of the casing 14. The front face 31 of the upper section 28 is provided with a continuous longitudinally extending groove 33 to receive the bead 19 on the hood 18, this groove being arranged below the front edge of the recess 29.

The member 21 is of a length conforming to the length of the opening 17 in the casing 14 and when arranged therein, completely fills or closes this opening. The cylindrically concave rear faces 30 of the upper sections 28, when the member 21 is mounted on the casing 14, provide continuations of the inner surface of this tubular casing. In mounting the member 21 on the casing 14 the central section 26 is inserted into the opening 17 in the casing under the hood 18 until the groove 32 receives the bead 20 and the locking bead 19 snaps into the groove 33, the hood 18 being sufficiently flexible or springy to permit of this.

The batteries 23 and 24 are conventional dry cells of the size employed in so-called pocket pen flash lights, although the diametral size of the batteries will depend on the size of the illuminating device. However, for use in hand bags or purses it is desired and an object of my invention to provide a slender illuminating device of compact design so as to take up a minimum of space and not be in the way. Each of these dry cell batteries 23 and 24 has the usual sleeve or jacket of insulating material such as paper surrounding its cylindrical body.

The battery 23 is shown as arranged within the tubular casing 14 between the end wall 15 thereof and the opposing end face 34 of the central section 26 of the member 21 and the battery 24 is shown as arranged within the casing between the cap 16 and the opposing end face 35 of this central section 26.

Electrical contact means are provided for electrically connecting the lamp bulb 22 in series with the dry cell batteries 23 and 24. For this purpose, a pair of contacts 38 and 39 are arranged on the end faces 34 and 35 respectively. As shown in Fig. 3, the positive terminal of the battery 23 engages the contact 38 and the base or negative end of the battery 24 engages the contact 39. The contacts 38 and 39 are connected with the usual sleeve and base terminals 40 and 41 respectively of the lamp bulb 22 in any suitable manner. As shown in Fig. 3, a conductor strip 42 partially embedded in the bottom wall of the central section 26 of the plastic member 21 is arranged to embrace and engage part of the sleeve terminal 40 of the lamp bulb 22. As shown in Fig. 4, a conductor strip 43 is partially embedded in the rear wall of the central section 26 of the plastic member 21 and is adapted to engage the base terminal 41 of the lamp bulb 22.

The dry cell battery 23 is urged toward and into engagement with its contact 38 by a metal spring 44, shown in Fig. 6 as a spiral spring, arranged between and engaging the end wall 15 and the opposing and negative end of the battery 23. This spring 44 also serves as an electrical connector between the battery 23 and the casing 14.

Switch means are provided for opening and closing the series circuit through the lamp bulb 22 and dry cell batteries 23 and 24. Such switch means are shown as being arranged on the cap 16 and, as shown in Fig. 6, comprise a movable contact plate 45, arranged within the cap 16 adjacent the end wall thereof and movable axially thereof. For this purpose one side of the contact plate 45 is provided with an axial extension 46 arranged to slide along the inner surface of the cylindrical wall of the end cap 16. The end of this axial extension 46 is shown as being bent outwardly to provide an arm 48. This arm 48 is arranged in an axially extending slot 49 provided in the cylindrical wall of the end cap 16. The contact plate 45 is movable axially of the cap 16 by a knob or finger piece 50 arranged on the outside of the cap 16 and connected adjacent one end to the outer end of the arm 48.

A disk 51 of insulating material is shown as arranged on the inner side of the contact plate 45. This disk 51 carries a spiral spring 52, the end of which has the largest convolution being arranged against the inner face of this disk. The opposite end of this spiral spring 52 and having the smallest convolution is shown as carrying an axially extending contact pin 53. One end of this pin 53 is shown as being enlarged or provided with a head 54 adapted to engage the positive terminal of the battery 24. The opposite end of the contact pin 53 is arranged to enter a hole 55 provided in the disk 51 and engage the contact plate 45.

In the position of the parts shown in Fig. 6, which is illustrative of the "off" position of the switch, the contact plate 45 is arranged against the inner face of the end wall of the cap 16. This is due to the spring 52 being under a slight amount of compression whereby the head 54 of the contact pin 53 carried by one end of this spring pushes against the battery 24 which in turn is urged against its contact 39 at the inner end of the battery and the other end of the spring 52 pushes the disk 51 against the contact plate 45. It will be seen that when the finger piece 50 is moved axially of the cap 16 and to the left as viewed in Fig. 6, the contact plate will move toward the free end of the contact pin 53. During this movement of the contact plate the spring 52 is further compressed. When the contact plate 45 engages the end of the contact pin 53 the circuit through the lamp bulb 22 and the batteries 23 and 24 is closed.

This position of the contact plate 45 can be maintained by detent means which may be of any suitable form but which are shown as comprising teeth 56, carried by the end of the finger piece 50 on the inner side thereof, these teeth

being engageable with accommodating recess **58** provided on the cap **16**. The finger piece is sufficiently springy to permit of ready disengagement of the teeth **56** and recesses **58** but yet capable of holding the spring **52** compressed so as to maintain the switch in its "on" position.

The series circuit referred to can be traced as follows: Beginning at the contact pin **53** the series circuit extends from the head **54** to the positive terminal of the battery **24** through this battery to the negative terminal at the opposite end thereof, contact **39**, conductor strip **43**, base terminal **41** of the lamp bulb **22** through the filament of this lamp bulb to the sleeve terminal **40** thereof, the conductor strip **42**, contact **38**, the positive terminal of the battery **23**, through this battery **23** to the negative terminal at the opposite end thereof, through the spring **44** to the casing **14**, through this casing to the end cap **16**, from this end cap through the finger piece **50**, arm **48**, axial extension **46** to the contact plate **45**, and back to the end of the contact pin **53**.

The illuminating device can be arranged on the flexible wall **10** of the hand bag or purse in any suitable manner. As shown in Fig. 1, the casing **14** is held adjacent its one end by a bow clamp **60**. A similar bow clamp **61** is provided adjacent the opposite end of the casing **14** and receives the cylindrical part of the cap **16**. As shown in Fig. 5, the center portion of the bow clamp **60** at the rear of the casing **14** is connected as by the rivet **62** to a support plate **63**. The lower end of this support plate **63** is preferably curved to conform to the curvature of the cylindrical portion and the portion of the support plate **63** above the rivet **62** extends upwardly generally parallel to the fabric wall **10** of the purse. The supporting plate **63** is preferably removably connected in any suitable manner to the fabric wall **10** of the purse. For this purpose a conventional type of snap fastener **64** is arranged adjacent the upper end of the supporting plate near each lateral end thereof.

The detailed description of the mounting for the bow clamp **60** shown in Fig. 5 is representative of a suitable mounting for the bow clamp **61** at the opposite end of the illuminating device.

The illuminating device can be readily removed and reinserted in the bow clamps **60** and **61** and also when frictionally held by these bow clamps and the casing **14** and cap **16** can be rotated so as to direct the rays or beam of light emitted through the member **21** in an arcuate path as desired. As shown in Fig. 5, the rear face of the base section **25** of the member **21** engages the lower edge of the support plate **63** so as to limit the rotation of the illuminating device in a clockwise direction relative to the bow clamp **60** as viewed in this figure.

The rear faces **30** of the upper sections **28** of the member **21** are preferably silvered so as to reflect light emitted from the lamp bulb **22** and also to mask the inner ends of the batteries **23** and **24** and associated parts which would be otherwise visible through the transparent member **21**.

An important feature of the invention is the ease with which the illuminating device can be disassembled for replacement of either the dry cell battery **23** or **24** and the lamp bulb **22** in case these elements have lost their effectiveness.

To disassemble the illuminating device the same

is first removed from the bow clamps **60** and **61**. The cap **16** is then unscrewed and the battery **24** is removed from the casing **14**. Thereafter the member **21** is removed from the casing **14** thereby permitting the other battery **23** to be slid out of the open end of the casing. Replacement of the lamp bulb **22** is facilitated by the provision of a hole **65** in the rear wall of the central section **26** of the member **21** through which hole any suitable pointed object such as a pencil or the end of a paper clip can be inserted to bear against the lamp bulb **22** and dislodge the lamp bulb from its mounting in the central section **26**. The lamp bulb can thereafter be removed from the recess **29** and replaced with another lamp bulb. When arranged in the member **21** the lamp bulb is firmly held by the conductor strip **43** which is sufficiently springy or resilient to urge the glass end or head of the lamp bulb into engagement with the front end wall of the recess **29**.

Reassembly of the batteries **23** and **24** and the central member **21** in the illuminating device is accomplished by reversing the procedure just described.

I claim:

An illuminating device, comprising an elongated cylindrical tubular casing having a rectangular opening in its side wall intermediate the ends of the casing, a hood extending outwardly and downwardly from the upper longitudinal edge of said opening, a dry cell battery arranged in said casing at each end thereof, a transparent member removably arranged on said casing and having lower section, a cylindrical central section above and projecting rearwardly of said lower section and an upper section on either side of said central section and extending laterally therefrom along and rising from the front of said lower section, said cylindrical central section being insertable into said casing through said opening and partitioning said casing between said batteries, the rear faces of said upper sections being cylindrically concave to conform to the inner surface of said casing and serving as a continuation thereof, the front faces of said upper sections conforming to the lower surface of said hood, a locking bead along the outer longitudinal edge of said hood and receivable in a longitudinal groove provided in said member thereby to hold said member on said casing, a lamp bulb arranged in an upwardly opening recess in said cylindrical central section and its illuminating end arranged substantially exteriorly of said casing, and electrical contact means on said cylindrical central section for electrically connecting said bulb in series with said batteries.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
2,258,540	Cressaty	Oct. 7, 1941
2,299,148	Johnson	Oct. 20, 1942
2,465,029	Meggs	Mar. 22, 1949

FOREIGN PATENTS

Number	Country	Date
597,943	France	Sept. 14, 1925