April 9, 1968 P. A. FRIGON 3,377,475

ILLUMINATED KEY CASES

Filed Sept. 16, 1965

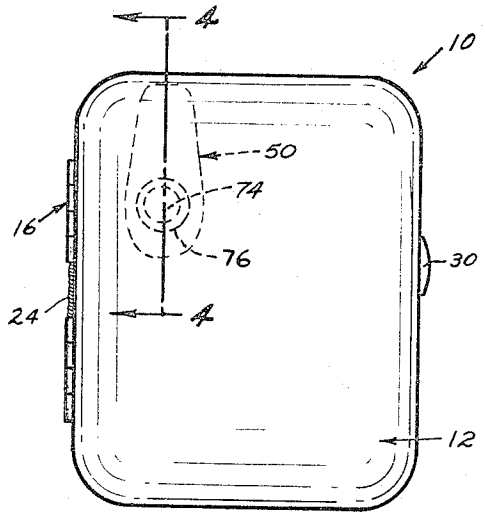


Fig. 1

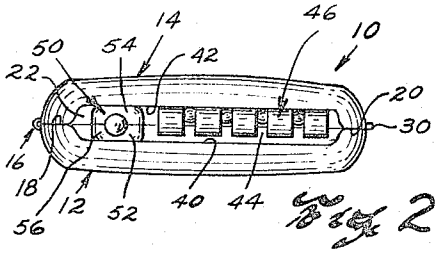


Fig. 2

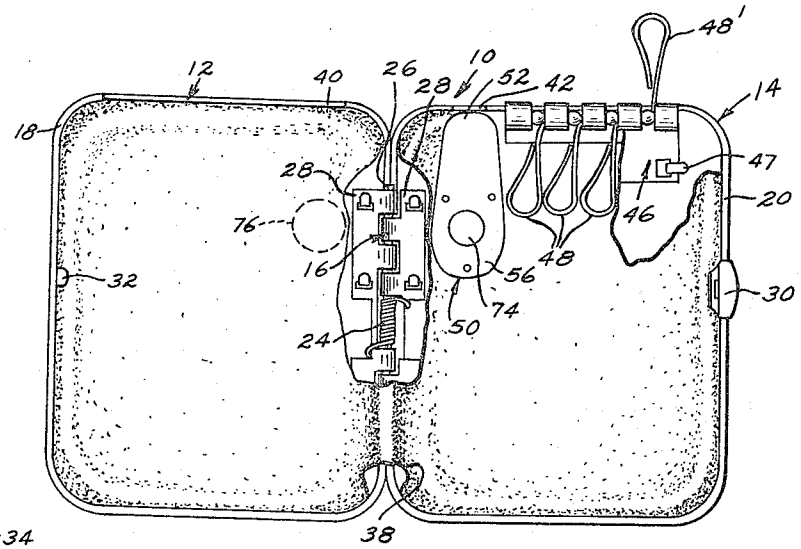


Fig. 3

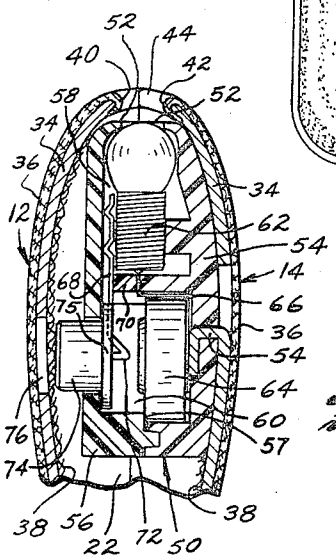


Fig. 4

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ILLUMINATED KEY CASES

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ABSTRACT OF THE DISCLOSURE

A hard shell key case containing a pushbutton operated flashlight and having an opening in the shell thereof aligned with the flashlight button. A flexible case covering is extended over the opening wherein operation of the flashlight may be effected by indention of the covering into the opening against the flashlight button.

This invention relates to key cases and has particular reference to an improved combination key case and flashlight.

An object of the invention is to provide improvements in flashlight key cases which render such cases simple and economical to manufacture and of greater than usual utilitarian as well as aesthetic value.

To attain the aforesaid object and others which may appear from the following detailed description, in accordance with one aspect of the present invention, I provide a rigid or hard shell key case containing a flashlight having a pushbutton light switch.

Operation of the flashlight from outside the case is effected through the provision of a hole in the shell of the case over which there is extended a covering of flexible plastic, leather or other similar case covering sheet material. The covered hole thus provides a soft spot in the case into which the flexible covering can be indented when pressed with a finger. This soft spot is aligned with the flashlight switch button so that, upon such indentation of the case covering, the button becomes engaged thereby and depressed to activate the flashlight. Removal of the finger from the soft spot, accordingly, releases the switch button which, being biased in a manner to be described in detail hereinafter, returns to its initial position to deactivate the flashlight.

It will become apparent hereinafter that the key case is adapted to be opened to provide access to keys and/or other items contained therein at which time the flashlight switch button is exposed and may be operated independently of the aforementioned soft spot. However, with the case in its usual closed condition, the flashlight is additionally adapted to be actuated with a touch of the soft spot and, accordingly, is available at all times for general purpose use or for illuminating keyholes.

The smooth exterior surface of the case not only conceals the flashlight button for the sake of improving the general appearance of the case but, since the button does not protrude above the surface of the case, it prevents accidental activation of the flashlight and snagging in the pockets of apparel or hand bags when carried therein.

The present invention will be more fully understood by reference to the following detailed description which is accompanied by a drawing in which:

FIG. 1 illustrates, in elevation, an embodiment of the present invention;

FIG. 2 is a top plan view of the improved key case of my invention wherein the case is illustrated as being closed;

FIG. 3 is a plan view of the interior of the case wherein the case is illustrated as being opened; and

FIG. 4 is an enlarged fragmentary cross section taken generally along line 4—4 of FIG. 1.

In the illustrated embodiment of the present invention, key case **10** comprises a complementary pair of shells **12** and **14** of substantially identical size and shape which are hinged together by leaf hinge **16** for swinging from and toward each other to permit opening and closing of the case. Shells **12** and **14** are preferably tray-shaped and include opposing rim portions **18** and **20** respectively which are brought into edge-to-edge engagement when case **10** is closed so as to form compartment **22** (see FIG. 4). Compartment **22** is of a depth equal to the sum of the depths of the two shells.

Leaf hinge **16** is provided with torsion spring **24** (see FIGS. 1 and 3) which surrounds pintel **26** having its opposite ends engaging leaves **28** of hinge **16** to normally urge case **10** to open position. The case is held closed against the action of spring **24** by a conventional spring catch **30** carried by shell **14** and hook **32** on shell **12** over which catch **30** is adapted to latch when the two are brought together. Alternatively, hinge **16** may be controlled by an overriding bow spring (not shown) by which the case is releasably held in both closed and open position in a well-known manner. This latter arrangement obviates the need for catch **30** and hook **32**. It is, however, immaterial to this invention as to which means is employed to hold case **10** closed.

Shells **12** and **14** each comprise a stiff or rigid body member **34** (see FIG. 4) formed of pressed sheet metal or a moulded hard plastic or fibrous material and are each covered at least externally with a thin covering **36** of flexible plastic, leather, fabric or an equivalent case covering material. Coverings **36** are preferably but not necessarily carried over rim portions **18** and **20**. Lining **38** may be provided interiorly of case **10** as illustrated in FIGS. 3 and 4 to conceal hinge **16** and raw edges of coverings **36** or, alternatively, the case interior may be flocked, spray painted or otherwise decorated.

Rim portions **18** and **20** are each formed with an elongated notch **40** and **42** respectively which, when case **10** is closed, are opposed to form an elongated opening **44** along one end or top of the case (see FIG. 2). Immediately below notch **42**, key hanger **46** is securely fastened to the interior side of shell **14** by any suitable conventional means such as tabs **47** struck from body member **34** or rivets (not shown). Hanger **46** extends longitudinally from the outermost end of notch **42** toward the hinged side of shell **14** only partially across the full length of notch **42**. The uppermost edge of hanger **46** is sufficiently close to notch **42** to fill and close a substantial portion of opening **44** when the case is closed. Key bails or loops **48** are each pivotally mounted on hanger **46** so that they may be individually swung approximately 180° from a position against the inner side of shell **14** to a position where they extend away from the top of case **10** as does loop **48'** shown in FIG. 3. This positioning of key loops **48**, of course, can only be effected when case **10** is open as illustrated in FIG. 3. However, the case may be closed with one or more of loops **48** in either one or the other of the aforementioned positions. Thus, a selected key may remain outwardly of case **10** and available for use when the case is closed.

Fastened to the same shell **14** is flashlight **50** having a light-emitting one end **52** of such size, shape and disposition relative to notch **42** as to substantially fill and close the portion of opening **44** not occupied by key hanger **46** when the case is closed. End **52** of flashlight **50** is exposed by opening **44** when the case is closed and by notch **42** when the case is opened so that light can be emitted therefrom at any desired time whether the case is closed or open.

Flashlight **50** is illustrated in FIG. 4 as being fastened to body member **34** of shell **14** by tab **54** which is struck

from member **34**. Other suitable means such as rivets and/or cement may be employed for this purpose. Flashlight **50** comprises base **54** and removable cover **56** both moulded or otherwise formed of a suitable rigid plastic or an equivalent electrical insulating material. Internal compartments **58** and **60** formed between base **54** and cover **56** contain flashlight bulb or lamp **62** and battery **64** respectively. Battery **64**, in the particular embodiment herein illustrated, comprises a single wafer-type alkaline dry cell. Electrical connection between the center terminal of lamp **62** and one side of terminal of battery **64** is made by wire **66**. The opposite side of battery **64** is engaged by internal edge **57** of cover **56** which holds battery **64** in a fixed position in base **54** firmly against wire **66**. The circuit for energizing lamp **62** is completed by strip **68** of resilient electrical conducting material arranged to have one of its ends permanently in contact with the outer terminal or metallic base of lamp **62**. The opposite end of strip **68** is adapted to be selectively depressed, as a switch, into contact with the opposite side or terminal of battery **64**. Strip **68** is cantilevered over bridge **70** formed between compartments **58** and **60** to a position where its free end **72** is normally biased out of contact with battery **64**. In such condtion the flashlight is, accordingly, not activated. Switch button **74** is moulded, press fitted, cemented or otherwise fixed upon end **72** of strip **68** and is arranged to extend laterally away from flashlight **50** through an appropriate opening in cover **56** to a point immediately adjacent the inner side of shell **12** when case **10** is closed. Having shoulder **75**, however, button **74** is prevented from movement completely outwardly through cover **56** and, accordingly, may be merely placed in contact with end **72** of strip **68** rather than being fixed thereupon as just mentioned. Depression of button **74** (i.e. movement toward battery **64**) causes end **72** of strip **68** to contact battery **64** thus completing the electrical circuit through the flashligh system to energize lamp **62**. Thereupon, light is directed outwardly from end **52** of flashlight **50** through opening **44**. Release of button **74** allows the cantilevered portion of strip **68** to return end **72** thereof to its normal position out of contact with battery **64** whereupon flashlight **56** becomes deactivated. Flashlight **50** is, accordingly, pushbutton operated in such manner that when button **74** is depressed the flashlight is activated and when button **74** is released or allowed to remain in its normal position the flashlight is deactivated.

It should be obvious that switch button **74** can be operated directly when case **10** is opened as illustrated in FIG. 3. As a feature of the present invention, however, provision is made for operating flashlight **50** when case **10** is closed. To accomplish this, hole **76** is formed in body member **34** of shell **12** before the shell is covered with the material of covering **36** and/or lining **38**. Hole **76** is of slightly larger diameter than button **74** and is so positioned in shell **12** as to become aligned with button **74** when shells **12** and **14** of case **10** are closed.

With covering **36** in place externally of shell **12**, hole **76**, provides a soft spot in shell **12** into which covering **36**, being flexible, may be indented with a finger so as to engage button **74** and depress the button sufficiently to activate flashlight **50**. Removal of the finger from the soft spot in shell **12** releases button **74** which then, as mentioned above, returns to its normal position to deactivate flashlight **50**. The spring tension of strip **68** is sufficient to overcome resistance to the return of button **74** which might result from indented covering material tending to remain in hole **76**.

It is to be understood that when case **10** is provided with a lining such as **38**, the material of outer covering **36** which is indented into opening **76** contacts such lining and causes it, in turn, to engage button **74** by bulging into compartment **22** sufficiently to effect the aforementioned actuation of flashlight **50**.

It should be apparent from the foregoing that outer covering **36** not only conceals the flashlight switch mechanism but protects the same from snagging in pockets or hand bags and shields it from dirt, pocket lint and/or other extraneous matter which could interfere with proper functioning. The soft spot in shell **12** of case **10** renders the case operable, when closed, as a general purpose flashlight and/or as means not only for carrying keys or other utility items but for illuminating a keyhole simultaneously with the use of a key extended outwardly of the closed case on a key loop such as loop **48'** illustrated in FIG. 3.

Those skilled in the art will readily appreciate that various modifications and adaptations of the precise form of the invention here shown may be made to suit particular requirements. Accordingly, it is intended that such modifications which incorporated the novel concept disclosed are to be construed as coming within the scope of the following claims or the range of equivalency to which they are entitled.

I claim:

1. The combination comprising a hard shell case having a hole in one side thereof, an outer flexible covering and an inner lining each extended over said hole, a flashlight disposed internally of said case having a switch button aligned with said hole wherein said switch button is actuable to activate said flashlight by indention of said outer covering into said hole.

2. A combination case and flashlight comprising a pair of rigid shells hinged for swinging movement from an open relationship toward each other into closed relationship to form a compartment therebetween, a flashlight in said compartment carried by one of said shells, said flashlight having a switch button disposed adjacent the other of said shells when said case is closed, a hole in said other shell aligned with said button, a flexible outer covering and an inner lining both extended over said hole, said inner lining being adapted to be engaged by said outer covering and forced against said button to actuate same when said outer covering is indented into said hole.

3. A combination key case and flashlight comprising a pair of rigid shells hinged to swing from an open relationship toward each other to a closed relationship to form, in the latter relationship, a compartment therebetween, at least one of said shells having a notch in one edge thereof arranged to form an elongated opening into said compartment, a key hanger and a flashlight each fastened to one of said shells internally of said compartment, said key hanger and flashlight being juxtapositioned and at least partially exposed by said opening when said shell are in closed relationship, said key hanger having a complement of pivotal key loops each adapted to be extended through said opening and said flashlight having a light emitting one end disposed adjacent said opening for emitting light therethrough when said flashlight is activated, said flashlight having a switch button extending laterally therefrom toward an opposing shell, said opposing shell having a hole therein aligned with said button when said shells are in closed relationship, an outer flexible covering and an inner lining both extended over said hole, said inner lining being adapted to engage said switch to actuate same when forced theretoward by indention of said outer covering into said hole.

4. A combination case and flashlight comprising a pair of rigid tray-shaped shells hinged together for swinging movement from and toward each other into opened and closed relationship such that when said shells are in closed relationship a compartment is formed therebetween, said shells each having a notch in one edge thereof, said notches being opposed to form an opening into said compartment when said shells are closed, a flashlight fastened to one of said shells within said compartment, said flashlight having a light-emitting one end disposed adjacent said opening for emitting light therethrough when said

flashlight is activated and a switch button extending laterally therefrom toward said other shell by means of which said flashlight may be activated when said button is depressed, said other shell having a hole therein aligned with said switch button and outer and inner flexible coverings extended over said hole, said outer covering being indentable into said hole toward and against said inner covering for forcing said inner covering against said switch button to effect activation of said flashlight.

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