May 10, 1955 M. MOHYLOWSKI 2,708,073

COMBINED KEY CASE AND FLASHLIGHT

Filed Jan. 27, 1954

Fig. 1

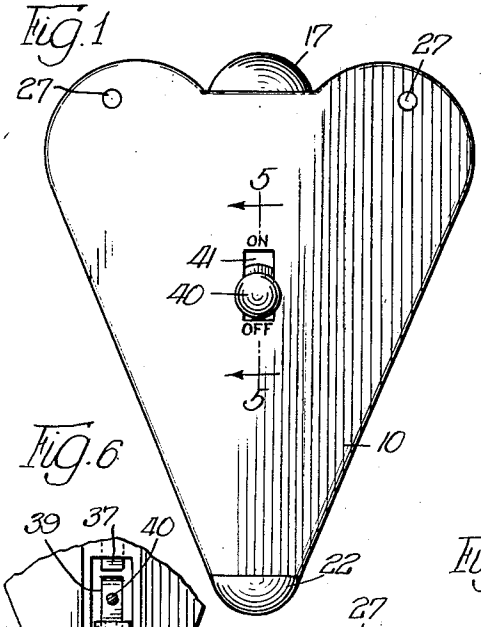


Fig. 2

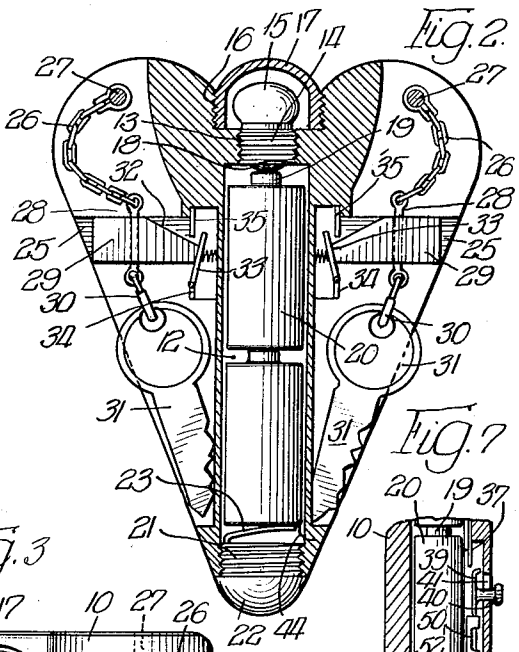


Fig. 6

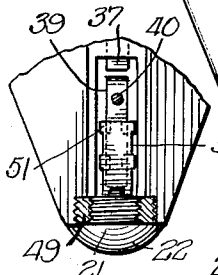


Fig. 3

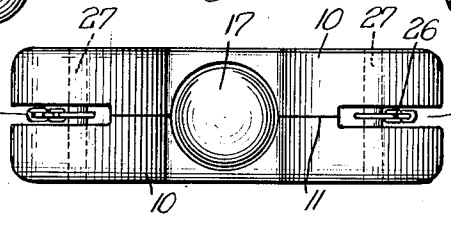


Fig. 7

Fig. 8

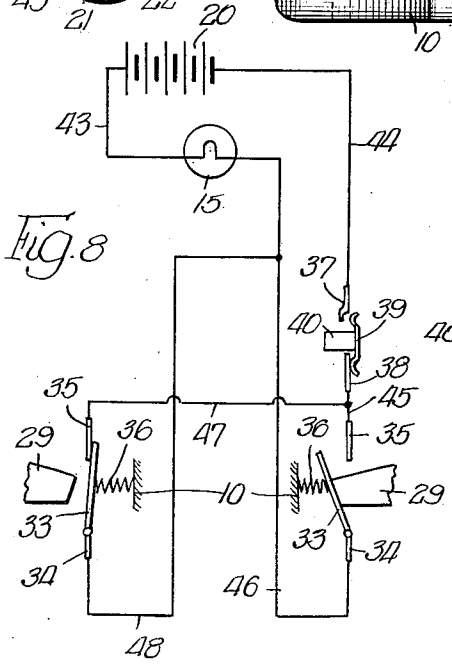


Fig. 5

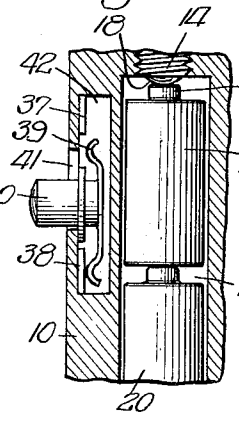
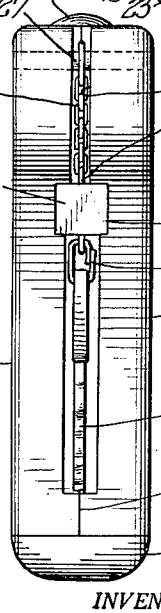


Fig. 4



INVENTOR.

Michal Mohylowski,

BY

B. Pelechowicz

Atty.

United States Patent Office

2,708,073

Patented May 10, 1955

2,708,073

COMBINED KEY CASE AND FLASHLIGHT

Michal Mohylowski, Kansas City, Mo.

Application January 27, 1954, Serial No. 406,424

3 Claims. (Cl. 240—6.4)

The present invention relates to key cases of the type provided with a flashlight for the purpose of illuminating a keyhole prior to the insertion of a key thereinto.

The principal object of the present invention is to generally improve the construction of a key case of the type indicated.

Another object of the present invention is the provision of a suitable electric circuit in a key case of the type indicated, which circuit may be provided with a main switch, on disconnection of which the circuit may be rendered inoperative whereby the flashlight would remain inoperative, the condition when the key is used during the daytime when normally the keyhole does not require any illumination.

A still further object of the present invention is the provision of an auxiliary switch in connection with a key case of the type indicated, which switch may be normally open while the key remains in the case for the purpose of preventing the flashlight to operate, but which is capable of closing instantly on removing the key from the case for lighting the flashlight.

With the above general objects in view and others that will appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawing and pointed out in the appended claims.

In the drawing forming a part of this application, and in which like designating characters refer to corresponding parts throughout the several views:

Fig. 1 is a face elevational view of the present key case;

Fig. 2 is a cross sectional view thereof;

Fig. 3 is a top elevational view of the key case;

Fig. 4 is the side elevational view of the key case;

Fig. 5 is a fragmentary transverse cross sectional view through the key case showing the details of the main switch, the view having been taken on line 5—5 of Fig. 1;

Fig. 6 is the cross sectional view through the case showing the main switch of a modified construction;

Fig. 7 is a cross sectional view through the key case illustrating the main switch of a modified construction, the view having been taken at the angle of 90 degrees from that of Fig. 6; and

Fig. 8 is a diagrammatical view illustrating the electric circuit.

Referring in detail to the present drawing there is shown a key casing composed of a pair of complementary heart-shaped sections **10**. Said sections **10** are cemented or otherwise joined together along line **11**. Each of said sections **10** on its inner face is provided with a channel, the two of which in turn define a longitudinal round chamber **12** in an axial relation with the case. At the wider end of the case said chamber **12** communicates with a constricted bore **13**, the body portion of the case therealong being threaded.

Receivable within said threaded bore **13** is the threaded

seal ring **14** of electric bulb **15**. The glass part of the electric bulb **15** reposes within a cavity made centrally of said case, the walls of said case adjacent said cavity being threaded as at **16** for the purpose of receiving and engaging the lateral threaded wall of cap **17** which is made of glass or plastic and is transparent. Said cap **17** acts as a guard for said bulb **15** for preventing breakage of the latter.

Core **18** of said bulb **15** extends into said chamber **12** and is in position to be contacted by pole **19** of the adjacent battery **20**, one or more of which are insertable into said chamber **12** in a longitudinal relation through the open end of said chamber **12** at the narrower end of said case. Said open end of chamber **12** is threaded for receiving therewithin in a threaded relation plug **21** of stopper **22**. Said plug **21** on its inner end is provided with a metallic leaf spring **23** for contacting with the adjacent smooth end of the nearest battery **20**. Thus batteries **20** are maintained in position within chamber **12** in a longitudinally stacked position.

The inner faces of each section **10** adjacent the side edges thereof are filed off so that when said sections **10** are in a connected mutual position the filed off portions define a longitudinal slot **24** extending along each side edge of the case from the wider end thereof and terminate short of the lower narrower end thereof, as is seen in Fig. 4. Said slot **24** may be of uniform width throughout, or it may be at the wider end of the case narrower, as is seen in Fig. 4.

In a transverse relation with said slot **24** two sections **10** are further recessed to define recess **25**, which is considerably wider than slot **24** and is substantially square on transverse cross section.

There is one of said recesses **25** adjacent each side edge of the case, as is seen in Fig. 2.

Affixed within each slot **24** adjacent the wider end of the case is chain **26** which is connected by one of its ends with pin **27** which is extended transversely through two sections **10** and said slot **24**. The opposite end of said chain **26** connects with rod **28**, which is passed through an oblong square block **29**. Connecting with the opposite end of said rod **28** is swivel **30** with which key **31** is connected. Thus, two keys **31** can be held within the case. Normally, when the key is not being used, block **29** reposes within recess **25**. The inner end of said block **29** is tapered and reduced as at **32**, and contacts with switch plate **33**. Said switch plate **33** is hingedly connected with one terminal **34**, while the other free end of said switch plate **33** is capable of swinging motions to or away from another terminal **35**. Said terminals **34** and **35** may be in any suitable manner supported within the case. In the back of said switch plate **33** there is a coil spring **36** bearing thereagainst by one of its ends, while the opposite end thereof is in any suitable manner embedded or otherwise affixed within the body of the case.

When said block **29** on either side of the case is withdrawn from recess **25** switch plate **33** springs in contact with terminal **35** for completing the circuit, as is indicated in Fig. 8 and for lighting bulb **15**. Withdrawal of block **29** from recess **25** is made simultaneously with the withdrawal of key **31** from slot **24**. The withdrawal automatically lights the bulb to assist a person to find the keyhole in the door or the like for insertion thereinto of the key. When the lock has been opened block **29** is inserted back into recess **25** wherein the same is frictionally held. The contact of the inner end of said block **29** with switch plate **33** swings back the latter from its contact with terminal **35** against the tension of spring **36** for breaking the electric circuit and thereby extinguishing the flashlight. The lighting of the flashlight on withdrawing of block **29** from recess **25** is of course conditioned on

the connection of the main switch presently described in the circuit.

Said main switch includes a pair of terminals **37** and **38** which are adapted for an intermittent bridging by means of switch plate **39** for the purpose of conditioning the operation of the auxiliary switch which includes terminals **34** and **35** and switch plate **33**.

Said main switch further includes knob **40** which connects with said switch plate **39** and extends through slot **41** made in the outer face of one of the two sections **10** of the case. Said knob **40** is shiftable within said slot **41** in either direction for the purpose of intermittently connecting or disconnecting terminals **37** and **38** by said switch plate **39**. The face of section **10** at the opposite ends of slot **41** is provided with indicia "on" and "off" in order to indicate which direction of shifting of knob **40** within slot **41** establishes the electric circuit and which breaks the same.

Said terminals **37** and **38** and switch plate **39** are located within cavity **42** (Fig. 5) made within the body of that section **10** which carries said main switch.

Referring now more particularly to the circuit shown in Fig. 8 the direct contact between bulb core **18** and the battery pole **19** is indicated by line **43**. Wire **44** by one of its ends is embedded within the narrow end of one section **10** and extended therefrom to directly contact with the bottom of adjacent battery **20** as is indicated at **44** in Fig. 2. If preferred, plug **21** may be made of conducting material and the end of wire **44** extended through one section **10** to contact directly with said plug **21**.

When the latter expedient is resorted to then the connection of the end of wire **44** with the adjacent end of battery **20** will be established through said plug **21** and leaf spring **23**, the latter of course being presupposed as made of conducting material also.

The opposite end of said wire **44** connects with terminal **37** in the main switch. Link wire **45** connects the opposite terminal **38** of the main switch with terminal **35** of the auxiliary switch at one side edge of the key case. Terminal **34** of the same auxiliary switch is connected to one end of wire **46**. The opposite end of said wire **46** is extended through the body portion of one of the two sections **10** of the case adjacent bore **13** to contact with the seal ring **14** when bulb **15** remains in an operative position within the case shown in Fig. 2.

From the hereinabove described circuit it will be seen that when plate **39** of the main switch remains in contact with two terminals **37** and **38** of the main switch, and when the key has been withdrawn from slot **24** with block **29** withdrawn from recess **25** for closing auxiliary switch, including switch plate **33** coming in contact with terminal **35**, the circuit will have been established with bulb **15** lit.

To render the circuit operative for the opposite side edge of the key case wire **47** is connected with link wire **45** and terminal **35** at said opposite side edge of the key case, while wire **48** connects terminal **34** with wire **46**. Thus, when main switch is "on" withdrawal of key **31** from slot **24** and of block **29** from recess **25** at the either side edge of the key case will establish the electric circuit to light flash bulb **15**.

The modified main switch, illustrated in Figs. 6 and 7, contemplates a metallic and conducting ferrule **49** threaded both internally and externally to be threadedly engageable within the narrower end of the key case at the end of chamber **12** opposite from that wherein bulb **15** is fitted. Plug **21** carried by stopper **22** is threadedly engageable within said ferrule **49**. Extending from the inner rim of said ferrule **49** is arm **50** which is provided upon its edges with tongues **51** bent over switch plate **39** for supporting the latter in its shifting movement permitting the same to selectively engage with or disengage from terminal **37**.

Knob **40** engaging said switch plate **39** extends through slot **41** made in one section **10** is adapted to be manually engaged to shift said switch plate **39** in either direction.

Conditioned upon said plug **21** being made of non-conducting material, with spring **23** being made of a conducting material, a short wire **52** connects said spring **23** with the end of wire **44**. The opposite end of said wire is connected with terminal **37**. One end of a link wire extends within the bore wherein said ferrule **49** is fitted so that said end of wire **45** may contact with said ferrule. At an intermediate point of said wire **45** wire **47** is of course connected as part of the circuit for the opposite auxiliary switch.

It is observed that all the wiring in the circuit illustrated in Fig. 8 and partially indicated in Fig. 7 should be firmly embedded within one or both of said sections **10** of the key case. The wires of the circuit are not being shown in all the figures of the drawing, because the particular position of the wires within sections **10** and their particular interconnection with the flashlight, batteries and the several switches is within the purview of mechanical skill rather than of the invention.

While there is described herein a preferred embodiment of the present invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. A combined key case and flashlight comprising an electric circuit, said flashlight being in said electric circuit, a switch in said electric circuit, said key case being provided with a recess, a block for selective insertion into and withdrawal from said recess, said switch reposing within said recess in the path of movement of said block, said block actuating said switch for selective breaking or reestablishing of said electric circuit for selective rendering of said flashlight inoperative or for lighting the same, said key case being provided with a slot for reception of a key therewithin when said block reposes within said recess, and connecting means between said block and the key.

2. A combined key case and flashlight comprising an electric circuit, said flashlight being in said electric circuit, a switch including a switch plate in said electric circuit, said key case being adapted for receiving a key, a block carried by the key, the key being adapted for reception within said key case, said key case being provided with a recess, when the key remains within said key case said block reposing within said recess, said switch plate remaining within said recess, and tensioning means in contact with said switch plate, when in said recess said block being adapted to press upon said switch plate against the action of said tensioning means for breaking said electric circuit for maintaining said flashlight inoperative, on withdrawal of the key from said key case said block being adapted to be simultaneously withdrawn from said recess, on withdrawal of said block from said recess said tensioning means urging said switch plate into said electric circuit for lighting said flashlight.

3. A combined key case and flashlight comprising an electric circuit, said flashlight being in said electric circuit, a switch in said electric circuit, said switch including a pair of terminals and a switch plate, said switch plate being hingedly connected to one of said terminals, a coil spring in contact with one face of said switch plate for urging the latter into contact with the other of said terminals, said key case being provided with a recess, a block for selective insertion into and withdrawal from said recess, said switch plate being positioned in a transverse relation with said recess and in the path of movement of said block, when said block reposes within said recess the same being adapted to press said switch plate away from its contact with the other of said terminals against the action of said coil spring for maintaining said electric circuit broken and said flashlight inoperative, on withdrawal of said block from said recess said coil spring

being adapted to shift said switch plate in a contactual relation with said last named terminal for establishing said electric circuit for lighting said flashlight, said key case being provided with a slot for reception therewithin of a key when said block reposes within said recess, a flexible connecting means between said block and the key, and a flexible connecting means between said key case and said block.

References Cited in the file of this patent

UNITED STATES PATENTS

2,481,295	Corigliano	Sept. 6, 1949
2,511,955	West	June 20, 1950