Sept. 11, 1934. G. FLINTERMANN 1,972,879

KEY CONTAINER

Filed Nov. 11, 1931 2 Sheets-Sheet 1

Fig. 1,

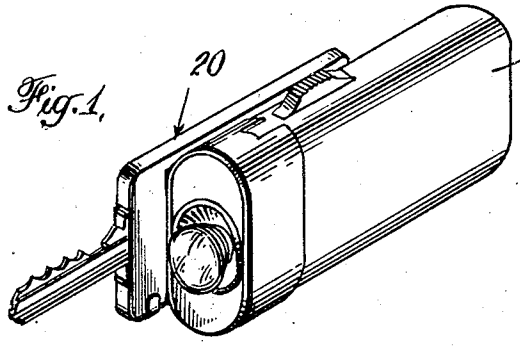


Fig. 2,

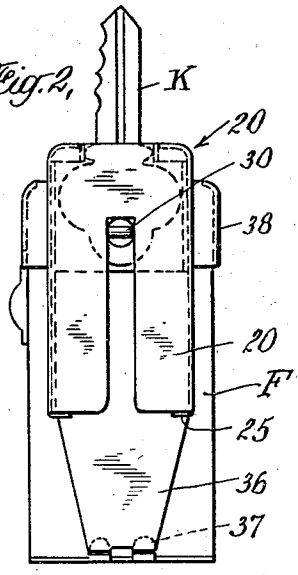


Fig. 3,

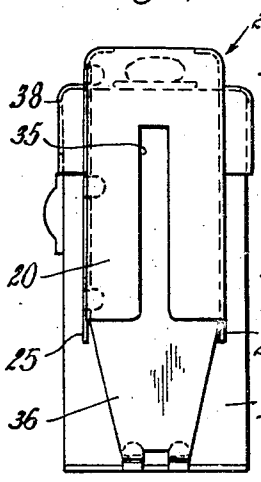


Fig. 5

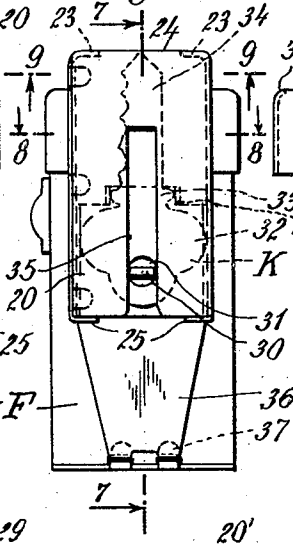


Fig. 6,

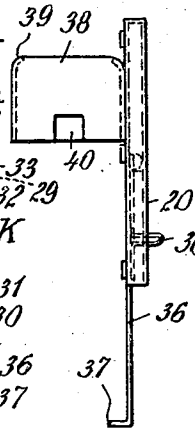


Fig. 7,

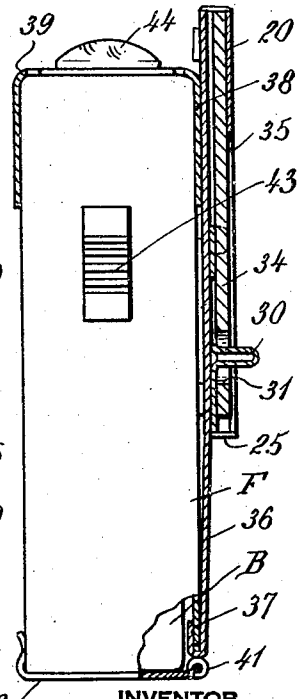


Fig. 4

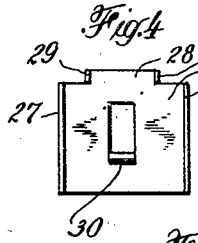


Fig. 9,

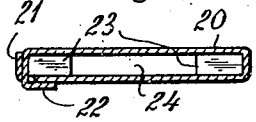


Fig. 10,

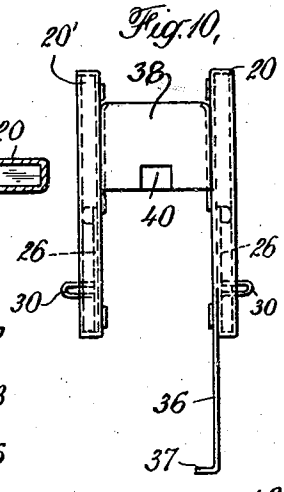
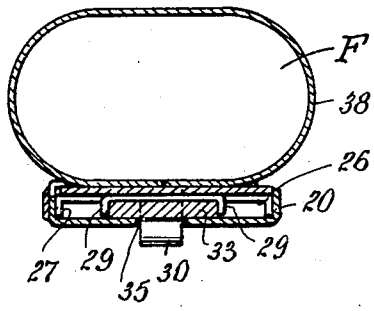


Fig. 8,



INVENTOR

Gerhard Flintermann

BY

Parrie, Davis, Hawes & Edmonds

ATTORNEYS

Sept. 11, 1934. G. FLINTERMANN 1,972,879

KEY CONTAINER

Filed Nov. 11, 1931 2 Sheets-Sheet 2

Fig. 11,

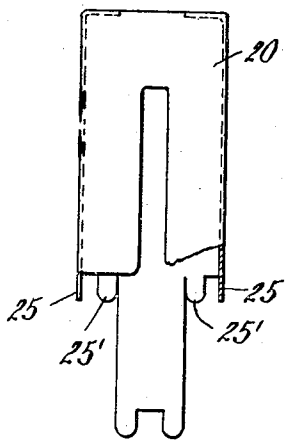


Fig. 12,

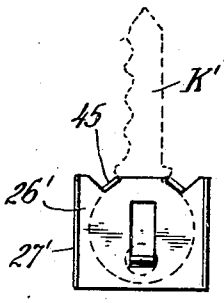


Fig. 13,

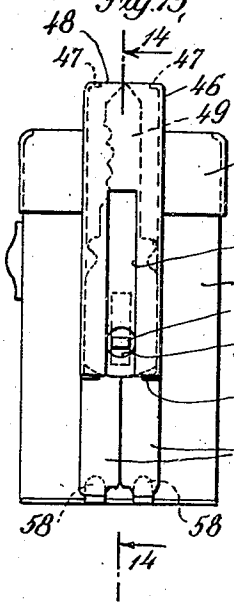


Fig. 14,

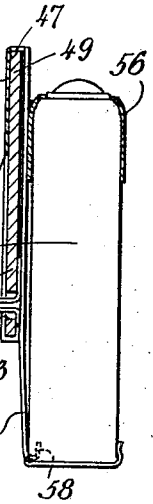


Fig. 17,

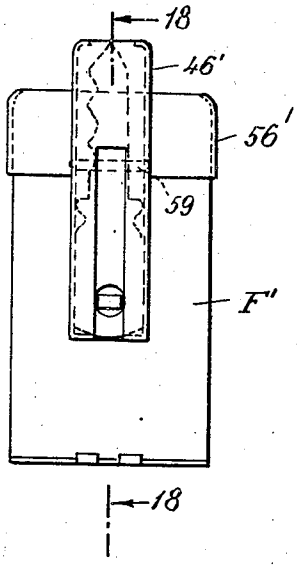


Fig. 18

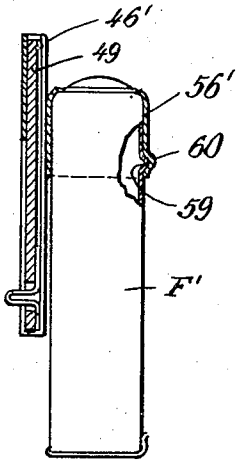


Fig. 15,

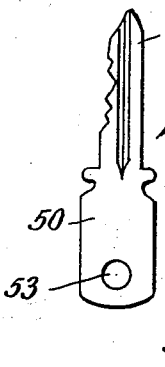
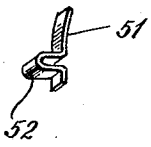


Fig. 16,



INVENTOR

Gerhard Flintermann

BY

Bacon, Davis, Mauriss & Edwards

ATTORNEYS

Patented Sept. 11, 1934

1,972,879

UNITED STATES PATENT OFFICE

1,972,879

KEY CONTAINER

Gerhard Flintermann, Short Hills, N. J.

Application November 11, 1931, Serial No. 574,468

3 Claims. (Cl. 59—96)

This invention relates to a key container and has particular reference to a container for a key from which the key may be released but not entirely removed when it is desired to use it.

It is usually necessary to use a particular key frequently, such as a door or latch key, and it is desirable to have this key so arranged that it can be distinguished from other keys so that searching and fumbling among other keys for the proper one will not be necessary. Also, when the key is to be used in a dark place or during the night time it is not only difficult to locate the proper key, but it is frequently difficult to insert the key in the keyhole without some kind of illumination. Such illumination is usually not readily obtainable and the striking of matches and the like is not satisfactory.

It is the principal object of this invention to provide a key container from which the proper key may be readily produced and held in such a way that its insertion in a keyhole and manipulation to turn the key in the lock is facilitated and also to provide an arrangement whereby properly directed illumination of the keyhole is obtained during the act of inserting the key therein.

In accordance with this object, the key container of the present invention comprises a metal casing having an opening in one side and a slide therein bearing the key. A thumb knob or button on the slide projects through a slot in the casing and when this knob or button is moved forwardly the tang or shank of the key is projected through the opening in the casing ready for use. The head of the key is held rigidly against turning in the casing when the tang or shank thereof projects from the casing, so that the casing serves as a convenient handle for turning the key in the lock. When the tang or shank of the key is withdrawn into the casing the casing forms a compact and attractive container which may be carried in a pocket or in a purse without wearing a hole in the pocket or the lining of the purse, as frequently occurs when a sharp-edged key is carried therein.

This key container may be carried separately as a unit or if it is desired to illuminate the keyhole it carries a clip adapted to be mounted on a pocket flashlight. This clip is secured to the flashlight in such a way that when the tang or shank of the key is projected from the casing of the container in the manner described and directed toward the keyhole, the light from the flashlight is directed in the same direction so that the keyhole can be located at once. In this arrangement the flashlight serves as an offset handle for the key, making it easy to handle and turn in the lock.

It will be seen that the new key container of this invention, whether used separately or applied to the flashlight in the manner described, forms a very convenient and simple arrangement for carrying keys and provides for the immediate and convenient use of the proper key without fumbling or searching. The casing of the key container or the flashlight serves as a convenient handle for the key, enabling the user to manipulate the key more readily and easily, since they provide a larger grip for the user than of the small head of the key. Also, the handle provided by the casing or flashlight enables the user to exert greater force on the key for locking or unlocking stubborn or worn locks.

For a better understanding of this invention reference is made to the accompanying drawings in which

Figure 1 is a perspective view of the novel key container of this invention as it is applied to a flashlight;

Fig. 2 is a side view thereof showing the key in projected position;

Fig. 3 is a side view thereof with a key holding slider removed;

Fig. 4 is a face view of the key holding slider adapted to fit in the casing of Fig. 3;

Fig. 5 illustrates the side view of the container, showing the key withdrawn within the casing;

Fig. 6 is an edge view of the key container fitted with the means for attaching it to a flashlight;

Fig. 7 is an enlarged longitudinal section as seen along the line 7—7 of Fig. 5;

Fig. 8 is an enlarged transverse section as seen along the line 8—8 of Fig. 5;

Fig. 9 is an enlarged cross section through the key container casing as seen along the line 9—9 of Fig. 5;

Fig. 10 is a side view of the flashlight fitting with two key containers;

Fig. 11 illustrates a modified form of the key container;

Key 12 illustrates a slide for holding a round-headed key;

Fig. 13 is a side view of a modified form of key container and flashlight clip;

Fig. 14 is a longitudinal section thereof as seen along the line 14—14 of Fig. 13;

Fig. 15 is a face view of a key which has been altered to fit the key container shown in Figs. 13 and 14;

Fig. 16 is a perspective view of the slider adapted to carry the key of Fig. 15 in the key container of Figs. 13 and 14;

Fig. 17 is a side view of a modified form of flashlight fitting with the key container attached thereto;

Fig. 18 is a longitudinal section thereof as seen along the line 18—18 of Fig. 17.

Referring to Figs. 1 to 8, inclusive, numeral

20 designates the key casing of the container. This casing is preferably formed from a blank of sheet metal provided at its opposite edges with alternately spaced ears 21 and slots 22. The sheet metal blank is shaped into a tube of rectangular cross-section as shown in Fig. 9 and the ears 21 on one edge of the blank are passed through corresponding slots 22 on the other edge of the blank and are bent down flatly along the adjacent surfaces to rigidly lock the joined edges thereof together. One end of the casing 20 is provided with the ears 23 and when these ears are bent down within the open end they form shoulders which define a narrow opening 24, as shown in Figs. 1, 2, 5 and 9. A pair of tabs 25, shown especially in Fig. 3, extend from the opposite end of the casing and are adapted to be bent into the adjacent opening thereof for a purpose to be described later.

Adapted to be slidably mounted within the casing 20 is a slider 26, shown especially in Fig. 4 and in the enlarged cross-sections of Figs. 7 and 8. This slider is also made of sheet metal and the opposite sides thereof are turned upwardly to form the parallel flanges 27 which are substantially equal in width to the inside width of the casing 20, so that the slider 26 fits closely within the casing. One end of this slider 26 is provided with a narrow extension 28 having the upturned flanges 29 on opposite sides thereof. A tongue is punched out of the center of the slider 26 and bent upwardly upon itself to form the lug 30.

The key K is adapted to be mounted on this slider in such a way that the lug 30 passes through the hole 31 of the key and the head 32 of the key is held between the flanges 27 of the slider. The throat 33 of the key fits between the small flanges 29 of the slider extension 28 and is held against lateral movement by these flanges. Thus the head of the key is anchored on the slider 26 while the tang or shank thereof extends freely beyond the slider.

This slider 26 with the key K mounted thereon is inserted tang first into the casing 20 which is also provided with a longitudinal slot 35 for the entry of the lug 30 of the slider 26. When the slider 26 and the key have been inserted within the casing 20, the tabs 25 thereof are bent from the position shown in Fig. 3 into the position shown in Fig. 5 so as to lock the slider 26 and the key K within the casing 20.

In operation, the casing of the key container is held in the palm and the lug 30 is advanced within the slot 35 of the casing 20 by the thumb or finger so that the tang or shank 34 of the key K is projected through the opening 24 in the front end of the casing 20, while the head 32 of the key is locked within the casing 20, its outward movement being limited by the engagement of the lug 30 with the end of the slot 35 and/or by the engagement of the slider 26 with the ears 23 forming the tang outlet opening 24. Either or both of these stop means may be provided, but as shown especially in Fig. 2, the lug 30 acts as the stop member, while the extension 28 fits relatively closely within the opening 24 so as to hold the key rigidly against lateral movement. When the tang of the key has been projected from the casing 20 in the manner described, it may be readily inserted and turned in the lock, the casing 20 providing a larger and more easily operable handle than the usual small head of the key, whereby greater force may be exerted on the key when a stubborn lock is encountered. When the key shank is returned within the casing 20 the slider 26, fitting frictionally within the casing 20, serves to hold the key tightly within the casing without rattling and prevents its tang 34 from sliding out of the casing when it is not in use.

When the key casing 20 is mounted on a flashlight in accordance with this invention, the sheet metal blank from which the casing 20 is formed is provided with mounting means or clips, which include a flat extension 36 having the two tabs 37 formed on its lower end and bent at right angles thereto and a tubular sheet metal band 38 soldered or otherwise secured to the inner surface of the casing 20 near its upper end. This tubular band 38 is also formed of sheet metal and its upper edge is turned inwardly as indicated at 39 in Fig. 6. This band 38 is shaped to fit the particular kind of flashlight housing upon which the key container 20 is intended to be mounted, and the tabs 37 of casing extension 36 are also shaped and arranged to conform to this particular form of flashlight casing. The lower edge of the band 38 is also provided with a slot 40 for the reception of the flashlight button. In mounting the casing 20 on the flashlight housing F, shown in Figs. 1, 2, 3, 5, 7 and 8, the band 38 thereof is passed over the front end of the flashlight housing F and the tabs 37 on extension 36 are inserted in the openings provided in the flashlight housing F for the hinge barrel 41 of the movable bottom 42 of the flashlight housing F. Obviously, other forms of mounting clips for the casing 20 will be necessary when it is to be mounted on different forms of flashlights. When the novel key container is mounted on the flashlight F in the manner described, the subsequent insertion of the dry cell B through the open bottom of the flashlight housing F bends the tabs 37 up against the inner surface of the housing and securely locks the key container thereon. When the flashlight button 43 is manipulated the slot 40 on the band 38 accommodates the forward movement of the button 43.

In operation, the illuminated key container of this invention is held in the hand and if the keyhole of the lock is located in a dark place or it is desired to manipulate the lock in the night time or the keyhole is otherwise difficult to find, the user projects the tang or shank 34 of the key from the key casing 20 by advancing the lug 30 and illuminates the flashlight by manipulating button 43. It will be seen that the tang of the key lies in the light zone cast by the lamp 44 of the flashlight and that the key may be readily directed into the keyhole. The flashlight housing F and the casing 20 form a readily gripped handle for the key, so that it may be turned easily even in a stubborn lock After the key has been used in the lock the user turns off the flashlight and retracts lug 30 to withdraw the tang 34 of the key K within the key casing 20.

As shown in Fig. 10 a second key container 20' may also be soldered to the band 38 so that two keys may be used in the manner described.

In the modified form of the key casing shown in Fig. 11 the open lower or rear end of the key casing 20 is not only provided with the casing closing tabs 25 but is also provided with the auxiliary tabs 25'. Inasmuch as the sheet metal tabs 25 are liable to break off after they have been bent back and forth a number of times in inserting and taking out a key from casing 20, these auxiliary tabs 25' for replacing the broken tabs 25 are provided. Thus the key container may still be used, since the auxiliary tabs 25' will perform the same function as the original tabs 25,

namely the closing of the bottom or rear end of the casing 20 to seal the key and its slider within the casing.

Round headed keys, because of the circular shape of their heads, are not held rigidly in the form of slider shown in Fig. 4. A special slider 26' for round headed keys is accordingly provided and is illustrated in Fig. 12. In this arrangement, the slider 26' is provided with the guide flanges 27' as before, but at its front end it is provided with auxiliary flanges or tabs 45 disposed at an angle, so that they will embrace or engage the circular head of the key K' within the reduced portion between the head and the shank of the key. These lugs 45 accordingly hold the round headed key K' rigidly in the slider 26' against any sidewise movement. This slider 26' fits in the casing 20 or 20' in the manner described.

Figs. 13 and 14 illustrate a modified form of the key container of this invention. In this arrangement the key casing 46 is made narrow and is formed by folding a blank of sheet metal into a tube having a rectangular cross-section. The front end of this casing 40 is provided with the ears 47, which are folded down into the adjacent opening for the passage of the tang 49 of the key K'', which is shown especially in Fig. 15. This key K'' is the standard type of key with the sides of the head cut off, so that the head 50 is narrow and has parallel sides. The width of the key head 50 is approximately equal to the inside width of the key casing 46, so that the key is held laterally rigid within the casing 46 and yet is slidable freely therein. Instead of being carried on a slider the key K'' carries the slider 51, shown in perspective in Fig. 16. This slider 51 consists of a strip of springy metal bent upon itself to form the lug 52, which is inserted through the hole 53 of the key head 50. A slot 54 is provided in the face of the key casing 46 for the passage of the lug 52 of the slider 51, so that when the lug 52 of the slider 51 is inserted in the hole 53 of the key head 50 and the key K'' is inserted in the key casing 46, the lug 52 of the slider 51 may be manipulated within the slot 54 to project or withdraw the tang 49 of the key through the open end 48 of the key casing 46. The bendable ears 55 are formed on the key casing 46 and may be bent partially into the adjacent opening to hold the key K'' within the casing. The ends of the slider frictionally engage the casing and the slider resiliently holds the key therein so that the key will not rattle or slip out. If the key casing 46 is to be mounted on a flashlight it is soldered or otherwise secured to the band 56 and is provided with the extensions 57 having the bendable tabs 58 for insertion within the hinge openings of the flashlight housing in the manner described.

In the modified form of the invention illustrated in Figs. 17 and 18 the flashlight housing F' is upset to form the surface ridge or rib 59 while the band 56' carrying the key casing 46' is also upset to provide the inside groove 60 which snaps resiliently over the ridge or rib 59 on the flashlight housing to hold the key casing 46 securely on the flashlight without the use of any other fastening means. In this arrangement the flashlight and key container are manipulated in the manner described.

It will be seen that the new key container of this invention, whether used separately or equipped with the clips for securing it to a flashlight housing, provides a very simple, attractive and effective arrangement for carrying keys. The proper key is always at hand and may be prepared for use simply by manipulating the lug 30 or 52 in the manner described and the casing forms a convenient and larger handle for turning the key in the lock and enables the user to use greater force for operating a stubborn lock than he would ordinarily be able to exert with the usual small headed key. When the key container is mounted on the flashlight housing it is provided with an immediate and convenient source of illumination for instantly locating the keyhole, the rays of light issuing from the flashlight being directed in the same direction as the tang of the key. The flashlight also provides a firm grip on the key and, being slightly offset from the shank of the key, provides a greater leverage for operating the key, especially when it is desired to operate a stubborn lock.

While several preferred embodiments and modifications of the invention have been illustrated and described herein, it is to be understood that the invention is not limited thereby but is susceptible of changes in form and detail within its scope.

I claim:

1. In a key container for carrying a substantially flat key, a casing comprising a single piece of bendable sheet material, bent to form a flat elongated container open at at least one end, a slider carried within said casing and slidable toward and away from said casing opening, means for connecting the head of a key to said slider and bendable extensions formed integrally with the walls of said casing adjacent the end opening therein and extending partially across said opening for preventing movement of said slider and the key head carried thereby out of said casing.

2. In a key container for carrying a substantially flat key, a casing comprising a single piece of sheet metal bent to form an elongated flat container open at both ends, a slider carried within said casing and slidable toward and away from one of said casing end openings, means for connecting the head of a key to said slider, means for propelling said slider in said casing and a plurality of bendable tabs formed integrally with the walls of said casing adjacent the open ends thereof and extending inwardly over the sides of said openings for limiting the sliding movement of said slider and the key head carried thereby.

3. In a key container for carrying a substantially flat key of the type having an opening in the head thereof, a casing comprising a single piece of sheet metal bent to form an elongated flat container open at both ends, a slider carried within said container and slidable toward and away from one of said casing openings, said casing having an elongated side opening therein parallel to the path of movement of said slider, a projection on said slider for passing through the opening in a key head and projecting out of said elongated casing opening, said projection serving to anchor a key head to said slider and to provide a means for moving said slider from the exterior of said casing, and a plurality of bendable tabs formed integrally with the walls of said casing adjacent the open ends thereof and extending inwardly over a portion of said openings, said tabs acting to prevent movement of said slider out of the ends of said casing.

GERHARD FLINTERMANN.