Jan. 6, 1953

O. S. ELLIFF

2,624,192

KEY RETAINER

Filed April 27, 1950

FIG. 1.

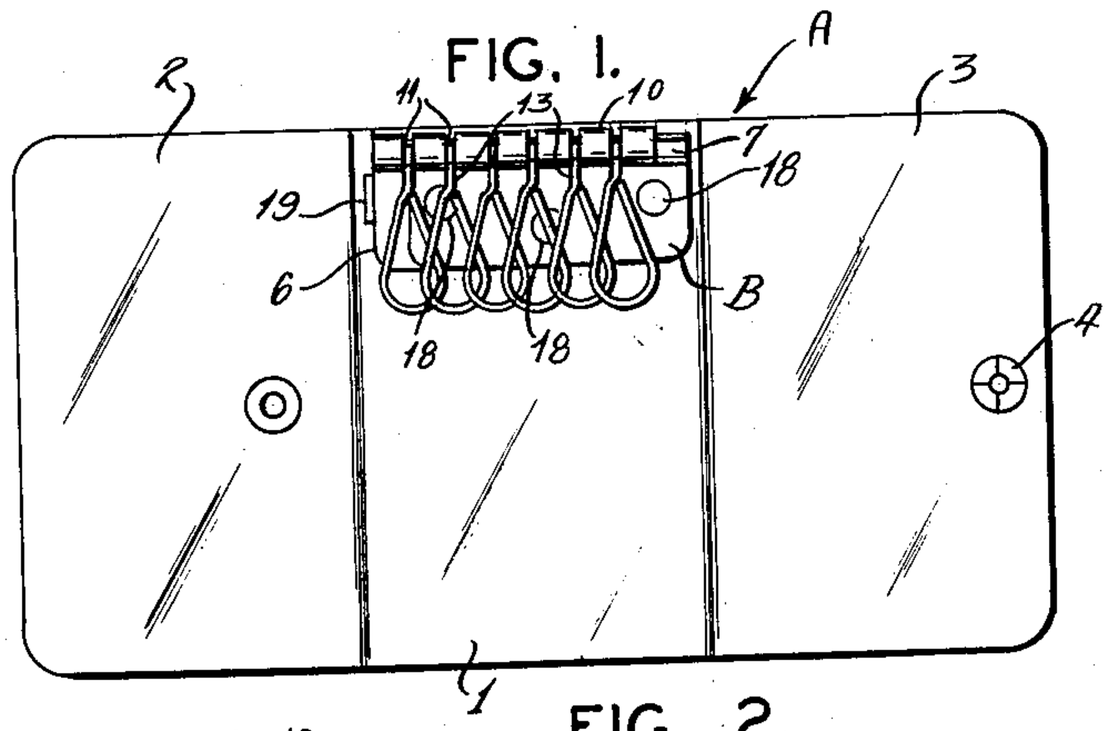


FIG. 2.

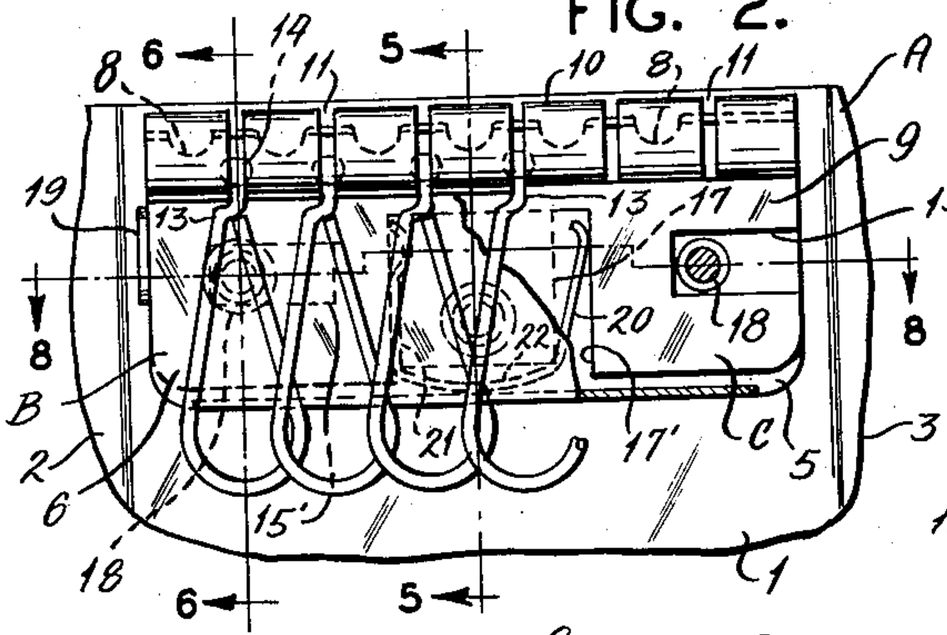


FIG. 3.

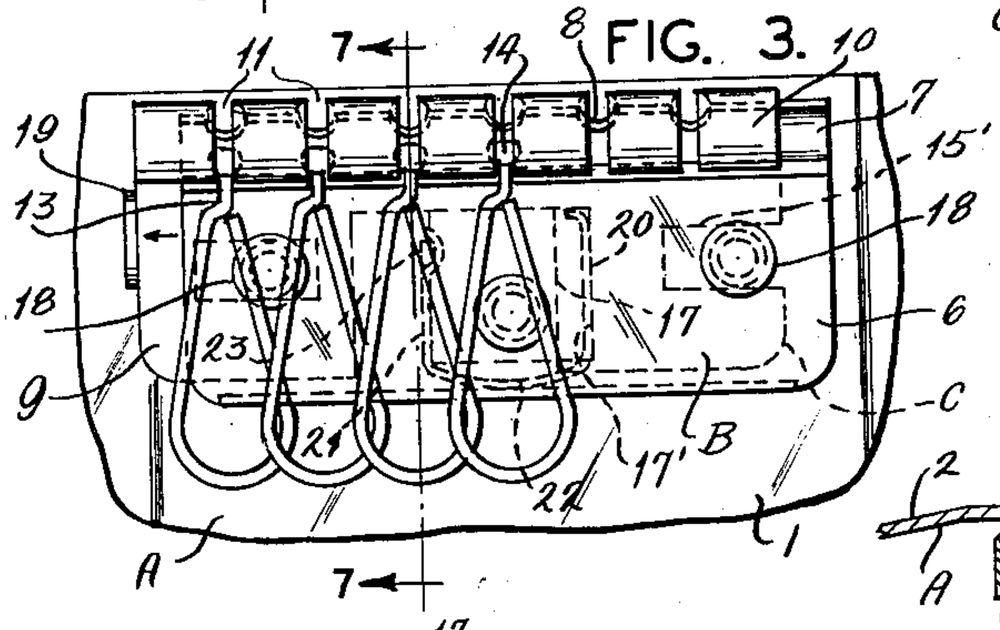


FIG. 4.

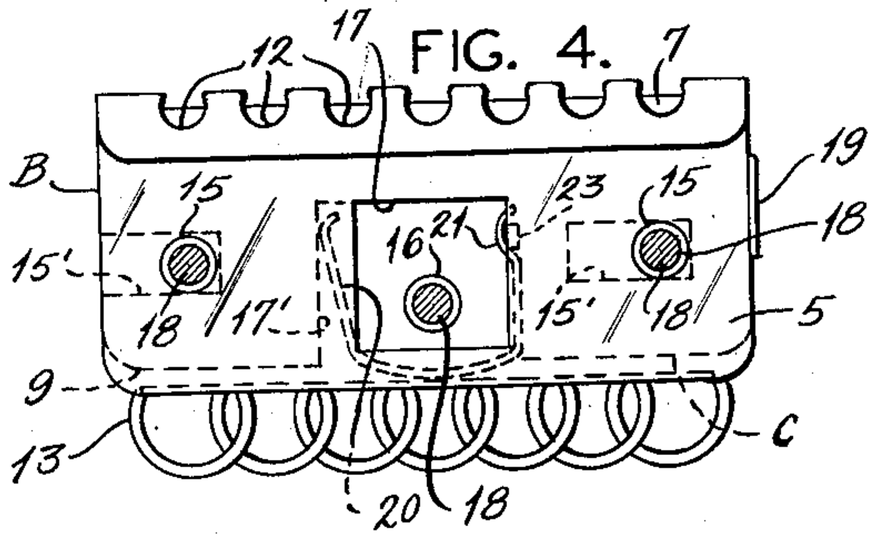


FIG. 5.

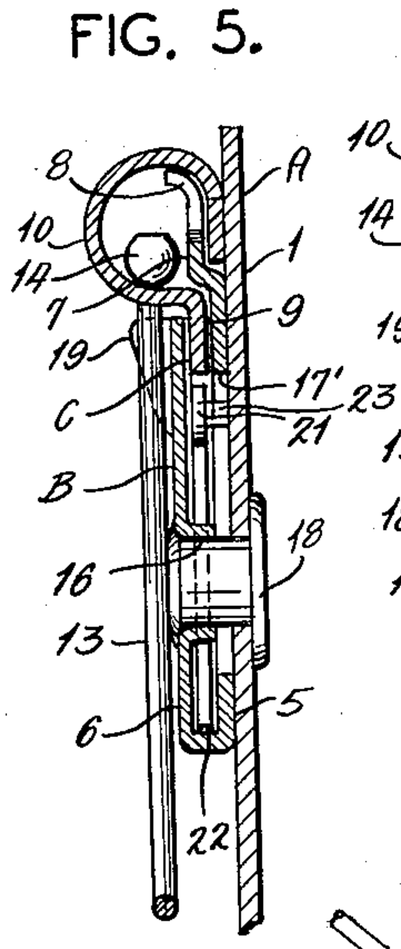


FIG. 6.

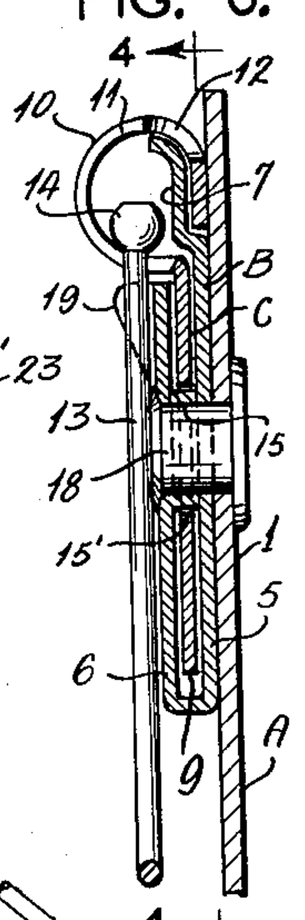


FIG. 7.

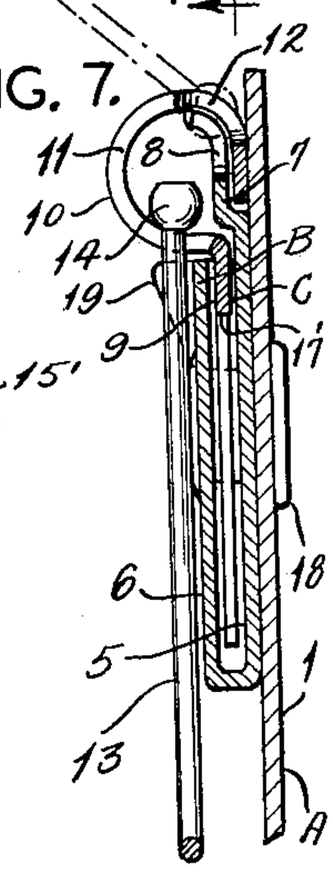


FIG. 8.

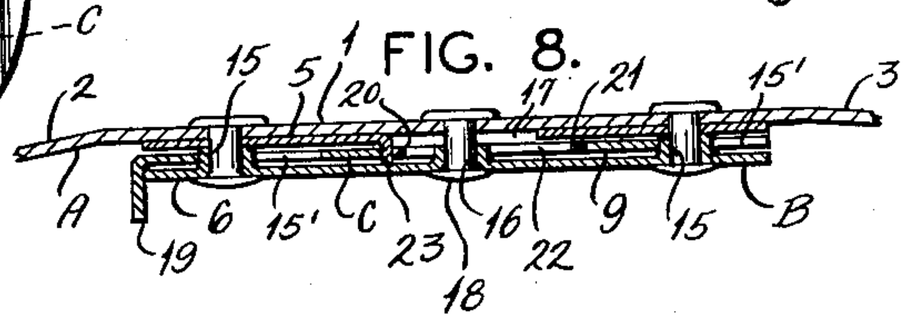


FIG. 9.

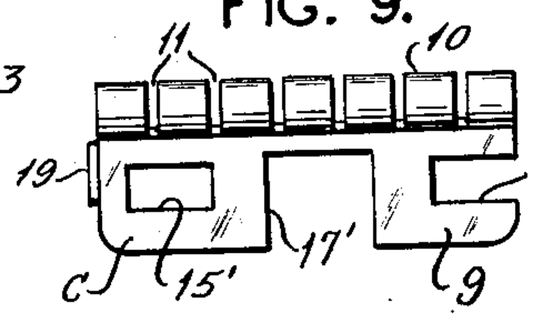
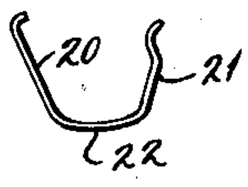


FIG. 10.



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UNITED STATES PATENT OFFICE

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KEY RETAINER

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3 Claims. (Cl. 70—456)

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This invention relates generally to improvements in a key retainer of the type wherein all of the keys are separated and each is carried on an individual key hanger that is detachably mounted, so that at any time, any selected key or keys may be removed from or replaced into the retainer, without removing the key from its respective hanger.

One of the important objects of this invention is to provide such a construction wherein a spring is employed to yieldably retain all of the key hangers in their normally locked position, and where there is practically no possibility of an accidental loss of such spring.

Another object of my invention is to so proportion the parts of such a retainer, that the spring may be entirely concealed from view therein and retained within a confined space, to efficiently perform its intended purpose and without danger of its loss.

Still another object of my invention is to provide a construction of the kind described wherein said spring shall be of a shape that is unusually strong and sturdy, so that it will last for an unusually long time without breakage.

A further object of the invention is to so construct such a device that said spring may be easily and quickly inserted into its working position in the key retainer unit at the original assembly of the parts of the mechanism, and yet permit a rapid and simple replacement of said spring if and when the occasion ever arises.

Other objects of the invention are the production of a device of the kind described which will be relatively simple in construction and in operation, be unusually sturdy and rigid for its intended purpose so as to stand up well in normal service, be neat and attractive in appearance, and which will be otherwise satisfactory and efficient for use wherever deemed applicable.

Many other objects and advantages of the construction herein shown and described, and the uses thereby obtained, will be obvious to those skilled in the art to which this invention appertains, as will be apparent from the disclosures hereinafter given.

This invention is embodied in a support having a key hanger opening and adapted to be mounted in a key case, said support having a member longitudinally shiftable thereon to selectively cover and uncover said opening in the support so that said key hanger may pass through said opening only when said opening is uncovered, and a spring detachably retained between said support and member to yieldably permit said shifting to uncover said opening and to retrieve said shiftable member to cover said opening upon release of said member.

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My invention also consists in the novel construction, arrangement, combination and form of parts herein shown and described, and as will be more clearly pointed out in the following specification.

In the drawings, wherein like reference characters represent like or corresponding parts throughout the views,

Fig. 1 is a front elevational view of a key case embodying the invention, the case being shown opened;

Fig. 2 is an enlarged fragmentary elevational view of the key retainer, with certain of the parts broken away in order to show the interior construction more clearly;

Fig. 3 is a similar enlarged view, but with the shiftable member moved to another position;

Fig. 4 is an enlarged elevational view, as seen from the reverse side;

Fig. 5 is a cross-sectional view, taken substantially along the line 5—5 of Fig. 2;

Fig. 6 is a transverse cross-sectional view, taken substantially along the line 6—6 of Fig. 2;

Fig. 7 is a cross-sectional view, taken substantially along the line 7—7 of Fig. 3;

Fig. 8 is a cross-sectional detail, taken substantially along the line 8—8 of Fig. 2;

Fig. 9 is a plan view of the shiftable member; and

Fig. 10 is a plan view of the bow spring.

Referring more particularly to the drawings, wherein I have illustrated a preferred embodiment of my invention, there is shown a key case A of any desired or preferred construction, and as shown is provided with snap fasteners, although it is obvious that the same may be held against accidentally opening by any other preferred or suitable means. This case or folder, usually made of leather or the like, may have a central section or panel 1 to which the key-retaining structure may be mounted, and the other panels 2 and 3 may be folded in overlapping relation across said central panel 1 and the same held in such position by a snap fastener 4.

Although key retainers wherein one or more of the keys may be withdrawn from or replaced into the retainer are well-known, the mechanisms of the same are relatively fragile and easily become damaged and out-of-order, so that the retainer is rendered useless thereafter.

It is the purpose of this invention to so improve the construction of such a retainer that the

members of the same will be initially strong and sturdy for their intended function, but if and when the spring element that forms a part of said construction becomes broken or defective it may be replaced relatively easily and readily.

The key-retaining mechanism includes a pair of cooperating members B and C, one of which, say the member B, is affixed to the key case A, while the other member C is longitudinally shiftable relative thereto.

The member B is a substantially channel-shaped member, comprising the pair of substantially parallel, superimposed plate-like portions 5 and 6, the portion 5 extending somewhat above and beyond the corresponding edge of the portion 6 and is transversely offset toward the latter as at 7. Openings or notches 8 are formed at regularly spaced intervals along and leading inwardly from the terminal edge of the portion 7.

The shiftable member C is formed with a plate-like portion 9 to fit between the spaced-apart plate-like portions 5 and 6 of the member B, and is shiftable or slidable longitudinally therebetween as will be more clearly hereinafter described.

This shiftable member has a tubular or cylindrical top portion 10 of such a size and shape as to ride on and substantially enclose the transversely offset portion 7 of the stationary member, and in addition, said tubular portion is provided with slots 11 at regularly spaced intervals and preferably of the same spacing as that of the openings 8 of the stationary members 5, the rearward ends of said slots being enlarged to provide the openings 12.

When the device is positioned in normal position, as shown in Figs. 1, 2, 4, 5 and 6, all of the openings 8 are covered by the shiftable member, but when the shiftable member is moved in one direction as to the left as shown in Figs. 3 and 7, said openings 8 will register with the enlarged openings 12 for a purpose about to be more clearly explained.

Key hangers or carriers are used to suspend the individual keys (not shown) and to keep them spaced apart and retained relatively flat within the case, each of said hangers comprising an element that has a shank 13 that is provided with a loop that is adapted to detachably receive a key, the upper end of said shank being provided with an enlarged ball head 14.

Each of said slots 11 is of a width so as to freely receive the shank portion 13 of the key hanger, but its enlarged opening 12 and the size of the openings 8 is sufficiently large to permit the ball head 14 of the key hanger to pass therethrough when said openings 8 and 12 are in registry.

Thus it is apparent that when the members B and C are shifted from normal position so that the openings 8 are uncovered and are in registry with the enlarged openings 12, any one or more of the key hangers may be passed therethrough for placement into or withdrawal from the key case, but when said parts are in their normal position the openings 8 are covered and such passage is prevented.

In order to affix the stationary member to the key case, as for example to the central panel 1 as shown, apertures are provided through said stationary member, there being pairs of registering end apertures 15 and an intermediate pair of apertures 16 and 17, the aperture 17 being enlarged so as to permit the manual insertion of a spring element therethrough in a manner about to be described.

Rivets 18 may be used to extend through opposed plate portions of the fixed member B, and extend through said openings aforesaid, and the intermediate rivet has sufficient lateral clearance as to permit insertion of or removal of the spring element, without contacting the latter.

The plate-like portion of the shiftable member C is provided with end apertures 15' therethrough and with an intermediate aperture 17' which are adapted to register with the corresponding apertures through the stationary member, but it is to be noted that the apertures through the shiftable member are longitudinally enlarged so that said shiftable member may be moved laterally for a predetermined distance, free of interference by said fastening rivets. An offset finger or lug 19 is preferably formed at one end of the shiftable member for manual actuation of the latter.

It is well known that small coil springs are relatively weak and have a short life as compared with certain other types of springs, and for this reason I prefer to employ a bow spring for yieldably resisting the shifting movement of said shiftable member and for retrieving the latter to its normal position. Such a form of bow spring is illustrated in Fig. 10 and comprises the pair of leg portions 20 and 21 joined together at 22 and of such thickness that the spring may be interposed to lie between the pair of plate-like portions 5 and 6 as shown.

In order to anchor one end of the spring, as for example the leg 21, a prong or abutment 23 is struck up from the metal of the plate-like portion 5 adjacent a bounding edge of the intermediate opening 17, the other end 20 of said spring abutting against the upright bounding edge of the cooperating aperture 17' of the movable plate-like portion 9 so as to resiliently press against said last-mentioned edge to actuate the shiftable member so that its openings 12 are normally out of registry with the openings 8 of the fixed member and will cover the latter, and to retrieve said shiftable member to such covering position after release of the manual force which has moved the parts to the opening uncovering position.

What I claim is:

1. A key retainer for a key case comprising a first member adapted to be attached to the key case, said first member providing spaced plate portions forming a channel therebetween, one of said plate portions having an extension formed with spaced slots in its free margin to pass key hangers, a second member providing a plate-like portion slidable in said channel and a cylinder portion enclosing said slotted extension, said cylinder portion having spaced key hanger slots in its periphery with slot enlargements adjacent said extension, said slot enlargements being substantially the same size as the slots in said extension, and a spring concealed in the channel of said first member, said spring being anchored to said first member and yieldably abutting said second member for normally urging said second member to a position in which the cylinder slot enlargements and said extension slots are out of registry whereby said slot enlargements are closed by said extension to prevent removal of a key hanger, opposite movement of said second member serving to bring said slots and slot enlargements into registry to permit hanger removal.

2. A key retainer for a key case comprising a first member adapted to be attached to the key case, said first member having front and rear plate portions forming a channel therebetween,

one of said plate portions having an extension formed with spaced slots extending inwardly from its free margin, said slots being sized to pass key hangers, a second member formed with a plate-like portion slidable in the channel of said first member and with a cylinder portion enclosing said slotted extension, said cylinder portion having spaced key hanger retaining slots in its periphery and connected slot enlargements arranged to move across and into and out of registry with the slots in said slotted extension upon sliding of said plate-like portion in said channel, and a spring concealed in the channel of said first member behind said front plate portion, said rear plate portion having an aperture through which said spring is inserted and removed, and said spring being anchored to said rear plate and abutting said second member for normally urging the second member to a position in which the cylinder slot enlargements and extension slots are out of registry to block said hanger retaining slots and prevent removal of a key hanger.

3. A key retainer for a key case having key hangers with enlarged heads, said retainer comprising a first member adapted to be attached to the key case and formed with a channel defined by front and rear plate portions and an extension along one margin of the channel, said extension having spaced slots sized to pass the enlarged hanger heads extending inwardly of its free margin, a second member having a plate-like portion slidable in the channel and an integral peripherally slotted cylinder portion along one margin adjacent said extension for enclosing

the latter, each cylinder slot having a connected slot enlargement sized to pass an enlarged hanger head, the slots in said cylinder portion serving to retain key hangers in the key case and said slot enlargements being movable, upon sliding of said plate-like portion in the channel, into and out of registry with the slots in said extension respectively to unblock and block said cylinder slot enlargements, and a spring concealed in the channel of said first member behind said front plate portion, said rear plate portion of said first member and said plate-like portion of said second member each having apertures in registry to receive said spring in the plane of the channel, said spring having one end anchored on said rear plate portion and the opposite end engaging a margin of the aperture in said plate-like portion to yieldingly hold said second member in a position with the said slot enlargements therein and said extension slots out of registry.

ORLA S. ELLIFF.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,691,637	Buxton	Nov. 13, 1928
1,908,846	Howe	May 16, 1933
1,959,207	Howe	May 15, 1934
2,114,172	Boden	Apr. 12, 1938
2,191,931	Collins	Feb. 27, 1940
2,201,850	Dawson Jr.	May 21, 1940
2,401,753	Geller	June 11, 1946