Feb. 9, 1937. J. P. GITS 2,070,546

KEY HOLDER

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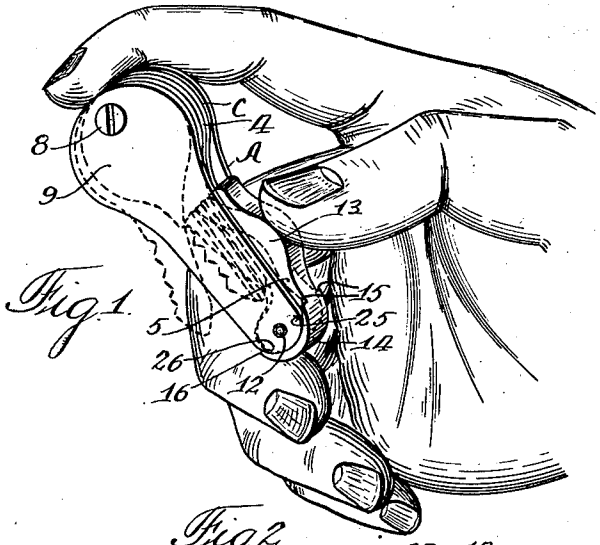


Fig. 1.

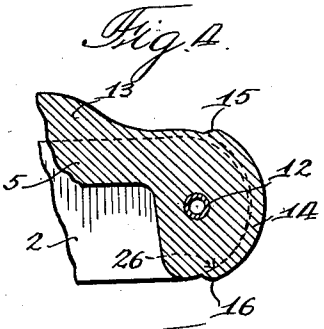


Fig. 4.

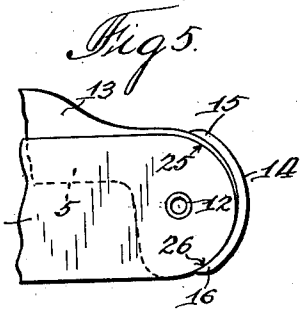


Fig. 5.

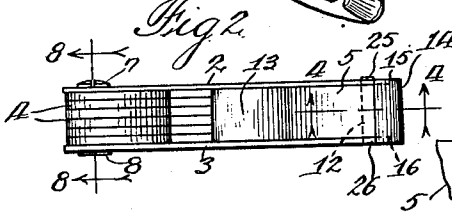


Fig. 2.

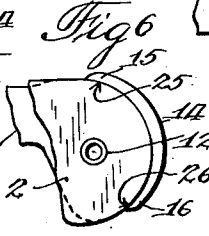


Fig. 6

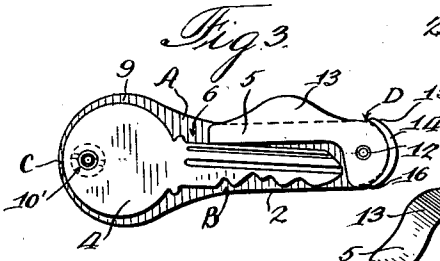


Fig. 3.

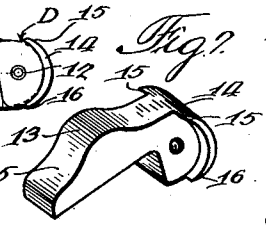


Fig. 7.

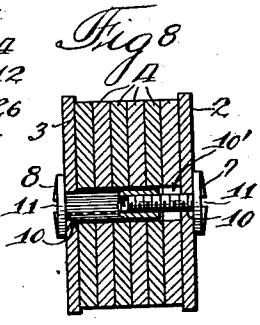


Fig. 8

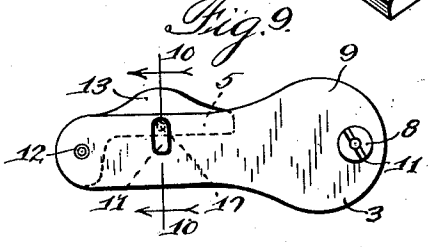


Fig. 9.

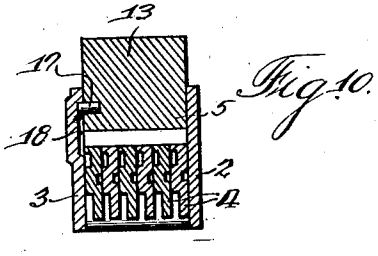


Fig. 10.

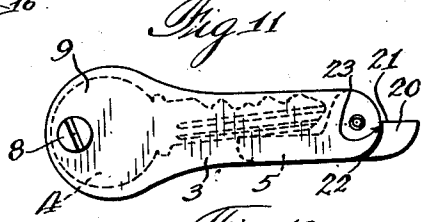


Fig. 11.



Fig. 12.

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Attys.

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KEY-HOLDER

Jules P. Gits, Chicago, Ill.

Application April 27, 1935, Serial No. 18,562

6 Claims. (Cl. 70—456)

My invention relates to key-holders and more particularly to a type of key-holder carrying one or more keys flatwise in a case, the latter conforming somewhat to the shape of the keys and admitting of simple manipulation to eject the keys.

An object of the invention is to provide an improved construction of key-holder of this type which is simple, inexpensive and easily operated, the part provided to eject the keys comprising a simple ejector movable by the hand of the user and operable to eject the keys in a manner admitting of ready selection of the proper key by the same hand, thereby permitting use of the key-holder and the ejection and selection of the key desired and its use by a single hand.

It is found that a key-holder of this type which is constructed so as to be wholly operable by one hand has greater utility because it may be conveniently used at times when only one hand is free for operating the lock and opening the door. Moreover, the utility of the present structure is greatly increased by the manner in which the keys are ejected so that the proper key of the group carried by the key-holder may be readily selected.

A further object of the invention is to provide the key-holder slightly larger than and substantially of the same configuration as that of the keys so that all the keys may be kept in a key compartment until ejected by the trigger.

A still further object of the invention is to provide a key-holder of this type having the keys preferably carried upon a common pivotal mounting at one end of the case and a trigger mounted at the other end to engage and eject the keys by simple manipulation.

Moreover, it is an object of the invention to employ the connections at both ends of the case holding the side parts together, first, as a common pivotal mounting for the keys at one end, and second, as the mounting for the trigger at the other end, this advantageously providing a simple and inexpensive construction and a movement of the keys and trigger in the direction permitting of ready engagement of the keys by the trigger so that the keys may be quickly ejected.

A still further object of the invention resides in a novel form of trigger that may be movably carried at one end of the case and a novel form of stop means that may be provided to limit the movement of the trigger so that it will always be in position again to eject the keys when the latter are returned to the key compartment.

It is the purpose of this invention to provide this stop means in any form that will limit the movement of the trigger in a manner necessary to keep the trigger in its proper position upon the case.

Other objects and advantages of the invention will be apparent from the following detailed description taken in connection with the accompanying drawing which forms a part hereof.

In the drawing:

Figure 1 is a perspective view of a key-holder embodying the invention positioned in the hand of an operator to illustrate how the keys may be ejected by the fingers of one hand of the operator without requiring the use of the other hand;

Fig. 2 is a top plan view of this key-holder;

Fig. 3 is a detail view of the key-holder having one of the side members removed to illustrate the keys in position and the trigger operative to eject the same;

Fig. 4 is an enlarged detail sectional view taken on line 4—4 of Fig. 2;

Fig. 5 is an elevational view of the structure shown in Fig. 4;

Fig. 6 is a view similar to Fig. 5, to illustrate the manner in which the stop means at the end of the trigger limits the depressible position;

Fig. 7 is a perspective view of the trigger;

Fig. 8 is an enlarged transverse sectional view taken on line 8—8 of Fig. 2;

Fig. 9 illustrates a key-holder embodying an alternative form of stop means for limiting the movement of the trigger;

Fig. 10 is an enlarged vertical sectional view taken on line 10—10 of Fig. 9, and

Figs. 11 and 12 illustrate a key-holder embodying the invention but illustrating an alternative embodiment of the trigger construction.

Referring now to the drawing, the invention may be embodied, as will be observed, in a structure comprising a key-holder having open sides A and B and open ends C and D which are obtained by providing side plates 2 and 3 that are spaced parallel to each other. Side plates 2 and 3 are connected together at opposite ends C and D. At end C of plates 2 and 3, the connection provides a removable mounting for the keys 4. At end D of plates 2 and 3, the connection provides a pivotal mounting for a trigger 5.

Keys 4 and trigger 5 keep side plates 2 and 3 properly spaced apart. Trigger 5 is adapted to lie within open side A and open end D between side plates 2 and 3. The spacing of these plates 2 and 3 provides key compartment 6. Plates 2 and 3 are preferably slightly larger and of the same

general contour as the keys, so that the keys may lie wholly within this compartment 6.

The removable mounting for keys 4 consists of a two-part connection, one part being a screw 7 and the other part an internally threaded bolt 8. Heads 9 of plates 2 and 3 are provided with off-centered apertures or openings 10 (see Fig. 8) through which the shanks of screw 7 and bolt 8 pass, the shank of screw 7 being threaded into the shank of bolt 8. The shanks of these parts are passed through the usual apertures 10' in the heads of the keys 4, as will be noted in Figs. 3 and 8. Keys 4 are, therefore, permitted to swing about these shanks in pivotal relation, so that, when screw 7 is threaded into bolt 8 with side plates 2 and 3 in position, keys 4 may be swung into and out of key compartment 6. The heads of screw 7 and bolt 8 are provided with slots 11 of such width and length as to permit the use of the edge of a coin to turn the screw 7 and bolt 8 in their threaded relation.

The connection at the opposite end of plates 2 and 3 may preferably comprise a rivet 12 acting as a pivot for trigger 5. When screw 7 and bolt 8 are separated or removed to allow the insertion or removal of a key or keys, plates 2 and 3 may swing away from each other about rivet 12. I find it preferable to prevent the rivet 12 from being removable so that trigger 5 may be held permanently between plates 2 and 3, but in pivotal relation, when plates 2 and 3 are swung apart to allow the insertion of one or more keys.

To provide an exceedingly simple and efficiently operating structure, trigger 5 is preferably of a width which permits it to occupy the space between plates 2 and 3, this trigger 5 lying within a portion of open side A and having a hump 13 projecting therefrom, as illustrated specifically in Fig. 3. Hump 13 projects a distance from the edges of side plates 2 and 3 and in a convenient location, permitting it to be engaged to depress trigger 5 downwardly about pivot 12. Depressing trigger 5 causes keys 4 to be ejected far enough from the opposite open side B of the case to allow say the third finger of the hand, as shown in Figure 1, to move against the tips of the keys to complete their swinging movement about their pivotal mounting, and, if a number of keys 4 are carried in compartment 6, the arrangement admits of separating the keys by the fingers of the same hand so that the particular key desired may be conveniently projected outwardly from the case for ready use.

A benefit obtained from the construction disclosed herein resides in the ability to use the key-holder and eject a desired key by one hand of the operator. Consequently, it is not necessary to use both hands in order to obtain the desired key and thereby require freeing both arms of packages or bundles. The key-holder is of a size and its parts are so compactly arranged that it may be obtained from a pocket or a purse and readily operated by one hand.

Trigger 5 is adapted to project slightly beyond the open end D of side plates 2 and 3 to provide a stop head 14. Stop head 14 is preferably wider than key compartment 6 to overlie side edges 25 and 26 of plates 2 and 3 and thereby provide shoulders 15 and 16 on opposite sides, as illustrated in Figs. 1 and 4 to 7, inclusive. On each side of stop head 14, the inside edge forming shoulders 15 and 16 is preferably of a slightly larger curvature than the curvature of the ends D of plates 2 and 3, so that, as trigger 5 is pivotally moved about rivet 12, shoulders 15 and 16 will alternately strike the edges 25 and 26 on plates 2 and 3 to limit the movement of the trigger. Shoulders 15 will strike the opposite edges 25 of plates 2 and 3 at open end D to limit the inward movement of trigger 5 into key compartment 6 when it is depressed to eject keys 4, this being illustrated specifically in Fig. 6. Shoulder 16 will strike the opposite edges 26 of plates 2 and 3 to limit the outward movement of trigger 5 from key compartment 6 when the keys are returned thereto (Fig. 5). Trigger 5 having widened portion 14 provided with shoulders 15 and 16, which may operate as stops to limit the movement of trigger 5 by virtue of the greater curvature given the inside edge of this portion 14, may be constructed in various ways in order to obtain the limited movement for trigger 5 about its pivot 12.

An alternative embodiment of this stop means is illustrated in Figs. 9 and 10. Plates 2 and 3, together with the end connections, are substantially the same as shown and described above. However, in this embodiment, the stop means is provided in the form of a pin 17 projecting from one side of trigger 5 riding in a groove or slot 18 in one of the plates, say plate 3. Groove 18 may be furnished in the forming of plate 3. Trigger 5 will not project beyond the open end D of the case. Hump 13 will be similarly extended, however, above open side A and be accessible for engagement by the thumb to depress trigger 5 and eject keys 4 in the same manner as above described.

As a further variant embodiment of the invention, hump 13 may be eliminated from along one side of trigger 5, but its equivalent provided in the form of a hump 20 projecting beyond open end D, as illustrated in Figs. 11 and 12. If trigger 5 is of molded material or a metal stamping or the like, hump 20 may be formed at the end so as to project sufficiently beyond open end D to allow one of the fingers of the hand to engage its flat surface 21 and thereby depress it and trigger 5 in the key compartment 6 whereby to eject keys 4. Making hump 20 wider than the width of key compartment 6 and preferably of a width including side plates 2 and 3 provides similar shoulders 22 and 23 which limit the swinging movement of trigger 5. Shoulder 22 limits the distance trigger 5 may be depressed in the key compartment 6 while shoulder 23 limits the return movement of trigger 5 when the keys are returned into key compartment 6.

It will be noted, however, that this stop means in either of the forms shown herein may be omitted and the friction between the sides of trigger 5 and the inside surfaces of plates 2 and 3 used to limit the movement of the trigger. This friction may be controlled by the tightness of rivet 12 and also by the threaded engagement between screw 7 and bolt 8.

It is not necessary that the case be formed essentially of spaced parallel plates 2 and 3, or that the sides and ends be left open in order to embody the improved form of trigger shown herein. To this extent, the construction of the case may be varied somewhat and the trigger 5 mounted in any desirable way. An exceedingly simple and inexpensive construction is provided by arranging the keys 4 to move about a common mounting acting as the connection at one end of the plates 2 and 3, and by arranging the trigger 5 to move about a mounting acting as a connection for the opposite end of these plates.

Without further elaboration, the foregoing will

so fully explain the gist of my invention that others may, by applying current knowledge, readily adopt the same for use under varying conditions of service, without eliminating certain features, which may properly be said to constitute the essential items of novelty involved, which items are intended to be defined and secured to me by the following claims.

I claim:

1. A key-holder comprising, in combination, a case open at its sides and ends, means for pivotally supporting a plurality of keys in said case at one end, and a pivotally supported trigger at the other end of said case for moving the keys outwardly from within said case about said pivotal means, said trigger projecting outwardly from one open side intermediate the ends of said case whereby it may be pushed inwardly to extend the keys beyond the opposite side.

2. A key-holder comprising, in combination, a case having separable sides and end connections therefor, one of said end connections forming a pivot for a plurality of keys adapted to lie in said case, a trigger pivotally carried about the other end connection and overlapping said keys, said trigger having an extension extending outwardly intermediate the ends of the case whereby it may be pushed inwardly to expose the keys beyond the opposite side of said case, and means for limiting the pivotal movement of said trigger.

3. A key-holder comprising, in combination, a case open at its sides and ends and formed of two spaced plate members providing a key compartment substantially of the same contour but larger than the keys, means securing the plates together in removable relation at one end, means securing the plates together at the other end, and a key ejector at the last said end, said key ejector lying crosswise in one of the open sides for edgewise engagement of all the keys when in said compartment, said key ejector having an engageable projection in transverse alignment with the keys extending beyond the open side adapted for use in depressing the key ejector to eject the keys from the opposite open side.

4. A key-holder comprising, in combination, a case open at its sides and ends and formed of two spaced plate members providing a key compartment substantially of the same contour but larger than the keys, means securing the plates together in removable relation at one end, means securing the plates together at the other end, a key ejector at the last said end, said key ejector lying crosswise in one of the open sides for edgewise engagement of all the keys when in said compartment, said key ejector having an engageable projection in transverse alignment with the keys extending beyond the open side adapted for use in depressing the key ejector to eject the keys from the opposite open side, and means for limiting the movement of the key ejector.

5. A key-holder comprising a case open at one side, means adjacent one end of said case for pivotally supporting a key within said open side, and means extending outwardly from the opposite side of said case and movable toward said key for exposing the key from said open side.

6. A key-holder comprising a case open at one side, means adjacent one end of said case for pivotally supporting a key within said open side, and means pivoted adjacent the other end and extending outwardly from the opposite side of said case and movable toward said key by pressure on the outwardly extending portion for exposing the key from said open side.

JULES P. GITS.