Sept. 8, 1931. D. I. REITER 1,822,502

KEY HOLDER

Filed May 8, 1929

Fig. 1.

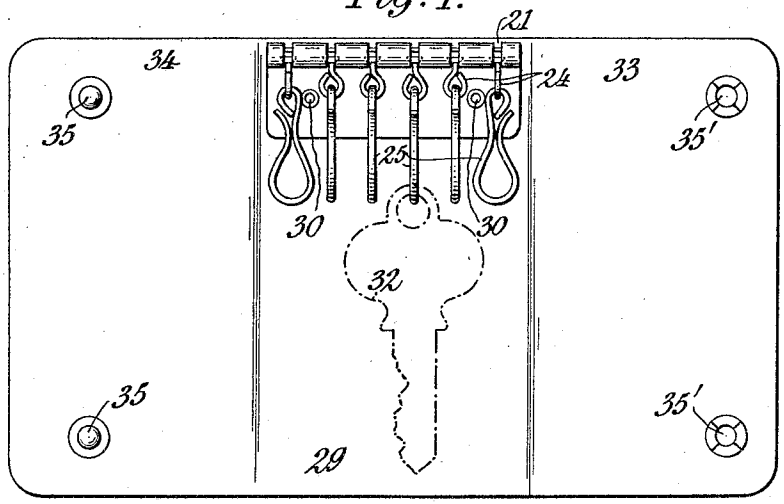


Fig. 3.

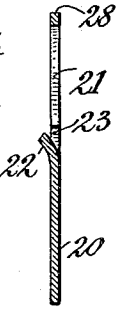


Fig. 4

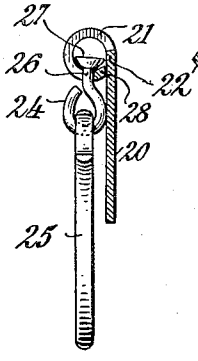


Fig. 2.

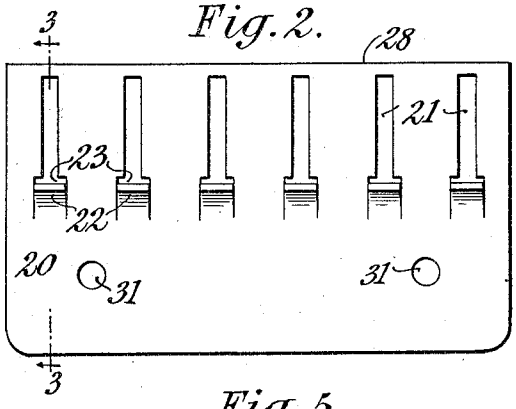


Fig. 5.

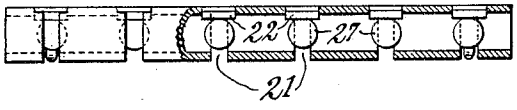
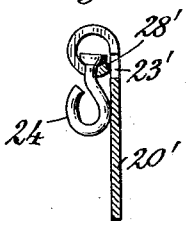


Fig. 6.



INVENTOR

Daniel I. Reiter,

By Attorneys,

Fraser, Myers & Manley.

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UNITED STATES PATENT OFFICE

DANIEL I. REITER, OF NEW YORK, N. Y.

KEY HOLDER

Application filed May 8, 1929. Serial No. 361,407.

This invention relates to improvements in key holders of the type which comprises a plate having a number of key-attaching links movably connected therewith at spaced intervals, the plate and links being adapted to be secured to a folder by which the holder and a number of attached keys may be enclosed in a convenient form to be carried in the pocket.

It is an object of the invention to provide a holder of the above-described character in which the various attaching links may be freely rotated upon their axes and may also be freely swung into positions extending beyond one end of the holder so that any desired key may be readily separated from the others, inserted in a lock, and turned to effect its intended purpose.

In the drawings illustrating preferred forms of the invention,—

Figure 1 is a face view of a completed holder embodying the above-described invention, the holder being mounted within a folder indicated in its open position and the holder being indicated as having a single key attached.

Fig. 2 is a face view of a partly-completed holder from which the finished article indicated in Fig. 1 may be formed by bending the material.

Fig. 3 is a view in cross-section through Fig. 2, the section being taken along the plane represented by the line 3—3 and viewed in the direction indicated by the arrows.

Fig. 4 is a cross-sectional view of the finished holder formed by bending parts of the plate illustrated in Figs. 2 and 3.

Fig. 5 is a top view of the holder illustrated in Fig. 4, parts thereof being broken away and parts indicated in cross-section.

Fig. 6 is a cross-sectional view of a modified form of holder.

Referring first to Figs. 1 to 5, inclusive, a holder embodying the above-described invention may comprise a plate 20 of suitable material, preferably metal, having a slot, or preferably a plurality of slots, 21, cut therein in side-by-side relation. For reasons hereinafter to be described, each of said slots should have at one end a communicating opening or enlargement and means whereby such opening may be obstructed. As herein disclosed, the enlargement for each slot is produced by striking a lip of metal 22 from the portion of the plate opposite one end of the slot, thereby providing an opening 23 of a width somewhat greater than the width of the slot.

A key may be conveniently attached to the above-described key-plate by means of an appropriate attaching link 24 having a snap hook 25 suspended therefrom. The link 24 may have a stem 26 of a diameter such as to permit it to extend through one of the slots 21 in the plate 20. This stem may have at its free end a retaining element 27 of a size such as to prevent it from being passed through the slot 21. The enlargement 23 in the plate 20 may, however, be of dimensions such as to permit the insertion of the retaining element 27 if the lips 22 have first been bent outwardly to the position indicated in Fig. 3.

The holder illustrated in Fig. 1 may be formed from the plate 20 shown in Fig. 2, and the key-attaching devices, illustrated as a part of Fig. 4, by passing the retaining element 27 of each attaching link through the opening 23, then moving the stem of the attaching link into the corresponding slot 21, then bending the lips 22 back into the plane of the plate 20, and then rolling the slotted portion of the plate to the position illustrated in Figs. 1 and 4 in which the edge 28 of the plate is brought to an abutting relationship with respect to one of its surfaces along the zone of the enlargements 23 and their obstructing lips 22.

In rolling the slotted portion of the plate, the bending should be in such direction as to enclose the retaining elements 27 within the

resulting cylindrical structure, so that the key-attaching links and hooks will be projected outwardly as indicated in Figs. 1 and 4.

The finished holder thus far described may, if desired, be secured to a leather folder 29, as indicated in Fig. 1, by appropriate fastening means such, for example, as rivets 30, holes 31 being provided in the plate 20 for such purpose.

Keys 32, one of which is indicated in Fig. 1, may then be snapped into engaging relationship with the hooks 25, and the folder may be provided with cover flaps 33, 34, which may be folded over the holder and attached keys and secured by snap fasteners 35, 35′, or other appropriate securing means.

It will be observed that the key-attaching links may turn freely upon their axes so that the keys may be caused to lie flat within the folder. Any key may be readily swung about the slot in the holder so as to separate it from the others and cause it to extend beyond the end of the folder. It may then be conveniently inserted in a lock and turned to operate a bolt or latch.

It will be noted that the rolling of the slotted portion of the plate 20 to the form illustrated in Fig. 4 causes the resulting cylindrical structure to conceal the obstructing fingers 22. It also brings the edge of the plate in direct contact with the obstructing lips and tends to prevent them from being bent outwardly into their link-releasing positions. The edge of the rolled portion of the plate also traverses the line of openings forming the enlargements at the ends of the slots so that this edge portion would itself constitute an obstruction to the removal of the links if the obstructing lips were absent.

The modified form of invention illustrated in Fig. 6 differs from the form thus far described only in that the enlargements 23′ at the ends of the slots are indicated as having been formed by punching out and removing the material, instead of as by striking up lips of material as indicated in Fig. 2. When the invention is embodied in this form, the edge 28′ of the rolled portion of the plate is relied upon as the obstructing means whereby the accidental separation of the key-attaching links is prevented. This form of the invention is assembled by passing the retaining elements of the attaching links through the openings 23′ when the plate 20′ is flat. The slotted portion of the plate is then bent or rolled in such manner as to cause the retaining elements of the attaching links to be enclosed within the resulting cylindrical structure. The edge of the bent portion of the plate is brought into contact with one of its surfaces along the line of openings which form the enlargements at the ends of the slots, so that the portions overlying the openings serve as obstructions and thereby prevent the detachment of the key-attaching links.

It will be apparent from the foregoing description that either of the two embodiments of the invention herein disclosed comprises a holder for the attaching links which may be readily and economically made from a single piece of metal.

The invention is not intended to be limited to either of the specific forms herein disclosed for purposes of illustration, but should be regarded as including modifications and variations thereof within the scope of the appended claims.

What is claimed is:

1. A key holder comprising a slotted plate, and a key-attaching link having a stem passing through a slot in said plate and a retaining element of such size as to prevent its withdrawal, said plate having an obstructed opening therein communicating with said slot and of a size exceeding that of said retaining element, the obstruction of said opening comprising a lip extending inwardly from an adjoining portion of the plate to an extent sufficient to prevent the insertion or withdrawal of the retaining element of a key-attaching link.

2. A key holder, as defined by claim 1, having a plurality of slots and attaching links, as described, the slots being disposed in parallel arrangement, each with its communicating obstructed opening located at one end well within the body of the plate and its other end adjacent one of its edges, the slotted portion of the plate being curved and having its edge adjacent the ends of the slots in an abutting relationship with respect to the surface of the plate adjacent its zone of obstructed openings.

3. A key holder comprising a plate having a plurality of slots therein arranged in side-by-side relation, and a plurality of openings each communicating with an end of one of said slots and of such dimensions as to form an enlargement thereof, a plurality of key-attaching links each having a stem passing through one of said slots, and a retaining element of such dimensions as to prevent its withdrawal except through its enlargement, and a plurality of flexible tongues comprising portions of said plate extended into said enlargements to obstruct the detachment of the attaching elements.

4. A key holder comprising a plate having a plurality of slots therein arranged in side-by-side relation, and a plurality of openings each communicating with an end of one of said slots and of such dimensions as to form an enlargement thereof, a plurality of key-attaching links each having a stem passing through one of said slots, and a retaining element of such dimensions as to prevent its withdrawal except through its enlargement, and a plurality of flexible tongues compris-

ing portions of said plate extended into said enlargements to obstruct the detachment of the attaching elements, the slots and enlargements being so disposed that the slots may be in a curved portion of the plate having an edge portion in an abutting relationship with the surfaces of the tongues which extend into its enlargements.

In witness whereof, I have hereunto signed my name.

DANIEL I. REITER.