April 14, 1931. B. E. MOULTON 1,800,843

KEY HOLDER

Filed Oct. 25, 1929

Fig. 1

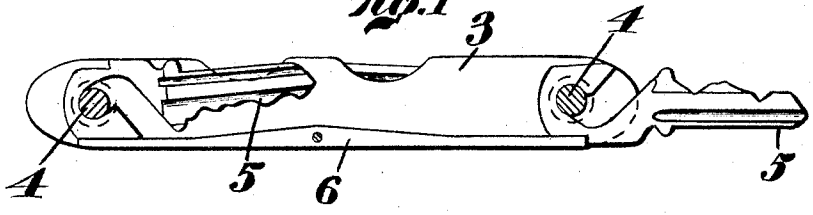


Fig. 2

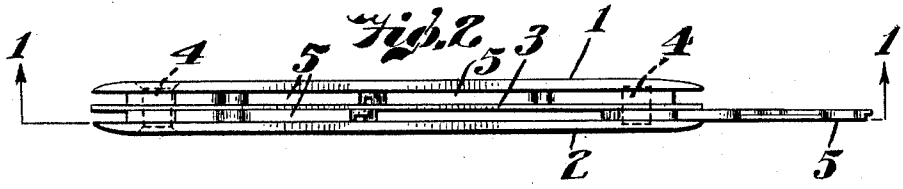


Fig. 3



Fig. 4

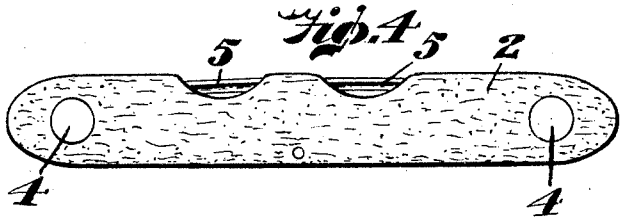
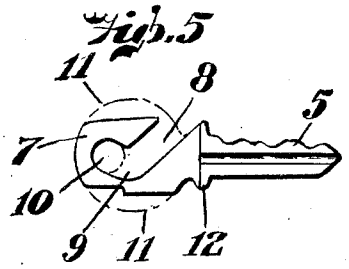


Fig. 5



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UNITED STATES PATENT OFFICE

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KEY HOLDER

Application filed October 25, 1929. Serial No. 402,472.

This invention relates to key outfits in which personal key groups are provided in an assembly on a basis of addition or substitution and which is at once convenient and individual.

It provides for a personal key assembly by which ordinary keys are made available in unit form. It also provides for a basis of insurance against loss or wrongful use and adds a new field of service to lock and key makers.

As illustrative of my invention I have shown in the accompanying drawing an assembly on a basis of efficient key service.

In the drawings:

Fig. 1 is a longitudinal sectional view on the line 1—1 of Fig. 2 showing a pocket device embodying my invention.

Fig. 2 is a top edge view.

Fig. 3 a bottom or back edge view.

Fig. 4 a side view, and

Fig. 5 a somewhat diagrammatic view of the key production basis.

I have indicated at 1 and 2 a pair of spaced side plates, and at 3 a central divisional plate. These plates are held together in the spaced relation shown by a pair of transverse studs 4 which may be simple rivets piercing said plates adjacent either end thereof and which constitute pivots for keys 5 which are formed for quick detachable connection therewith for purposes of removal and replacement and for normal folding action thereabout as pivot axis in the ordinary use of the device.

As here shown, I have provided for mounting two keys 5 on each pivot pin 4, one on either side of the division plate 3, with the key pair on one pivot opposing the key pair on the other pivot (Fig. 2).

The plates 1 and 2 have the general form and appearance of a pocket or clasp knife and in the ordinary use of the device, the keys fold into and out of the case after the manner of the usual knife blade, being backed by backing springs 6 as in usual pocket knife construction.

According to my invention, however, the keys 5 are so formed as detachably to hook over the pins 4 by endwise sliding movement with respect thereto and to lie substantially wholly within the confines of the side plates 1 and 2 when folded into the case so as to be covered and protected thereby. To this end, the head 7 of each key is provided with a rearwardly directed slot 8 having a jog 9 therein in advance of the usual key-ring hole 10 and the head itself is cut away adjacent such hole 10 as indicated diagrammatically by the dotted lines 11 in Fig. 5.

This construction not only provides a hook adapted to be lodged over one of the pins 4 but effects such a reduction in the size of the key head itself as materially to reduce its weight and bulk so that it will lie substantially wholly within the confines of the side walls 1 and 2 when folded down into the position shown in Fig. 1. This is a feature of considerable advantage in that it not only actually reduces the bulk of the keys themselves but avoids any projecting edges which might tear the pocket or catch on other objects carried in the pocket.

In use, the case proper affords sufficient leverage and hand hold for manipulating the key in the lock when the key has been projected into the position of Fig. 1 (right hand end), the arrangement and relation of the slot 8 and particularly the jog 9 thereof being such as to prevent accidental disengagement of the key from its pin 4 in its opening and closing pivotal travel.

In purposely removing a key, however, the selected key is first swung to the closed position shown at the left hand end of Fig. 1 and is then engaged and forced axially outwardly away from its pin 4. In this action, the shoulder 12 at the head end of the key shank affords a convenient surface for the application of endwise sliding force. The hook portion of the key clears itself readily from the pin when the key is slid endwise away from the pin and as readily reengages over the pin when the key, or a substitute key, is replaced. When all keys are closed, they lie well within the planes of the side plates 1 and 2 as shown in Fig. 4 and the absence of any projecting edges, particularly at the key heads, avoids entanglement of the keys in the cloth of the pocket or in other objects carried in the pocket as well as materially reducing the

weight and bulk of the device as a key case.

Various modifications in the construction and operation of my device may obviously be resorted to if within the spirit and scope of my invention without departing from the limits of the appended claims.

What I therefore claim and desire to secure by Letters Patent is:—

1. In combination, a key holder comprising a case inclusive of a pair of spaced side walls and a cross pivot adjacent to the ends thereof, and a key inclusive of a shank and a head having a slot to receive said cross pin to detachably pivotally connect the key with the case for swinging movement between a closed position between the side walls of said case and an open position projecting beyond the end of the case, a back spring disposed between said side walls and having a free end underlying said cross pivot for cooperation with opposite edges of the head of the key to hold the same in closed and open positions, respectively, and a shoulder on said key for cooperation with the end of said back spring to prevent disengagement of the key from the cross pin when the key is in an open position, said slot opening through the edge of the head which is disposed adjacent to the back spring when the key is in a closed position and extending diagonally inward from said edge away from the shank and thence diagonally outward away from the shank toward said edge and terminating in a cross pin receiving bearing pocket, the edges of said slot thus forming oppositely disposed diagonally extending shoulders leading to said pocket whereby the key is adapted to be engaged with and disengaged from said cross pin solely by pressure exerted longitudinally thereof when the same is disposed in a closed or substantially closed position.

2. In combination, a key holder comprising a case inclusive of a pair of spaced side walls and a cross pivot adjacent to the ends thereof, and a key inclusive of a shank and a head having a slot to receive said cross pin to detachably pivotally connect the key with the case for swinging movement between a closed position between the side walls of said case and an open position projecting beyond the end of the case, a back spring disposed between said side walls and having a free end underlying said cross pivot for cooperation with opposite edges of the head of the key to hold the same in closed and open positions, respectively, and a shoulder on said key for cooperation with the end of said back spring to prevent disengagement of the key from the cross pin when the key is in an open position, said slot opening through the edge of the head which is disposed adjacent to the back spring when the key is in a closed position and extending diagonally inward from said edge away from the shank and thence diagonally outward away from the shank toward said edges and terminating in a cross pin receiving bearing pocket, the edges of said slot thus forming oppositely disposed diagonally extending shoulders leading to said pocket whereby the key is adapted to be engaged with and disengaged from said cross pin solely by pressure exerted longitudinally thereof when the same is disposed in a closed or substantially closed position, and a shoulder on the edge of the key that is disposed outermost when the key is in a closed position to be engaged for exerting pressure longitudinally of the key.

3. In combination, a key holder comprising a case inclusive of a pair of spaced side walls and a cross pivot adjacent to the ends thereof, and a key inclusive of a shank and a head having a slot to receive said cross pin to detachably pivotally connect the key with the case for swinging movement between a closed position between the side walls of said case and an open position projecting beyond the end of the case, said slot opening through one edge of the head and extending diagonally inward from said edge away from the shank and thence diagonally outward away from the shank toward said edge and terminating in a cross pin receiving bearing pocket, whereby the key is adapted to be engaged with and disengaged from said cross pin solely by pressure exerted longitudinally of the key.

4. In combination, a key holder comprising a case inclusive of a pair of spaced side walls and a cross pivot adjacent the ends thereof, a key having a pocket to receive said cross pin whereby the key is adapted to be pivotally connected with said pin for swinging movement between closed and open positions relative to said case, and a back spring carried by said case for cooperation with said key to hold the same in closed and open positions, said key further having a slot leading to said pocket defining a wedge shaped portion adjacent to said pocket and disposed oppositely to the pocket bottom for cooperation with said pin to permit engagement and disengagement of the key with and from the pin solely by pressure exerted longitudinally of the key.

In testimony whereof I affix my signature.

BRYANT E. MOULTON.