May 11, 1954

R. G. HOWELL ET AL

2,677,954

SUPPORT FOR KEYS

Filed Sept. 26, 1950

FIG. 1

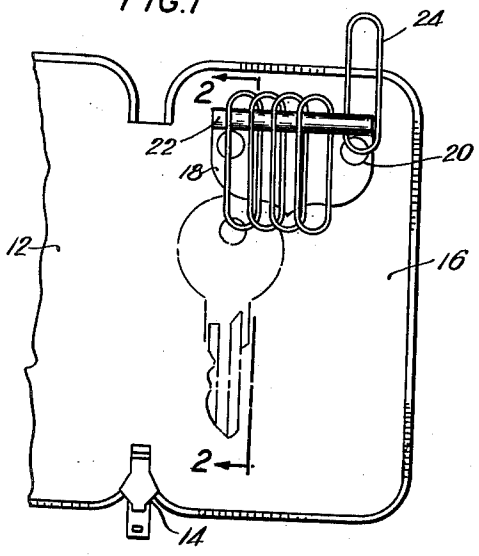


FIG. 2

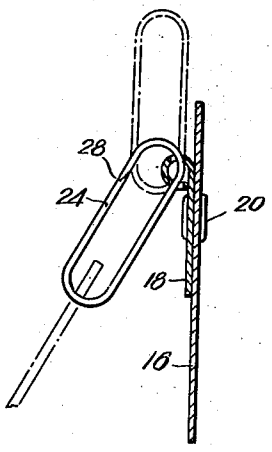


FIG. 3

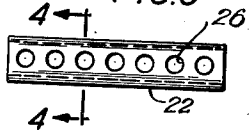


FIG. 4

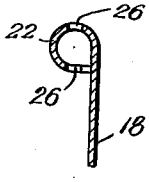


FIG. 5

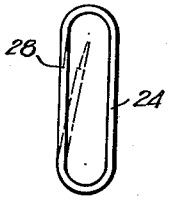


FIG. 6

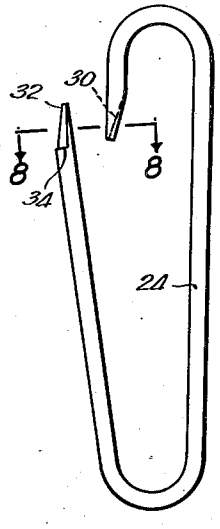


FIG. 7

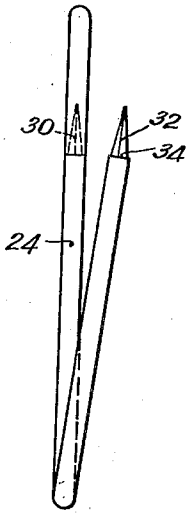
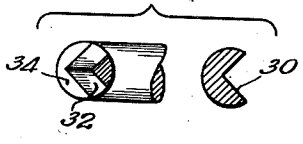


FIG. 8



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SUPPORT FOR KEYS

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2 Claims. (Cl. 70—456)

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The present invention relates to a key case of the type having a row of loosely-mounted hooks for carrying a set of keys, so that any one of the keys may be selected and used without disconnecting it from its hook.

Many arrangements for this purpose have heretofore been proposed, in an effort to provide a mode of construction that will afford free movement of the key relative to the case, while affording a secure connection against loss. Hook mountings based on ball and socket connections, link joints and the like theoretically permit relatively unrestricted rotary and swinging movement, but such connection are subject to jamming tendencies that limit the key movement and occasionally result in breaking off or pulling out of a hook, with consequent loss of one or more keys. Such arrangements in addition, generally do not permit the keys conveniently to be placed on or removed from the hooks as the occasion requires.

To overcome the difficulties inherent in existing arrangements, the present invention has as an object the provision of a key case having a novel construction and arrangement of key-supporting means. More specifically, the invention is concerned with a construction which permits to a substantial degree, sliding, swinging, and rotary movements of the key-retaining members without likelihood of jamming, while at the same time providing a rugged and durable connection. It is likewise an object of the invention to provide a construction which permits the keys readily to be placed on or removed from a hook, or if desired, a key and hook removed together.

In the drawings illustrating the several features of the invention, Fig. 1 is a view in front elevation of my key case, with the case in open condition to show the key-retaining means; Fig. 2 is a detail view in side elevation, partly in section and taken on the line 2—2 of Fig. 1, and illustrating in part the free movement of the key-retaining members; Fig. 3 is a top view of the supporting strip; Fig. 4 is a sectional view thereof, taken on the line 4—4 of Fig. 3; Figs. 5 and 6 are side views of the key-retaining loops, in closed and in open positions, respectively, Fig. 6 being somewhat enlarged for clarity; Fig. 7 is a front enlarged view showing the appearance of the split joint when the parts are temporarily held in laterally-displaced position, and Fig. 8 is a detail sectional view of the split joint in normally open position, taken on the line 8—8 of Fig. 6.

The key case comprises a body 12 of leather

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or other suitable material, shown for purposes of illustration as conventional in shape, having complementary back and front portions adapted to be closed by the usual slide fastener means 14, or in any other suitable manner. Mounted on the inside of the back 16 is a plate 18, the plate being secured by means of rivets 20. At its top, the plate is shaped in the form of a tube 22 to provide the support for the row of key-receiving loops 24.

To support the key loops in non-jamming but free-swivelling relation, the tubular support 22 is provided with pairs of holes 26, the holes of each pair being aligned on an axis substantially diametrically of the tube and extending approximately parallel to the mounting plate 18. The pairs of holes are disposed in closely spaced relation transversely of the support, so that the hooks or loops 24 overlap with consequent saving of space.

The loops 24 on which the keys are suspended are preferably formed of spring wire, bent to provide an elongated, parallel-sided loop with curved ends. A split joint, indicated generally at 28, permits the loops to be opened for the insertion or removal of a key, or to permit the loops themselves readily to be disconnected.

These key-retaining loops and their mode of mounting constitute a particular feature of the invention. As distiguished from constructions employing a ball and socket or equivalent form of connection for the key loops, the present arrangement provides certainty of retention as a result of the closed-loop construction, with the loop passing directly through the permanently closed and rigid support.

The certainty of retention of the keys and key loops does not however, diminish or interfere with the availibility or freedom of action of the keys. Indeed, the loops and their mounting permit convenient and free movement in excess of that afforded by prior arrangements. This is due to the relatively wide bearing engagement between the support and the hooks, which prevents the hooks from getting twisted or cocked in a jamming position. As best illustrated in Figs. 1 and 2, it will be observed that the keys normally hang downwardly from the bottom of the loop, and with the loops in lowermost position relative to the support 22. From this position, a key may be selected and brought to a position outwardly of the case in various ways.

One mode is shown in Fig. 2, wherein the key and its loop are swung upwardly with the curved end of the loop sliding through the tube 22 as a

center, thereby bringing the loop to the position shown in dotted outline. In this position, since the loop may swing from one side to the other through substantially 180°, ample swing is provided for free utilization of the key in a lock.

Alternatively, from depending position a key may be slid upwardly along the free arm of its loop, after which the loop may be drawn bodily upward through the tubular support until it reaches the position shown in dotted outline in Fig. 2. But in either case, there is no possibility of cocking or jamming of the loop in the support, since the relatively wide bearing provided by the spaced walls and pair of holes is the equivalent of a relatively long passage affording effective guidance to the loop to prevent its getting into a locked or binding position. Notwithstanding this relatively long guideway, under all conditions the loop may swivel freely, whether the straight sided portion or the curved end is within the support. It will be noted that the tubular support, with its spaced guiding passages, provides an open intermediate region or clearance into which the curved portion of the hook may swing when necessary.

To provide for convenient insertion and removal of keys, without interfering with the free end-for-end movement of the loops through the support, the split joint **28** is provided in each loop. This joint is made with a combination V-notch and taper, so as to be self-locking in positively aligned condition without projections of any kind.

The joint is preferably located adjacent on one end of a straight side of the loop, with the V-notch **30** disposed inwardly of the short arm. The long arm is formed at its end with a tapering tongue **32** of a shape complementary to the V-notch, with the apex of the V-section directed outwardly. To aid in securing a smooth joint when the loop is closed, the tongue preferably terminates with a slight shoulder **34** and the end of the notched arm is correspondingly shaped, thus avoiding the necessity of carrying the section to a sharp point.

The loops are so formed that the tongue end tends to spring outwardly in aligned relation to the socket or recessed portion. As a result, when the loop is closed, the parts are automatically and securely retained in smoothly aligned position, so that the keys and loops may slide and be securely retained, to all intents and purposes as effectively as if the loops were wholly

continuous in structure. On the other hand, the loop readily may be opened to permit removal of a key, or, with equal facility, the loop may be removed from the support if it is desired to keep the key and loop together.

It is thus apparent that we have provided a new and useful key case, wherein the keys are retained with utmost safety, yet with a freedom and ease of utilization unequaled by more complicated structures and arrangements. The embodiment which we have illustrated and described is considered to be the preferred form, but it will be understood that other forms and arrangements are possible and are comprehended by our invention as defined in the appended claims.

We claim as our invention:

1. In a key case having a container of flexible material, a support, said support comprising a tubular member having pairs of aligned apertures in the walls of the tube to form elongated guideways, and a plurality of key-retaining loops extending through and slidable within said guideways.

2. In a key case having a container of flexible material, a support comprising a tubular member having a flange portion, a plurality of pairs of apertures in the tubular member, the apertures of each pair being aligned transversely of the tube on an axis substantially parallel to the plane of the mounting flange to form elongated guideways, and a series of key hooks carried by the support and extending through the guideways, said hooks having curved ends and straight, parallel-sided connecting portions, one of said straight portions of each hook having a split joint.

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