

Aug. 15, 1933.

W. R. BUXTON
KEY CASE

1,922,755

Filed Oct. 8, 1930

Fig. 1.

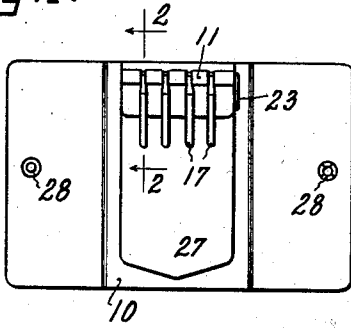


Fig. 2.

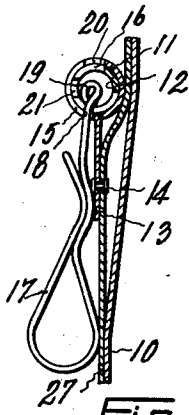


Fig. 4.

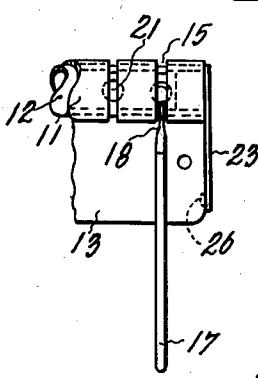


Fig. 3.

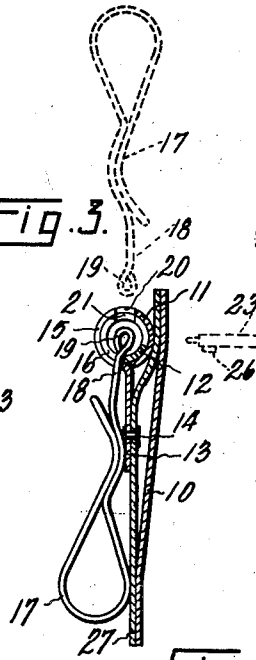


Fig. 5.

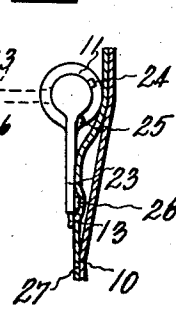


Fig. 8.

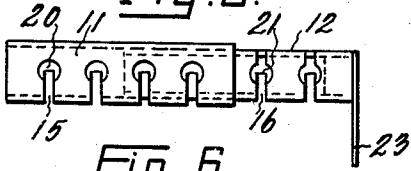


Fig. 9.

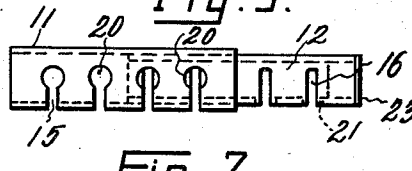


Fig. 6.

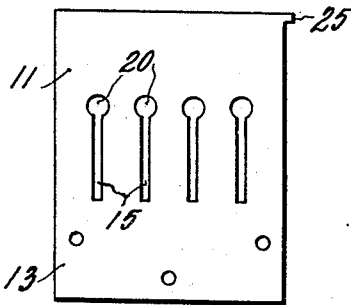
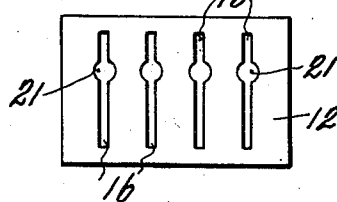


Fig. 7.



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UNITED STATES PATENT OFFICE

1,922,755

KEY CASE

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Application October 8, 1930. Seral No. 487,276

3 Claims. (Cl. 150—40)

This invention relates to improvements in key cases and, more particularly, to the means for securing the key holding hooks in the case.

This invention, like that of my co-pending application Serial No. 480,391, filed September 8, 1930, provides for the ready interchangeability of the key holders in the case. As in said application, the key holders are secured in the case by the use of two relatively movable, tubular members, the inner of which receives the enlarged heads of the key holders and both of which have one or more, and usually a series, of transverse slots to receive the shanks of the key holders and allow them to swing freely into and out of the case within the desired limits, and usually also to allow them to "swivel" or turn about their own axes. Each slot in each of these tubular members has at one point an enlargement sufficient to permit passage of the enlarged head of the key holder therethrough. When the members are turned to bring the enlargements of one member into register with those of the other member, the key holders or any one of them can be removed,—its enlarged head passing through the then registering enlargements. In the normal position of parts, the enlargements are maintained out of register and the heads of the key holders are locked within the inner tubular member.

This invention is differentiated from the former in that one tubular member can be moved relatively to the other into position to release all of the key holders in the case without at the same time swinging up all the key holders. The inner, rather than the outer member is moved for the purpose and this can be turned without at the same time moving the key holders along their slots. Although all of the enlargements in the two tubular members are brought into register to enable all of the key holders to be removed, the key holders remain in their normal pendent positions, until intentionally swung up, one at a time, into position to be withdrawn through the registering enlargements. Thus, with the new structure, any one key holder of the series can be released without necessitating movement of others into positions where accidental release is possible. At the same time, the structure is of more attractive appearance.

Other objects of the invention will appear as the detailed description proceeds and will be pointed out in the appended claims.

The invention will be disclosed with reference to the accompanying drawing, in which:—

Fig. 1 is a front elevational view of a key case

embodying the invention,—the case being shown in open position;

Fig. 2 is an enlarged fragmentary cross sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a view, taken similarly to Fig. 2 but showing the parts in position to permit removal of the key holders;

Figs. 4 and 5 are fragmentary front and end elevational views, illustrative of the means for turning the inner tubular member;

Figs. 6 and 7 are developed views of the blanks from which the outer and inner cylinders, respectively, are formed; and

Figs. 8 and 9 are top plan views showing the outer and inner tubular members in partially assembled relation.

Referring to this drawing; the body of the case is designated 10. This case, usually of leather or the like, may be of any desired form, as this invention is concerned only with the means for fastening the key holders in place therein.

Such fastening means comprises outer and inner tubular members 11 and 12, preferably rolled up from the flat blanks of sheet metal shown in Figs. 6 and 7, respectively. Member 11 has a flat plate-like extension 13 which is suitably secured, as by rivets 14, to the case 10. The members 11 and 12 are provided with one or more, and usually several, transverse slots 15 and 16, one for each of the key holders 17, and the width of each slot is such as to permit free play therein of the shank 18 of a key holder. Each of the latter has an enlarged head 19, which is substantially ball-shaped and of a diameter greater than the width of the aforesaid slots. Slots 15 and 16 have enlargements 20 and 21, respectively, therein, each of a diameter such as to permit free passage of a head 19. The inner cylinder 12 is of a diameter such as to be telescoped, axially endwise, as indicated in Figs. 8 and 9, in the outer cylinder and it is also free to turn therein. When the cylinders 11 and 12 are fully telescoped, the slots 15 in the former coincide with the slots 16 in the latter. The enlargements 20 are preferably located at the top of the stationary outer cylinder. When the inner cylinder is rotated to the position shown in Fig. 3, the enlargements 20 and 21 register and any key holder 17 can then be removed by swinging it upwardly from the position shown by full lines to that shown by dotted lines and then drawing it radially upward to carry its head 19 through the registering enlargements. When the cylinders 11 and 12 occupy the relative positions shown in Fig. 2, the enlargements 20 and 21 are

out of register and the key holders 17 are locked in and against removal from the cylinders, although each is free to be rotated about its own axis or swung to any position along the slot 15.

5 Any suitable means may be provided for turning the inner cylinder 12, such for example as a handle 23 (Figs. 4 and 5), secured to one end of said cylinder. Desirably, this handle has a lug 24 which cooperates with a lug 25 on member 12
10 to limit the extent of upward swinging movement of the handle. When these lugs abut, the enlargements 20 and 21 are exactly in register. If desired, the handle may have an ear 26 (Figs. 4 and 5) which may underlie plate 13 and serve
15 to retain the handle in its normal position in which it lies parallel with and closely adjacent one end of plate 13. A slight sidewise movement of the handle will serve to release ear 26 from beneath plate 13, whereupon it may be swung
20 up into the position shown by dotted lines in Fig. 5, in which lugs 24 and 25 will abut and accurately locate the inner cylinder with respect to the outer so that the enlargements 20 and 21 register.

25 In the form of key case shown herein, there is an inside flap 27, secured (preferably at the upper edge only) to the body 10 with freedom to move relatively thereto. In such case the plate 13 is secured to the flap 27 rather than directly
30 to the body 10. Where, as here, the cylinder 11 has a portion offset rearwardly from the plate 13, there is a tendency to produce a bulge in the leather case. Most of this bulging is made to occur in the flap 27 where it doesn't show, rather
35 than in the folder 10 itself. This effect is shown in somewhat exaggerated form in Fig. 2.

The key case folder, as shown, extends beyond each end of plate 13, forming flap extensions which may be folded in overlapping relation over
40 the key holders and secured together by the snap fastener elements 28, or any other suitable means.

The operation and advantages of the new structure will be generally apparent from the foregoing description but there are some aspects
45 of the invention that may be clearer through special mention. For example, the key case shown herein, except for the provision of the enlargements 20 in slots 15 and the addition of cylinder 12, is substantially the same form of key case structure which I have commercialized and which
50 is now in wide use. The addition of the enlargements 20 changes the prior structure very little. It will act exactly the same as heretofore except that, when any key holder 17 is swung up into
55 vertical position, it may be withdrawn through an enlargement 20 and taken out of the case. There is considerable advantage in thus removing a key holder from the key case.

60 However, such separation of the key holder from its case would be a real fault if it occurred accidentally and it has thus occurred even with the former structure, which lacked the enlargements 20. For example, the walls of a slot 15 have sometimes spread apart far enough to let
65 the head 19 of the key holder fall therethrough. Heretofore, the plate 13 has been formed with slots 15 which are open at one end rather than closed at both ends as shown in Fig. 6. The prior practice was to partially roll up a cylinder
70 from the plate and then lay the key holders in place just before the cylinder was completely rolled down into final form. But, while this form of manufacture was convenient, the strains and pulls on the key holders have sometimes caused
75 one or more of the slots to open far enough to

allow escape of the key holder. Spreading of the walls of the slot was made easier with the old structure because these walls were tied together by the metal of plate 13 at one end only. The present construction is a better one to avoid
80 spreading of the walls of the slots because these same walls are rigidly tied together at both ends. It would be difficult, as will be clear from Fig. 6, to spread the walls of the slots 15 there shown through any pulls and strains to which the key
85 holders are subjected in normal service.

Such construction, however, necessitates an entrance through which the head 19 of the key holder can be inserted into the cylinder 11 and hence the enlargement 20. The heads 19 must
90 then be locked against escape from the cylinder 11 and that is the province of the cylinder 12. Such cylinder may be held against accidental rotation in any suitable way. For example, and as shown, the ear 26 is lodged between the plate 13
95 and the underlying flap 27 so that the handle 23 and thus cylinder 12 cannot turn in either direction relative to cylinder 11. The cylinders are thus held against relative rotation with the parts positioned as in Fig. 2,—that is, with the enlarge-
100 ments 20 and 21 out of register. Escape of the key holders from the telescoped cylinders 11 and 12 is thus effectually prevented.

This structure results in an advantage both to the user and the manufacturer. To the user, the
105 removal of a key holder from the case and the replacement of another in the case is easily accomplished. He simply swings handle 23 upwardly as far as the abutments 24 and 25 will allow it to go and the enlargements 20 and 21
110 are accurately brought into register. Then the key holder to be removed is swung up into a vertical position and its head 19 withdrawn through the registering enlargements 20 and 21. To the manufacturer an easier assembly of parts is avail-
115 able. All parts may be completely formed before assembly, as distinguished from prior practice. To assemble the parts, the cylinders 11 and 12 are telescoped in the manner indicated in Fig. 6. With the inner cylinder 12 turned as shown so that its
120 enlargements 21 will register with those in the outer cylinder 11, the heads 19 of the several key holders are then inserted through the registering enlargements and the handle 23 turned to rotate the inner cylinder and lock the heads in
125 place. It will be noted that the key holders, when inserted in the cylinders are sufficient to hold the cylinders against any substantial axial movement, but obviously any other suitable means may be provided for the purpose.
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The use of the inner rather than the outer cylinder for locking the key holders in place has the advantage that the key holders do not have to be turned as an incident in the act of turning the
135 locking cylinder to release position. The key holders remain in their normal pendent positions shown by full lines in Fig. 3, undisturbed by the movement of cylinder 12 into release position. Then the key holder, to be removed, must be swung up into the position shown by dotted lines
140 before it can be removed. Other key holders of the series remain undisturbed and accidental escape of other than the one key holder, which it is desired to remove, is prevented.

The invention has been described in a form at
145 present preferred but I desire to claim it as broadly as the state of the prior art will permit.

What I claim is:

1. A device for removably securing a key holder, having an enlarged head, in a key case which
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comprises an outer plate member having one edge bent into hollow cylindrical form and adapted to be secured to the body of a key case, an inner member mounted inside the cylindrical portion of the outer member for turning movement about the axis of the latter, registering slots formed in the cylindrical portion and said last named member adapted to receive the shank of the key holder and of a width to permit free travel of the holder in the slots, enlarged openings formed in the slots and positioned to be brought into registration for the introduction or removal of the enlarged head of the key holder when the inner member is turned into one position and to be moved out of registration to lock the holders in the slots when the inner member is turned to another position.

brought into registration for the introduction or removal of the enlarged head of the key holder when the inner member is turned into one position and to be moved out of registration to lock the holder in the slots when the inner member is turned to another position, means connected to the inner member and extending outside the cylindrical portion of the outer member in non-interfering relation with the key holders for turning the inner member, and means for limiting the turning movement of the inner member in one direction and locating the same so that its enlargements register with those in the cylindrical portion of the outer member.

2. A device for removably securing a key holder, having an enlarged head, in a key case which comprises an outer plate member having one edge bent into hollow cylindrical form and adapted to be secured to the body of a key case, an inner member mounted inside the cylindrical portion of the outer member for turning movement about the axis of the latter, registering slots formed in the cylindrical portion and said last named member adapted to receive the shank of the key holder and of a width to permit free travel of the holder in the slots, enlarged openings formed in the slots and positioned to be brought into registration for the introduction or removal of the enlarged head of the key holder when the inner member is turned into one position and to be moved out of registration to lock the holder in the slots when the inner member is turned to another position, the enlarged openings in the outer member being located at the upper part of its cylindrical portion and opposite the plate-like portion thereof.

5. A device for removably securing a key holder, having an enlarged head, in a key case which comprises an outer plate member having one edge bent into hollow cylindrical form and adapted to be secured to the body of a key case, an inner member mounted inside the cylindrical portion of the outer member for turning movement about the axis of the latter, registering slots formed in the cylindrical portion and said last named member adapted to receive the shank of the key holder and of a width to permit free travel of the holder in the slots, enlarged openings formed in the slots and positioned to be brought into registration for the introduction or removal of the enlarged head of the key holder when the inner member is turned into one position and to be moved out of registration to lock the holder in the slots when the inner member is turned to another position, means connected to the inner member and extending outside the cylindrical portion of the outer member in non-interfering relation with the key holders for turning the inner member, and releasable means for holding the inner member in said last named position.

3. A device for removably securing a key holder, having an enlarged head, in a key case which comprises an outer plate member having one edge bent into hollow cylindrical form and adapted to be secured to the body of a key case, an inner member mounted inside the cylindrical portion of the outer member for turning movement about the axis of the latter, registering slots formed in the cylindrical portion and said last named member adapted to receive the shank of the key holder and of a width to permit free travel of the holder in the slots, enlarged openings formed in the slots and positioned to be brought into registration for the introduction or removal of the enlarged head of the key holder when the inner member is turned into one position and to be moved out of registration to lock the holder in the slots when the inner member is turned to another position, and means connected to the inner member and extending outside the cylindrical portion of the member in non-interfering relation with the key holders for turning the inner member.

6. A device for removably securing a key holder, having an enlarged head, in a key case which comprises tubular members positioned in telescopic relation, registering slots formed in said members, adapted to receive the shank of the key holder and of a width to permit free travel of the holder in the slots, enlarged openings communicating with said slots and positioned to be brought into registration for the introduction of the enlarged head of the key holder, by relative movement of the tubular members, and to be thereafter moved out of alignment to lock the holder in the slots, and means for effecting relative movement of said members without causing movement of the key holder in its slot.

4. A device for removably securing a key holder, having an enlarged head, in a key case which comprises an outer plate member having one edge bent into hollow cylindrical form and adapted to be secured to the body of a key case, an inner member mounted inside the cylindrical portion of the outer member for turning movement about the axis of the latter, registering slots formed in the cylindrical portion and said last named member adapted to receive the shank of the key holder and of a width to permit free travel of the holder in the slots, enlarged openings formed in the slots and positioned to be

7. A device for removably securing a key holder, having an enlarged head, in a key case which comprises an outer plate member having one edge bent into hollow cylindrical form and adapted to be secured to the body of a key case, an inner member mounted inside the cylindrical portion of the outer member for turning movement about the axis of the latter, registering slots formed in the cylindrical portion and said last named member adapted to receive the shank of the key holder and of a width to permit free travel of the holder in the slots, enlarged openings formed in the slots and positioned to be brought into registration for the introduction or removal of the enlarged head of the key holder when the inner member is turned into one position and to be moved out of registration to lock the holder in the slots when the inner member is turned to another position, the enlarged openings in the outer member being located at the upper part of its cylindrical portion and opposite the plate-like portion thereof, and means for

turning the inner member in the outer member without causing movement of the key holder along its slot.

8. The combination in a key case, of a support
5 for the key holders having a plate-like part se-
cured to the key case and a hollow cylindrical
portion, said portion having transverse slots with
an enlargement at one point in each, key holders
10 one for each slot each having a head of a size to
pass freely through the enlargement in its slot
but not through the slot itself and a shank to

swing freely in the slot, a member separate from
said plate movably mounted within said cylin-
drical portion and bodily shiftable relatively
thereto and independently of the key holders
80 from one position to another to prevent or per-
mit passage, respectively, of the heads of the key
holders through said enlargements, and an ac-
tuating part connected to said member and ex-
tending outside said cylindrical portion to enable
said member to be manually shifted. 85

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