

Nov. 14, 1933.

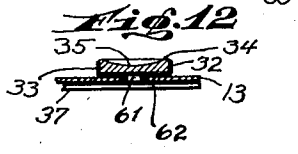
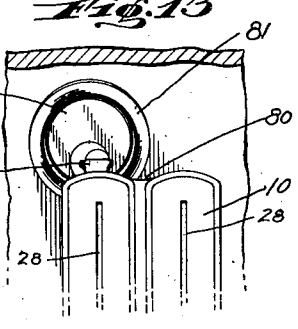
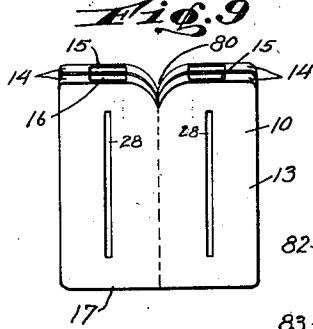
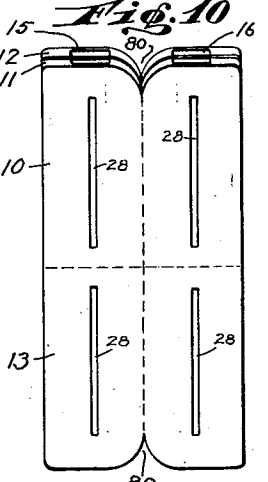
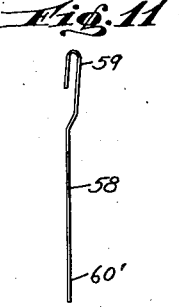
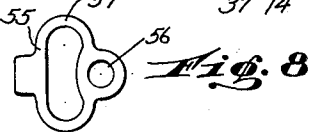
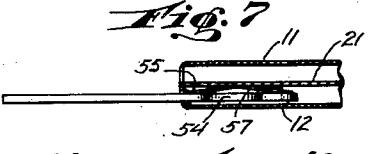
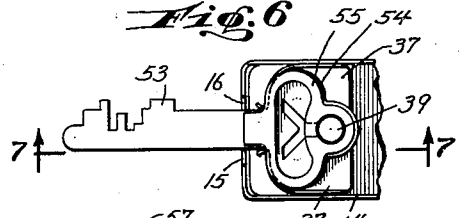
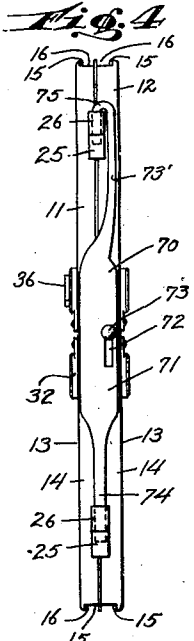
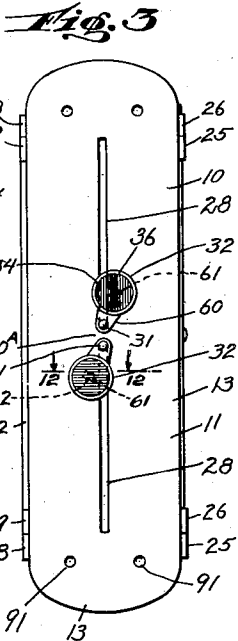
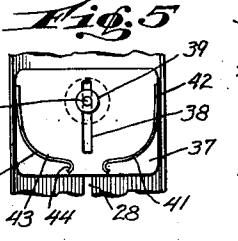
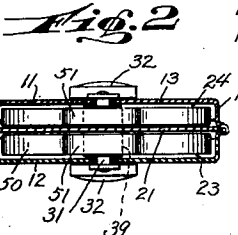
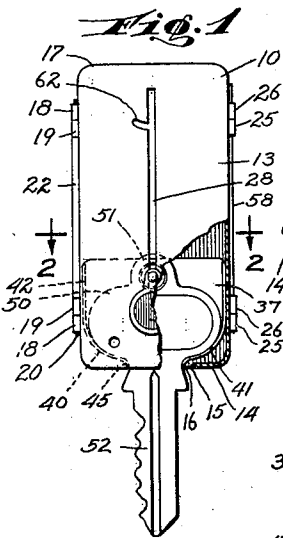
H. R. SEGAL

1,934,889

KEY RETAINER

Filed June 29, 1931

2 Sheets-Sheet 1



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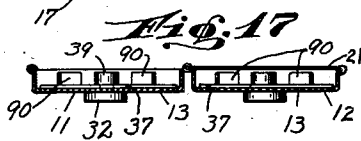
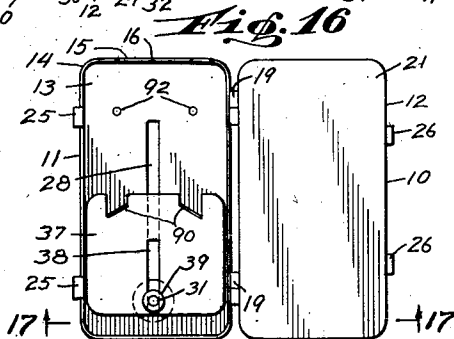
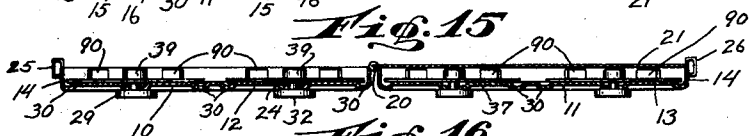
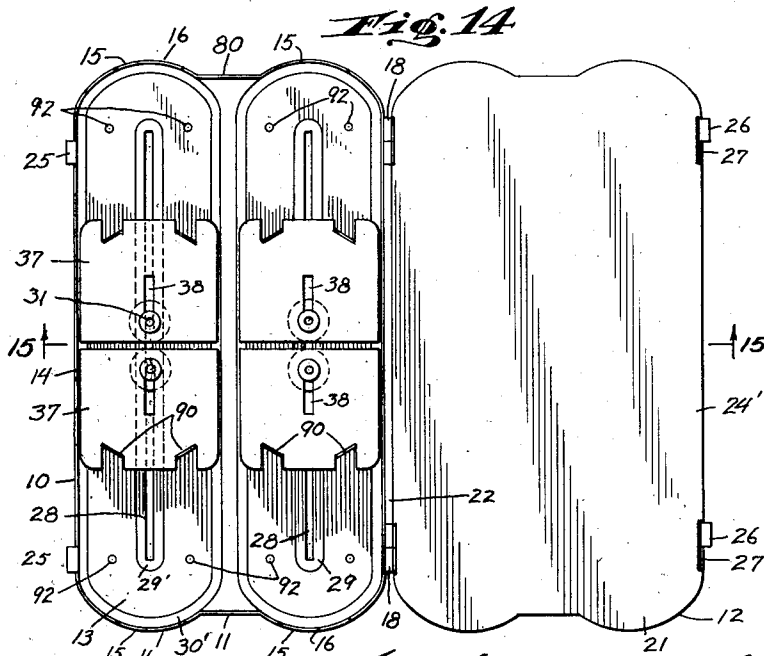
H. R. SEGAL

1,934,889

KEY RETAINER

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2 Sheets-Sheet 2



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1,934,889

KEY RETAINER

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Application June 29, 1931. Serial No. 547,659

25 Claims. (Cl. 59—96)

The present invention has general reference to a retainer and more specifically to a key retainer having means for selectively ejecting several types of keys for releasing door locks or the like although in its broadest aspect the invention is not limited in this respect.

As an object of the invention provision is made for removably concealing a plurality of keys in a container or casing of such shape and proportions adapted to be carried in a vest pocket or ladies' hand bag.

Another aspect is to provide a split casing of complementary members or covers each of which includes one or more slidably arranged elements on which the several keys are maintained in movable or immovable relationship with regard to respective members.

Still another object is to suitably guard each key disposed on respective slidable members or carriages against displacement.

A feature of the invention resides in the provision of a carriage having means to receive keys of various sizes.

More particularly, the invention contemplates a key retainer which may be employed as a handle and has a further advantage in that only one hand of the operator is required for two operations, to wit, first, for grasping the casing and secondly, withdrawing or concealing of a selected key.

Broadly speaking, the invention comprehends a key retainer which positively prevents discharging of any keys therefrom after the casing has been disposed in a pocket or holder of the user.

As another feature, the invention provides means for precluding a carriage to ride rearwardly after having been brought forwardly to expose a selected key for use.

A further advantage resides in a novel construction for storing a plurality of keys wherein a selected key may be ejected in such manner as to avoid interference with other concealed or non-selected keys.

More specifically, another object of the invention is to associate a manipulator with a respective key whereby a particular key of the several keys concealed within the container may be selected by sight or touch.

While I shall describe my invention as being particularly useful as a key retainer, it will be understood that the invention is capable of embodiment in whole or in part in similar and non-analogous arts and therefore finds a wide field of utility other than herein described.

The invention is exemplified in the combination and arrangement of parts shown in the accompanying drawings and described in the following specification and it is more particularly pointed out in the appended claims.

Referring to the drawings:

Fig. 1 is a view of a retainer for two keys and showing one key ejected and parts of the casing broken.

Fig. 2 is a sectional view along the line 2—2, Fig. 1 in the direction of the arrows.

Fig. 3 is a view of a retainer for four keys, all being concealed.

Fig. 4 is a side view of Fig. 3.

Fig. 5 is a fragmentary inside view of one of the complements of the retainer illustrated in Figs. 1 or 3 to show the slidable key support or carriage.

Fig. 6 is a fragmentary inside view of a key retainer complement or cover with a flat key ejected and mounted on a carriage.

Fig. 7 is a section across the line 7—7, Fig. 6, in the direction of the arrows.

Fig. 8 is a view of a compensator, employed in connection with a flat or narrow gage key.

Fig. 9 is a schematic view of a retainer for holding eight keys.

Fig. 10 is a schematic view of a modified retainer for holding also eight keys.

Fig. 11 is a view of a fastening member for securing the complements of the retainer illustrated in Fig. 1.

Fig. 12 is a section on the line 12—12, Fig. 3, in the direction of the arrows.

Fig. 13 is a schematic view illustrating one of the keys ejected from a retainer and disposed within the cylinder of a lock preparatory to opening a door, drawer or the like to which the lock is secured.

Fig. 14 is an open view of a retainer for holding eight keys, exhibiting also a modified key carriage.

Fig. 15 is a section taken along the line 15—15 of Fig. 14, in the direction of the arrows.

Fig. 16 is an open view of a retainer for two keys.

Fig. 17 is a section along the line 17—17, Fig. 16 in the direction of the arrows.

In all forms of key retainers of the present disclosure it is proposed to provide a casing, generally denoted 10 having split complementary members or covers 11 and 12 juxtaposed and suitably hinged together and fastened to comprise an enclosure in which the one or more keys may be concealed.

Each complement comprises a plate as 13 having a peripheral edge flange or rim 14 which is substantially continuous except for the cutaway portions as 15 which in their respective complements of all the modifications herein set forth provides a discharge opening 16 through which a selected key may be partially extended outside of the retainer for use.

With a two key retainer, of the type illustrated in Fig. 1 or with the form of retainer exhibited in Fig. 9, which in fact constitutes two embodiments of Fig. 1 placed and secured side by side, only one end of the peripheral flange 14 of respective complements include a key ejecting or receiving opening, say, as 16, formed by cutaway portions 15, it being noted that the opposing end 17 of each complement in these figures has its peripheral flange continuous, (see also Fig. 17.) However, with the multiple key retainers illustrated in Figs. 3, 4, 10 or 14, each end of the complements includes openings as 16 formed by respective cutaway portions 15.

For forming the casing, the complements or covers thereof are juxtaposed in such manner that, the spaced coiled ears as 19 extending from one component are within close proximity to and aligned with the spaced coiled ears 18 extending from the other complement, after which an elongated closely fitting pin 20 is threaded through the aligned pairs of ears. In this way the complements are hingedly associated and swingable on the pin 20.

Provision has been made for forming a plurality of compartments within each casing. To this end, a flat plate or leaf 21 disposed between contiguous flanges 14 of the hinged complements includes a reflexed portion 22 coiled and freely secured to the pin 20 whereby leaf 21 may be swung towards and against the peripheral flanges of either of the complements, in forming one compartment and subsequently the other component is swung against the leaf and the second compartment is formed. In other words, with the complements, closed, that is, in the position indicated in Figs. 2, 3, 9 or 10 the concealed leaf 21 (see particularly Fig. 2) forms a common wall for the superimposed compartments say, as 23 and 24. It should be noted that the leaf 21 of all modifications has an edge contour conforming substantially to the contour formed by the peripheral flanges of adjacent complements with exception, however, that no cutaway portions as 15 are provided on the upper and lower transverse edges, for example, (see Fig. 14.) In order that the leaf may bear against a peripheral flange, it is necessary that the forward marginal portion 24' clears pairs of spaced coiled ears 25, 26 or sleeves extending from each complement which are in alinement when the latter are superimposed and to this end a pair of elongated spaced notches or striations 27 (see Fig. 14) are provided. Of course it is within the province of my invention to have the ears as 25 and 26 project forwardly of their peripheral flanges or rims and with such construction the elongated notches 27 need not be provided, see Fig. 16.

In the embodiments, disclosed in Figs. 1, 3 and 16 each wall or carriage carrying plate 13 includes an elongated slot 28 extending axially thereof. With embodiments of Figs. 9, 10 and 14 each carriage carrying wall 13 of respective complements comprises a pair of spaced transversely arranged slots 28 (see particularly Fig. 14) which in the present instance are struck out in such manner as to embody a depression 29' and con-

stituting on the opposite side of respective plates 13 a boss 29 which reinforces the walls about respective slots 28 (see Fig. 15). Also, each plate, 13 of Figs. 15 and 16 embodies two closed reinforcing beads 30, preferably elliptical in contour which not only enhance the appearance of the outer faces of plates 13 but additionally increases their strength. In Fig. 3 the aligned slots 28 of each carriage supporting wall 13 of the complements are spaced apart by the intermediate connecting portion 30A integral with its respective wall.

Freely and slidably disposed in each slot 28 of all walls or covers of the complements of all modifications is a post as 31 which projects above the inner and outer faces of respective walls 13 and, has secured thereto a manipulator generally denoted 32 comprising shell 33 (see Fig. 12) in which is mounted a button 34 having the depressions 35 which may be easily gripped by a finger of the operator for a purpose hereinafter explained. The buttons may be of any suitable material and each may be coated with any selected color. That is, one button may be green, another red, and still another of another color and each color would identify a particular key or the coating may be of a character as to be readily viewable in the dark and further, each manipulator may carry embossed numbers as 36 on the upper surface thereof to permit the selection of a key by the sense of touch.

Associated with each post 31 is a flat plate or carriage 37 and each of the latter includes a slot 38 in registry with a contiguous slot 28 of an associated wall 13. The posts extend through both respective registered slots 28 and 38 and are provided with collars 39 secured to the inner ends of the posts within close proximity of respective carriages whereby the latter may each be slidably moved longitudinally in respective complements, a distance corresponding to the length of its slot, if its manipulator attached to the outside of its post and snugly guided by the margins of an adjacent casing slot is actuated, either for concealing within or ejecting a key from the casing. Attention, however, is directed to the feature, that although a post may be moved along the casing slot 28, the associated key carriage is without movement until the post 31 reaches either end of slot as 38, that is to say a lost motion connection is provided between a carriage and an associated cover or complement. Stated in another way, although a manipulator button may be moved a considerable distance, its carriage will not be affected until a post as 31 (see Fig. 16) has been moved to either end of its carriage slot 28 at which time the selected carriage 37 is picked up and slidably moved in either direction depending upon the forward or retracted position of post 31 controlled by the shifting of an outside manipulator. In Figs. 3, 14, 15, and 16 the posts and their carriages are retracted.

Each carriage 37 of the embodiments illustrated in Figs. 1 to 7 inclusive comprises a pair of oppositely arranged springs 40 and 41 having one end thereof as 42 fixedly secured to the same face of the carriage but adjacent opposite longitudinal edges. The curved intermediate portions 43 and the reflexed terminals 44 of each spring are free of but contiguous to the inner face of its carriage and by reason of the resiliency of the free reflexed portions, the neck 45 intermediate the stem 52 and bow portion 50 of a key may be securely gripped and held flat, and the swingable intermediately disposed intervening

leaf 21 insures and guards that the key may be maintained in a desired plane when ejected and against shaking or rattling in its compartment.

Post 31 and its collar 39 may be moved in either direction within the limits of its carriage slot without causing any displacement of its carriage. Consequently the distance between the gripping lips 44 and an associated collar 39 may be varied. Thus, adjustments on a carriage may be made for securing keys having various sizes of bows 50 the latter having a headed portion 51 loosely and removably fitted over a collar as 39.

The standard key illustrated in Fig. 1, shown ejected from the container has its bulbous or bow portion 50 and stem 52 of a depth corresponding to the height of its carriage and when the leaf 21 is swung against a rim or peripheral flange, the walls of the compartment formed, prevent the key from shaking and rattling. If the key contained a bow or bulbous portion and stem having a depth less than standard types of keys, as exemplified in Fig. 6, even though leaf 21 would be swung thereover this type of key, generally known as flat key, the latter would have a tendency to shake and rattle in the compartment formed. This objection is overcome by interposing between the bow 54 of flat key 53, and leaf 21 a compensator (see Fig. 7) generally denoted, 55 of the design shown in Fig. 8, stamped out of thin resilient stock. The compensator includes the perforated headed portion 56 which is placed over a collar 39.

To prevent a key after having been concealed within the compartment from sliding out as to project partially beyond the retainer casing, the slidable posts 31 in respective slots 28 include a flat lug as 60 pivotally connected thereto and to each lug is attached a manipulator 32. Lugs 60 each carry a pin 61 adapted to ride into the inclined slot 62 in communication with respective slots 28 of the complements (see Fig. 3.) Thus, it is apparent, that after the post 31 has been brought by actuating an associated manipulator 32 to its inward limit; this position being indicated in Fig. 3, the selected manipulator 32 is swung to one side, causing pin 61 to interlock with the inclined slot 62. In this way, a key is prevented from being ejected until the manipulator is unlocked.

Associated with the complements 11 and 12 of Fig. 4, is the fastening or latch member 70 which comprises a flat intermediate portion 71, slotted at 72, the latter being freely guided by rivet 73 which is fixed to one rim of the casing. Arms 73' and 74 extending from intermediate portion 71, are offset and arm 73 includes hook 75.

Since the fastening member 70 and its arms may be bodily moved lengthwise of the casing within the limits of slot 72 hook 75 and the terminal portion of arm 74 may be disengaged from contiguous ears 25 and 26 by sliding member 70 upwardly. Thus complements 11 and 12 may be swung apart for insertion of the desired keys. For connecting the complements, the latter are brought together and the fastening member 70 is moved downwardly. If desired the outside face of the slidable fastening member 70 may be knurled.

Where the retainer is of the type illustrated in Figs. 9, 10, 13 or 14, each complement includes an intermediate reentrant portion 80 which may receive the usual bevelled flange 81 surrounding a cylinder lock 82 (see Fig. 13) whereby a selected key, as 83, shown ejected from the retainer

casing 10 may properly reach the lock to release same.

Instead of providing resilient gripping jaws as 40 and 41, a key may be retained on its carriage between spaced upstanding flanges 90 on which one portion of the bow of a key is seated (see Figs. 14-16 inclusive.)

After a selected key has been ejected provision has been made to prevent the key from being moved back into the casing unless deliberately forced back. In this connection the casing includes a plurality of spaced indentations as 91 which form small protuberances 92 on the inside faces of the casing providing a brake for an associated carriage after the latter has been slidably operated by extending its manipulator to eject its key on the outside of the casing.

In all forms of retainers herein described, if the casing thereof be empty, the complements are disconnected by operating the fastening elements 58 or 70. The manipulators of one complement are then adjusted to place their posts the required distance from either the gripping lips as 44 or the lugs 90. Subsequently the headed portion of a key is centered on respective collars 39 and brought between the gripping lips 44 or between the upstanding lugs 90. The intermediate leaf 21 is swung over against the keys just centered and secured. The other component of the casing is then filled and closed, and subsequently the fastening member as 58 or 70 is brought into position to secure the complements. To eject a key a respective manipulator 32 is slidably moved along the outer surface of the casing. To restore the key within the casing, its manipulator is moved in a reverse direction.

The foregoing disclosure has been given by way of example for clearness and understanding only. Hence no unnecessary limitations should be understood and the appended claims should be construed as broadly as the state of the art permits.

I claim:

1. A retainer, including, in combination, complementary swingably connected members, intervener means interposed between said members defining a compartment with each member, a carriage for supporting an article in each compartment and selective means carried by said members for operating respective carriages, said intervener means having opposed faces disposed contiguous to juxtaposed articles to prevent the latter from appreciable transverse displacement.

2. In a retainer, a casing with complementary members hingedly connected, a key carriage within each member, means common to a carriage and a respective member to guide and move its carriage relatively of said casing, means associated with each carriage for removably holding a key mounted thereon, intervening means, hingedly connected to said members having faces disposed contiguous to a key of said carriages, and a compensator disposed between a key and a contiguous portion of said intervening means.

3. A key retainer comprising a casing having concealed therein a plurality of key receiving members, driving means for each of said members longitudinally movable of and guided by a wall of said casing, a swingable manipulator individual to each member, and locking means associated with each manipulator to prevent movement of a respective key receiving member.

4. In a key retainer, a casing with swingable complementary connected slotted members, a plate between said members dividing said cas-

- ing into compartments, a plurality of key carriages disposed on each member and each including an opening in registry with a slot of a respective member, a post extending through a registered opening and slot and slidably associated therewith, means at one end of each post for slidably holding a carriage within close proximity to a respective member, and means at the other end of each post for identifying the key carried by a respective carriage.
5. The retainer according to claim 4 further characterized in that the opening in a carriage limits the movement of a respective post without affecting movement of its associated carriage.
6. The retainer defined in claim 4, wherein each carriage includes spaced flanges providing a guard for its key.
7. In a retainer, the combination of, a casing comprising complementary swingable slotted members, intervener means interposed between said members defining a compartment with each member, article supporting slotted means slidably mounted in each compartment, shiftable means comprising an element passing through registered slots of said member and associated supporting means and including means to receive a portion of a respective article and a manipulator connected to each element for actuating its associated supporting means to extend the article thereon beyond or within the casing, said intervener means having opposite faces contiguous to adjacent articles.
8. In a retainer, the combination of a casing comprising complementary swingable members, article supporting slotted means slidably mounted in each member, intervening means hingedly connected to the casing and defining a compartment with each member and adapted to be disposed adjacent to an article of said supporting means, and means shiftable guided in registered slots of a complementary member and its article supporting means for moving the latter to extend or conceal its article beyond or within the casing.
9. In a retainer, the combination of, complementary slotted swingably connected members, an article supporting slotted plate slidably mounted in each member, plate intervener means hingedly connected to said members forming a plurality of compartments therewith and disposed adjacent to the articles of said supporting plates, and selective actuator means guided in registered slots of a complementary member and its supporting plate to displace the latter for extending or concealing its article beyond or within the casing.
10. In a retainer, the combination of, complementary juxtaposed hingedly connected slotted members, a slotted article support carriage slidably disposed in each member, intervener means swingably connected to said members and forming therewith a plurality of compartments with faces thereof adapted to be disposed within close proximity to articles of adjacent carriages, shiftable means having a portion thereof guided in registered and unequal length slots of a complementary member and associated carriage for moving an article of the latter in and out of a respective compartment.
11. In an article retainer, the combination of, a casing having a wall with a slot, an article supporting plate slidably mounted and guided on said wall and including an opening in registration with said slot but of less length, driving means guided in said registered slot and opening for shifting said plate with respect to said casing, and clamp means carried by said plate for holding an article thereon, said driving means being adjustable with respect to said clamp means to accommodate various sizes of articles on said plate without displacement of the latter.
12. In a retainer, the combination of, a casing having a slotted wall, a key supporting plate movably mounted and guided on said wall and including an opening of a length less than a slot of said wall but in registration therewith, actuator means for moving said plate to shift its key in and out of the casing comprising a member displaceably disposed in said registered slot and opening, a manipulator attached to the outside end of said member and a key receiving portion mounted on the inside end of said member, said plate having means for removably embracing a portion of said key.
13. The retainer according to claim 12 characterized in that the actuator means may be shifted a distance coextensive the length of said opening without affecting the displacement of said plate.
14. The retainer according to claim 12 characterized further in that the actuator means may be shifted as to cause said member to selectively about the ends of said opening to extend an associated key outside of the casing or conceal the key, if extended, within the casing.
15. In a retainer, the combination of, a casing comprising complementary hingedly connected slotted members, an intervener pivotally mounted on said casing and defining a compartment with each member, a plurality of article supporting means slidably mounted in each member and including an opening of less length but in registration with a slot thereof, and actuator means individual to a supporting plate and shiftable guided in the opening thereof and its registered slot for moving the article supported thereby in and out of its compartment.
16. In a retainer, the combination of, a casing comprising complementary hingedly connected slotted members, an intervener pivotally mounted on said casing and defining a compartment with each member, a plurality of article supporting plates slidably mounted in each compartment and including an opening of less length but in registration with a slot thereof, and actuator means individual to a supporting plate and shiftable guided in the opening thereof and its registered slot for moving the article supported thereon in and out of its compartment, said intervener being a plate having opposed sides disposed contiguous to adjacent faces of articles on said plates.
17. In a key retainer, the combination of, a casing having complementary hingedly connected members, intervener means cooperating with the latter dividing the casing into compartments, a key supporting plate slidably guided and seated on a wall of each member, means carried by each plate for removably embracing and holding its key flatwise thereto, the hinged members being adapted to be superposed with said intervener means disposed in close proximity to adjacent faces of the keys of said plates and prevent the keys from appreciable displacement transversely of said casing and driving means individual to a key supporting plate and accessible outside of the casing for displacing an associated plate with respect to its member.
18. In combination, a casing, a key supporting carriage slidably disposed therein and means comprising a connection for holding said carriage contiguous to a wall of the casing and adjustable

with respect to said carriage without the latter's displacement.

19. In combination, a casing, a key supporting carriage slidably disposed therein, driving means 5 comprising a connection for holding said carriage contiguous to a wall of said casing and adjustable with respect to the carriage without the latter's displacement, said connection having means for shifting the carriage longitudinally of 10 said casing.

20. In combination, a casing having complementary members having a pair of corresponding sides hingedly connected and provided with latching means, a slidable article supporting 15 carriage disposed in each member, each carriage having spring means for removably holding its article flatwise and selective means accessible outside of each member and operatively associated with a respective carriage for shifting its article with respect to the casing. 20

21. In combination, a casing comprising complementary members having a pair of corresponding sides hingedly connected and provided with latching means, an intervening plate 25 hingedly carried by said sides and cooperating with said members to define a plurality of compartments, a plurality of article supporting carriages slidably disposed and guided in each member, each carriage having resilient means thereon 30 and comprising free terminals for removably holding its article flatwise and means individual to each carriage and accessible outside of said casing and operatively connected to its carriage for shifting its article with respect to said casing. 35

22. In a device of the character described, a casing having a slotted wall, a key supporting plate slidably mounted and guided on said wall, resilient clamping means bodily carried by said plate for removably holding its key flatwise 40 thereto, and means accessible outside of said wall

and connected to said plate for displacing the latter and its key relative to the casing.

23. In a device of the character described, a casing having swingably connected covers, an article supporting plate mounted on a wall of one 80 of said covers, driving means accessible outside of said wall and operatively connected to said plate for displacing the latter longitudinally of said casing and resilient clamping means bodily movable with said plate for holding its article 85 flatwise thereto.

24. In a device of the character described, a casing having swingably connected covers, an article supporting plate slidably mounted and guided on a wall of one of said covers, driving means 90 accessible outside of said wall and operatively connected to said plate for displacing the latter relative to the casing, resilient clamping means for holding an article of said plate flatwise thereto, sleeves disposed in juxtaposition and extending in alinement from corresponding faces of 95 said covers at opposed ends of the casing, and a manipulator having terminals removably received in said juxtaposed and alined sleeves.

25. In a device of the character described, a casing having swingably connected covers, a key supporting flat plate slidably mounted on and guided on a wall of one of said covers, driving means accessible outside of said wall and operatively connected to said plate for displacing the 105 latter relative to said casing, clamping means carried by said plate for holding its article flatwise thereto, intervening plate means intermediately and swingably disposed between said covers and disposed in close proximity to the key 110 of said plate, a sleeve carried by each cover at opposed ends thereof, and a manipulator slidably mounted on said casing having terminals removably received in adjacent sleeves of said covers.

HYMAN R. SEGAL. 115

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