

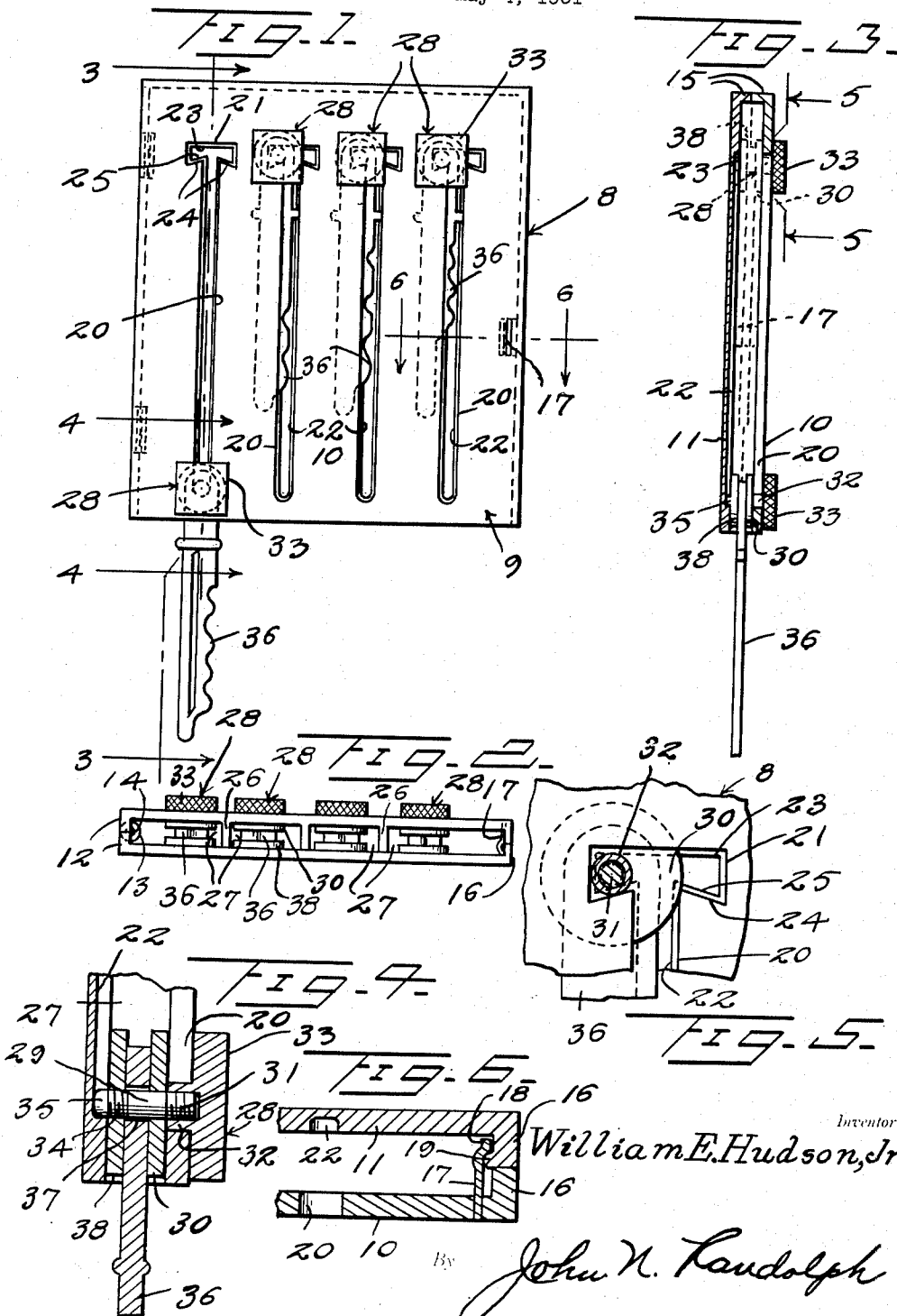
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W. E. HUDSON, JR

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KEY CASE

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Inventor

William E. Hudson, Jr.

By

John N. Randolph

Attorney

UNITED STATES PATENT OFFICE

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KEY CASE

William E. Hudson, Jr., Vicksburg, Miss.

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This invention relates to an improved construction of key case capable of containing a plurality of keys therein in such a manner that the individual keys may be moved selectively from retracted positions within the case to projected positions externally of the case for use without requiring opening of the case and without involving any movement of the keys other than the selected key to be used.

Another object of the invention is to provide a key case of extremely simple construction wherein each of the keys will be contained in a separate compartment supported by a separate operator capable of being manually actuated from the exterior of the case for moving the key selectively to a projected or a retracted position.

Another object of the invention is to provide a key case of rigid construction wherein the body portion of the case will form a rigid handle for each key thereby making it possible to eliminate the usual enlarged key head thus reducing the amount of material required in producing a key and at the same time making it possible to house the keys in smaller compartments of the case and thus reduce the over-all size of the case.

Another object of the invention is to provide a key case wherein a desired key may be readily selected in the dark and moved to an exposed position for use.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a plan view of a key case constructed in accordance with the invention;

Figure 2 is an end elevational view thereof as viewed from the lower end of Figure 1;

Figure 3 is a longitudinal sectional view taken substantially along a plane as indicated by the line 3-3 of Figure 1;

Figure 4 is an enlarged fragmentary sectional view taken substantially along a plane as indicated by the line 4-4 of Figure 1;

Figure 5 is an enlarged fragmentary sectional view taken substantially along a plane as indicated by the line 5-5 of Figure 3, and

Figure 6 is an enlarged fragmentary transverse sectional view taken substantially along a plane as indicated by the line 6-6 of Figure 1.

Referring more specifically to the drawing, the improved key case in its entirety is designated generally 8 and includes a body portion, designated generally 9 which is preferably formed of a substantially rigid relatively light weight metal

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including a front wall 10 and a rear wall 11, which walls are of the same size. The walls 10 and 11 are provided along opposite side edges and one end with complementary flanges which project at right angles to the planes of said walls including corresponding flanges 12 at complementary side edges of the front and rear walls which are provided at spaced intervals with aligned barrel portions 13 which are journaled on pins 14 and form hinges of the concealed type about which the front and rear walls 10 and 11 are capable of swinging from the closed position of the body portion 9 as illustrated in Figure 2 to an open position for exposing the interior of said walls. The barrel portions 13 of each flange 12 are receivable in recesses, not shown, of the other flange 12, as is conventional in hinges of the "concealed" type. The front and rear walls are also provided with complementary flanges 15 at corresponding ends of said walls which are disposed in abutting engagement when the body portion of the case is closed, as illustrated in Figure 3. The other, complementary side edges of the front and rear walls are provided with complementary flanges 16, as seen in Figures 2 and 6, which are likewise disposed in abutting engagement when the case is closed. The key case is provided with a suitable spring latch to retain it in its closed position, as best illustrated in Figure 6, including a spring latch element 17 which is preferably anchored at one end in the front wall 10 adjacent its flange 16 and which is provided with an offset free end 18 which engages around a keeper 19 on the flange 16 of the rear wall 11. Said keeper 19 constitutes an integral internal projection of said last mentioned flange 16. It will be readily apparent that the latch 17, 19 will retain the case in a closed position but will permit the case to be opened when the walls 10 and 11 are forcibly urged away from one another and will automatically relatch the case to a closed position as the walls 10 and 11 are swung back to their parallel positions of Figures 2 and 6. However, as the description proceeds it will be readily apparent that any suitable form of latch may be provided in lieu of the latch as illustrated as the case 8 is only opened when it is necessary to replace a key.

It will be noted that the end of the case opposite the end thereof provided with the end flanges 15 is open. As seen in Figure 1, the front wall 10 is provided with four corresponding slots 20 which are laterally spaced relatively to one another between the flanges 12 and 16 and which extend from adjacent the end flanges 15 to ad-

adjacent the opposite, open end of the case. Each of the slots 20 is substantially T-shaped having a transverse portion 21 at the end thereof disposed adjacent to the flanges 15 which extends laterally from each side edge of the longitudinal portion of its slot 20. Likewise, as illustrated in Figures 1, 5 and 6, the inner side of the rear wall 11 is provided with four corresponding grooves 22 each of which is also T-shaped including a transverse end or head portion 23. The grooves 22, 23 align with the slots 20, 21 when the case is closed and as seen in Figures 1 and 5 are each of a width slightly less than the width of the slots. Also, as seen in Figures 1 and 5, the head portions 21 of the slots and 23 of the grooves are provided with bottom edges 24 and 25, respectively, which are disposed at acute angles to the side edges of the longitudinally extending portions of the slots and grooves so that said edges 24 and 25 project outwardly relatively to the longitudinal axes of the slots and grooves in directions away from the closed end of the case, provided by the flanges 15, and thus the head portions 21 and 23 of the slots and grooves, respectively, are flared outwardly toward each end thereof, for a purpose which will hereinafter become apparent. The front wall 10 is provided with a plurality of transversely spaced partitions 26 which are interposed between and spaced equal distances from the slots 22 and which are disposed on the inner side of said front wall and bear against the inner side of the rear wall 11, when the case is closed as seen in Figure 2, for dividing the case into longitudinal compartments 27 which open outwardly of the open end of the case and each of which is provided with a slot 28 and a groove 22.

A key support and actuator, designed generally 28, is associated with each compartment 27 and as best illustrated in Figure 4, includes a stem 29 having a collar 30 fixed therearound near one end thereof. The shorter end of the stem which projects from one side of the collar 30, as seen at 31, is externally threaded to threadedly engage an internally threaded socket 32 forming a shank which projects from one side of an actuator head or knob 33. The socket 32 slidably engages the slot 28 of the compartment 27 with which the actuator 28 is associated and the substantially flat head 33 is slidably disposed against the outer side of the front wall 10 while the collar 30 is slidably disposed against the inner side of said front wall and within the key chamber 27. The stem 29 is provided with a threaded portion 34 adjacent its opposite end and a rounded, slightly restricted terminal portion 35 disposed beyond the threaded portion 34. It will be readily apparent that the connected portions 31 and 32 will retain the stem 29 and knob 33 in applied positions relatively to the front wall 10 when said front wall is swung on the hinges 13, 14 to an open position away from and at approximately a right angle to the rear wall 11. With the case thus in an open position, a key 36 may be applied to each compartment 27 and the opening 37 in the head portion of the key engaged on the intermediate portion of the stem 29 over its terminal portion 35 and so that the key will be disposed against the exposed side of the collar 30. A retaining collar 38, forming a part of the unit 28, in the form of a flat disk-like nut having a threaded opening, is inserted over the stem terminal 35 and threadedly engages the stem portion 34 for

clamping the head portion of the key 36, which surrounds the opening 37, between the members 30 and 38. The key 36 preferably differs from conventional keys in that the head portion in which the opening 37 is formed is no wider than the notched bit of the key since the usual key bow is eliminated in order to enable the key to be accommodated in a narrower chamber 37 than would otherwise be possible and since a key bow is not necessary in order to provide a handle portion for turning the key as this is adequately provided by the body portion 9 of the key case. Additionally, this reduction in the size of the head portion of the key which eliminates the key bow effects a considerable saving in material in addition to enabling the key case 8 to be made narrower, than would otherwise be possible for holding any predetermined number of keys.

From the foregoing it will be readily apparent that after keys 36 have been applied as previously described to the key holder and actuating units 28 the key case is latched in a closed position, it will not ordinarily again be opened until it is necessary to replace one of the keys 36. The keys 36 are normally disposed in retracted positions within the compartments 27 and to retain the keys therein the units 28 are displaced laterally into one end of the slot head 21 and groove head 23 and so that the stem 29 will be out of alignment with the longitudinal portions of the slots and grooves. The inclined surfaces 24 and 25 of the slots and grooves assist in maintaining the stems 29 in their positions as illustrated in Figure 5 and make it necessary to move each unit 28 toward the closed end of the case in order to position the stem 29 thereof in alignment with its associated slot 28 and groove 22. Accordingly, an individual unit 28 of a selected key 36 can be positioned with its stem 29 in alignment with the longitudinal portion of the slot 28 and groove 22 by initially exerting a pressure with the thumb or finger against the knob 33 of said unit in a direction transversely of the case 8 and thereafter exerting a pressure longitudinally of the case toward its open end for moving the selected key 36 to a projected position, as illustrated in Figure 3 and at the left of Figure 1. The selected key may then be utilized for opening a lock and thereafter returned to a retracted position corresponding to the position of the other three keys as seen in Figure 1 by a thumb or finger pressure exerted against the actuator knob 33. The associated slots and grooves cooperate to retain the actuating units 28 in correct positions relatively to the case and with the stems 29 disposed perpendicular to the walls 10 and 11. Each stem terminal 35 has sufficient frictional engagement with its associated groove 22 to retain the actuating unit 28, of which it forms a part, and associated key 36 in a retracted position. Likewise, the parts 31 and 32 may be tightened to cause the collar 30 and knob 33 to frictionally engage opposite sides of the front wall 10 for accomplishing this same result.

If desired, the outer surfaces of the knobs 33 may be provided with suitable indicia to indicate the lock in which the key carried thereby fits; however, this is usually unnecessary as the location of different keys in the case 8 will be quickly memorized and which provides an additional novel feature since the key case may then be efficiently used in the dark as the position of the knobs 33 with respect to the closed and open ends

of the body portion 9 will readily indicate to the owner the identity of the key associated therewith so that any selected key may be moved to a projected position in the dark.

Obviously the size of the key case 8 may be varied to accommodate a greater number or fewer keys than as shown in the drawing and various other modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A key case comprising a substantially rigid body portion including a front wall, a rear wall, closed sides, a closed end and an open end, said body portion being formed of hingedly connected sections swingable to an open position for exposing both sides of the front and rear walls thereof, latch means normally retaining the body portion in a closed position, said front wall being provided with a plurality of transversely spaced slots extending to adjacent the open and closed ends thereof, a key supporting and actuating unit slidably engaging each of said slots and detachably connected to said front wall, each of said units being adapted to detachably mount a key movably within the body portion, and a detachable key retaining element forming a part of each unit and normally disposed within the body portion and adapted to retain the key in engagement with said unit, said rear wall having grooves formed on the inner side thereof, one of said grooves aligning with each of the slots and being substantially coextensive therewith, each of said key holding and actuating units including a stem having a terminal portion slidably engaging one of the grooves when the body portion is in a closed position.

2. A key case comprising a substantially rigid body portion formed of hingedly connected sections including a front wall, a closed end and an open end, latch means normally latching the body portion sections in a closed position, said front wall having a plurality of transversely spaced slots extending to adjacent the open and closed ends of the body portion, a key supporting and actuating unit slidably engaging each of said slots and detachably connected to said front wall, each of said units being adapted to detachably mount a key on the inner side of said front wall and movably within the body portion toward and away from its closed end, each of said key supporting and actuating units including a stem having a threaded end extending outwardly through the associated slot of the front wall and a fixed collar secured around the stem adjacent said threaded end and disposed slidably against the inner side of the front wall, said stem having a threaded portion adjacent its opposite end, a collar detachably threaded to said last mentioned threaded stem portion and adapted to cooperate with said fixed collar for retaining the key on the stem between the collars and on the inner side of said front wall, said first mentioned threaded end of the stem being slidably dis-

posed in said slot, and a knob threadedly connected to said first mentioned threaded end of the stem and engaging slidably against the outer side of said front wall for slidably and detachably mounting the key supporting and actuating unit on the front wall.

3. A key case comprising a substantially rigid body portion including a front wall, a rear wall, closed sides and an open end, said body portion being formed of hingedly connected sections swingable to an open position for exposing both sides of the front and rear walls thereof, latch means normally retaining the body portion in a closed position, said front wall being provided with a plurality of transversely spaced slots extending to adjacent the open end of the body and to adjacent the opposite end of the body portion, a key supporting and actuating unit slidably engaging each of said slots and detachably connected to said front wall, each of said units being adapted to detachably mount a key movable within the body portion, a detachable key retaining means forming a part of each unit and normally disposed within the body portion and adapted to retain the key in engagement with said unit, said rear wall having a groove disposed in alignment with each of said slots when the body portion is in a closed position, said grooves and slots being substantially coextensive, said detachably key retaining means comprising a stem, a fixed collar and a detachable collar, said stem having a threaded end, said fixed collar being secured around the stem adjacent said threaded end, said stem having a threaded portion adjacent its opposite end, said detachable collar being threadedly connected to said last mentioned threaded stem portion and being adapted to cooperate with said fixed collar for retaining the key on the stem and between the collars, said stem having a rounded terminal portion at its opposite end slidably engaging the groove, the first mentioned threaded terminal of the stem being loosely disposed in one of the slots, and a knob disposed externally of said front wall having an internally threaded socket forming a shank portion disposed perpendicular to the plane of the knob and extending into the slot and threadedly engaging the first mentioned threaded terminal of the stem for slidably and detachably mounting the unit on said front wall.

WILLIAM E. HUDSON, JR.

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