Nov. 23, 1954 M. KERNER 2,694,921

KEY HOLDER

Filed Sept. 5, 1952

FIG. 1.

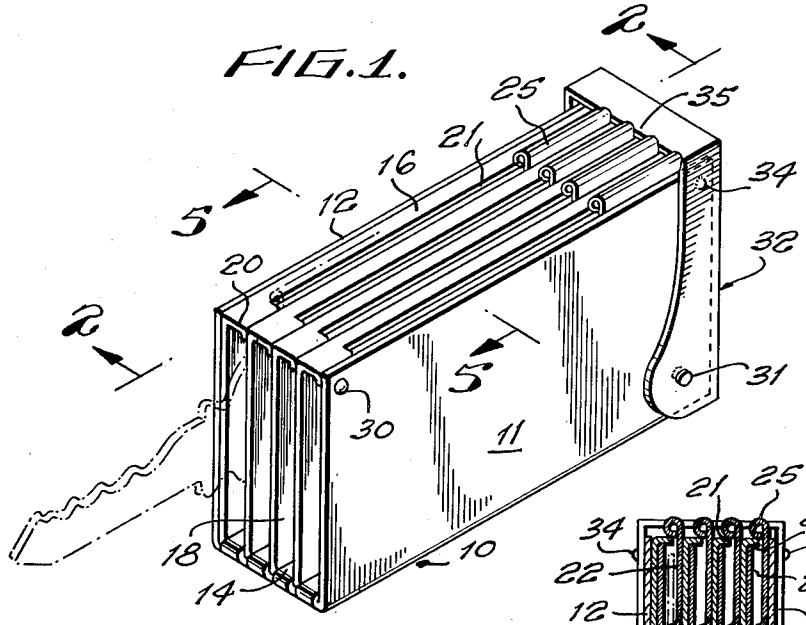


FIG. 4.

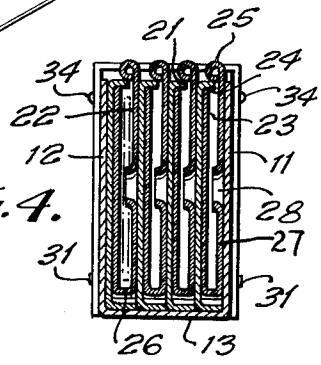


FIG. 2.

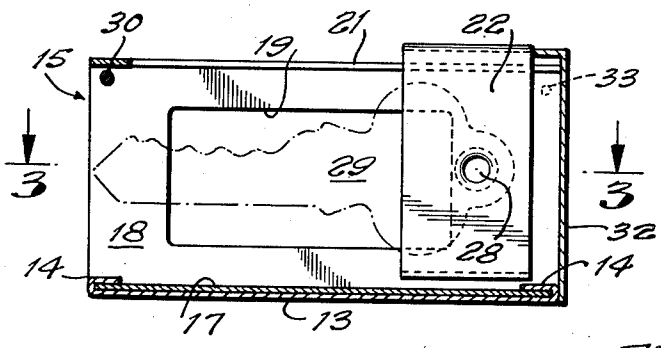


FIG. 5.

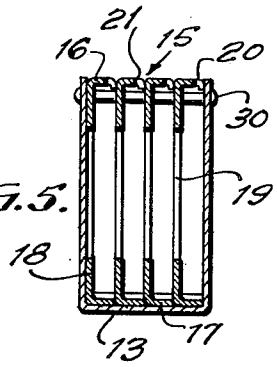
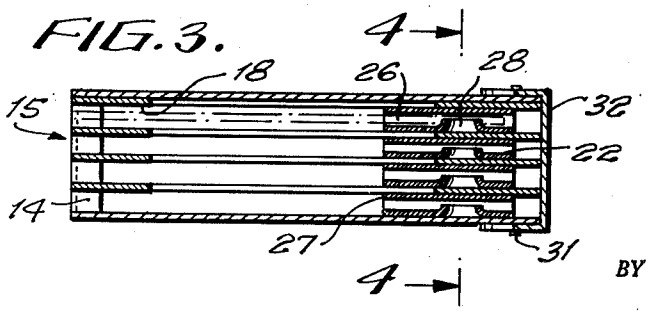


FIG. 3.



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KEY HOLDER

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4 Claims. (Cl. 70—456)

The present invention relates to key holders.

More particularly the present invention relates to key holders which are made of a rigid material and which are adapted to removably enclose a number of keys.

One of the objects of the present invention is to provide a key holder of the above type which is of an extremely simple and rugged construction so that it is assured a long period of fault-free usage.

Another object of the present invention is to provide an efficient and simple means for supporting keys for movement into and out of the key holder during use thereof.

A further object of the present invention is to provide an efficient and simple means for placing keys into the key holder and for removing keys therefrom.

Yet another object of the present invention is to provide a key holder which prevents the keys from becoming loose in the same and inadvertently being separated therefrom.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view of a key holder constructed in accordance with the present invention;

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

Fig. 3 is a sectional view of the key holder taken along line 3—3 of Fig. 2 in the direction of the arrows;

Fig. 4 is a sectional view of the structure of Fig. 3 taken along line 4—4 of Fig. 3 in the direction of the arrows; and

Fig. 5 is a sectional view of the structure of Fig. 1 taken along line 5—5 of Fig. 1 in the direction of the arrows.

Referring now to the drawings, there is shown therein an outer casing **10** for the key holder having a pair of parallel opposite sides **11** and **12** which are interconnected by a third side **13** normal to the sides **11** and **12** so that the casing **10** has opposite open ends and an open side. The wall **13** of the casing **10** is provided at its opposite ends with a number of tongues **14** which are bent backwardly toward the wall **13** on the inside of the casing **10**. In the particular example illustrated, there are four tongues **14** at each end of the wall **13**.

Associated with the casing **10** are, in the particular example illustrated, four guide members **15** each of which is also of a channel shape having a pair of opposite substantially parallel walls **16** and **17** which are interconnected by a third wall **18** normal thereto and being of substantially the same size as the walls **11** and **12**, these walls **18** of the guide members **15** each being formed with a substantially central cutout or opening **19** to reduce the weight of the key holder. The side walls **17** of the guide members **15** have a total width which is substantially equal to the width of wall **13**, and the walls **16** of the guide members **15** are all narrower than the walls **17** thereof except at one end portion of the guide members where the walls **16** are formed with extensions **20** which are of substantially the same width as the walls **17** and which are inwardly bent at their free ends, as illustrated. These guide members **15** are located

against each other within the casing **10** with all of the opposite side walls thereof extending in the same direction from wall **12** toward wall **11** and with the side walls **17** thereof located against the wall **13** of casing **10** between the same and tongues **14** so that the latter serve to fixedly connect the guide members **15** to the casing **10**. It will be seen that this arrangement of the guide members **15** provides on each one thereof a free edge portion **21** extending from the extensions **20** all the way to the opposite end of the guide members and casing.

A plurality of slide members **22** which are made from one piece of material are respectively associated with the guide members **15**. These slide members **22** each have a side **23** whose top edge **24** is located next to the inner side of a side wall **16** of the guide members **15**, as is shown most clearly in Fig. 4, and the slide members **22** have rolled free ends **25** located against the outer side of these walls **16** of the guide members **15** so that the parts **24** and **25** of the members **22** cooperate with the walls **16**, and in particular with the free edges **21** thereof, to slidably support the slide members **22** on the walls **16**.

As is apparent from Fig. 4, each slide member **22** rests against the outer side of the wall **18** of the guide member **15** next to that on which it is slidably mounted, except for the slide member **22** located at the right hand end of the structure, as viewed in Fig. 4, which rests against the inner side of wall **11**. These slide members are also provided with bottom sides **26** located adjacent to the walls **17** of guide members **15** and being bent to form sides **23** and which are located opposite sides **27** of the slide members and which slide against the wall **18** of the guide member **15** on which a slide member **22** is mounted, so that these members are fully guided for movement along the key holder. As is most clearly shown in Fig. 2, the slide members **22** are spaced from the walls **17** of the guide members **15** by a distance slightly greater than the thickness of tongues **14**.

Each of the slide members **22** is provided with an integral, outwardly pressed, annular projection **28** extending toward the wall **18** of the guide member **15** on which it is mounted and adapted to be located in the opening of a key such as key **29**, shown in dot-dash lines, so that each slide member holds a key **29** between its opposite wall portions **23** and **27**.

The entire assembly is further held together in a fixed relation by a pin **30** extending through the opposite walls **11** and **12** and through aligned openings of the guide members **15**.

A pair of pivot pins **31** are fixed in any suitable way to the side walls **11** and **12** of casing **10**, as by being threaded into threaded openings thereof, for example, and these pins **31** turnably support a cover member **32** which is illustrated in its covering position where it closes the open ends of the guide members **15** at one end of the casing **10**. The side walls **11** and **12** of the casing **10** are each formed with an outwardly pressed projection **33** one of which is seen from the inside of casing **10** in Fig. 2, and the cover **32** is formed with corresponding projections **34** which are outwardly pressed and which snap over the projections **33** to releasably hold the cover **32** in its closing position. It will be seen that this cover **32** has an edge portion **35** which is located over the walls **16** of guide members **15** when the cover **32** is in its closed position.

The above described structure may be made of any convenient rigid material, such as plastics, metal, or laminations of wood or fabric, or any combination of these materials.

The operation of the above described key holder is as follows:

When it is desired to place a key in the key holder, the cover **32** is turned away from the position shown in the drawings, the operator merely pressing the projections **34** from the snap projections **33**. This uncovers the right hand open end of the casing, as viewed in Figs. 1 and 2, and the operator need only push against one of the free ends **25** of a slide member **22** to move the same along the edge **21** out of the casing **10** through the right end thereof, as viewed in Figs. 1–3.

Then the projection **28** of the slide member **22** is placed

within the opening of a key **29**, and the latter together with the slide member **22** is moved into the space defined by the guide member **15** from which the particular slide member **22** was removed, with the parts **24** and **25** of the slide member embracing the edge **21** of the slide member **15** and with the slide member **22** sliding against the outer side of the wall **18** of the next guide member **15**. After the slide member **22** and the key therewith have been moved into the casing beyond the right end thereof, as viewed in Figs. 1–3, the cover **32** is returned to its illustrated position covering this end of the casing, the projections **34** snapping over the projections **33** to releasably hold the cover **32** in its covering position.

During normal use, the key **29** is moved through the open left end of the key holder, as viewed in Figs. 1–3, by sliding the slide members **22** along the edges **21** of the guide members **15**, the operator merely moving the free ends **25** of the slide members **22** in order to effect this result. As is shown in Fig. 1, the extensions **20** limit the movement of the slide members **22** and the key therewith in one direction, while edge portion **35** of cover **32** limits the movement of the slide members **22**, when moving the keys into the key holder, in the opposite direction.

It will be seen that the above described apparatus is quite simple. The keys are held within the key holder simply by the frictional contact of the slide member **22** with the guide members **15**, and the slide members **22** are, on the other hand, easy to slide in either direction. No springs or other additional elements are required with the disclosed construction. It will also be noted that the keys are not held in position by any threaded members or the like which are likely to become loose, so that there is absolutely no risk of the keys becoming inadvertently separated from the key holder.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of key holders differing from the types described above.

While the invention has been illustrated and described as embodied in key holders made of a rigid material, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention and, therefore, such adaptations should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

What is claimed as new and desired to be secured by Letters Patent is:

1. A key holder comprising, in combination, an outer channel-shaped casing having a pair of opposite parallel side walls interconnected by a third side wall normal to said opposite side walls; a plurality of guide members each being of a channel shape and each having a pair of opposite parallel side walls interconnected by a third side wall normal to the same and of substantially the same size as said opposite walls of said casing, said opposite walls of said guide members being narrower than said third side of said casing and one of said opposite walls of each guide member being narrower, except at one end portion thereof, than the other of said opposite walls of each guide member, and the total width of all of said other opposite walls of said guide members being substantially equal the width of said third side of said casing, said guide members being located against each other in said casing with said opposite side walls of said guide members all extending in the same direction from one of said side walls of said casing toward the other of said side walls thereof and with said other opposite walls of said guide members fixedly located against said third side wall of said casing so that said one opposite walls of said guide members have free edges next to said one end portions thereof; a plurality of slide members equal in number to the number of guide members slidably mounted on said free edges of said one opposite walls of said guide members, being located within the latter and being limited in their sliding movement at one end of said casing by said one end portions of said one opposite walls of said guide members, each of said slide members having a projection extending toward the third side wall of the guide member on which it is mounted for supporting a key and being removable from said guide member at an end opposite said one end thereof, each of said slide members being formed from a single piece of substantially U-shaped material having one end extending along the guide member in which it is mounted and engaging said one opposite wall of said guide member on the inside thereof, and each of said slide members having an opposite end portion engaging said one opposite wall of the guide member on which it is mounted on the outside thereof; and a cover member turnably mounted on said casing for removably covering said opposite ends of said guide members.

2. A key holder, comprising, in combination, an elongated channel member having opposite open ends and consisting only of a pair of opposite parallel side walls interconnected by a third wall normal to said side walls and being substantially wider than the same, one of said side walls being as wide as the other of said side walls only at one end portion of said one side wall and the remainder of said one side wall being of a uniform width less than the width of said other side wall; a fourth wall coextensive with and fixed to said channel member, having a width equal to the width of said third wall of said channel member and being parallel to and located opposite said third wall, said fourth wall engaging said other side wall and said one end portion of said one side wall to provide with said channel member a tubular compartment of rectangular cross-section having opposite open ends and having a slot extending from one end of said compartment up to said one end portion of said one side wall and being located between said fourth wall and said remainder of said one side wall; a substantially U-shaped slide member located in said tubular compartment and having a pair of opposite legs interconnected by a web portion located adjacent said other side wall of said channel member, said legs respectively slidably engaging the inner faces of said third and fourth walls located in the interior of said compartment, one of said legs extending up to said one side wall of said channel member and having a free edge slidably engaging the inner face of said one side wall located in the interior of said compartment, the other of the legs of said slide member extending through said slot to the exterior of said compartment and slidably engaging the outer face of said one side wall of said channel member, and said slide member having a projection located between said legs; and a cover member removably mounted on said tubular compartment at the end thereof opposite from said one end portion of said one side wall of said channel member.

3. A key holder, comprising, in combination, an outer channel-shaped casing having opposite open ends and consisting only of a pair of opposite parallel side walls interconnected by a third side wall normal to said opposite side walls; a plurality of channel members coextensive with said casing and each having opposite open ends and consisting only of a pair of opposite parallel side walls interconnected by a third side wall normal to the same end of substantially the same size as said opposite side walls of said casing, said opposite side walls of said channel members being narrower than said third side of said casing and one of said opposite side walls of each channel member being narrower, except at one end portion thereof, than the other of said opposite walls of each channel member, and the total width of all of said other opposite walls of said channel members being substantially equal to the width of said third side of said casing, said channel members being located against each other in said casing with said opposite side walls of said channel members all extending in the same direction from one of said side walls of said casing toward the other of said side walls thereof and with said other walls of said channel members fixedly located against said third side wall of said casing so that said one side walls of said channel members have free edges next to said one end portions thereof, whereby said channel members and casing cooperate together to form a plurality of tubular compartments of rectangular cross-section located next to each other and each having opposite open ends and a slotted portion extending up to said one end portions of said channel members; a slide member located in each of said compartments, extending through said slotted

portion thereof, and slidably engaging said one opposite wall of said channel member thereof; and a cover common to said tubular compartments and located over the ends thereof distant from said one end portions of said one side walls of said channel members.

4. A key holder as defined in claim 3 and wherein each of said third walls of said channel members is formed with a cut out and wherein said slide members respectively have side wall portions extending across said cut outs and slidably engaging said third walls of said channel members.

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