Aug. 26, 1952 W. I. JONES 2,608,086

KEY HOLDER FRAME

Filed Sept. 16, 1949

FIG. 1.

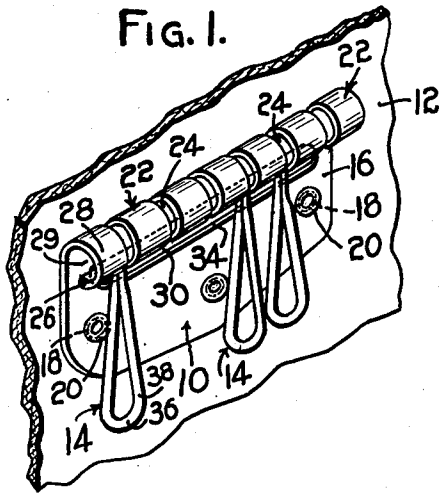


FIG. 2.

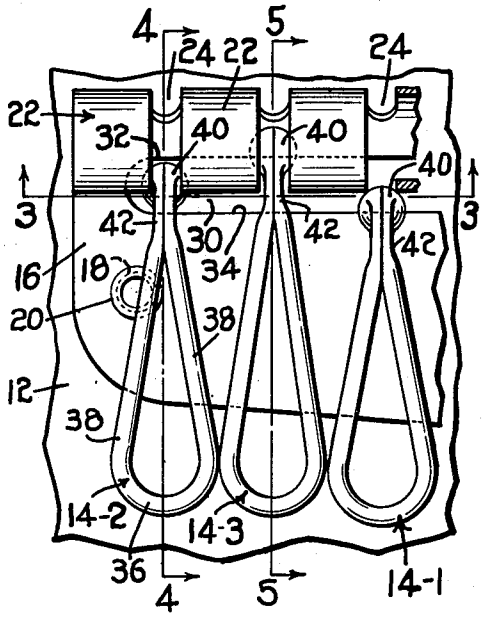


FIG. 4.

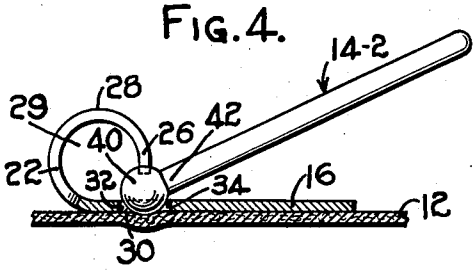


FIG. 3.

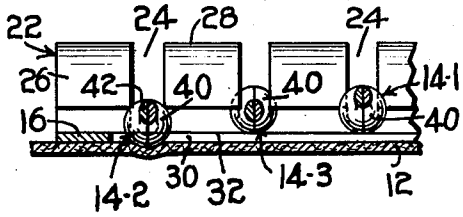


FIG. 6.

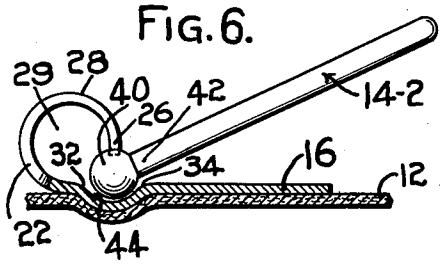
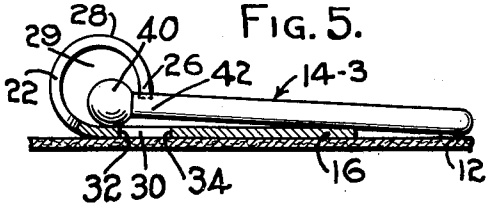


FIG. 5.



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KEY HOLDER FRAME

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Application September 16, 1949, Serial No. 116,032

11 Claims. (Cl. 70—456)

1

This invention relates generally to key retaining devices, and has particular reference to a key holder frame adapted to receive key hooks of the type having an enlarged head disposed on the end of a neck portion.

The object of the invention is to provide a key holder frame which is adapted to receive the enlarged head of a key hook in snapping engagement therewith, to allow the key hook to be easily engaged and disengaged with the frame.

A further object of the invention is to provide a key holder frame of improved construction which is adapted to receive a plurality of key hooks thereon, which is so constructed as to allow the head of the key hooks to be engaged therewith with a double snap action.

A further object of the invention is to provide a key holder frame formed of a single piece of sheet metal in which a plurality of spring tongues are provided to overhang an opening or openings in a base to allow the head of a key hook to be snapped into engagement between adjacent tongues and an edge provided by the opening.

Other objects of the invention will, in part, be obvious, and will, in part, appear hereinafter.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description, taken in conjunction with the accompanying drawing, in which:

Fig. 1 is a perspective view of the key frame of the invention attached to a supporting member;

Fig. 2 is an enlarged plan view of a portion of the key frame, illustrating key hooks in various positions during the engaging operation;

Fig. 3 is a view in section taken on line 3—3 of Fig. 2;

Fig. 4 is a view in section taken on line 4—4 of Fig. 2;

Fig. 5 is a view in section taken on line 5—5 of Fig. 2; and

Fig. 6 is a view similar to Fig. 4, in which the base member is provided with certain modifications within the scope of the invention.

Referring to the drawing, there is illustrated a key frame 10, which is adapted for attachment to a supporting member 12, such as a key case or the like, to receive and engage key hooks 14.

The key frame 10 comprises a base 16, which may be provided with openings 18, to receive rivets 20 for attaching the frame to the supporting member, and a series of spring tongues 22

2

disposed on the base in spaced relation to one another to form key hook receiving slots 24 between adjacent tongues. In the preferred embodiment the tongues 22 are integral with the upper edge of the base, and are curled back thereon to form a free end portion 26 which extends inwardly toward the plane of the base, and an intermediate portion 28 which is disposed outwardly from the base to form a key head receiving space 29 therebetween. A horizontal opening 30, having an upper edge 32 and a lower edge 34 is provided in the base directly opposite the ends 28 of the tongues so that the ends 28 overhang the opening, and in the preferred embodiment the edges 32 and 34 are substantially equidistant from the ends 28 for a purpose to appear hereinafter.

The key hooks 14 for use with the key frame of the invention are well known in the art, and generally comprise a key retaining loop 36 and a pair of legs 38 which are held together by the spring action of the loop. To provide means for engagement with a key frame, the legs 38 are shaped to provide an enlarged head 40 disposed on a neck portion 42. The relative dimensions of the slots 24 and the head and neck of the key hook are such that the head cannot pass through the slot, but the neck is freely slidable therein. The distance between the ends 26 of the tongues and the edges 32 and 34 of the horizontal opening 30 is also slightly less than the diameter of the enlarged head 40 to permit the head to be snapped into engagement between adjacent tongues as will be hereinafter described.

Referring to Figs. 2–5, there is illustrated the method of assembling a key hook on the key frame. The head 40 of a hook is placed against the base 16 between the ends of adjacent tongues (see 14—1 in Figs. 2 and 3) and pushed upwardly and inwardly so that the head snaps between the ends of adjacent tongues and the lower edge 34 of the opening into an intermediate position in the opening 30 between the ends 26 of the two adjacent tongues. (See 14—2 in Figs. 2–4.) To complete the assembly, the head 40 is then pushed upwardly to snap between the adjacent ends 26 and the upper edge 32 of the opening into the head receiving space 29, thereby causing the neck portion to enter the slot 24 between adjacent tongues. (See 14—3 in Figs. 2, 3, and 5.) The assembled key hook is freely movable up and down in the slot, and is retained therein by the head 40 engaging the edges of adjacent tongues. The key hook is removed from the frame in a similar manner, by snapping the

head downwardly into the intermediate position, and then snapping it outwardly between the ends of the adjacent tongues and the lower edge of the horizontal opening.

Although in the illustrated embodiment of the device, the edges **32** and **34** of the horizontal opening are equidistant from the ends **28** of the tongues to provide the double snap action during assembly of a key hook, in some cases the edges of the horizontal slot may be so spaced in relation to the ends of the tongues as to provide only a single snap action. The horizontal opening **30** may be provided by a slot extending completely through the base **16** as illustrated in Fig. 4, or in some cases may be provided by a groove or recess **44** in the base, as illustrated in Fig. 6.

Since certain other obvious changes may be made in the device without departing from the scope of the invention, it is intended that all matter contained herein be interpreted in an illustrative and not in a limiting sense.

I claim:

1. A key holder frame, comprising a base adapted to be secured to a supporting member, said base having a series of spring tongues disposed thereon, adjacent tongues of said series being spaced apart to form a slot to receive a key hook, each of said tongues having a portion spaced outwardly from the base terminating in an end extending inwardly toward the base, said base having an opening therein opposite the ends of said tongues and opposite to each key receiving slot.

2. A key holder frame, comprising a base adapted to be secured to a supporting member, said base having a horizontal slot disposed therein, and a series of spring tongues disposed on the base, adjacent tongues of said series being spaced apart a predetermined distance to form a slot to receive a key hook therebetween, each of said tongues having a portion spaced outwardly from the base terminating in an end extending inwardly toward the plane of the base, said ends being disposed over said slot.

3. A key holder frame, comprising a base adapted to be secured to a supporting member, said base having a horizontal slot disposed therein, and a series of spring tongues disposed on the base parallel to the slot, adjacent tongues of said series being spaced apart a predetermined distance to receive a key hook therebetween, each of said tongues being attached to the base at the upper portion, and having an intermediate portion spaced apart from the base and a free end portion extending inwardly toward the plane of the base and overhanging said slot.

4. A key holder frame, comprising a base adapted to be secured to a supporting member, said base having a horizontal slot disposed therein, and a series of spring tongues disposed on the base, adjacent tongues of said series being spaced apart a predetermined distance to receive a key hook therebetween, said tongues being integral with the upper edge of the base and being curled back on the base, and having free ends extending inwardly toward the base and overhanging the slot.

5. A key holder frame to receive key hooks of the type having an enlarged engaging portion disposed on the end of a neck portion, said frame comprising a base adapted to be secured to a supporting sheet, and a series of spring tongues disposed on the base, adjacent tongues of said series being spaced apart a predetermined distance forming slots to receive the neck portion and engage the enlarged portion of a key hook, said tongues being attached to the base at the upper portion, and having an intermediate portion spaced apart from the base and a free end portion extending inwardly toward the base and terminating in spaced relation to the plane of the base, said base having an opening disposed therein opposite the ends of each adjacent pair of tongues and slot formed therebetween, an edge of the base provided by said opening and the ends of the tongues being spaced apart a sufficient distance to allow the enlarged portion of the key hook to be snapped between the ends of adjacent tongues and the edge of the base through said opening and slot.

6. A key holder frame to receive key hooks of the type having an enlarged engaging portion disposed on the end of a neck portion, said frame comprising a base adapted to be secured to a supporting member, and a series of spring tongues disposed on the base, adjacent tongues of said series being spaced apart a predetermined distance to receive the neck portion of a key hook therebetween and to engage the enlarged portion of the key hook adjacent the neck portion, each of said tongues being attached to the base at the upper portion, and having an intermediate portion spaced apart from the base and a free end portion extending inwardly toward the base, said base having a slot disposed therein opposite the ends of the tongues, an edge of the base provided by the slot and the ends of the tongues being spaced apart a sufficient distance to allow the enlarged portion of the key hook to snap between adjacent tongues and said edge.

7. A key holder frame to receive key hooks of the type having an enlarged engaging portion disposed on the end of a neck portion, said frame comprising a base adapted to be secured to a supporting member, and a series of spring tongues integral with the upper edge of the base, adjacent tongues of said series being spaced apart a predetermined distance to receive the neck portion of a key hook therebetween and to engage the enlarged portion of the key hook adjacent the neck portion, said tongues being curled back over the base and terminating in free ends spaced apart from the plane of the base, said base having a longitudinal slot disposed therein opposite the ends of the tongues, an edge of the base provided by the slot and the ends of said spring tongues being spaced apart a sufficient distance to allow the enlarged portion of a key hook to snap between the ends of adjacent tongues and said edge.

8. A key holder frame to receive key hooks of the type having an enlarged engaging portion disposed on the end of a neck portion, said frame comprising a base adapted to be secured to a supporting member, the upper edge portion of said base being curled back over itself to form a portion spaced apart from the base, said curled back portion terminating in an end extending toward the plane of the base, said curled back portion having key hook receiving slots extending from the end thereof forming individual tongues, said base having an opening opposite the end of each of said slots.

9. A key holder frame as set forth in claim 1, in which the end of each tongue is spaced substantially equidistant from the edges of the base formed by the opening therein.

10. A key holder frame as set forth in claim 4, in which the end of each tongue is spaced sub-

stantially equidistant from the upper and lower edges formed by the horizontal slot.

11. A key holder frame to receive key hooks of the type having an enlarged head portion disposed on the end of a neck portion, said frame comprising a base having a horizontal slot therein, and spring tongues mounted on the base, said spring tongues having a portion spaced apart from the base forming a key head receiving space, and ends extending inwardly toward the plane of the base and overhanging the horizontal slot, adjacent tongues being spaced apart a predetermined distance to receive the neck of a key hook therebetween, the end of each tongue being spaced substantially equidistant from the upper and lower edges of the base provided by the slot, whereby the head of a key hook may be engaged with the frame by first snapping the head into the slot by pressing the head between the ends of adjacent tongues and said lower edge, and then snapping the head into the head receiving space by pressing the head between said ends of adjacent tongues and said upper edge.

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