

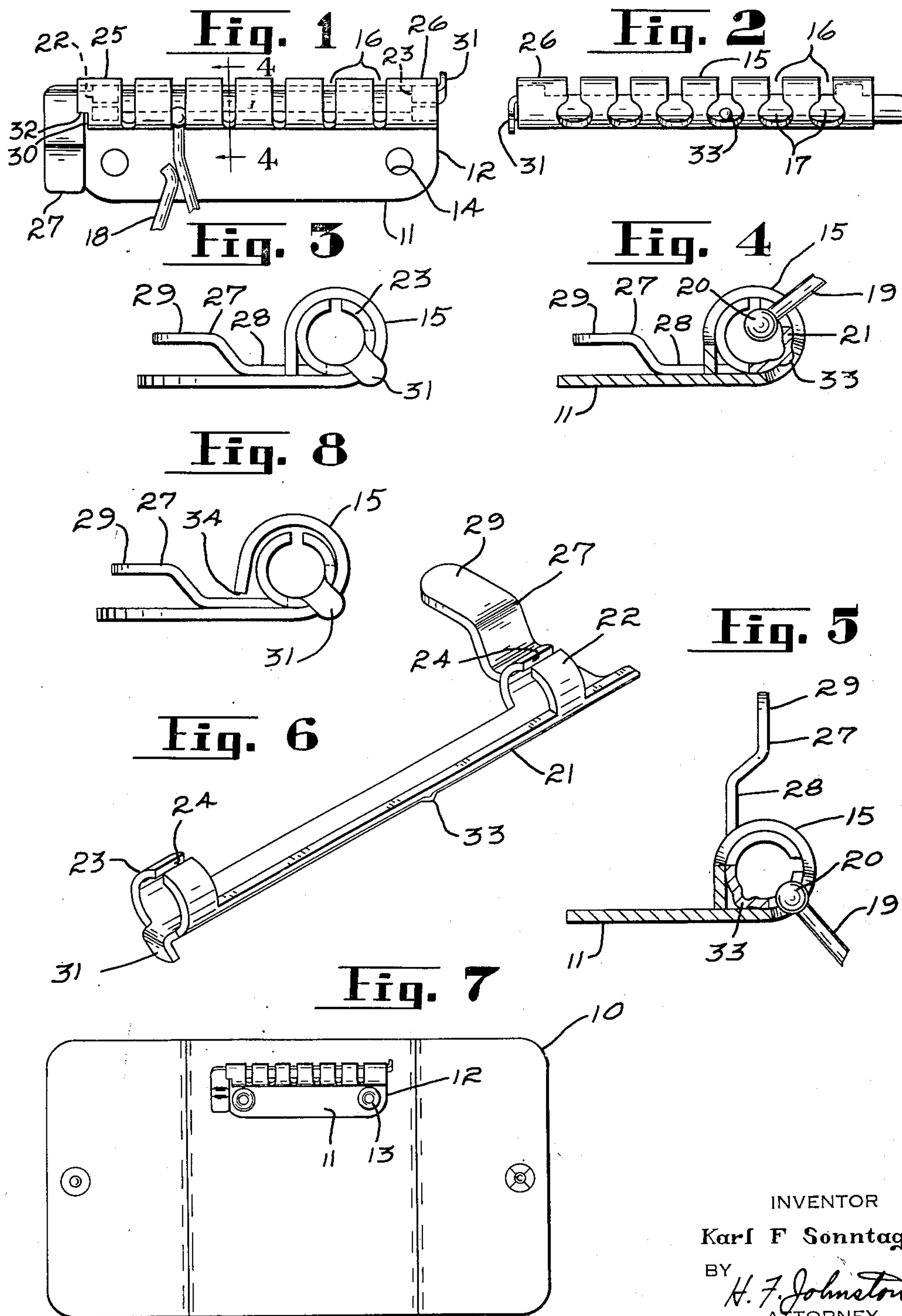
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K. F. SONNTAG

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KEY RETAINER

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INVENTOR

Karl F Sonntag

BY

H. F. Johnston  
ATTORNEY



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## KEY RETAINER

Karl Frederick Sonntag, Watertown, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

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My invention relates to key retainers of the type which are secured in a key case, usually of leather, and whose purpose is removably to secure several key loops which in turn hold the keys. According to general practice each of these loops has a shank with an enlarged head at the end and a loop of a desired form for holding the key.

My improved retainer comprises a base plate having one end bent into hollow tubular form, which tubular portion is provided with cross slots connecting with enlarged holes so that a head of a key loop may enter into one of such holes and the key loop shank may slide in the slot.

My invention is particularly concerned with the device for holding the key loops in the slot. It has heretofore been proposed to use a rotatable tubular guard member working either inside or outside of a stationary tubular member, both having similar slots and enlarged holes, and where the enlarged holes in the guard member in one position will register with the enlarged holes in the stationary member and allow the heads of the key loops to be inserted or removed therethrough. This results in somewhat bulky and expensive construction, and it is one of my objects to employ the simplest kind of a guard bar instead of a tubular guard member with registering slots. This guard bar takes up less space inside the tubular stationary member and is cheaper and lighter in weight. Since the guard bar does not have registering slots, means are provided to prevent endwise movement while at the same time permitting limited rotary movement upon journal members at the ends of the guard bar.

For the sake of compactness and strength I prefer to make the guard bar of thinner stock and of hardened steel. Also by having a small handle member which operates the guard bar positioned flat against the base plate I am able to assemble the guard bar into the tubular part endwise, handle end first, by initially leaving the outer tubular member partly open and finally closing it after assembly.

A further object of my invention is to provide a simple device for controlling the action of the bar to prevent accidental movement. This is accomplished preferably by forming a raised portion on the guard bar normally located in one of the enlarged openings and working against the inner wall of the tubular member during the rotation of the guard bar.

Other advantages will be apparent from the following detailed description when read in con-

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nection with the accompanying drawings, wherein:

Fig. 1 is a front plan view of a key retainer plate showing a single key loop associated therewith.

Fig. 2 is a top edge view of the same.

Fig. 3 is an end view taken from the right side as seen in Fig. 1.

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 1 showing the guard bar in closed position for holding the key loops in place.

Fig. 5 is a view similar to Fig. 4 showing the guard bar rotated to open position to permit the removal of the key loops.

Fig. 6 is a perspective view of the guard bar, per se.

Fig. 7 is a front elevation of the key case in open position showing the holder plate attached thereto, and

Fig. 8 is an end view similar to Fig. 3 showing the initial position of the tubular part to allow for the assembly of the guard bar.

Referring now to the drawing in which like reference numerals denote like parts in the several views, the numeral 10 refers to a cover or leather case to which is secured the flat base plate 11 of a key retainer device 12 adjacent one edge of said cover as by tubular rivets 13 passing through suitable openings 14 in the base part 11. One end of the base plate 11 is bent to form a rolled barrel section or tubular part 15. This tubular part 15 is provided with a series of circumferential narrow slots 16 terminating at one end in enlarged openings 17 positioned adjacent the base plate 11.

The keys are attached to the retainer 12 by means of the usual form of key loops 18 that have shanks 19 capable of having free movement in the slots 16. The shanks 19 are formed with enlarged heads 20 on one end of a size permitting passage through the enlarged openings 17 but not through the slots 16.

In order to retain the key loops 18 attached to the tubular part 15 provision is made of a retainer or guard bar 21 positioned within the tubular part 15. The bar 21 is preferably a longitudinal uninterrupted member arcuate in cross section and covers less than half of the inner wall of the tubular member, thus allowing maximum space for the key loop heads in the tubular part 15. The bar is formed at its opposite ends with opposed strap-like lugs shaped into cylindrical journal portions 22 and 23, each having a split 24 therein. The journals 22 and



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23 are rotatably fitted into the end barrel sections 25 and 26 of the tubular part 15. By reason of the splits 24, the journals 22 and 23 will have a slight resilient frictional engagement within the barrel sections 25 and 26 so as to hold the parts against any relative looseness.

At the left end of the retainer bar 21, as viewed in Fig. 1, a lateral extension 27 is provided that consists of a flat section 28 that extends into an upwardly offset terminal end 29, the extension 27 serving as a handle for operating the retainer bar 21. In the closed position of the bar 21 the flat section of this handle extension 27 lies flat against the base plate.

The inner edge of the extension 27 operates within a recess 30 provided in the adjacent edge of the barrel section 25. The opposite end of the bar 21 is formed with a radial lug 31 that engages against the outer edge of the adjacent barrel 26 and this lug 31 in conjunction with the handle extension 27 serves to prevent endwise movement of the retainer bar 21 within the tubular part 15.

The lateral handle extension 27 operates between two stop positions. In one position the flat section 28 of the extension 27 contacts the upper surface of the base plate 11, as seen in Fig. 3, in which position the bar 21 is designed to completely close off enlarged openings 17 so as to prevent the key loop heads 20 from slipping therethrough. To remove the key loops 18 from the plate 12 the handle extension 27 is rotated about 90° or to a position where the flat section 28 of said extension 27 abuts against a stop shoulder 32 positioned at one end of the recess 30. In this position the retainer bar 21 will be free of the enlarged openings 17 to permit the removal and assembly of the key loops 18 therethrough.

In order to assure that the retainer bar 21 will be held in either open or closed position, the mid portion of said bar 21 is formed with an outwardly projecting nub 33 which is so located that when the bar 21 is in closed position the nub 33 will be disposed in one of the enlarged openings 17. In the act of rotating the bar 21 to open position, the nub 33 will move out of and cam over the edge of its respective opening 17 and ride upon the base plate 11, at the same time springing the adjacent part of the bar 21 relative to the base plate 11 so as to provide for an increased frictional factor to maintain the bar in open position.

Another important point in the construction of my invention is that the design of the retainer bar 21 is such that it can be made of carbon steel and tempered to provide a hard material not subject to wear, and also assure maximum strength and compactness.

It is to be understood that the retainer bar 21 is in its finished form as shown in Fig. 6 before it is assembled into the barrel part 15 of the holder device and thus requiring no subsequent assembly forming operation in said bar 21. In order to assemble the bar 21 into the barrel part 15, said

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latter part is initially rolled to a position, as shown in Fig. 8, where its end 34 is spaced from the upper surface of the plate 11 a distance slightly greater than the thickness of material of which the bar 21 is made. The bar 21 can thus be axially telescoped into the barrel part 15 with the handle extension 27 sliding in the space between the barrel 34 and plate 11 until the lug 31 abuts the end of the barrel section 26 as a stop, after which the tubular part can be further rolled to its finished state as seen in Fig. 4.

While I have herein described and upon the drawing shown one illustrative embodiment of the invention, it is to be understood that the invention is not limited thereto but may comprehend other constructions and arrangements without departing from the spirit of the invention.

I claim:

1. A key retainer adapted to be secured to the body of a key case for removably securing a plurality of key loops, each loop having a shank with an enlarged head at one end, said retainer comprising a base plate having one end bent into hollow tubular form, said tubular portion being provided with cross slots terminating in enlarged holes so the head of a key loop may enter only through one of such holes and the key loop shank may slide in the slot, a guard bar curved to fit against the inside surface of said tubular portion covering less than half the inner wall thereof and having journal portions at opposite ends curved to fit around substantially more than half the inside diameter of said tubular portion so that said guard bar may be turned along the inner surfaces of said tubular portion from one limiting position where it just blocks the entrance holes in the tubular portion to another position uncovering said holes, a lug at one end and an operating handle at the other end of the guard bar bearing against opposite ends of said tubular portion to prevent endwise movement of the bar, and means for limiting the rotative movement of the bar between the aforesaid positions.

2. A key retainer as defined in claim 1 wherein a portion of said handle lies against the surface of the unbent portion of said base plate in one of the limiting positions of said handle as a stop.

3. A key retainer as defined in claim 1, in which said guard bar is provided with a raised portion registering with one of the entrance holes in the closed position of the bar and offering resistance to the movement of the bar toward open position.

KARL FREDERICK SONNTAG.

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