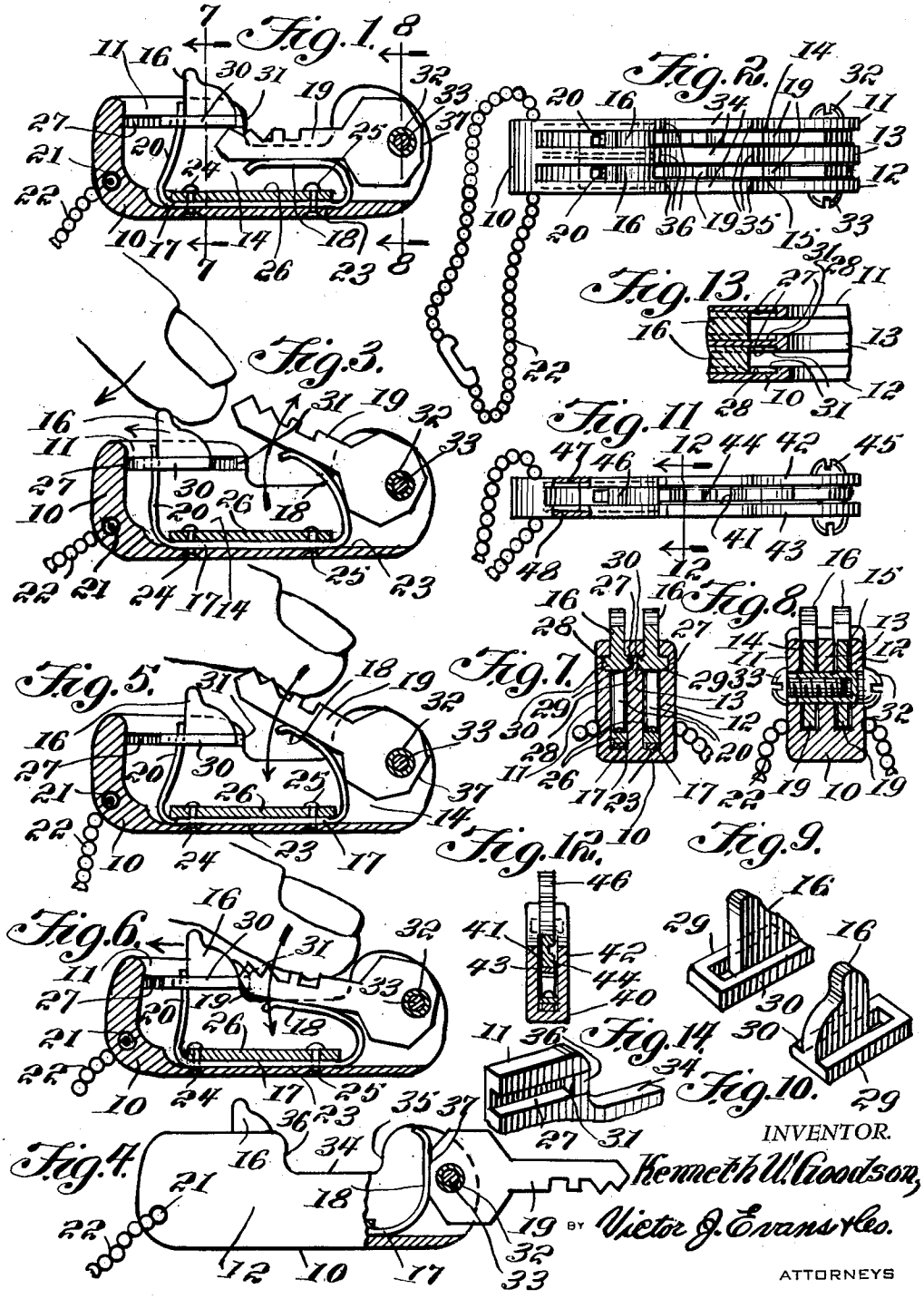
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KEY EJECTOR CASE

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KEY EJECTOR CASE

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This invention relates to key cases of the pocket type and in which one or a plurality of keys may be retained, and in particular a key case having a spring therein for ejecting a key about a pivotal mounting when the key is released and also a spring for actuating a latch or cam for retaining the key within the case.

The purpose of this invention is to provide means for readily ejecting a selected key from a case whereby the time required for picking out a key from a bunch of keys is eliminated.

In the conventional type of key case and particularly where one hand is otherwise engaged it is difficult to select one key and separate it from the other keys of the case so that it may be held for use. With this thought in mind this invention contemplates a key case having a cam or a plurality of cams whereby upon operation of the cam of a selected key the key is instantly ejected and the shaft thereof may readily be extended and resiliently held in the extended position for use.

The object of this invention is, therefore, to provide means for forming a key case whereby a key pivotally mounted in one end thereof may be turned into a slot of the case and snapped under a cam whereby it is retained in the case until it is manually released.

Another object of the invention is to provide a key case having key retaining and ejecting means therein in which the case is substantially of the same size as cases now in use.

A further object of the invention is to provide a key retaining and ejecting key case which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a key case having a comparatively thin elongated body with key receiving slots therein, with means for pivotally mounting keys in the slots, and with double end springs in the slots with one end of the springs of each slot positioned to actuate a cam for holding the key folded in the slot and the other positioned to eject the key when released by the cam.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a longitudinal section through one of the key retaining slots of the key case.

Figure 2 is a plan view of the key case.

Figure 3 is a longitudinal section similar to that shown in Figure 1 illustrating a cam in the key releasing position.

Figure 4 is a side elevational view of the key

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case showing part of one of the ends broken away and showing a key extended for use with the key held by one of the ends of the spring.

Figure 5 is also a longitudinal section through the case illustrating the parts in the position wherein a key is being depressed into the case.

Figure 6 is a similar section illustrating the key in the position of sliding the cam backwardly to permit passage of the end of the key into the slot of the case.

Figure 7 is a cross section through the key case taken on line 7—7 of Figure 1.

Figure 8 is a similar section taken on line 8—8 of Figure 1.

Figure 9 is a detail on an enlarged scale illustrating a rear or straight end of one of the cams.

Figure 10 is a similar view showing the opposite side of the cam.

Figure 11 is a plan view similar to that shown in Figure 2 illustrating a modification wherein a case is provided for a single key.

Figure 12 is a cross section taken on line 12—12 of Figure 11 showing a section through a case for a single key.

Figure 13 is a section showing a detail through the ends of the cam retaining slots illustrating the positions of stops in the ends thereof.

Figure 14 is a detail also showing the stops in the ends of the cam retaining slots.

Referring now to the drawings wherein like reference characters denote corresponding parts the key ejecting case of this invention includes a body 10 having side walls 11 and 12 with an intermediate partition 13 providing key slots 14 and 15, a plurality of cams 16 and a spring 17 having an end 18 positioned to eject a key, as indicated by the numeral 19 and an end 20 positioned to engage the cam 16 for urging the cam in the position retaining the key in the slot.

The body 10 of the key case is provided with an opening 21 through which a key chain 22 may be extended, and the lower parts of the slots 14 and 15 are provided with recesses 23 in which the springs 17 are mounted by screws 24 and 25 which extend through plates 26 that are positioned against the inner surfaces of the springs.

As illustrated in Figure 7 grooves 27 and 28 are provided in the inner surfaces of the side walls and intermediate partitions and the cams 16 are provided with projecting ledges 29 and 30 by which the cams are slidably mounted in the grooves 27 and 28. The outer ends of the grooves are provided with stops 31, as illustrated in Figure 14 to limit outward movement of the cams.

The keys 19 are pivotally mounted in the side

walls and partitions of the case by tubular screws **32** into which screws **33** are threaded, as shown in Figure 8, although it will be understood that the keys may be pivotally mounted in the case by other suitable means.

As illustrated in Figure 4 the side walls and partition of the case are provided with recesses **34** into which the end of a thumb or finger may extend when forcing a key into the case, as illustrated in Figure 6 and the recesses extend from shoulders, as indicated by the numeral **35** of the outer part of the case to shoulders **36** at the ends of the stops **31**.

Upon release of a key from the case by sliding one of the cams, as illustrated in Figure 3 the key is snapped upwardly by the end **18** of the spring and the key may be turned over to the position shown in Figure 4 where a flat surface **37** on the end thereof is held by the end **18** of the spring to retain the key in the outwardly extended position.

In the design illustrated in Figure 11 the key case **40** is provided for a single key in which a slot **41** is provided between side walls **42** and **43** and a key, as indicated by the numeral **44**, is pivotally mounted on a pin **45** and the opposite end of the key held by a cam **46**, similar to the cam **16**. The cam is slidably mounted in slots **47** and **48** and the cam and key are held by a spring **49** similar to the spring **17** and having ends similar to the ends **18** and **20**.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. A key case comprising a body having an open slot in one edge and having grooves in the sides opening into the slot, a cam having ledges on the sides slidably mounted in the grooves of the body, a key having a head and a shaft positioned in the slot, means pivotally mounting the key through the head thereof in the slot, a spring urging the cam in the position of retaining the shaft of the key in the slot, and a spring for ejecting the shaft of the key when the shaft is released by manually sliding the cam, the head of said key having a flat side and the said flat side of the head of the key being positioned to be engaged by the spring by which the shaft of the key is ejected to retain the shaft in an extended position.

2. In a key case, the combination which comprises a body having open slots therein, keys having heads with extended shafts pivotally mounted through the heads in the said slots, cams positioned in the slots and slidably mounted in the body, and springs with extended ends secured in the slots and positioned with one of the ends thereof engaging the cams to urge the cams in the positions of retaining the shafts of the keys in the slots and with the other of the ends positioned to urge the shafts of the keys outwardly when released by the cams.

3. In a key case, the combination which comprises a body having open slots therein, keys having heads with extended shafts pivotally mounted through the heads in the said slots, cams positioned in the slots and slidably mounted in the body, and springs with extended ends secured in the slots and positioned with one of the ends thereof engaging the cams to urge the cams in the positions of retaining the shafts of the keys in the slots and with the other of the ends positioned to urge the shafts of the keys outwardly when released by the cams, said body having means limiting outward movement of the cams.

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