



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**18.04.2007 Bulletin 2007/16**

(51) Int Cl.:  
**A44B 15/00 (2006.01) A45C 11/32 (2006.01)**

(21) Application number: **05022086.2**

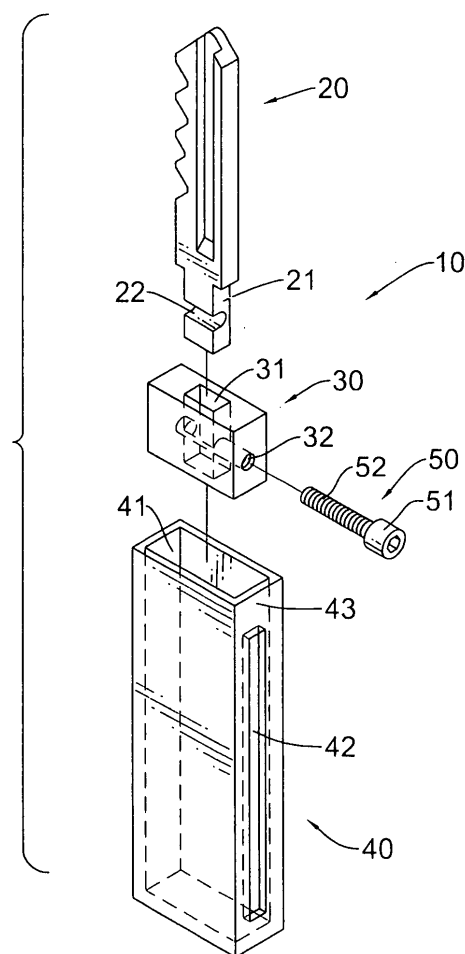
(22) Date of filing: **11.10.2005**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR**  
Designated Extension States:  
**AL BA HR MK YU**  
(71) Applicant: **Hsu, Heng-Tsung**  
**Lingya Dist.**  
**Kaohsiung (TW)**

(72) Inventor: **Hsu, Heng-Tsung**  
**Lingya Dist.**  
**Kaohsiung (TW)**  
(74) Representative: **Hauck Patent- und Rechtsanwälte**  
**Postfach 11 31 53**  
**20431 Hamburg (DE)**

(54) **Key holder**

(57) A key holder has at least one seat (10) and at least one housing (40). The seat (10) has a key (20) and a base (30) in which the key (20) is mounted. The housing (40) has at least one chamber (41) to receive the seat (10), and at least one slot (42) longitudinally defined in a side of the housing (40). At least one fastener is inserted into the slot (42) and the base (30) so that the key (20) is secured in the base (30) and the base (30) can slide along the slot (42). The key (20) can be retracted into the key holder for safe storage. The key (20) can be quickly and easily extended out of the key holder for convenient use.



**FIG. 1**

## Description

### 1. Field of the Invention

**[0001]** The present invention relates to a key holder, and more particularly to a key holder, which can receive keys within it and is safe and convenient to carry and use.

### 2. Description of the Related Art

**[0002]** At present, it is common for people to amass a large number of keys on a key ring. However, the keys are usually not contained in any kind of holder such that they hang out in the open and can easily hurt the user or others if not careful. The keys can also cause damage to surfaces or other objects if the user is not careful.

**[0003]** Therefore, the invention provides a key holder to mitigate or obviate the aforementioned problems.

**[0004]** The main objective of the present invention is to provide a key holder, with which it is convenient for a user to carry keys safely.

**[0005]** Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

### IN THE DRAWINGS

#### **[0006]**

Fig. 1 is an exploded perspective view of a first embodiment of a key holder in accordance with the present invention;

Fig. 2 is an operational cross-sectional side view of the key holder in Fig. 1;

Fig. 3 is an exploded perspective view of a second embodiment of a key holder in accordance with the present invention;

Fig. 4 is an exploded perspective view of a third embodiment of a key holder in accordance with the present invention;

Fig. 5 is an exploded perspective view of a fourth embodiment of a key holder in accordance with the present invention;

Fig. 6 is an operational cross-sectional view of the fourth embodiment of a key holder in Fig. 5; and

Fig. 7 is a cross-sectional view of the fourth embodiment of a key holder in Fig. 5.

**[0007]** With reference to Fig. 1, a first embodiment of a key holder has a seat (10) and a housing (40).

**[0008]** The seat (10) comprises a key (20) and a base (30) in which the key (20) is mounted. A tongue (21) is integrally formed in a lower end of the key (20) and a channel (31) is longitudinally defined in a center of the base (30). The tongue (21) is inserted into the channel (31). A notch (22) is transversely defined in the tongue (21). A threaded hole (32) is defined in a side of the base

(30) and communicates with the channel (31).

**[0009]** The housing (40) has a chamber (41) longitudinally defined therein forming a box with an open end. The base (30) with the key (20) can be inserted into the housing (40) and slide freely up and down within the chamber (41). A slot (42) is longitudinally defined through a side of the housing (40) and in communication with the chamber (41). A stopping edge (43) is formed at the open end of the housing (40) closing the end of the slot (42).

**[0010]** A screw (50) has a head (51), the diameter of which is slightly larger than that of the slot (42), integrally formed in an end thereof and a thread (52), the diameter of which is slightly smaller than that of the notch (22), extending from the head (51). The thread (52) is securely mated with the threaded hole (32) and securely fastened to the notch (22). In other embodiments of the present invention, the screw (50) can be any type of fastener.

**[0011]** With reference to Figs. 1 and 2, the key (20) is inserted into the channel (31) and the base (30) is inserted into the chamber (41). The screw (50) is inserted so that the thread (52) extends through the slot (42) and into the threaded hole (32) in the base (30). The thread (52) also extends through the notch (22) in the tongue (21) of the key (20) thereby securing the key (20) in the base (30). The head (5) remains outside of the housing (40) abutting the slot (42). When the head (51) is pushed upwards along the slot (42), an end of the key (20) extends out of the chamber (41) to be used. When the head (51) abuts the stopping edge (43), the key (20) cannot be pushed farther and will not be separated from the housing (40).

**[0012]** With reference to Fig. 3, a second embodiment of the invention is the same as the first embodiment except that the second embodiment has a housing (60) which has two chambers (61) longitudinally defined therein and in alignment with each other. Two seats (10), each of which is composed of a key (20) and a base (30), are received respectively into the chambers (61). Two slots (62) parallel to each other are longitudinally defined through a side of the housing (60) and in communication with the chambers (61). Hence, each key (20) is fastened to each base (30) with a fastener (50) being inserted into each slot (62) and through each threaded hole (32). The operation of the second embodiment of the invention is similar to that of the first embodiment.

**[0013]** With reference to Fig. 4, a third embodiment of the invention is the same as the second embodiment except that the third embodiment has a housing (70), which has three parallel chambers longitudinally defined therein. The operation of the third embodiment of the invention is similar to that of the second embodiment.

**[0014]** With reference to Figs. 5-7, a fourth embodiment of the invention has a box (80), which has an open end and two chambers (81) defined therein and in alignment with each other. A single housing (40) and a double housing (60) are received respectively into the chambers (81). Multiple slots (82) are defined in two sides of the box (80) and correspond to the slots (42)(62) in the hous-

ings (40)(60). The seats (10) are received into the housings (40)(60) and the housings (40)(60) are received into the box (80). The fasteners (50) are inserted through the slots (82)(42)(62) in turn and fastened in the threaded holes (32). Hence, the keys (20) are secured in the bases (30) and the seats (10) can slide within the chambers (81). A cap (90), which is configured to mate with the box (80), is mounted over the open end of the box (80) thereby preventing dust from entering the box (80). The operation of the fourth embodiment is the same as that of the previous embodiments.

**[0015]** The advantages of the present invention are described as follows:

1. The keys (20) are contained within the key holder when not in use to prevent injury or damage to persons or objects nearby.
2. A key (20) can be quickly and easily extended for use. When the keys (20) are retracted within the housings (40)(60), the key holder has an attractive appearance and the keys (20) are separated so they will not strike each other and make noise.
3. The key holder can be configured to hold different numbers of keys (20).

## Claims

1. A key holder comprising:

at least one seat (10), each one of the at least one seat (10) having  
 a key (20) with a tongue (21) formed at a lower end thereof, wherein the tongue (21) has a notch (22);  
 a base (30) connected to the key (20) and having a channel (31) defined longitudinally through a center to receive the tongue (21), and a threaded hole (32) defined in a side of the base (30) and in communication with the channel (31) and the notch (22) in the tongue (21);  
 a housing (40) holding the at least one seat (10) inside and having an open end;  
 at least one chamber (41) defined longitudinally in the housing (40), corresponding respectively to and held the at least one seat (10) inside, and at least one slot (42) defined longitudinally through a side of the housing (40) and corresponding respectively to the channel (31) in the base (30) of the at least one seat (10); and  
 at least one fastener corresponding respectively to the at least one seat (10), and each one of the at least one fastener having a head (51) with a diameter slightly larger than that of a corresponding one of the at least one slot (42) in the housing (40) and abutting a periphery of the corresponding slot (42), and

a thread (52) extending from the head (51), wherein the fastener is inserted through the corresponding slot (42) into a corresponding one of the at least one threaded hole (32) and has a diameter slightly smaller than that of a corresponding one of the at least one notch (22), whereby the fastener is securely mated with the corresponding notch (22) to fasten a corresponding one key (20) to a corresponding one base (30).

2. The key holder as claimed in claim 1 further comprising a box (80) holding the at least one housing (40) inside and having an open end, at least one chamber (81) and at least one slot (82) longitudinally defined in the box (80).
3. The key holder as claimed in claim 2, wherein the key holder has multiple housings (40) received into the box (80).
4. The key holder as claimed in claim 2, wherein the key holder (80) has two housings (40) received into the box (80).
5. The key holder as claimed in claim 2 further comprising a cap (90) mounted over the open end of the box (80).

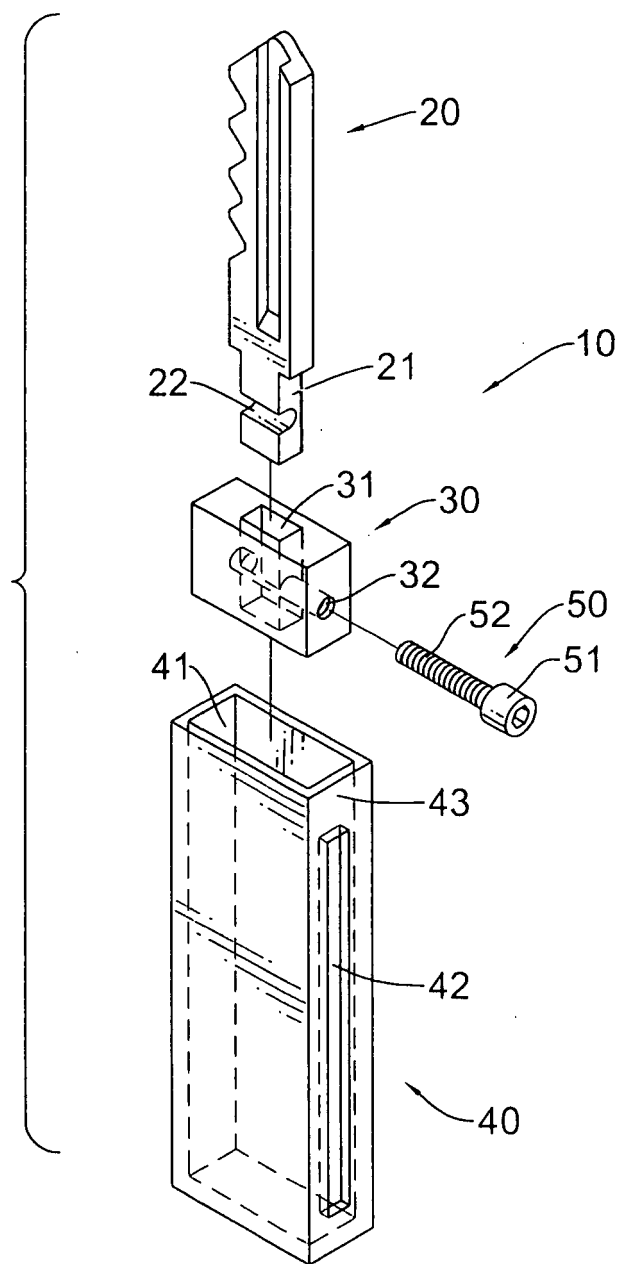


FIG.1

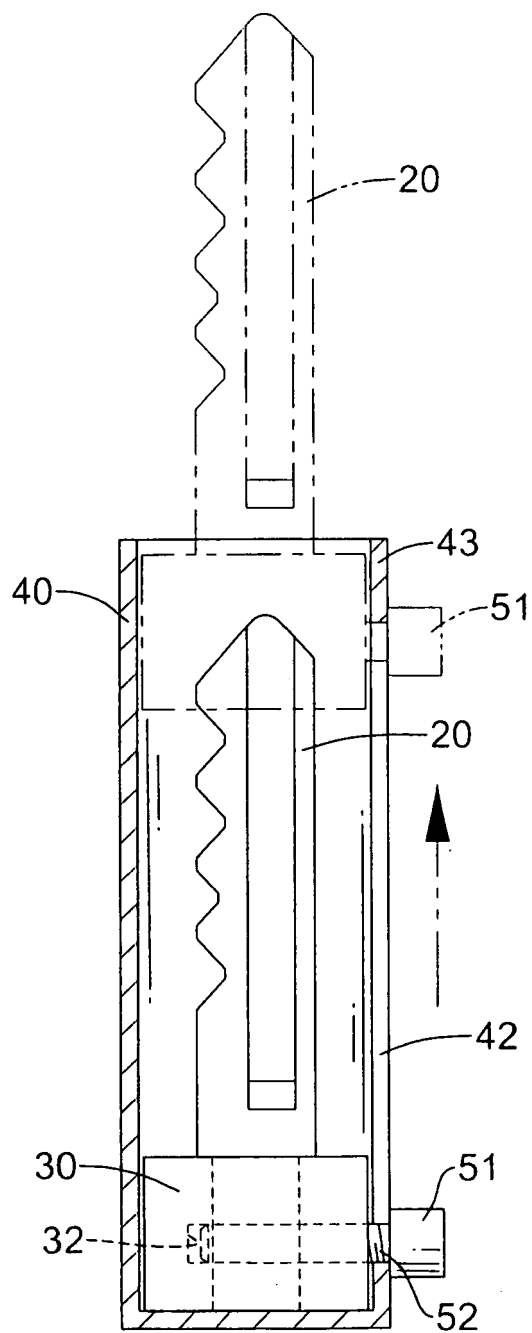


FIG.2

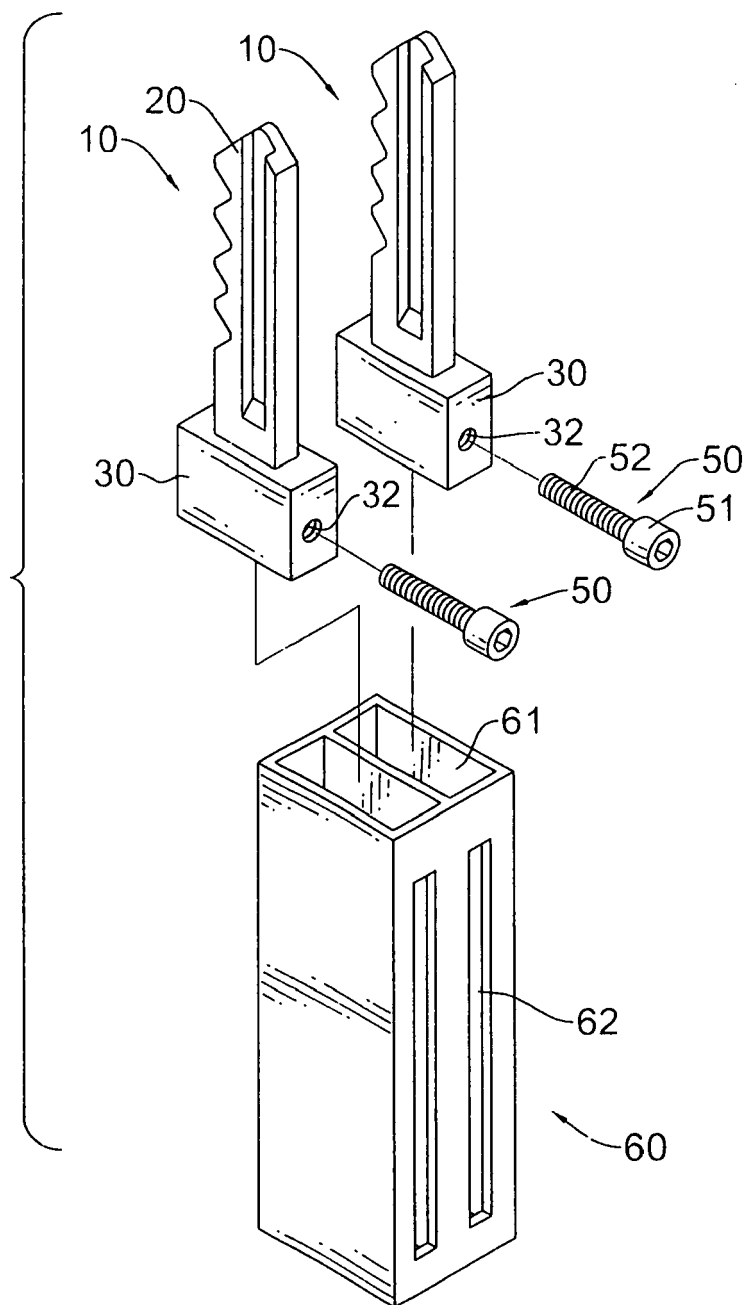


FIG.3

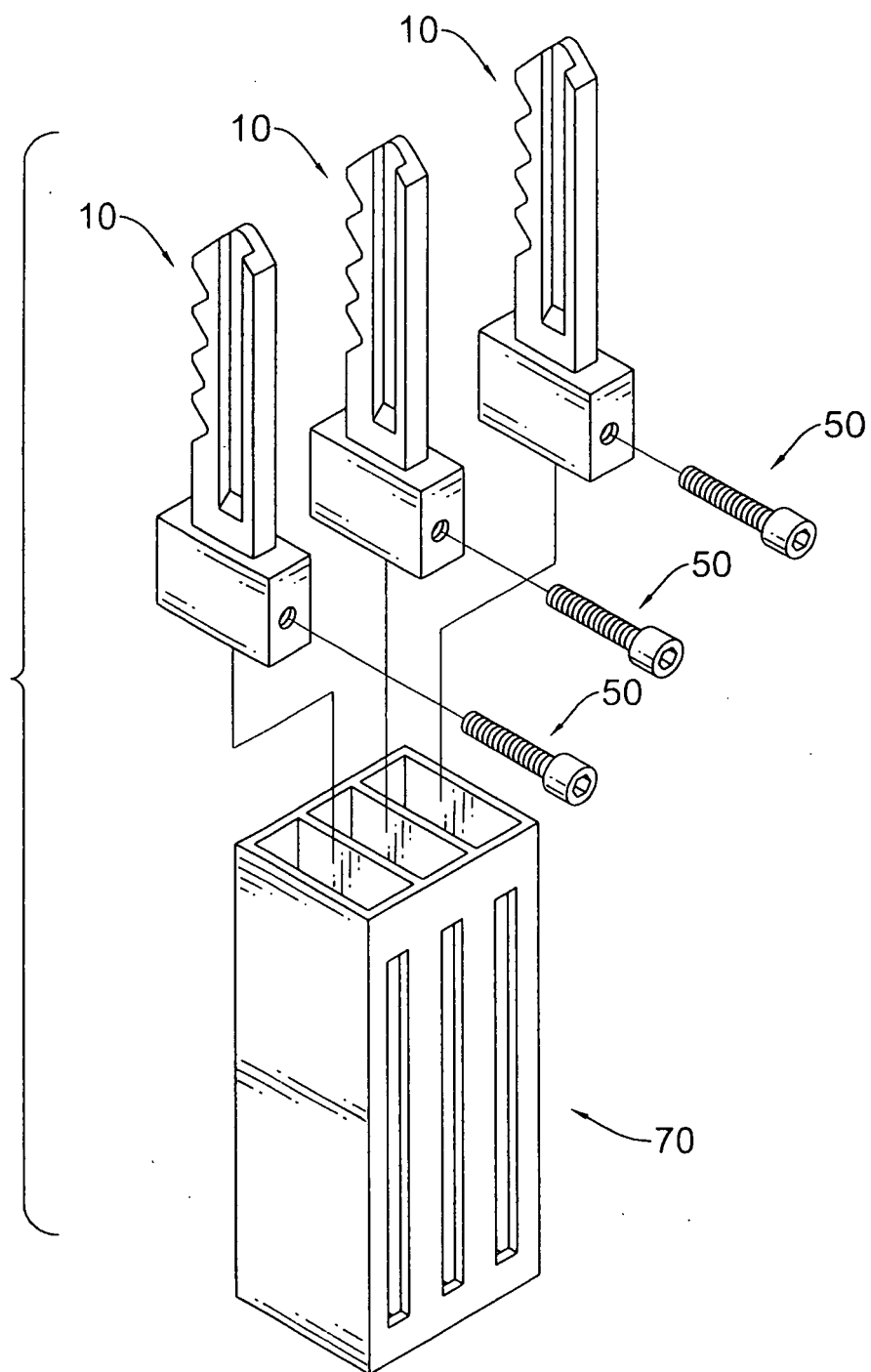
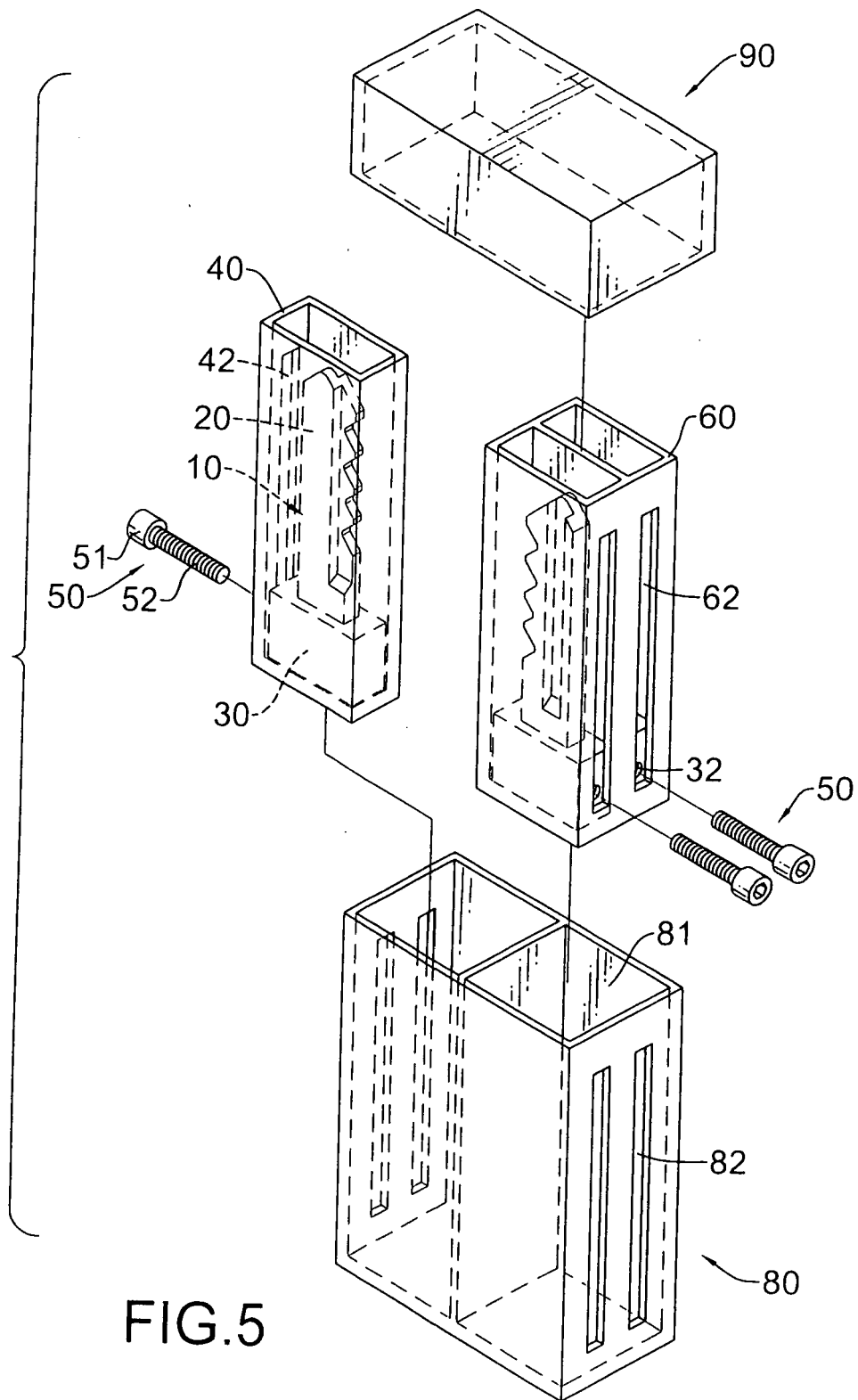


FIG.4





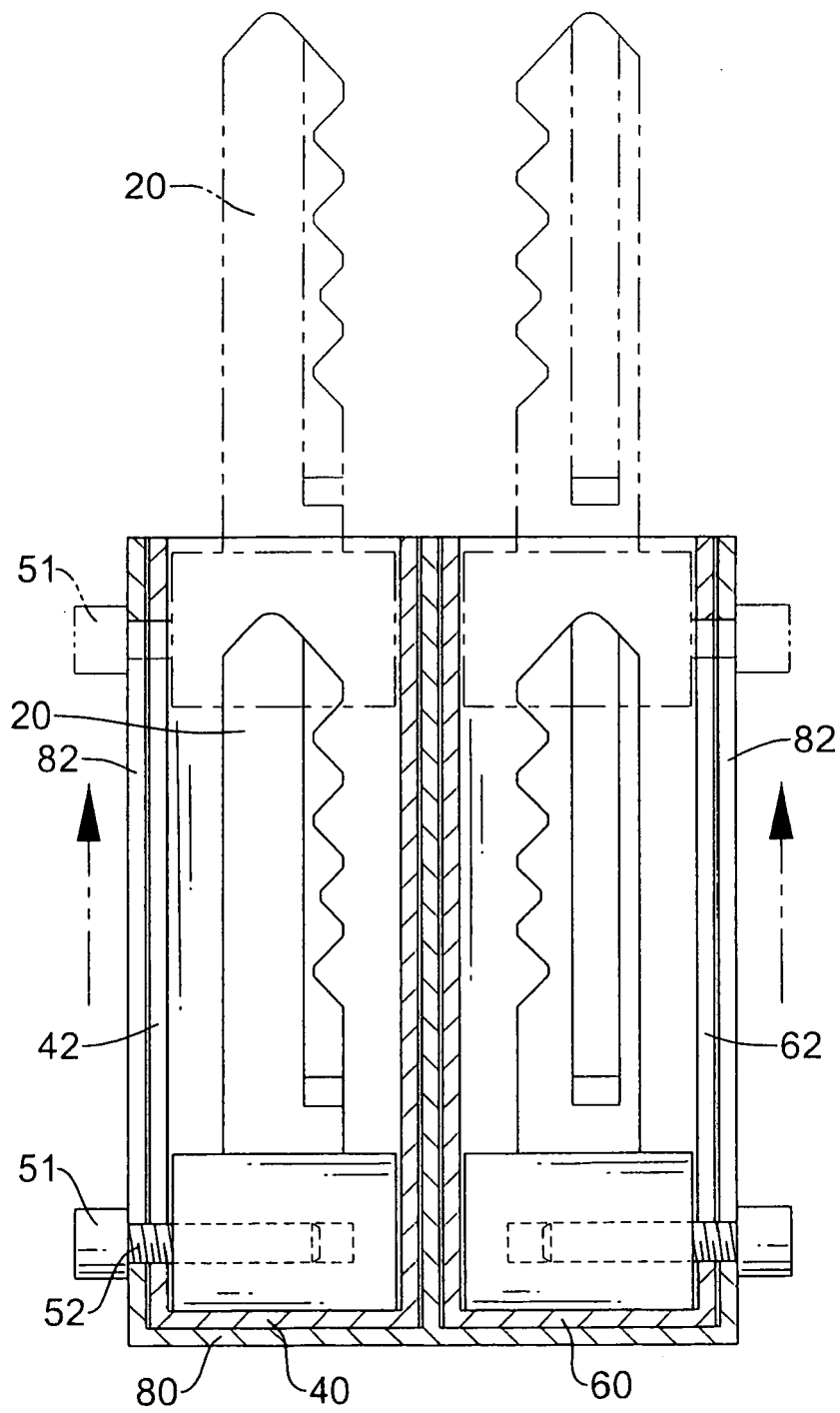


FIG.6

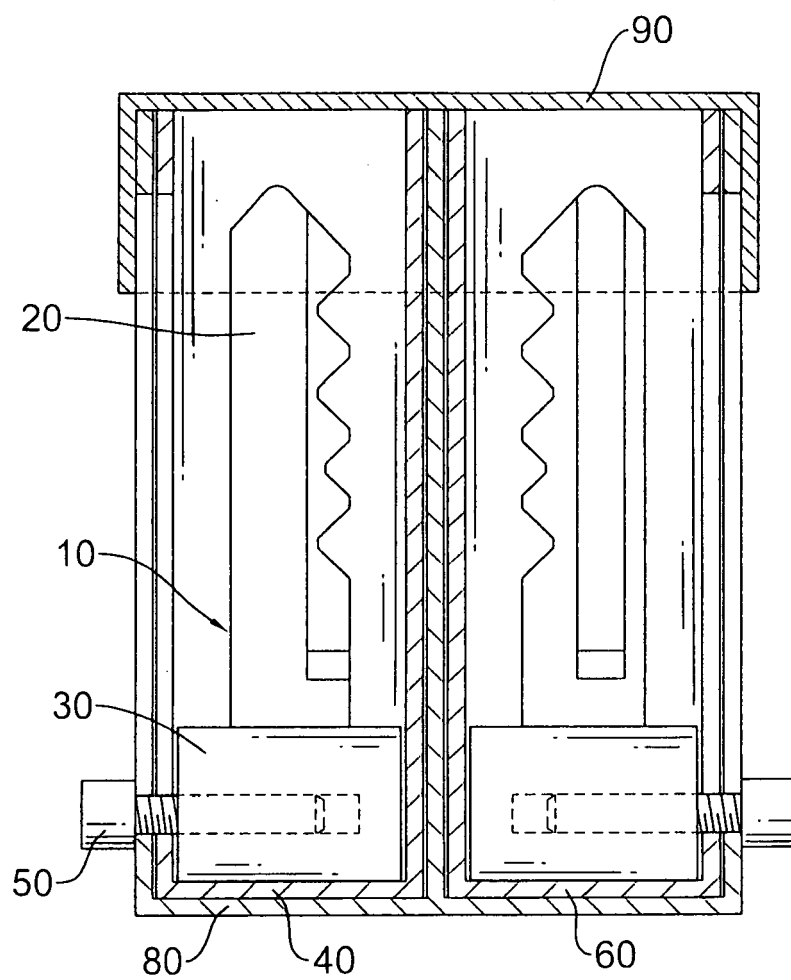


FIG.7



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 1 449 455 A (VALEO SECURITE HABITACLE) 25 August 2004 (2004-08-25) * paragraphs [0022], [0023]; figures 1-3 *	1	A44B15/00 A45C11/32
A	----- US 4 281 527 A (LEOPOLDI ET AL) 4 August 1981 (1981-08-04) * abstract; figures 1-4 *	1-5	
A	----- US 2004/089560 A1 (SUEDA MASAKAZU) 13 May 2004 (2004-05-13) * paragraph [0032]; figure 2 *	1-5	
			TECHNICAL FIELDS SEARCHED (IPC)
			A44B A45C
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 March 2006	Examiner Westermayer, W
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 05 02 2086

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-03-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1449455	A	25-08-2004	FR 2851430 A1	27-08-2004
US 4281527	A	04-08-1981	NONE	
US 2004089560	A1	13-05-2004	NONE	