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(72) Inventors:
• **Battistin, Pietro**
32012 Forno di Zoldo (Belluno) (IT)
• **Costantin, Arcangelo**
32012 Forno di Zoldo (Belluno) (IT)

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(74) Representative: **Modiano, Guido, Dr.-Ing. et al**
Modiano & Associati SpA
Via Meravigli, 16
20123 Milano (IT)

(71) Applicant: **SILCON PLASTIC S.r.l.**
I-32012 Forno di Zoldo (Belluno) (IT)

(54) **Key**

(57) A key (10) made of metallic material, comprising a grip part (11) and a blade (12); the grip part is ring-

shaped, with a radial opening (14), for the removable coupling of a complementarily shaped insert (15) made of plastics.

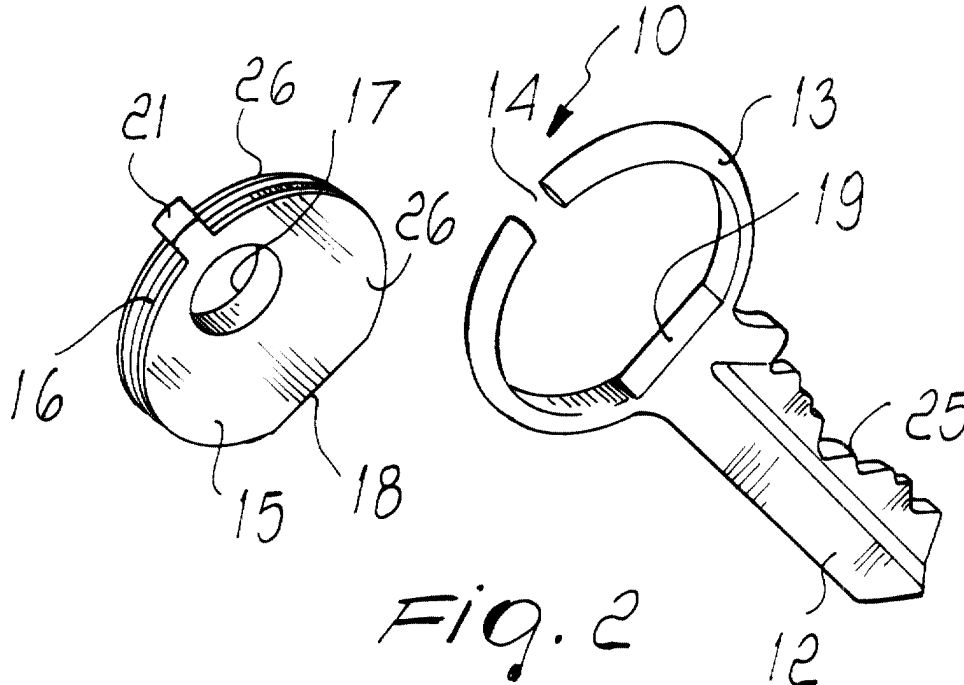


Fig. 2

Description

[0001] The present invention relates to a key made of metallic material.

[0002] An extremely wide variety of metallic keys is commercially known.

[0003] Such keys are usually formed monolithically with a characteristic metallic color or can be provided with applied portions made of colored plastics.

[0004] The keys that are most commonly used are formed monolithically from metallic material and have the particularity that they are difficult to tell apart.

[0005] Once they have been grouped in a same bunch, it is in fact difficult to tell them apart simply by looking at the shape of the grip part or the type of serrations of the blade.

[0006] This is the reason why plastic applied portions are used; they are provided in various colors but are in any case an additional accessory to the key.

[0007] It is therefore onerous to provide the keys by using a single-color metallic material and then provide additional applied portions made of plastics, which can be separate or can be constituted by a covering of the grip part of the key, to the detriment of the amount of material employed and therefore of the costs, for large production volumes.

[0008] The aim of the present invention is to provide a key which allows immediate visual confirmation even in different orientations of the key.

[0009] Within the scope of this aim, an object is to provide a key which allows to save material with respect to conventional keys.

[0010] Another object is to provide keys having a very wide choice of colors.

[0011] Another object is to provide a key whose color can be changed at will.

[0012] This aim, these and other objects which will become better apparent hereinafter are achieved by a key made of metallic material, which comprises a grip part and a blade, characterized in that said grip part is ring-shaped, with a radial opening, for the removable coupling of a complementarily shaped insert made of a different material.

[0013] Further characteristics and advantages of the present invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment of the key, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a key according to the present invention;

Figure 2 is an exploded view of the key of Figure 1;

Figure 3 is a transverse sectional view of the key shown in Figures 1 and 2;

Figures 4 and 5 are, respectively, a transverse sectional view and a plan view of the same key portion, in which a detail has been changed;

Figure 6 is a view of the same key portion shown in Figures 4 and 5, in which the detail is illustrated according to a third embodiment;

Figure 7 is a plan view of a key with a portion thereof shown at rest and flexed.

[0014] With particular reference to the figures, a key according to the present invention is generally designated by the reference numeral 10.

[0015] The key 10 comprises a grip part 11 which is monolithic with respect to a blade 12.

[0016] The grip part 11 is constituted by a circular ring 13 provided with a radial opening 14 which lies in the direction of the longitudinal extension of the blade 12.

[0017] The radial opening 14 allows the elastic deformation of the ring 13 for the interlocking of an insert 15 made of plastics or of a different metal, which is shaped complementarily to the ring 13.

[0018] The insert 15 is provided with a circumferential slot 16 which allows an optimum removable but nonetheless stable interlocking with the ring 13.

[0019] The insert 15 is provided with a hole 17 which allows to group a plurality of keys of the type 10 in a key-holder, which is not shown in the figure but is in any case of a per se known type.

[0020] The hole 17 is usually arranged in the end portion of the key 10 and substantially in the direction of the longitudinal extension of the blade 12.

[0021] For this reason, the insert 15 is shaped so as to have a single radial arrangement.

[0022] It is in fact provided with a flat portion 18 which is shaped complementarily to a corresponding flat portion 19 of the grip part 11.

[0023] The insert 15 is further provided with a tab 20 which is arranged in a radial direction and couples to the radial opening 14.

[0024] The tab 20 is shaped complementarily to the radial opening 14 and can assume a substantially radial and straight shape 21 or a dovetail shape 22, in which the larger portion 23 is arranged toward the outside of the key 10, or can comprise a flat portion 24 arranged on the outside of the key 10.

[0025] Advantageously, the insert 15 can be concave on one or both of the surfaces 26 in order to facilitate grip of the key 10.

[0026] The insert 15 made of plastics or of a different metal can of course assume many colors and/or metallic colorings and this allows to immediately identify the intended key 10 and to choose the color that one prefers to identify a certain key.

[0027] Once the serrations 25 have been formed in the blade 12, it is possible to choose any insert 15 to be coupled to the grip part 11.

[0028] The key 10, in addition to being easily recognizable when viewed flat, can also be easily distinguished by virtue of the presence of the tab 20 when grouped in a bunch if it is viewed from the grip portion 11.

[0029] The tab 20, by protruding from the radial open-

ing 14, in fact allows to identify the particular color, and the optional dovetail shape 22 or the flat portion 24 further increases visual impact.

[0030] In practice it has been observed that the present invention has achieved the intended aim and objects.

[0031] In particular, it is noted that once the chosen key has been made, a very wide choice of colors is possible and it is also possible to change color at will even at a later time.

[0032] The provision of such a key structure entails a certain saving in metallic material.

[0033] Moreover, the keys are easy to tell apart both when viewed flat and when viewed from one end, facilitating their identification if they are gathered in bunches.

[0034] Finally, the grip portions that can be provided need not be circular; they may also be square or hexagonal or otherwise shaped, so long as said shape is elastically deformable by means of the radial opening.

[0035] In practice, the materials employed, so long as they are compatible with the contingent use, as well as the dimensions, may be any according to requirements.

[0036] The disclosures in Italian Utility Model Application No. PD99U000119 from which this application claims priority are incorporated herein by reference.

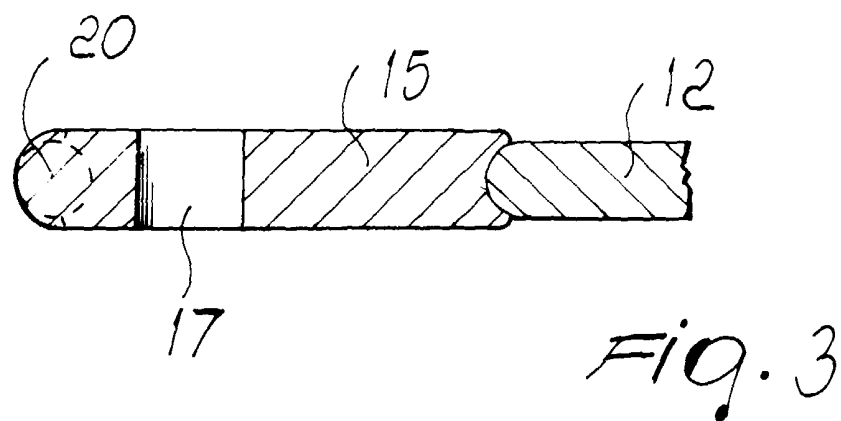
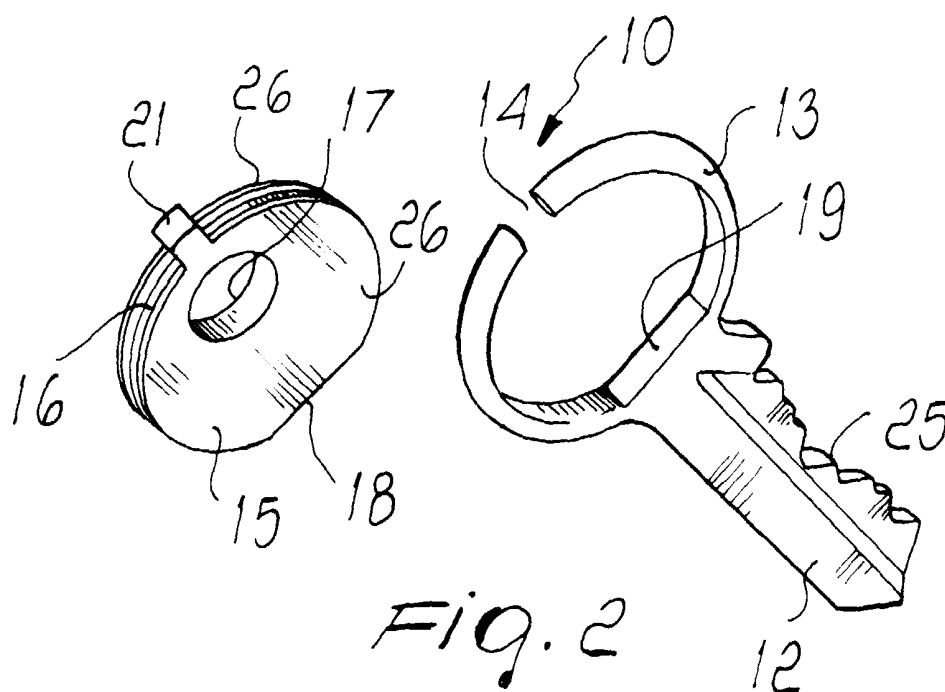
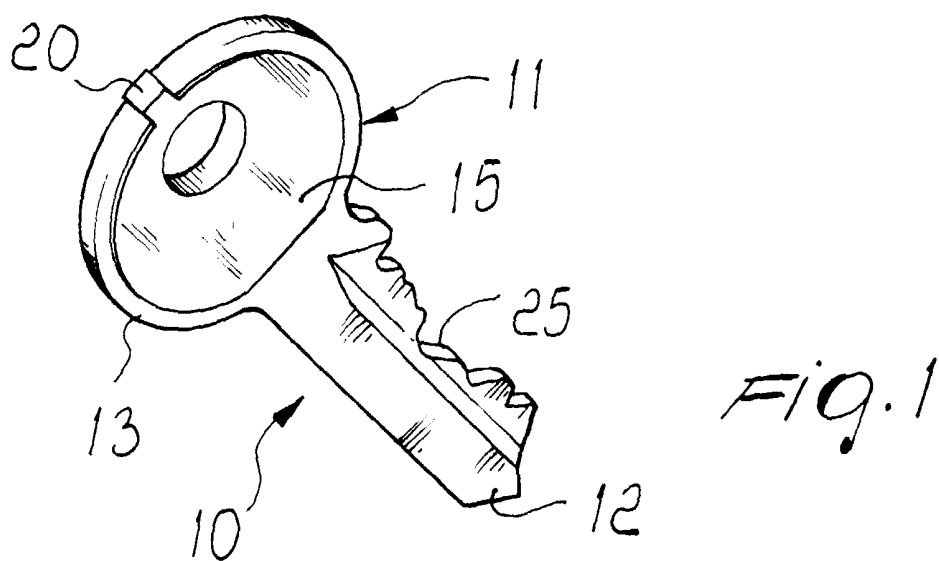
[0037] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A key made of metallic material, comprising a grip part and a blade, characterized in that said grip part is ring-shaped, with a radial opening, for the removable coupling of a complementarily shaped insert made of a different material.
2. The key according to claim 1, characterized in that said different material is plastics and/or a metallic material different from the material of the grip part.
3. The key according to claim 1, characterized in that said insert has a circumferential slot for interlocking on said ring.
4. The key according to claim 1, characterized in that said insert comprises a flat circumferential portion which is shaped complementarily to a corresponding portion of the grip part at the blade.
5. The key according to claim 1, characterized in that said insert is provided with a substantially radial tab

for insertion in said radial opening.

6. The key according to claim 5, characterized in that said tab is dovetail-shaped, with a larger portion arranged toward the outside of the key.
7. The key according to claim 5, characterized in that said tab is substantially straight and provided with a flat portion which is arranged on the outside of the key.
8. The key according to claim 1, characterized in that said insert is provided with a hole for a key-holder which is located in the outermost vicinity of said key along the longitudinal extension of the blade.
9. The key according to claim 1, characterized in that said insert has at least one surface which is concave in plan view.



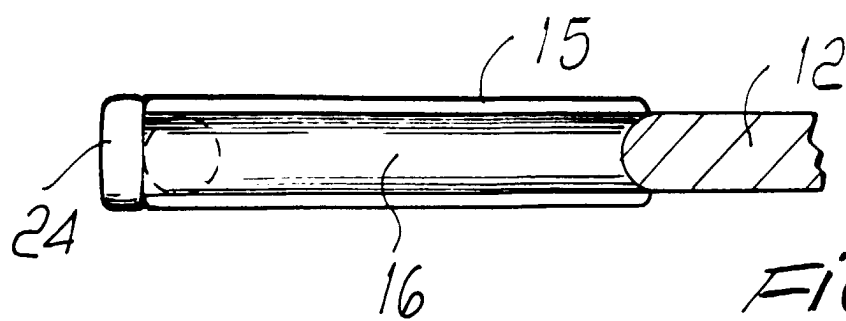


Fig. 4

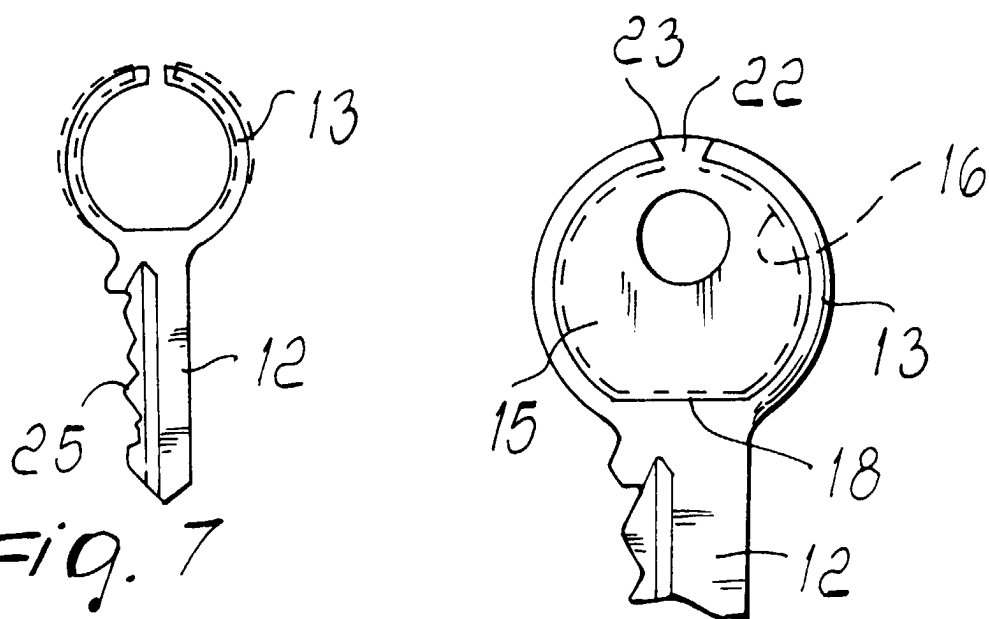


Fig. 6

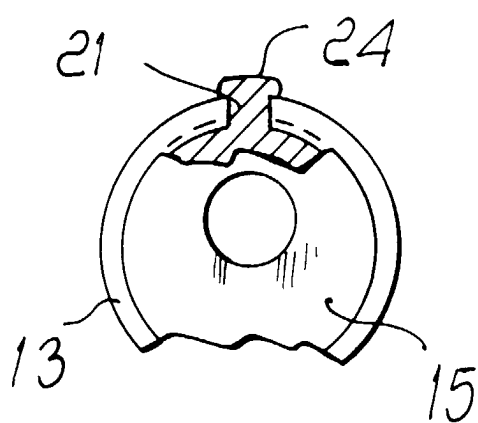


Fig. 5

Fig. 7



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 12 3408

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 336 701 A (RAYMOND) 29 June 1982 (1982-06-29) * the whole document *	1-3,8	E05B19/24
A	US 1 629 343 A (KATZ) 17 May 1927 (1927-05-17) * the whole document *	1,5	
A	US 3 568 483 A (WOOFER) 9 March 1971 (1971-03-09) * column 2, line 44-55; figures *	1,3	
A	GB 1 587 368 A (CRAIG) 1 April 1981 (1981-04-01) * page 1, line 88 - page 2, line 16; figures *	1,3	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E05B A44B
Place of search		Date of completion of the search	Examiner
THE HAGUE		17 April 2001	Westin, K
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			

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

EP 00 12 3408

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
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17-04-2001

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US 1629343	A	17-05-1927	NONE	
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82