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Description

This invention relates to a key and key holder, and in the preferred embodiment provides a key and key holder which can readily be retained for emergency use in a wallet or handbag.

It has been proposed, for example in EP-A-240804, to produce a combined key and key holder in plastics material, the overall size and shape of the key/key holder combination being substantially the same as that of a conventional credit card whereby the key and key holder can readily be stored in the wallet or handbag of the user for emergency use.

The key and key holder combinations of the prior art do however suffer from a number of disadvantages. In particular, the prior proposal of EP-A-240804 makes use of an integral one-piece moulding comprising the key or keys, the holder or card, and an interconnecting hinge arrangement. This proposal limits the extent to which the keys can be rotated relative to the card without breaking the interconnection between the key and card. Further, having rotated a key relative to the card a set is imposed on the hinge which will tend thereafter to hold the key out of the plane of the card, thereby making the key and card combination difficult to store after it has once been used. Further, the plastics materials necessary for the injection moulding of a key are expensive, and the use of an integral moulding increases the volume of such material needed even though the material of the card itself is not required to withstand any large mechanical stresses.

US-A-2,413,337 discloses a key which may be hingedly connected to a support by means of a pair of coaxial pins.

US-A-4,637,236 serving as the basis for the preamble of claim 1 provides a key and key holder combination wherein the key holder is in the form of a card of plastics material having a socket therein in which the key is housed, and wherein the key and card are interconnected by a hinge located at one end of the card which permits rotation of the key relative to the card about the hinge.

The present invention is characterised in that the card and the key are separate injection mouldings of different plastics materials and the hinge is formed by a pair of co-axial pins provided on the holder which are received in a pair of co-axial sockets formed in the key whereby the hinge permits free rotation of the key relative to the card, the pins being integral parts of the holder and being formed as the holder is moulded.

The invention enables the key to be manufactured from the relatively expensive plastics material necessary for such purposes, and the card to be manufactured from relatively inexpensive plastics

material.

Preferably, means are provided for detaining the key in the plane of the card until the key is required for use, said detaining means being effective after the key has been used to retain the key in the plane of the card.

The invention will be better understood from the following description of a preferred embodiment thereof, given by way of example only, reference being had to the accompanying drawing wherein:

Figure 1 is a plan view of a preferred embodiment of the invention; and

Figure 2 is a section on the line II-II of Figure 1;

Referring to the drawings, there is shown a combination of a key 1 and a card-like key holder 2. The overall size and shape of the combination is substantially the same as that of the conventional credit card enabling the key and key holder to be stored in a wallet or hand bag for emergency use. The primary intended use of the key/key holder combination is as an emergency car key, but it will be appreciated that the exact nature of the key is not critical, and the key could, for example, be in the form of a conventional night-latch key.

The key 1 is injection moulded from any suitable plastics material, bearing in mind the function the key is intended to form. In general, the key as moulded will be a "blank" which will be cut to the particular tumbler combination of the lock with which it is intended to be used.

The card 2 is formed by any suitable means, for example by injection moulding. Because the card is merely required to perform the function of a holder for the key it can be manufactured from a relatively inexpensive plastics material.

The key and card are interconnected by a hinge means 3 at one edge of the card. The hinge comprises a pair of co-axial pins 4,5 which are integrally formed with the holder and are received in a corresponding pair of sockets 6,7 formed in the key. The arrangements are such that after the key has been moulded, or indeed after it has been cut, it can be snapped on to pins 4,5 to form the hinged connection. The hinged connections permit substantially unlimited rotation of the key relative to the card about the axis of the hinge, as shown in broken lines in Figures 2 and 4. Further, because hinging movement of the key does not deform the hinge, the hinge takes no permanent set as a result of rotation of the key, and accordingly after the key has been used it can readily be pressed back into the slot provided for it in the card, and will remain there for future use.

Preferably, means are provided for detaining the key in the plane of the card. In the preferred embodiments of the invention, the retaining means comprises an undercut portion 8 of the card to

engage the tip of the key.

Further, although a small clearance gap is provided between the periphery of the key and the complementary slot in the card over the majority of the periphery of the key, the clearance gap is reduced to zero at the points A whereby the key is an interference fit with the card at this point. The combination of the undercut 8 and the interference fit at the points A is effective to retain the key in the plane of the card until required for use. If desired, the retention of the key can further be aided by adhesively securing a sheet of, e.g. plastic material 9 to the underside of the key and card. Such material can then be peeled off or torn through when the key is required for use.

The surface of the card 2 surrounding the key, and the entire surface of the sheet 9 may be used to bear advertising material if so required.

Claims

1. A key and key holder combination wherein the key holder (2) is in the form of a card of plastics material having a socket therein in which the key (1) is housed, and wherein the key and card are interconnected by a hinge (3) located at one end of the card which permits rotation of the key relative to the card about the hinge, characterised in that the card (2) and the key (1) are separate injection mouldings of different plastics materials and the hinge (3) is formed by a pair of co-axial pins (4,5) provided on the holder which are received in a pair of co-axial sockets (6,7) formed in the key whereby the hinge permits free rotation of the key relative to the card, the pins being integral parts of the holder and being formed as the holder is moulded.
2. A key and key holder combination according to claim 1 characterised in that means (10, A,A) are provided for detaining the key (1) in the plane of the card (2) until the key is required for use.
3. A key and key holder combination according to claim 2 characterised in that said detaining means is effective to retain the key in the plane of the card between successive uses of the key.

Patentansprüche

1. Kombination aus Schlüssel und Schlüsselhalter, bei der der Schlüsselhalter (2) in Gestalt einer Kunststoffkarte mit einem darin enthaltenen Aufnahmeteil vorliegt, in dem der Schlüssel (1) untergebracht ist, und bei der der

Schlüssel und die Karte über ein an einem Ende der Karte angebrachtes Gelenk (3) miteinander verbunden sind, wodurch ein Drehen des Schlüssels in bezug auf die Karte am Gelenk ermöglicht wird, dadurch gekennzeichnet, daß die Karte (2) und der Schlüssel (1) gesonderte Spritzgußteile aus unterschiedlichen Kunststoffen sind und das Gelenk (3) aus einem Paar koaxialer Stifte (4, 5) gebildet wird, die sich am Halter befinden und in einem Paar im Schlüssel eingestrichelter koaxialer Aufnahmeteile (6, 7) aufgenommen werden, wodurch das Gelenk ein freies Drehen des Schlüssels in bezug auf die Karte ermöglicht, wobei die Stifte integrale Bestandteile des Halters sind und beim Formen des Halters hergestellt werden.

2. Kombination aus Schlüssel und Schlüsselhalter nach Anspruch 1, dadurch gekennzeichnet, daß Vorrichtungen (10, A,A) vorgesehen sind, die den Schlüssel (1) solange in der Ebene der Karte (2) halten, bis er verwendet werden soll.
3. Kombination aus Schlüssel und Schlüsselhalter nach Anspruch 2, dadurch gekennzeichnet, daß besagte Haltevorrichtung zum Zurückhalten des Schlüssels in der Kartenebene zwischen aufeinanderfolgenden Verwendungen des Schlüssels effektiv ist.

Revendications

1. Ensemble clé et porte-clé dans lequel le porte-clé (2) est sous la forme d'une carte en matière plastique ayant une cavité dans laquelle la clé (1) vient se loger, et dans lequel la clé et la carte sont reliées entre elles par une articulation à charnière (3) située à une extrémité de la carte et permettant la rotation de la clé par rapport à la carte autour de l'articulation à charnière, caractérisé en ce que la carte (2) et la clé (1) sont des moulages par injection séparés de différentes matières plastiques et l'articulation à charnière (3) est formée par une paire d'ergots coaxiaux (4,5) prévus sur le porte-clé et reçus dans une paire de cavités coaxiales (6,7) formées dans la clé, l'articulation à charnière permettant ainsi la libre rotation de la clé par rapport à la carte, les ergots faisant partie intégrale du porte-clé et étant formés lors du moulage du porte-clé.
2. Ensemble clé et porte-clé selon la revendication 1, caractérisé en ce que des moyens (10, A,A) sont prévus pour retenir la clé (1) dans le plan de la carte (2) jusqu'à ce que l'on ait besoin d'utiliser la clé.

3. Ensemble clé et porte-clé selon la revendication 2, caractérisé en ce que lesdits moyens de retenue retiennent efficacement la clé dans le plan de la carte entre des utilisations successives de la clé.

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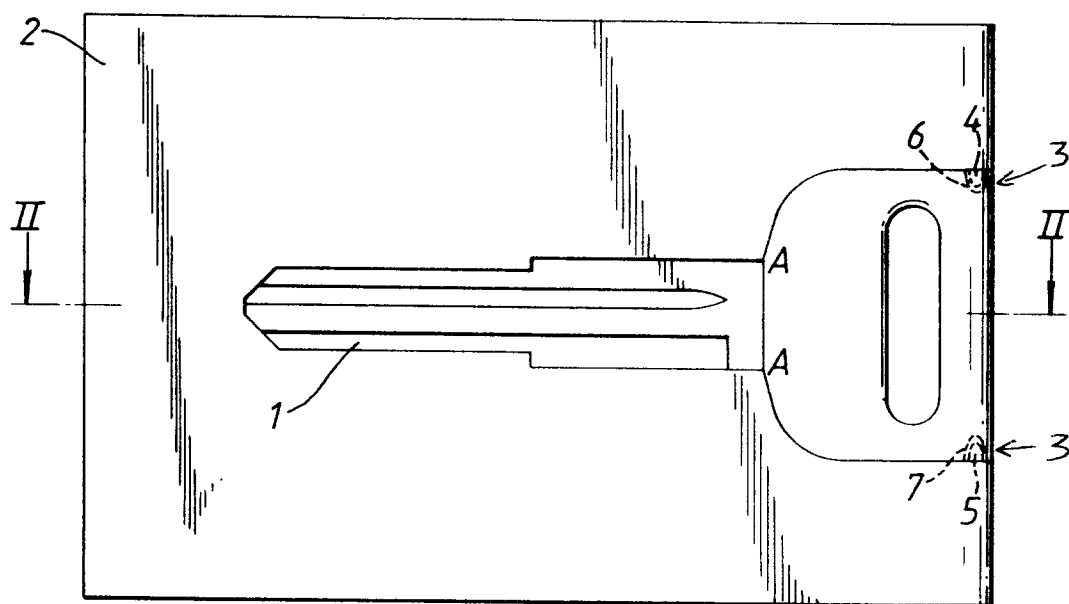


Fig. 1.

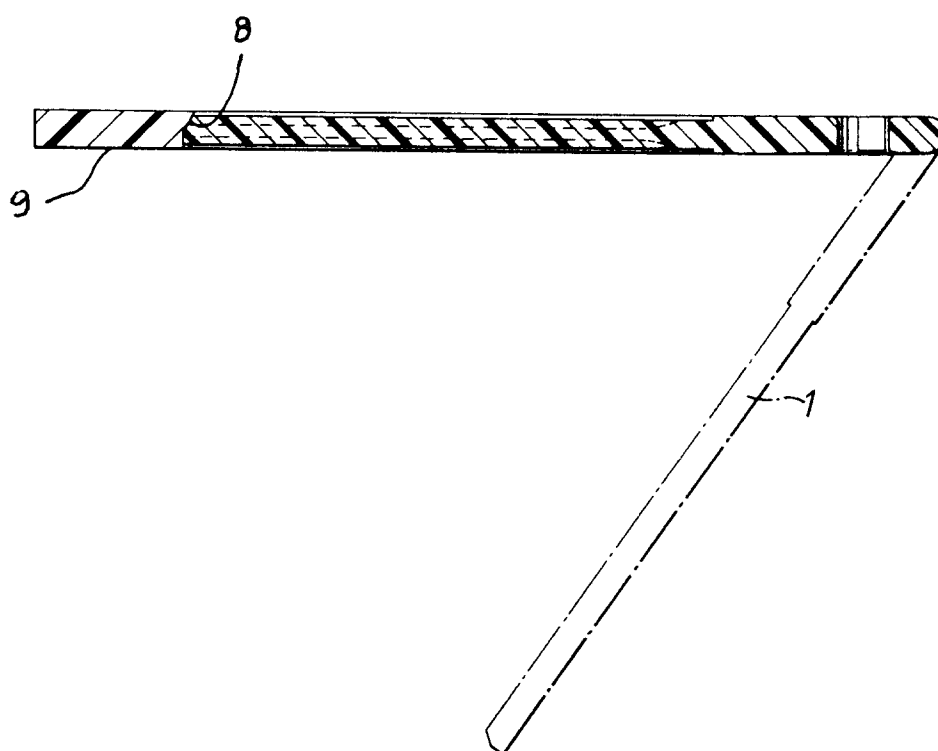


Fig. 2.