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(54) Card-like holder for token to release a coin-operated lock

(57) The present invention discloses a lock-releasing device (1), comprising a coin-like token (10) and a flat support (11). The token (10) is pivotally attached to the flat support (11) by a hinge (12), so that the user can

open and close the device (1), and moreover, the flat support (11) contains a recess (15) in which the token (10) is located when the device (1) is closed.

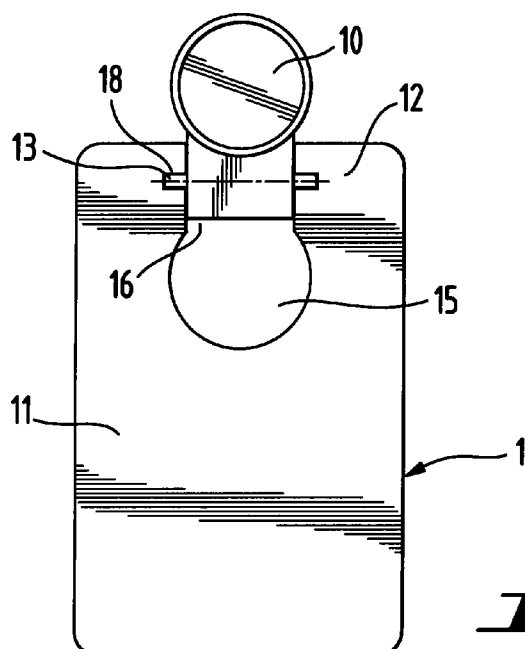


Fig. 3

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Description

Technical field

[0001] The present invention relates to a lock-releasing device.

Background art

[0002] Devices including a token for freeing a key from a coin-operated lock mounted for example on self-service trolleys are representative of the various lock-releasing devices to which the present invention can apply. The usual problem for users of such devices is to have a token that fits the latch, or coin of the required value, and which is available immediately when they need it. Most of the time, they do not have the right coin or token, so they need to go to any business establishment to get change of the required value. This means a waste of time for the user, and an increase in the operating costs for the business establishments.

[0003] The following references are directed to devices including a token to use with a shopping trolley lock: German patent DE 44 00 574 A1, Fuchs 13 July 1995: teaches a 1-piece flat support constituted of 2 symmetrical rounded extremities with the function of keys for shopping trolley locks. Both extremities are linked through a narrower part of the flat support, comprising symmetrical fields that can be used as a support of information; German patent DE 43 24 083 A1, Fuchs 26 January 1995: discloses a device with a token for trolley locks, that is attached to a card. The card is used as a support of information, and both parts can be linked through different means: they can be fixed together, forming a whole item, or they can be attached by a small ring. In the case they are attached, the support of information will have a notch that is combined to the flexibility of the plastic material to fix the invention on a bunch of keys; French Utility Certificate Application 93 04596, Le Goff 21 October 1994: discloses a key-ring with the shape of a flat support, comprising a cavity associated with a spring-blade and a slide. A token or coin is to be inserted into said cavity, and kept in place with the spring blade. To release the token, the user will use a button associated with the slide to push the token or coin out of the spring-blade/cavity. Faces of the flat support can be used as a support of information; United Kingdom Patent Application GB 2 290 648 A, Gonzalez, Guzman, 20 June 1994: discloses a token consisting of a disc-shaped counter, comprising a surface with high or low reliefs, surrounded by a rim that can be used as a support of information. The token has at least one through orifice which is to be traversed by a key-ring clasp or ring, or snap ring...

[0004] Lock-releasing devices as described in the preceding documents have a number of disadvantages: their shape usually is too complex or they are too bulky, so it is difficult to carry them in a pocket or in wallet for

example. Even in the case the token is pivotally attached to its support, it is still not possible to insert it in this support, and so the device remains inconvenient to carry. In some of them, there is merely no support for the token so it is very easy to lose them and moreover the support of information is limited to the token, which usually is quite small.

[0005] The object of the present invention is to provide the user with a device that comprises a token which can be stored in a compact way into a flat support and so, which is easy and convenient to carry at all times, thereby guaranteeing that the user will always have the token close at hand when it is needed. The support is efficient to carry information as well.

Summary of the invention

[0006] The present invention is achieved by a lock-releasing device, comprising a coin-like token and a flat support, characterized in that the token is pivotally attached to the flat support by a hinge so that the user can open and close the device, and further characterized in that the flat support contains a recess in which the token is located when the device is closed.

Brief description of the drawings

[0007]

Figure 1 is a top view of the device in the closed position.

Figure 2 is a profile view of the device in a partially open position.

Figure 3 is a top view of the device in the open position.

Figure 4 is a top view of the token with its extension. Figure 5 is a profile view of the token with its extension.

Figure 6 is a top view of a modified version of the invention.

Detailed description of the invention

[0008] A description of the device according to the invention will now be made with reference to the accompanying drawings. (figures 1 to 5)

[0009] A lock-releasing device 1 comprises a token 10 which is pivotally attached to a flat support 11 by the means of a flat hinge 12. Said flat hinge 12 is composed of an axle 13 and an extension 14 to the token 10, said axle 13 being inserted in the flat support 11. Recesses, 15 and 16, having the shape and dimensions respectively of the token 10 and the extension 14, are hollowed into the depth of the flat support 11.

[0010] The token 10, as shown in figure 4, is polygonal or rounded shaped, preferably circular. It has a diameter of 10 to 40 mm, preferably 20 to 30 mm, with a thickness comprised within the range of 1 to 3 mm. It is made out

of plastic, metal or any other suitable material, preferably plastic.

[0011] In a preferred embodiment of the invention, the token 10 contains a peripheral relief 17 on both faces, and is optionally made so that it includes information on its faces. Also, it is manufactured as an integral part of the extension 14 of the hinge 12, as shown in figure 4.

[0012] The flat support 11 is made out of plastic, metal, cardboard, or any other suitable material, but is preferably made out of plastic. Its shape is polygonal or rounded, but is preferably rectangular with rounded corners. Its dimensions are within the range of 100 mm long and 70 mm wide with a thickness of 2 to 4 mm, preferably 85 mm long and 54 mm wide with a thickness of 2 to 3 mm, and most preferably within the range of 85 mm long and 54 mm wide with a thickness of 3 mm in one side, preferably one small side of the flat support 11, most preferably a small side that contains the token 10 and the hinge 12, said thickness decreasing gradually to reach a final 2 mm thickness in the opposite side. These dimensions are chosen so that the device, once closed, can be easily arranged and carried in a pocket or preferably in a wallet, in the place usually designed for credit cards. The flat support 11 contains recesses 15 and 16 respectively with the shape and size of the token 10 and extension 14 of the hinge 12, so that said token 10 and extension 14 of the hinge 12 are integrally positioned into said flat support 11 when the device 1 is closed. It also contains recesses 18 into which the axle 13 is pivotally inserted. This flat support 11 is to be printed on both faces and so, used as a support of information, for example for advertising.

[0013] The hinge 12 is located along one of the small sides of the flat support 11 and includes the extension 14 connected to the token 10, said extension 14 being preferably molded as an integral part of the token 10. The extension 14 is pivotally attached to the flat support 11 by the means of an axle 13. Said axle 13 is made out of plastic or metal, preferably metal, and has a length of 10 to 40 mm and a diameter of 0.5 to 3 mm; it is positioned at a distance of 0 to 20 mm from the edge of the flat support 11, preferably 5 to 10 mm. In the closed position, the extension 14 has an inner surface which makes contact with the flat support 11 into a recess, and an outer surface which is preferably printed/decorated.

[0014] In a modified version of the invention (shown in figure 6), the device 1 is one single piece: the token 10, the hinge 12 and the flat support 11 are manufactured at the same time (for example by injection molding process). The hinge 12 is located along the edge of one side of the flat support 11, preferably one small side, and the axle is replaced by a single thin strip connecting the flat support to the extension 14 of the hinge 12 which is part of the support, and in such a way that the token 10 and the extension 14 are pivotally linked to the flat support 11 through this thinner part. The dimensions of the different elements, which are disclosed in the previous version are respectively kept here, and the flat support 11

is also used as a support of information.

[0015] The whole device is used in two different positions: (a) when it is open, the token 10 can be inserted into the slot of a trolley lock to release the key and separate the trolley from the others in a row. Both faces of the flat support 11 are used for printing information (for example advertisement) so that at least one face is visible when the token 10 is inserted in the lock. (b) In the closed position, the token 10 and its extension 14 to the hinge 12 are located in corresponding reserves into the flat support 11. The resulting shape of the device 1 is flat, without protrusion, and with such dimensions that the card is easily inserted either in a pocket or, more preferably, in the place of a wallet usually designed for credit cards.

Claims

1. A lock-releasing device (1), comprising a coin-like token (10) and a flat support (11), characterized in that:
 - (a) the token (10) is pivotally attached to the flat support (11) by a hinge (12) so that the user can open and close the device (1), and
 - (b) the flat support (11) contains a recess (15) in which the token (10) is located when closing the device (1).
2. A device (1) according to claim 1, which is closed in such a way that no protrusion is left.
3. A device (1) according to claims 1 to 2, wherein the flat support (11) is used as a support of information.
4. A device (1) according to claims 1 to 3, wherein the token (10) has a diameter which is comprised within the range of 10 to 40 mm, preferably 20 to 30 mm, and a thickness comprised within the range of 1 to 3 mm.
5. A device (1) according to claims 1 to 4, wherein the flat support (11) has dimensions that are comprised within the range of 100 mm long and 70 mm wide with a thickness of 2 to 4 mm, preferably 85 mm long and 54 mm wide with a thickness of 2 to 3 mm.
6. A device (1) according to claims 1 to 5, wherein the flat support (11) has a thickness of 3 mm in one side, decreasing gradually to reach a final 2 mm thickness in the opposite side.
7. A device (1) according to claims 1 to 6, wherein the token (10) is made out of plastic material.
8. A device (1) according to claims 1 to 7, wherein the flat support (11) is made out of plastic material.

9. A device (1) according to claims 1 to 8, wherein the hinge (12) is composed of an axle (13) and an extension (14) to the token (10).
10. A device (1) according to claims 1 to 9, wherein the extension (14) to the token (10) is made out of plastic material. 5
11. A device (1) according to claims 1 to 10, wherein the axle (13) is metallic. 10
12. A device (1) according to claims 1 to 11, wherein the token (10) and the hinge (12) are molded as a single piece. 15
13. A device (1) according to claim 1, wherein the token (10), the hinge (12), and the plate are molded as a single piece. 20
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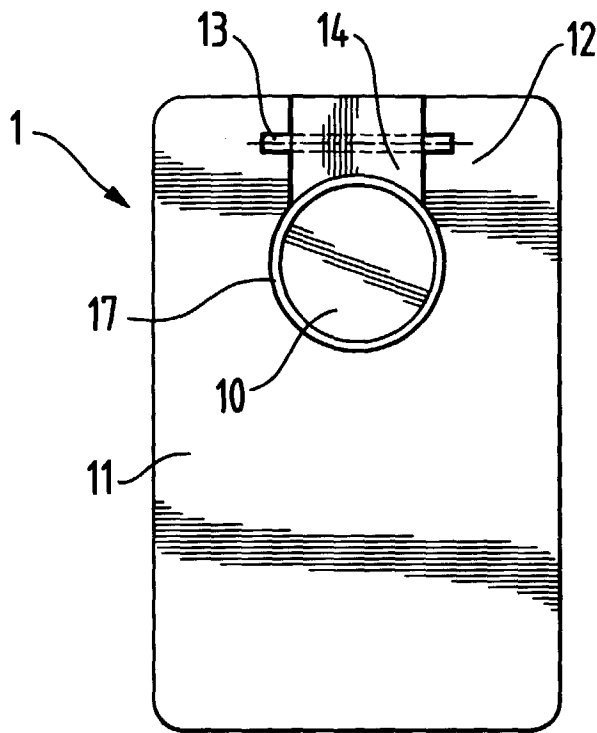


Fig. 1

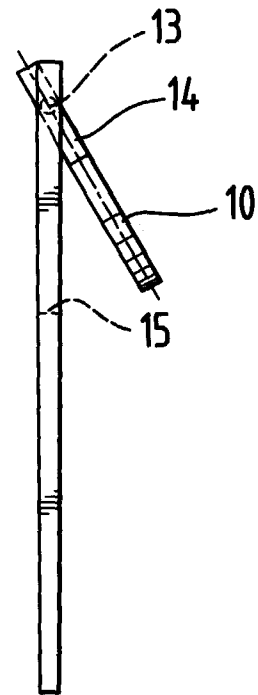


Fig. 2

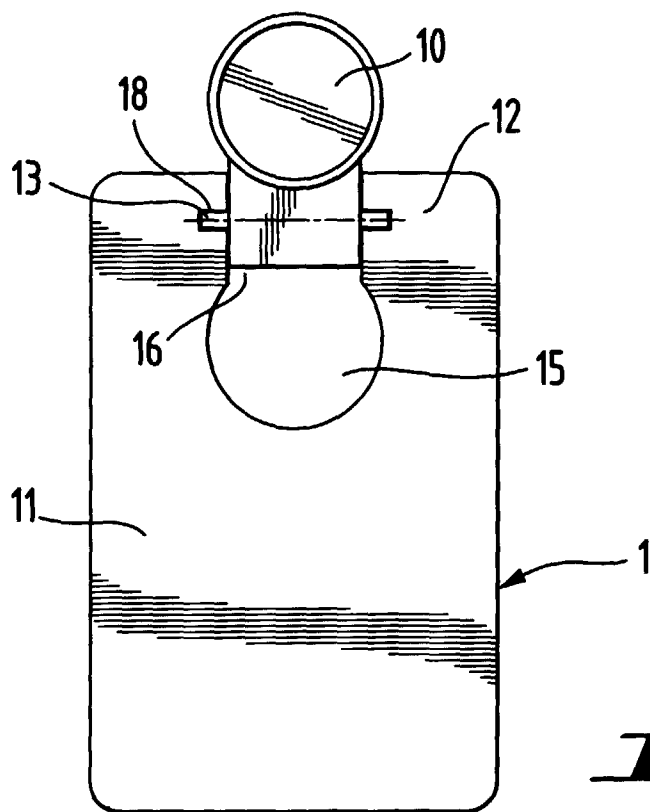


Fig. 3

Fig. 4

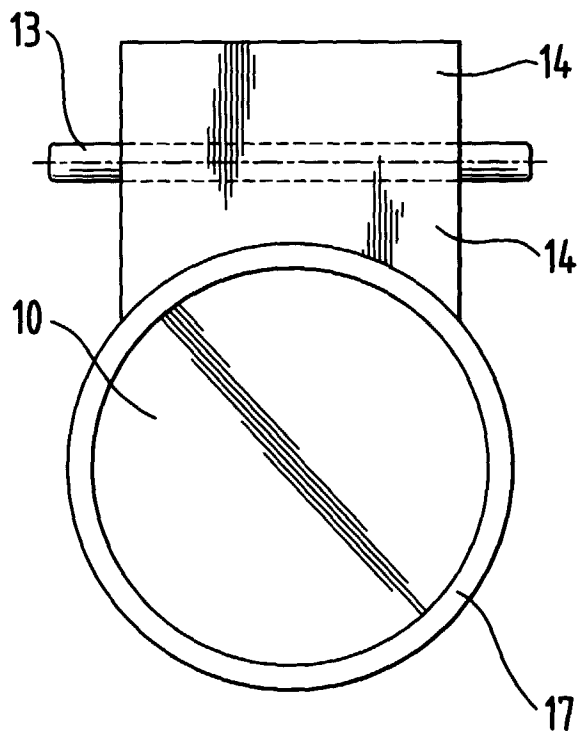
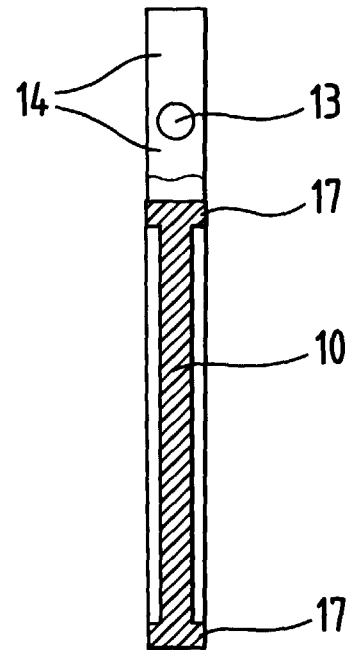


Fig. 5





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EUROPEAN SEARCH REPORT

Application Number
EP 97 11 9995

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.6)
X	FR 2 687 819 A (MERLAUD BENOIT ; LOI EUGENIO (FR)) 27 August 1993	1-5, 11	G07F1/06 G07F7/06
A	* the whole document *	7-10	
A	WO 96 24911 A (JENSEN KAJ ; JALKLING ROOBIN (SE)) 15 August 1996	1-5, 7-13	
	* the whole document *		
A	US 4 946 030 A (GURIDI JOSE J S ET AL) 7 August 1990	1-3, 5, 9-13	
	* abstract; figures *		
A, D	DE 43 24 083 A (FUCHS PETER) 26 January 1995	1-5, 7, 8	
	* claims 1, 3; figures 2, 3 *		
A	DE 94 03 809 U (TOEBBEN HANS) 19 May 1994		
A	DE 195 19 837 A (HUBER FERDINAND DIPL ING) 29 February 1996		
	* claims; figures *		
A	DE 44 02 549 A (KLEINHANS PIUS) 3 August 1995		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6) G07F A44C A45C
Place of search		Date of completion of the search	Examiner
THE HAGUE		5 June 1998	Guivol, O
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