

(19)



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(11)

**EP 1 254 296 B1**

(12)

**EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention  
of the grant of the patent:

**15.12.2004 Bulletin 2004/51**

(21) Application number: **01913775.1**

(22) Date of filing: **30.01.2001**

(51) Int Cl.7: **E05B 73/00, A47F 7/024**

(86) International application number:  
**PCT/EP2001/001020**

(87) International publication number:  
**WO 2001/059240 (16.08.2001 Gazette 2001/33)**

(54) **SAFETY PACKING FOR A PRODUCT TO BE EXHIBITED**

SICHERHEITSVERPACKUNG FÜR WARENPRÄSENTATION

CONDITIONNEMENT DE SECURITE POUR PRODUIT A L'ETALAGE

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE TR**  
Designated Extension States:  
**AL LT LV MK RO SI**

(30) Priority: **07.02.2000 NL 1014308**

(43) Date of publication of application:  
**06.11.2002 Bulletin 2002/45**

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## Description

**[0001]** The present invention relates to a safety packing for a product to be exhibited, for example, a CD packing, comprising a housing for keeping the product, with an opening for inserting or removing the product and a locking mechanism comprising a frame part which is securely connected with the housing and a locking element to be moved between two positions, namely a locking position where the product may be prevented from being moved into and from the housing, and an open position where the product may be moved into and from the housing, wherein the locking element is pushed through a spring in the direction of the open position, and a retainer which is movable between a retaining position and a release position, which retainer is pushed in the retaining position through a spring, wherein the retainer in the retaining position secures the locking element when this latter is in the locking position relative to the frame part, which retainer can be moved against the spring load through a magnetic force towards the release position in order to let the locking element move freely.

**[0002]** Such a packing is known from WO-A-98 36 997.

**[0003]** In such a known packing, the retainer is formed by saw tooth-shaped clamps which are connected to the movable locking element and can be pressed onto resilient metal bands, which, after the clamps have completely passed thereon, return to their initial position and therefore, maintain the locking element in the closed position. The resilient bands can thereby move in an area which is approximately perpendicular to the moving direction of the movable locking element. For moving the locking element, a single magnet being mounted in the vicinity of the metal bands is sufficient, whereby the bands can be shifted against their own spring load and the clamps released, resulting in the locking element being moved with the spring load to the release position.

**[0004]** Such a known packing has this disadvantage that the magnetic force which is necessary to release the locking element is generated by a magnet or a magnetized material which is kept against the packing outside at the right place. Consequently, it is quite easy to remove the product from the safety packing, as a potential shop-lifter could simply open such a safety packing by inserting a permanent magnet.

**[0005]** A safety packing with a magnet being located in an opening of the packing is known from FR 2 628 717 A.

**[0006]** The aim of the invention is to provide a safety packing of the above-mentioned type wherein the disadvantages of the known safety packing are overcome.

**[0007]** This aim is reached according to the invention by a safety packing according to claim 1.

**[0008]** It is thereby achieved that no any arbitrary permanent magnet may be used to shift the locking element to the released position, but such a magnet must satisfy

specific requirements with respect to the shape and magnetic force thereof in order to be able to move the locking element. The shape is important in order to be fit into the opening of the locking mechanism, whereas when the magnetic band fits into the opening, the right magnetic field strength must also still be generated relative to the direction and orientation in order to move the retainer.

**[0009]** Other features and advantages of the invention will become apparent from the following description referring to the accompanying drawings, wherein :

Fig. 1 is a schematic section of a safety packing for a CD packing according to the invention, and

Fig. 2 is a side view of the packing according to Fig. 1.

**[0010]** Figs. 1 and 2 show a CD packing according to the invention, which comprises a housing 1 and a locking mechanism 2. The housing 1 is not shown in detail, but generally is in the shape of a rectangular parallelepiped, with a flat rear wall 3 and a (non shown) flat front wall, an upper wall 4, a side wall 5 and a bottom wall 6. The side 7 lying opposite the side wall 5 is opened so that a CD can be inserted herein. Recesses 8 are arranged in the front wall and in the rear wall 3 in order to facilitate the removal, so that an inserted CD can be grabbed with fingertips.

**[0011]** The above-mentioned walls define a rectangular space in which a CD packing fits with a limited tolerance. The upper wall 4 is castellated on the side of the space, whereby a CD packing being pressed against the wall 4 cannot be any longer moved laterally, as such packings are also provided with castellated walls. Moreover, the wall 4 near the opened side 7 is provided with an abutment 9 extending in the direction of the space 3.

**[0012]** The bottom wall 6 is connected with the locking mechanism 2 and is provided with a number of openings 10, 11 and 12, the function of which will be described hereafter.

**[0013]** The locking mechanism 2 comprises a frame part 15 which is securely connected with the housing 1 and a locking element 16 which is slidable within this frame part 15. The frame part 15 comprises a front wall and a rear wall which actually extend the front wall and the rear wall 3 of the housing and therefore form an assembly.

**[0014]** The front wall and the rear wall of the frame part 15 are connected with each other through parts 15A, 15B which form a seal for the sides and the bottom sides of the frame part 15 and which also form a guide 13 for the locking element 16, so that it can shift to and fro, from and to the housing 3. The front wall and the rear wall of the frame part 15 are moreover connected through a central part 17. The central part is provided, approximately at mid-way of the bottom edge of the assembly, with an opening 18 which extends from the bottom edge to the vicinity of the bottom wall 6. An abut-

ment 19 is arranged in this opening 18, which abutment is pressed through spring 20 in the direction of the bottom edge, but is retained by an edge in the locking element 16 as it will be described hereafter.

**[0015]** In the bottom edge oriented side of the central part 17, two blind openings 22, 23 are additionally provided and respective pins 24, 25 are provided in each of them, which are pressed through springs 26, 27 in the direction of the bottom edge.

**[0016]** The pins 24, 25 cooperate at their other end with blind bores 28, 29 in the locking element 16, as it will be described hereafter.

**[0017]** Each side edge oriented side of the central part 17 is moreover provided with a blind bore 30, 31. A plunger 32, 33 is located inside, which is pressed through springs 34, 35 in the direction of the side edge and can thereby cooperate with a blind bore 36, 37 formed in the locking element 16, as it will be described hereafter.

**[0018]** The locking element 16 comprises a basic part 40, upright arms 41, 42 and two wings 43, 44. The upright arms 41, 42 are connected with both ends of the basic part and are perpendicular thereto, whereas each wing 43, 44, is connected with an upright arm 41, 42 and is perpendicular thereto, as it is clearly seen from Fig. 1.

**[0019]** The basic part 40 comprises an opening 45 which, when the locking element 16 is arranged in the frame part 2, is in alignment with the opening 18, but with a somewhat smaller section so that the abutment 19 cannot pass through the opening 45.

**[0020]** The basic part 40 also comprises both blind bores 28, 29 which cooperate with the pins 24, 25.

**[0021]** The upright arms 41, 42, together with the basic part 40, are adapted to the shape of the guide 13 and ensure that the locking element can shift controllably to and fro from and to the housing 3. In the sides oriented to each other of the upright arms 41, 42 the blind bores 36, 37 are provided, cooperating with the plungers 32, 33. The wing 43 is provided with an abutment 51 which fits through the opening 11 in the bottom wall 6 and the wing 44 is provided with an abutment which fits through the opening 12 in the bottom wall 6. The wing 43 is moreover provided with an abutment 50 which fits through the opening 10 in the bottom wall 6.

**[0022]** The safety packing works as follows.

**[0023]** In Fig. 1 the packing is shown in the closed position, i.e. with a CD packing present in the housing 1 being is locked inside on the one hand through the action of the abutments 50, 51, 52, whereby the abutment 50 grabs behind the CD packing and the abutments 51, 52 cooperate with openings which are present as a standard in CD packings, on the other one by means of the castellated upper wall 4 against which the CD packing is pressed and finally by the abutment 9 which maintains the CD packing near the upper wall 4.

**[0024]** To remove a CD packing from the housing, a magnetic bar or a magnetized bar is pressed into the openings 45 and 18, shifting thereby the abutment 19

in the direction of the housing 1 until it entirely lies against the bottom of the opening 18.

**[0025]** At this time, the magnetic bar can attract the plungers 32, 33, which are made in a magnetized material, against the load of the springs 34, 35. The plungers are released from the blind bores 36, 37 and the locking element 16 can now move freely and will be pressed away from the housing 1 as a result of the action of the springs 26, 27. The abutments 50, 51 are released from the CD packing in the housing 1 and the CD packing is released from the wall 4 and this latter can now be removed from the housing. The magnetic bar is removed from the opening 18 and the safety packing is ready for a new use.

**[0026]** A new CD packing can thereby be slid into the housing 1 through the opening 7 and when pushing the locking element in the direction of the housing, this one may be locked therein. This occurs automatically after the locking element has been clamped sufficiently away so that the plungers 32, 33 are pushed back in the blind bores 36, 37. The assembly is now again in the situation illustrated in Fig. 1.

**[0027]** Figs. 1 and 2 illustrate the opening 18 and the associated insertion opening 45 as a rectangular opening. In order to make any possible fraud difficult, these openings, at least certainly the opening 45, may have a special shape so that no any magnetic bar can be inserted therein, but exclusively specially formed magnetic bars, for example with a S-shaped section, can be used. The assembly works then as the combination of a key and a keyhole.

**[0028]** In another embodiment, the mobility of the locking element is controlled in so that the locking element is pressed outside by the springs 26, 27 in such a way that the plungers 32, 33 lie somewhat biased in the bores 36, 37 and have therefore a clamping effect. The magnetic force of an inserted magnetic bar is then sufficient to remove the plungers 32, 33. This can only happen when the locking element is simultaneously pushed somewhat in the direction of the housing 1 so that the plungers 32, 33 are released in the bores 36, 37 and are therefore attracted by the magnetic bar.

**[0029]** In practice, this can be automatically achieved by making a slot in the counter of a shop in which a magnetic bar is mounted and in which optionally a small embossment is provided. When correctly inserting the safety packing into the slot, the magnetic bar automatically runs in the openings 18 and 45 and the embossment automatically presses the locking element in the direction of the housing 1. Moreover, mechanically pressing may also be complicated when completely closing the bottom edge with a wall connected to the frame part 16. An opening may be present in the wall for inserting the magnetic bar and additionally a second opening, also having possibly a special profile for inserting a pressing element in order to press the locking element somewhat in the direction of the housing. Finally it is also still possible to manufacture the system in such a way that each

plunger is controlled by a separate magnetic bar, making frauds more difficult as two magnetic bars should be used simultaneously, each also having possibly a special section and being moreover possibly combined with a mechanical pushing action.

**[0030]** It should be apparent that the invention is not limited to the described and illustrated embodiment, but several modifications can be contemplated within the scope of the claims. This is specially true for the mechanical parts such as springs and pins and the shaping of the different components.

## Claims

1. A safety packing for a product to be exhibited, for example, a CD packing, comprising a housing (1) for keeping the product, with an opening (7) for inserting or removing the product and a locking mechanism (2) comprising a frame part (15) which is securely connected with the housing and a locking element (16) to be moved between two positions, namely a locking position where the product may be prevented from being moved into and from the housing (1), and an open position where the product may be moved into and from the housing (1), and a retainer (32) which is movable between a retaining position and a release position, which retainer (32) is pushed in the retaining position through a spring (26), wherein the retainer (32) in the retaining position secures the locking element (16) when this latter is in the locking position relative to the frame part, which retainer (32) can be moved against the spring load through a magnetic force towards the release position in order to let the locking element (16) move freely, wherein the locking mechanism is provided with an opening (45) and the retainer can therefore only be shifted from the retaining position to the release position in such a way that this may only occur using a magnetic force generated by a magnet or a magnetized element located in the opening (45) **characterized in that** the locking element (16) is pushed through a spring (26) in the direction of the open position.
2. A packing according to claim 1, **characterized in that** the opening (45) and the magnet or magnetized element to be inserted therein have a mutually adapted shape.
3. A packing according to claim 1 or 2, wherein the locking element (16) is movable in a first direction, **characterized in that** the retainer (32) is formed by at least a pin which can be moved in one direction which is essentially perpendicular to the first direction.
4. A packing according to claim 3, **characterized in**

**that** the pin (32) cooperates with one an opening (30) in the frame part (15), wherein the magnetic force is insufficient to draw the pin out of the opening (36) as a result of the frictional force between pin and opening (30) generated by the spring acting on the locking element (16) and that a mechanical shift of the locking element (16) is required so as to eliminate this frictional force.

5. A packing according to claim 4, **characterized in that** an opening (45) is provided in the locking mechanism (2) in which a pin can be stuck so as to generate the mechanical shift.
6. A packing according to claim 5, **characterized in that** the pin and the opening (45) have a profile mutually adapted to each other.

## Patentansprüche

1. Sicherheitsverpackung für ein zur Schau zu stellendes Produkt, beispielsweise eine CD-Verpackung, umfassend ein Gehäuse (1) zum Aufbewahren des Produkts, mit einer Öffnung (7) zum Einführen oder Herausnehmen des Produkts und einem Verriegelungsmechanismus (2), umfassend einen Rahmenteil (15), der fest mit dem Gehäuse verbunden ist, und ein Verriegelungselement (16), das zwischen zwei Positionen zu bewegen ist, und zwar einer Verriegelungsposition, in welcher das Produkt daran gehindert werden kann, in das Gehäuse (1) hinein und aus diesem heraus bewegt zu werden, und einer offenen Position, in welcher das Produkt in das Gehäuse (1) hinein und aus diesem heraus bewegt werden kann, und ein Festhalteelement (32), welches zwischen einer Festhalteposition und einer Freigabeposition bewegbar ist, wobei das Festhalteelement (32) durch eine Feder (26) in die Festhalteposition gedrückt wird, wobei das Festhalteelement (32) in der Festhalteposition das Verriegelungselement (16) sichert, wenn sich dieses letztere in der Verriegelungsposition relativ zu dem Rahmenteil befindet, wobei das Festhalteelement (32) durch eine magnetische Kraft gegen die Federlast zu der Freigabeposition hinbewegt werden kann, um zu ermöglichen, dass sich das Verriegelungselement (16) frei bewegen kann, wobei der Verriegelungsmechanismus mit einer Öffnung (45) versehen ist und das Festhalteelement daher nur von der Festhalteposition in die Freigabeposition verschoben werden kann, derart, dass dies nur mittels einer magnetischen Kraft erfolgen kann, die durch einen Magneten oder ein magnetisiertes Element, der/das in der Öffnung (45) angeordnet ist, erzeugt wird, **dadurch gekennzeichnet, dass** das Verriegelungselement (16) durch eine Feder (26) in Richtung der offenen Position gedrückt wird.

2. Verpackung nach Anspruch 1, **dadurch gekennzeichnet, dass** die Öffnung (45) und der Magnet oder das magnetisierte Element, welcher/welches darin eingeführt werden soll, eine aneinander angepasste Gestalt aufweisen. 5
3. Verpackung nach Anspruch 1 oder 2, wobei das Verriegelungselement (16) in eine erste Richtung bewegbar ist, **dadurch gekennzeichnet, dass** das Festhalteelement (32) durch mindestens einen Stift 10 gebildet wird, der in eine Richtung bewegt werden kann, die im Wesentlichen senkrecht zu der ersten Richtung verläuft.
4. Verpackung nach Anspruch 3, **dadurch gekennzeichnet, dass** der Stift (32) mit einer Öffnung (30) in dem Rahmenteil (15) zusammenwirkt, wobei die magnetische Kraft nicht ausreicht, um den Stift aus der Öffnung (36) zu ziehen, infolge der Reibkraft zwischen dem Stift und der Öffnung (30), welche durch die Feder erzeugt wird, die auf das Verriegelungselement (16) einwirkt, und dass ein mechanisches Verschieben des Verriegelungselements (16) erforderlich ist, um diese Reibkraft zu eliminieren. 15 20 25
5. Verpackung nach Anspruch 4, **dadurch gekennzeichnet, dass** eine Öffnung (45) in dem Verriegelungsmechanismus (2) vorgesehen ist, in welche ein Stift gesteckt werden kann, um das mechanische Verschieben herbeizuführen. 30
6. Verpackung nach Anspruch 5, **dadurch gekennzeichnet, dass** der Stift und die Öffnung (45) jeweils ein Profil aufweisen, die aneinander angepasst sind. 35

#### Revendications

1. Emballage de sécurité pour un produit destiné à être exposé, par exemple, un emballage de CD, comprenant un boîtier (1) pour contenir le produit, avec une ouverture (7) pour insérer ou retirer le produit et un mécanisme de verrouillage (2) comprenant une partie de châssis (15) qui est reliée de manière fixe au boîtier et un élément de verrouillage (16) destiné à être déplacé entre deux positions, à savoir une position de verrouillage, où l'on peut empêcher le produit d'être déplacé dans le boîtier (1) et hors de celui-ci, et une position ouverte, où le produit peut être déplacé dans le boîtier (1) et hors de celui-ci, et un élément de retenue (32), qui peut être déplacé entre une position de retenue et une position de libération, lequel élément de retenue (32) est poussé dans la position de retenue par un ressort (26), où l'élément de retenue (32) en position de retenue fixe l'élément de verrouillage (16) lors- 40 45 50 55

que ce dernier est en position de verrouillage par rapport à la partie de châssis, ledit élément de retenue (32) pouvant être déplacé à l'encontre de la pression du ressort par une force magnétique vers la position de libération afin de laisser l'élément de verrouillage (16) se déplacer librement, où le mécanisme de verrouillage est pourvu d'une ouverture (45) et l'élément de retenue ne peut par suite être déplacé que de la position de retenue à la position de libération de sorte que cela ne puisse se faire qu'en utilisant une force magnétique générée par un aimant ou un élément magnétisé situé dans l'ouverture (45), **caractérisé en ce que** l'élément de verrouillage (16) est poussé par le ressort (26) en direction de la position ouverte.

2. Emballage selon la revendication 1, **caractérisé en ce que** l'ouverture (45) et l'aimant ou l'élément magnétisé à y insérer ont une forme mutuellement adaptée.
3. Emballage selon la revendication 1 ou 2, dans lequel l'élément de verrouillage (16) peut être déplacé dans une première direction, **caractérisé en ce que** l'élément de retenue (32) est formé par au moins une broche qui peut être déplacée dans une direction qui est essentiellement perpendiculaire à la première direction.
4. Emballage selon la revendication 3, **caractérisé en ce que** la broche (32) coopère avec une ouverture (30) dans la partie de châssis (15), où la force magnétique est insuffisante pour retirer la broche de l'ouverture (36) à la suite de la force de frottement entre la broche et l'ouverture (30) générée par le ressort agissant sur l'élément de verrouillage (16), et **en ce qu'un** déplacement mécanique de l'élément de verrouillage (16) est nécessaire pour éliminer cette force de frottement.
5. Emballage selon la revendication 4, **caractérisé en ce qu'une** ouverture (45) est ménagée dans le mécanisme de verrouillage (2), où une broche peut être enfilée pour générer le déplacement mécanique.
6. Emballage selon la revendication 5, **caractérisé en ce que** la broche et l'ouverture (45) ont un profil mutuel adapté.

Fig. 1

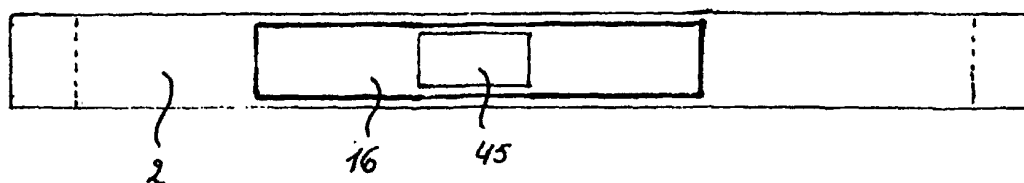
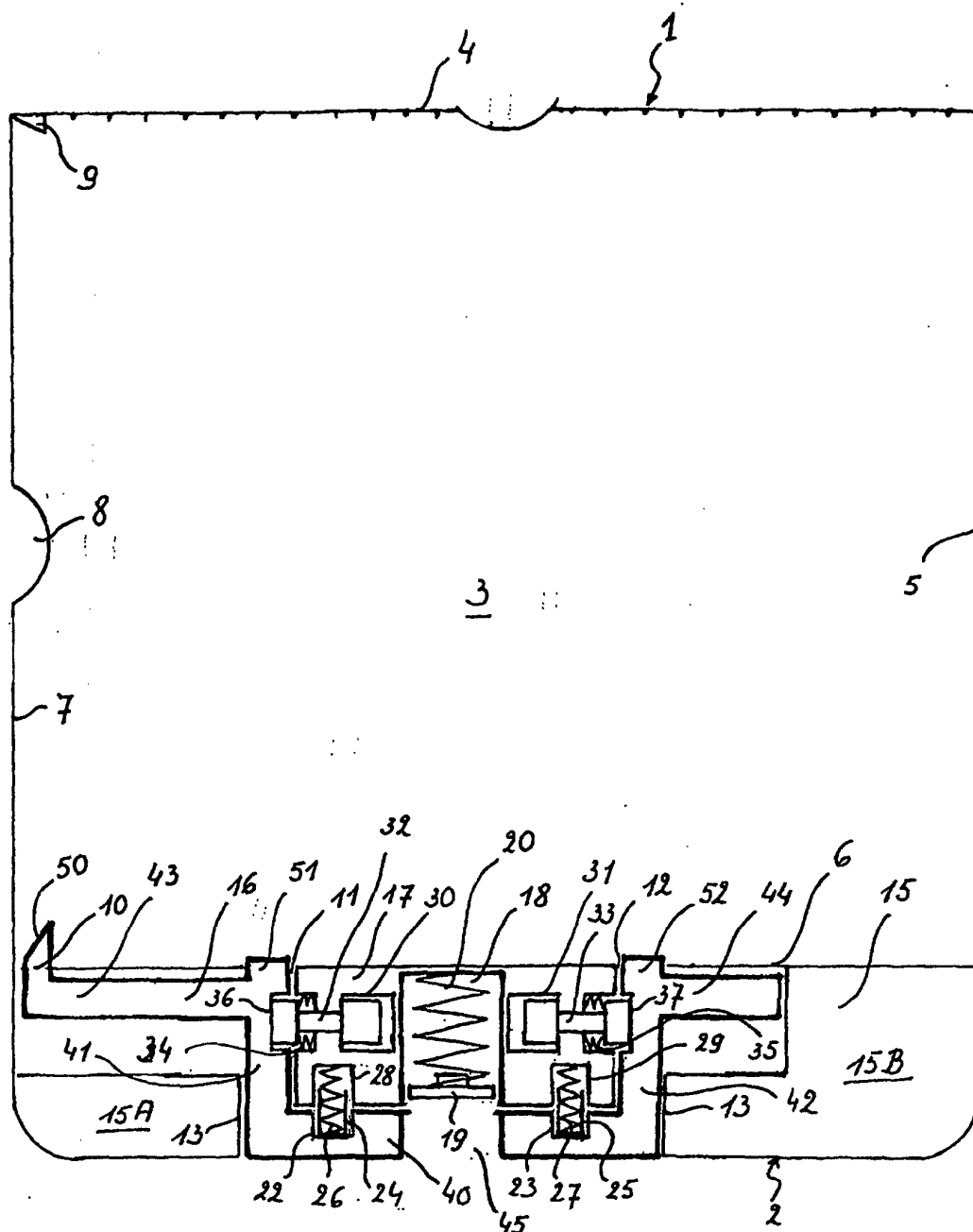


Fig. 2