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(54) **Resealable package closure**

(57) A resealable package closure for a container (R) has an upper edge (1), a film (2) heat sealed to the upper edge (1) of the container (R), an opening tab (4) and an opposite hinge (5) about an axis of rotation (r). The opening tab (4) and the opposite hinge (5) are parts of a repositionable label (3), which is attached on the film (2) by a non-permanent adhesive substance (c). The repositionable label (3) covers the film (2) in a central area (6)

delimited by a rupturable weakening line (7), and in a contour area (8) that surrounds said central area (6). A retaining force exerted between the central area (6) and the contour area (8) of the film (2) along the rupturable weakening line (7) is less than the adhesion force applied by said non-permanent adhesive substance (c) between the repositionable label (3) and the film (2).

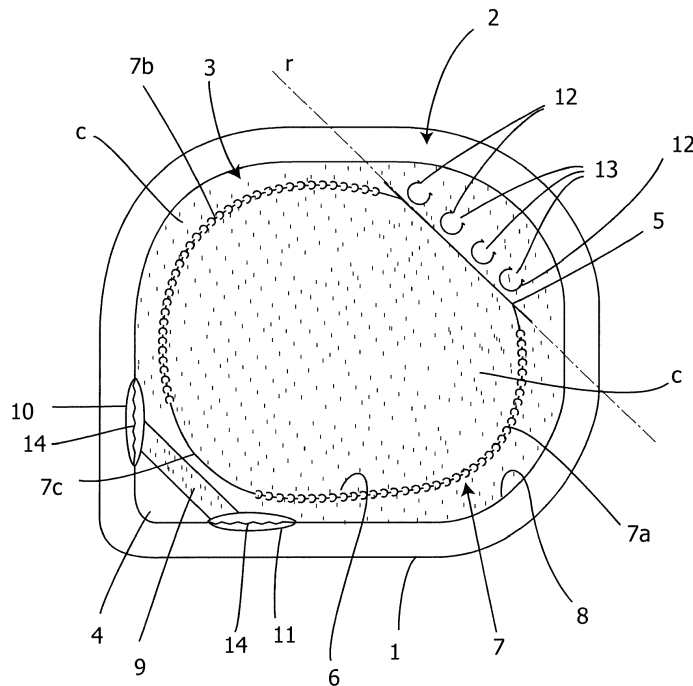


Fig. 1

Description

[0001] The invention relates to a resealable package closure for containers having as their cover a film heat sealed to their upper edge. Such containers are generally used for packaging food.

[0002] In the following description, the term "repositionable" of a label or other should be understood as equivalent to the phrase "that can be detached and reattached". Similarly, the term "permanent" as referred to a portion or element should be understood as equivalent to the phrase "that remains attached to the package in a normal use thereof". The terms "permanent" and "repositionable" should be understood from a functional point of view rather than in relation to their adhesive nature. Indeed, the feature of being "more or less detachable" or "permanent" for an adhesive substance is a function of the substrate on which it is laid.

[0003] There are currently resealable package closures for containers provided with a closure film heat sealed to the edge of the container, and with a label as a layer overlying the closure film to which it remains attached during the opening of the container. The closure film remains intact in an area different from an opening area when a consumer pulls the label. The mechanical strength of the film is often used to stop tear off.

[0004] Alternatively, the shape of the label in the zone of the hinge is sometimes what maintains a portion of the label attached to the film upstream of the zone of the hinge to prevent the tear off. In the zone of the hinge, the label withstands without both being detached and broken only because of the material and the shape of the label.

[0005] Moreover, until now the film acting as a cover tends to yield under the weight of the overlying containers when they are stacked one above the other. This stems from the fact that the only resistance to the weight is provided by the adhesive area of the cover film.

[0006] While retaining the possibility to avoid that the label, which cooperates with the film in opening and closing a container, is completely separated from the film, the invention is directed in particular to overcome the following drawbacks:

- the label, once opened, has a tendency to close again, which makes uncomfortable the extraction and consumption of the contents of the container;
- the consumer may not realize that the container has been opened, with the resulting risk;
- when a plurality of containers are stacked on each other, their weight can cause the breakdown of their covers.

[0007] In order to overcome the above drawbacks, the present invention provides a resealable package closure as defined in claim 1 and dependent claims.

[0008] The invention will be described according to an embodiment thereof with reference to the accompanying drawing in which

Figure 1 is a schematic top plan view of the resealable package closure according to the present invention; and

Figure 2 is a perspective view of the resealable package closure in Figure 1 in an open condition.

[0009] The resealable package closure is intended for a container shown in a top view in Figure 1. The container has a top edge 1 to which a film 2 that closes hermetically the container completely covering the top edge 1, is adhered by heat sealing. Attached on the film 2 is a repositionable label 3, including an opening tab 4 and an opposite hinge 5 having an axis of rotation r about which the repositionable label 3 rotates in opening the container. The repositionable label 3 is attached above the film 2 by an adhesive substance c indicated by dots that is not permanent in the meaning of the term given above. The repositionable label 3 and the film 2 form two superimposed layers. The repositionable label 3 covers the film 2 in both a central area 6 and a contour area 8, which surrounds the central area 6. The central area is delimited in the film 2 itself by a rupturable weakening line 7 indicated schematically by partial circles. It is worth repeating that the rupturable weakening line is made only in the film 2 and it is shown in transparency under the repositionable label. The retaining force exerted between the central area 6 and the contour area 8 of the film 2 along the rupturable weakening line 7 is less than the adhesion force applied by the non-permanent adhesive substance between the repositionable label 3 and the film 2. Thus, the repositionable label 3 has the advantage to be openable in order to allow access to the container, which may possibly be closed by reattaching the repositionable label 3 on the contour area 8 of the film 2.

[0010] The rupturable weakening line 7 forms two symmetrical tracts 7a, 7b separated by a non-rupturable portion 7c facing the opening tab 4, and by the hinge 5. In particular, only a rectangular zone 9 of adhesive substance is provided between the opening tab 4 and the non-rupturable portion 7c. Possibly in a preferred embodiment, adjacent to the a rectangular zone 9 of adhesive substance are two tamper-proof zones 10, 11 that will be described below.

[0011] In a zone adjacent to the hinge 5 there are grooves 12 to facilitate rotation of the repositionable label 3 and notches 13 against the tear of the hinge 5.

[0012] The two tamper-proof zones 10, 11 in the vicinity of the opening tab 4, are elongated and have a pattern that identifies them in the resealable package closure according to the present invention, and therefore the pattern is different from the color of the film 2 and the repositionable label 3. The two tamper-proof zones 10, 11 have a jagged line 14 of fracture that covers the boundary between the film 2 and the repositionable label 3.

[0013] Reference is made now to Figure 2 that is a perspective view of the resealable package closure in Figure 1 in an open condition. The container is indicated as R. Heat sealed to the edge 1 of the container R is the

film 2 comprising a heat sealed area indicated as 15, the contour area 8 and the central area 6. The label 3 is shown as lifted with respect to the hinge 5 upon the rupture of the rupturable weakening line indicated in its tracts 7a and 7b in which each circle is reduced schematically to a half. The other half of each circle, even if not visible in Figure 2, limit the central area 6 of the film 2 that remains attached by the adhesive c to the label 3. For clarity sake the adhesive c between the label 3 and the central area 6 of the film 2 is not shown in Figure 2. The adhesive c is depicted both in the contour area 8 of the film 2 and in a correspondent contour area 80 of the label 3 in order to show that said areas are attachable again each other.

[0014] The material of the repositionable label 3 in accordance with invention can be for example paper, polyethylene terephthalate (PET), polyethylene (PE), polyvinyl chloride (PVC), polypropylene (PP), or different. The choice of the material results from a compromise between its weight, its flexibility, its capability to be static electrically charged which would bring the cover to close again, its compatibility with foodstuffs or other.

[0015] The non-rupturable portion 7c and the hinge 5, which connect the tracts 7a, 7b of the rupturable weakening line 7, avoid that the opening area yields under the weight exerted on the repositionable label 3.

[0016] In operation, in case of intentional opening, the consumer lifts the opening tab 4; continuing the operation, the progressive lifting of the repositionable label 3 breaks along the tracts 7a, 7b of the rupturable weakening line 7 the film 2 to which the repositionable label 3 is attached by the non-permanent adhesive substance c. The full rotation of the repositionable label 3 about the axis of rotation r of the hinge 5 is achieved because the force applied in the lifting is sufficient to break the rupturable weakening line 7 but not to separate the repositionable label 3 from the film 2 that is peripherally joined in a permanent manner in its heat sealed area 15 to the edge 1 of the container R.

[0017] In reclosing the container R, the consumer positions again the repositionable label 3 retaining the central area 6 of the film 2 to the contour area 8 along which the adhesive substance c allows the temporary seal between the repositionable label 3 and the film 2.

[0018] During the opening of the container, a characteristic noise due to the fracture along the rupturable weakening line 7 is produced. Therefore the consumer has proof that the container is opened for the first time.

[0019] However, a further evidence of a previous opening is given by the possible presence of at least one of the two tamper-proof zones 10, 11 described above.

[0020] The grooves 12 to facilitate the rotation of the repositionable label 3 and the notches 13 against the tear of the hinge 5 that are provided in the zone adjacent to the hinge 5 determine a compromise with the size of the repositionable label 3 detached up to the area of the hinge 5 and with its rigidity, also called "hand". The effect obtained is that the repositionable label 3 remains open due its own weight increased by the weight of the central area

6 of the film 2.

Claims

1. A resealable package closure for a container (R) having an upper edge (1), a film (2) heat sealed to the upper edge (1) of the container (R), an opening tab (4) and an opposite hinge (5) about an axis of rotation (r), **characterized in that** said opening tab (4) and opposite hinge (5) are parts of a repositionable label (3), which is attached on the film (2) by a non-permanent adhesive substance (c) and covers the film (2) in a central area (6) delimited by a rupturable weakening line (7), and in a contour area (8) that surrounds said central area (6), a retaining force exerted between the central area (6) and the contour area (8) of the film (2) along the rupturable weakening line (7) being less than the adhesion force applied by said non-permanent adhesive substance between the repositionable label (3) and the film (2).
2. The resealable package closure according to claim 1, wherein the rupturable weakening line (7) forms two symmetrical tracts (7a, 7b) separated by a non-rupturable line (7c) facing said opening tab (4), and by said hinge (5).
3. The resealable package closure according to claim 1, wherein grooves (12) to facilitate the rotation of the repositionable label, and notches (13) against the tear of the hinge (5) are provided in an area adjacent to said hinge (5).
4. The resealable package closure according to claim 1, wherein provided in the vicinity of the opening tab (4) is at least one tamper-proof zone (10, 11) having an elongated shape, and an identifying pattern having a jagged line of fracture (14) that covers a boundary line between the film (2) and the repositionable label (3).

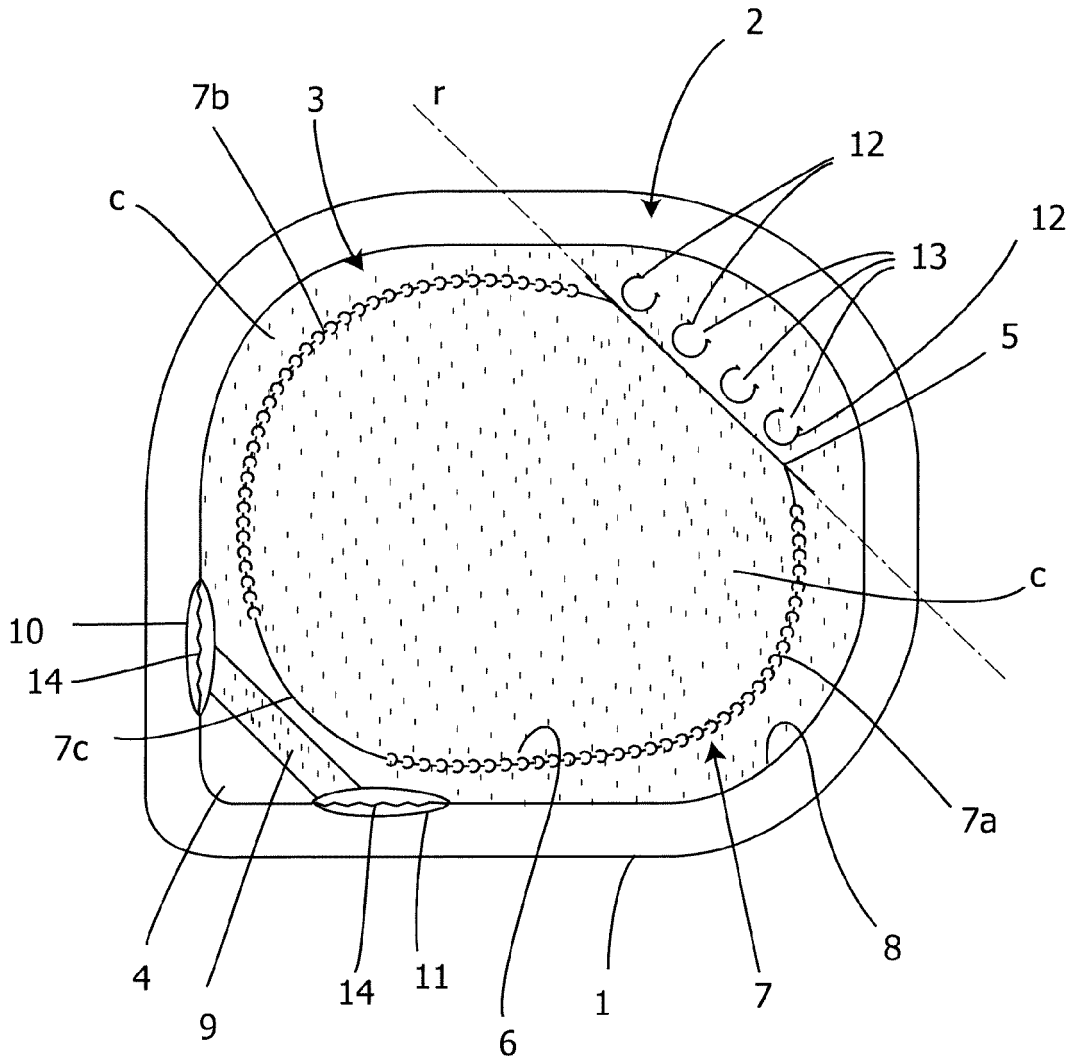


Fig. 1

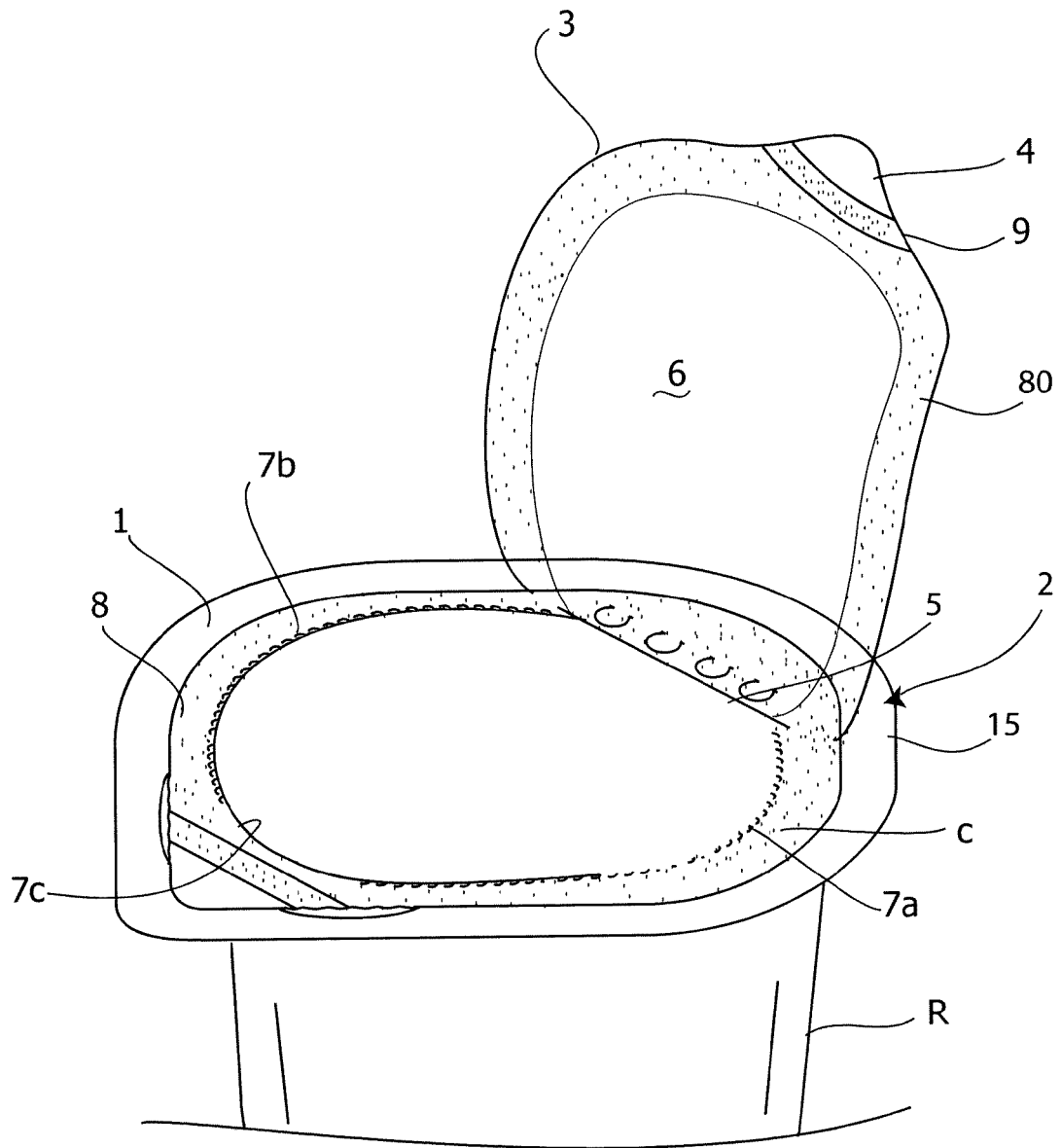


Fig. 2



EUROPEAN SEARCH REPORT

Application Number
EP 14 42 5079

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Y	* page 4, line 30 - page 11, line 20;	3	
A	figures 1,2,3,8 *	2	
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A	* figures 1-2 *	2	

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
1	Place of search	Date of completion of the search	Examiner
	Munich	8 December 2014	Czerny, M
CATEGORY OF CITED DOCUMENTS		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	
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			

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

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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.

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82