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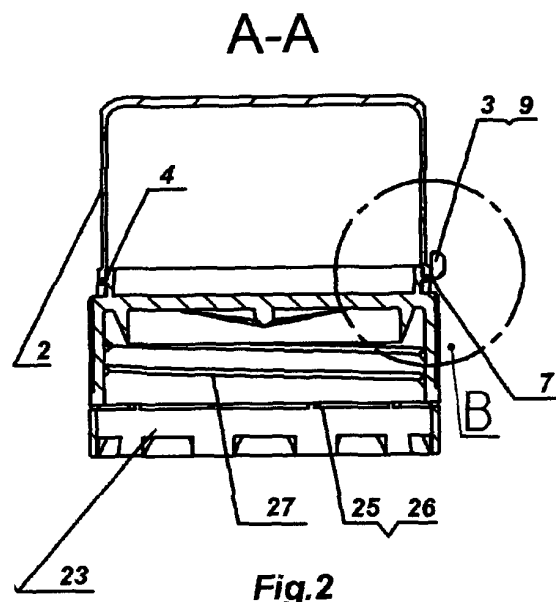
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(54) **Closure for bottles**

(57) Plastic closure for bottles including a nut, characterized by that, that it has a compartment **2** in the form of a cylindrical cup turned bottom up, situated on cylindrical flanged lug **15** which is made on the upper surface of the bottom **14** of the nut **1**, and said compartment **2** terminates on its lower part with a seal **3**, and said seal **3** consists of slightly thickened flange **4** having its upper **5** and lower **6** parts connected together by a band-shaped tear element **7** and said element **7** is narrowed and weakened by slots **8**, furthermore, on the inner side **10** of the thickened flange **4** there is a circumferential recess **11** and a circumferential fastener **12** having the form of a spline, and said fastener **12** has a half-cylindrical cross-section, and under the fastener **12** there is a circumferential groove **13** having the form of a two-stepped recess **13'**, furthermore, the cylindrical flanged lug **15** has on its outer perimeter the first fastener **16** and the second fastener **17**, furthermore, between the first fastener **16** and the second fastener **17** there is a circumferential notch **18** which is "a" in width, and under the second fastener **17** there is a circumferential notch **19**, which is "b" in width, furthermore, the nut **1** has in its lower part a sealing cuff **23** connected with front edges **24** of the cylindrical surface **20** of the nut **1** by a narrow tear band **25**, which is weakened by slots **26**.



Description

[0001] The invention relates to a closure for glass and plastic bottles.

[0002] The one-piece closure for containers for carbonated beverages known from the description of the Polish utility model Ru-55678 consists of a top portion and a skirt portion. The closure has an annual sealing rib which extends downwardly from the lower part of the top portion. The rib includes a first portion having a substantially cylindrical inner surface and a second frusto-conical portion contiguous with the end of the first portion, extending radially inwardly and terminating in a circular free edge. During engagement of the closure with the neck of the container the second, frusto-conical, portion will be engaged by the free end of the neck and folded back against the first portion of the rib to form a gas-tight seal between the neck of the container and the closure.

[0003] The closure known from the Polish patent application P-352255 includes a cup with promotion compartment and a promotional closure is adapted for application to a container. The promotional closure includes promotion compartment with a promotional element such as a coupon, currency or other promotional item. The promotional element has a mechanism which covers interior of the closure, preferably it is an opaque part of the surface of the container. The part is situated between liquid product and the neck of the container, which makes the container lustreless enough to hide the inside of the closure.

[0004] The closure known from the Polish patent specification nr 197272 has a tamper-evident band secured to a container neck by a retaining band. The tamper-evident band is attached to the retaining band by a hinge so that the retaining band rotates upward about the hinge when the closure is applied to the neck of a container, causing the inner wall of the retaining band and the inner wall of the tamper-evident band to form a cavity between them. A number of rectangular openings are spaced around the circumference of the retaining band. The upper edge of each opening extends beyond the hinge and into the tamper-evident band. A recess in the inner wall of the tamper-evident band is located above each opening so that the lower edge of the recess intersect with the rear wall of the opening. The openings and recesses cooperate to ensure that any liquid that spills or splashes from the container neck into the cavity during capping will drain out.

[0005] The closure known from the Polish patent specification nr 180383 having a tamper-evident band is proposed for tight closing bottles and other containers. The tamper-evident band is joined by a plurality of frangible bridges and at least one extended non-frangible bridge to the free edge of a skirt of the closure. The band has a segmented internal rib which engages an external retaining flange of the container when the closure is applied to the container. An L-shaped slot extends through the side wall of the tamper-evident band, horizontal leg of which

terminates directly adjacent to the under the extended non-frangible bridge. A weakened frangible region of the band extends from the terminating end of the horizontal leg axially downward to the bottom of the band.

[0006] The closure known from the specification of the Polish patent nr 175182 has a pouring head with a flange, a cylindrical part with an annual inner protrusion, a nut mounted on the cylindrical part by an weakened element and a coupling element situated between the annual protrusion of the cylindrical part and the flange of the pouring head. That coupling element ensures stiffening of the pouring head and the cylindrical part.

[0007] The aim of the invention is to construct a new closure for bottles with a compartment for hiding lottery tickets, advertising materials and/or tablets for making carbonated beverages, lemonade and the like. Furthermore, the new construction of the closure with the promotion holding compartment guarantees that the compartment had not been opened before.

[0008] The closure for bottles according to the invention is characterised by that, that it is provided with a compartment having the form of a cylindrical cup turned bottom up which is situated on a cylindrical flanged lug made on the upper surface of the bottom of a nut. The compartment terminates on its lower part with a seal. The seal is formed from a slightly thickened flange having a lower part and an upper part, connected together with a band-shaped tear element. The cross-section of the tear element is narrowed and weakened by slots. On the inner surface of the thickened flange there is a circumferential recess and a circumferential fastener having the form of a spline. The fastener has a half - cylindrical cross-section. Under the fastener there is a circumferential groove in the form of a two-stepped recess. The cylindrical flanged lug has on its outer perimeter the first fastener and the second fastener. The tear element is provided with a formed holder. Between the first and the second fasteners there is the first circumferential notch, which is "a" in width, and under the second fastener there is the second circumferential notch, which is "b" in width. The nut has in its lower part a sealing cuff connected to front edges of the outer cylindrical surface of the nut by a narrow tear band weakened by slots.

[0009] The invention subject-matter has a simple construction and it is easy in realization. The invention guarantees certain information that the compartment had not been opened earlier, because the seal is permanently fastened to the compartment.

[0010] The invention subject-matter in the example of realization is presented on the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011]

Fig.1 shows the principal end view of the closure for bottles.

Fig.2 shows the longitudinal section of the closure

along the line A-A.

Fig.3 shows the longitudinal section of the detail "B".

Fig.4 shows magnification of the longitudinal section of the detail "B" shown on fig.3

Fig.5 shows the end view of the closure.

Fig.6 shows the magnification of principal end view of the detail "C" shown on fig. 5

Fig.7 shows the magnification of the principal end view of the compartment.

Fig.8 shows the magnification of the axonometric view of the closure.

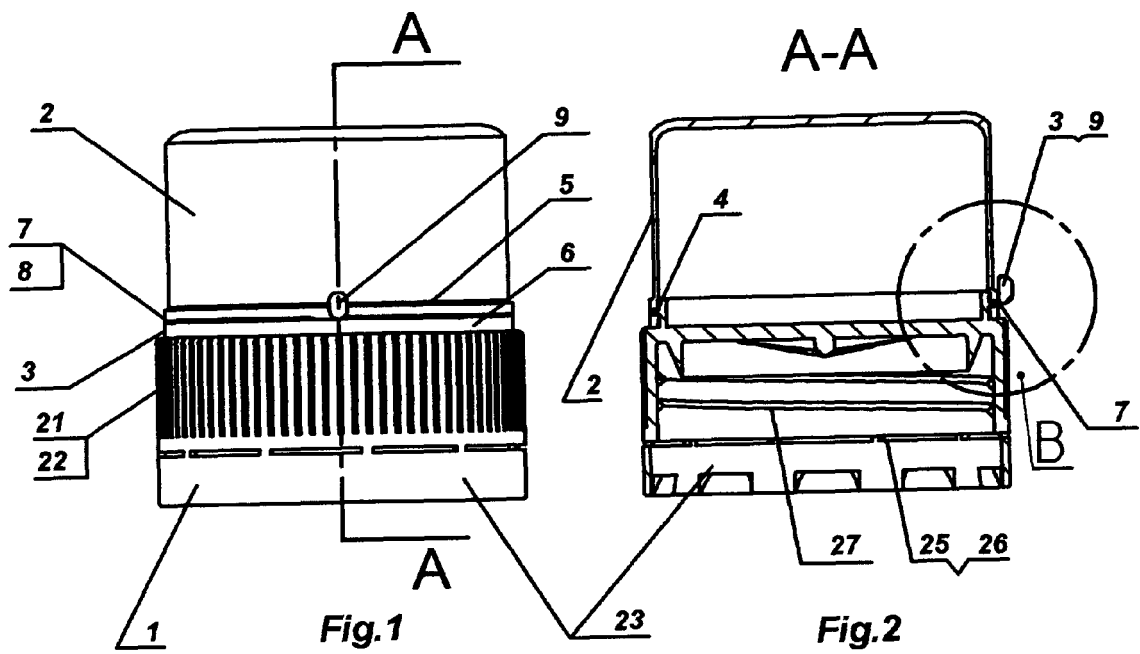
[0012] The plastic closure for bottles includes a nut 1 and a compartment 2 forced in the nut 1. The compartment 2 is a cylindrical cup turned bottom up. The compartment 2 has on its lower opened end a seal 3 which is formed from a slightly thickened flange 4 having its upper part 5 and a lower part 6, joined together with a band-shaped tear element 7. The cross-section of the tear element 7 is narrowed and weakened by slots 8. The tear element 7 is provided with a formed holder 9 which allows to tear the seal 3, in order to access to the contents of the compartment 2. On the inner side 10 of the flange 4 there are a circumferential recess 11 having a rectangular cross-section and a circumferential fastener 12 having a form of a spline which has a half-cylindrical cross-section. Under the fastener 12 there is a circumferential groove 13 in a form of a two-stepped recess 13'. The plastic nut 1 having a form of a cylindrical cup turned its bottom 14 up, has on the upper surface of the bottom 14 a cylindrically flanged lug 15. On the outer perimeter of the lug 15 there are the first fastener 16 and the second fastener 17. Between the fasteners 16 and 17 there is ABSTRACT the first circumferential notch 18, which is "a" in width and under the fastener 17 there is the second circumferential notch 19, which is "b" in width. After the first tearing the lower part 6 of the thickened flange 4, which makes the seal 3, remains on the circumferential notch 19 of the flanged lug 15. The outer cylindrical surface 20 of the nut 1 is provided with longitudinal vertical indentations 21 and longitudinal recesses 22, in order to increase roughness during turning the nut 1 in relation to a not-shown bottle. The nut 1 has in its lower part a sealing cuff 23 connected to the free edges 24 of the outer cylindrical surface 20 of the nut 1 by a narrow tear band 25, weakened by slots 26. On the inner cylindrical surface of the nut 1 there is thread 27. After the first undo the nut 1 from a not-shown bottle neck the sealing cuff 23 remains on the bottle neck. Furthermore, there is a circumferential sealing ring 29 mounted on the inner side 28 of the nut 1. Between the lower edge of the lower part 6 of the compartment 2 and the upper outer surface 14' of the nut 1 there is a contact line 30.

terized by that, that it has a compartment 2 in the form of a cylindrical cup turned bottom up, situated on cylindrical flanged lug 15 which is made on the upper surface of the bottom 14 of the nut 1, and said compartment 2 terminates on its lower part with a seal 3, and said seal 3 consists of slightly thickened flange 4 having its upper 5 and lower 6 parts connected together by a band-shaped tear element 7 and said element 7 is narrowed and weakened by slots 8, furthermore, on the inner side 10 of the thickened flange 4 there is a circumferential recess 11 and a circumferential fastener 12 having the form of a spline, and said fastener 12 has a half-cylindrical cross-section, and under the fastener 12 there is a circumferential groove 13 having the form of a two-stepped recess 13', furthermore, the cylindrical flanged lug 15 has on its outer perimeter the first fastener 16 and the second fastener 17.

2. Plastic closure for bottles according to claim 1, characterized by that, that the tear element 7 is provided by a formed holder 9.
3. Plastic closure for bottles according to claim 1, characterized by that, that between the first fastener 16 and the second fastener 17 there is a circumferential notch 18 which is "a" in width, and under the second fastener 17 there is a circumferential notch 19, which is "b" in width, furthermore, the nut 1 has in its lower part a sealing cuff 23 connected with front edges 24 of the cylindrical surface 20 of the nut 1 by a narrow tear band 25, which is weakened by slots 26.

Claims

1. Plastic closure for bottles including a nut, charac-



Detail B

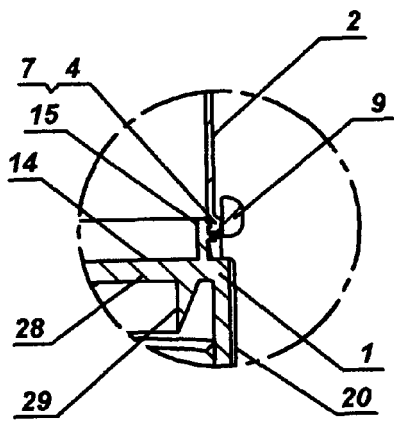


Fig. 3

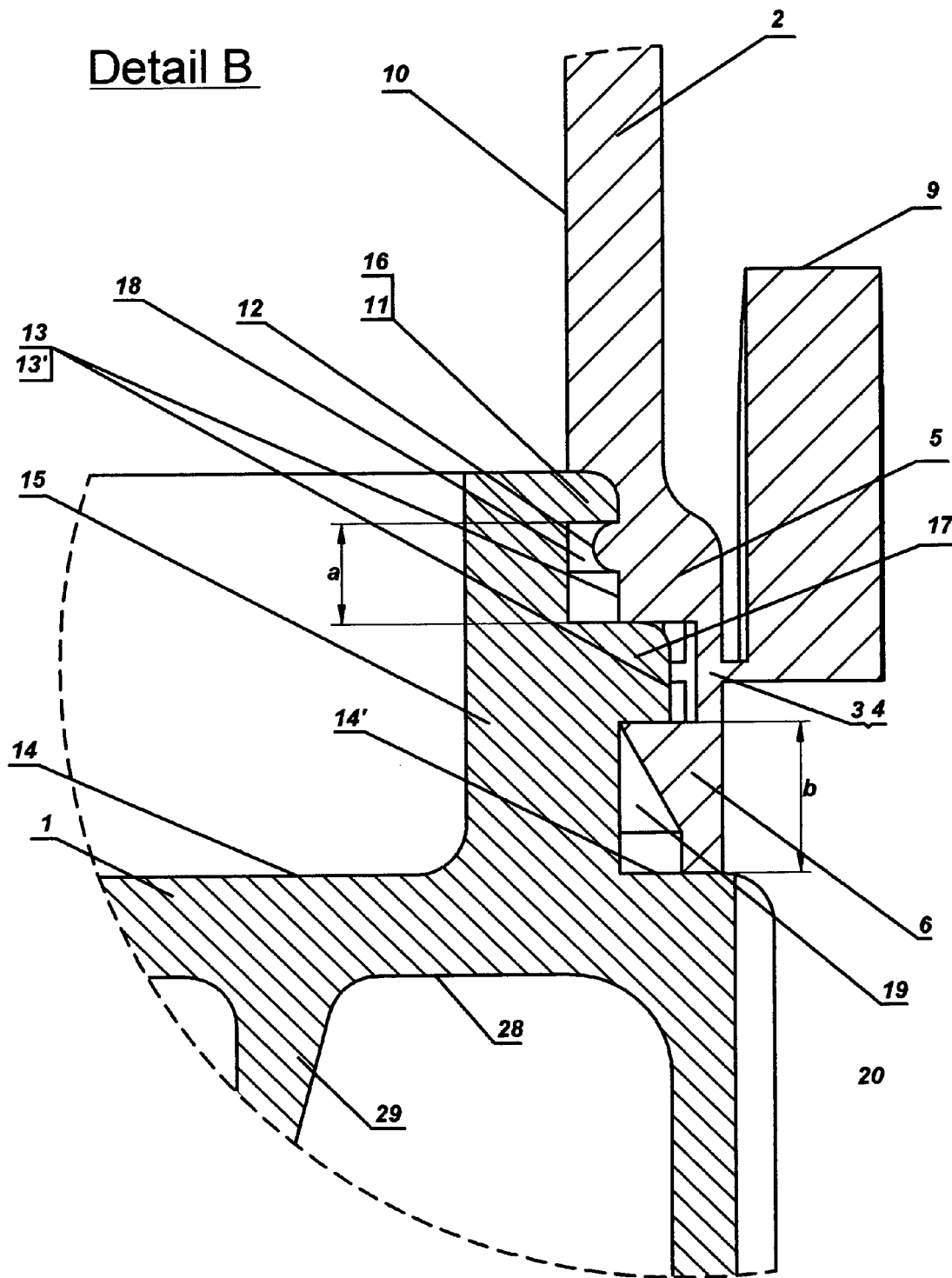
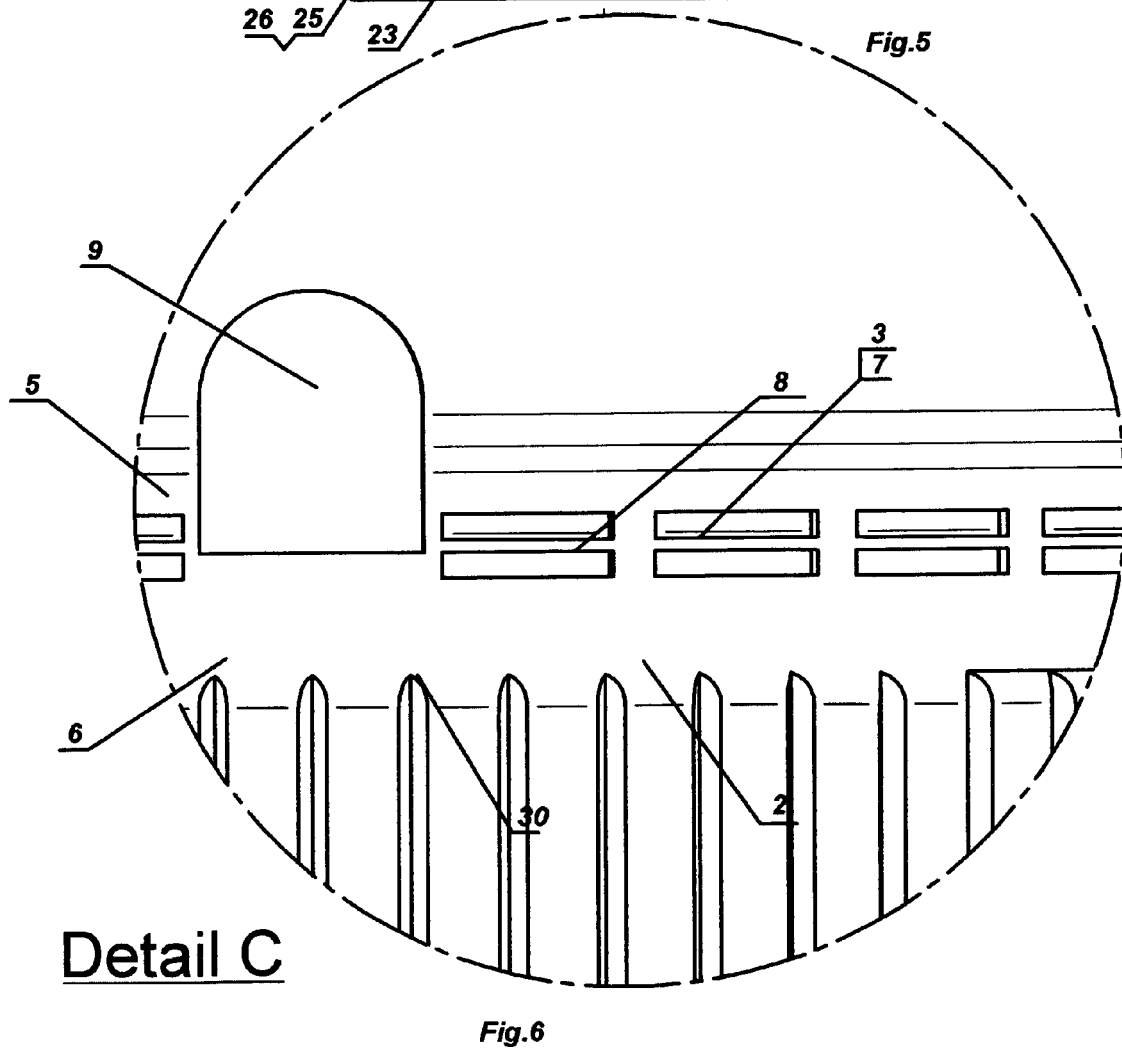
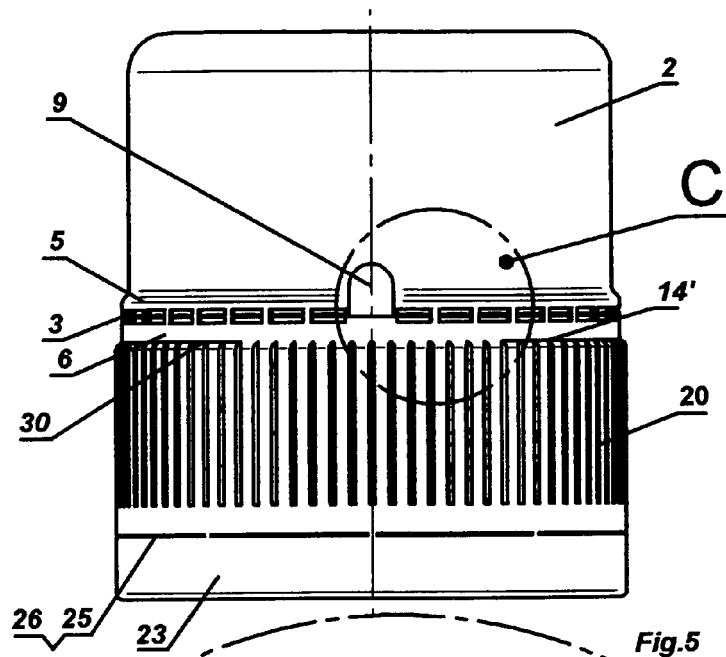
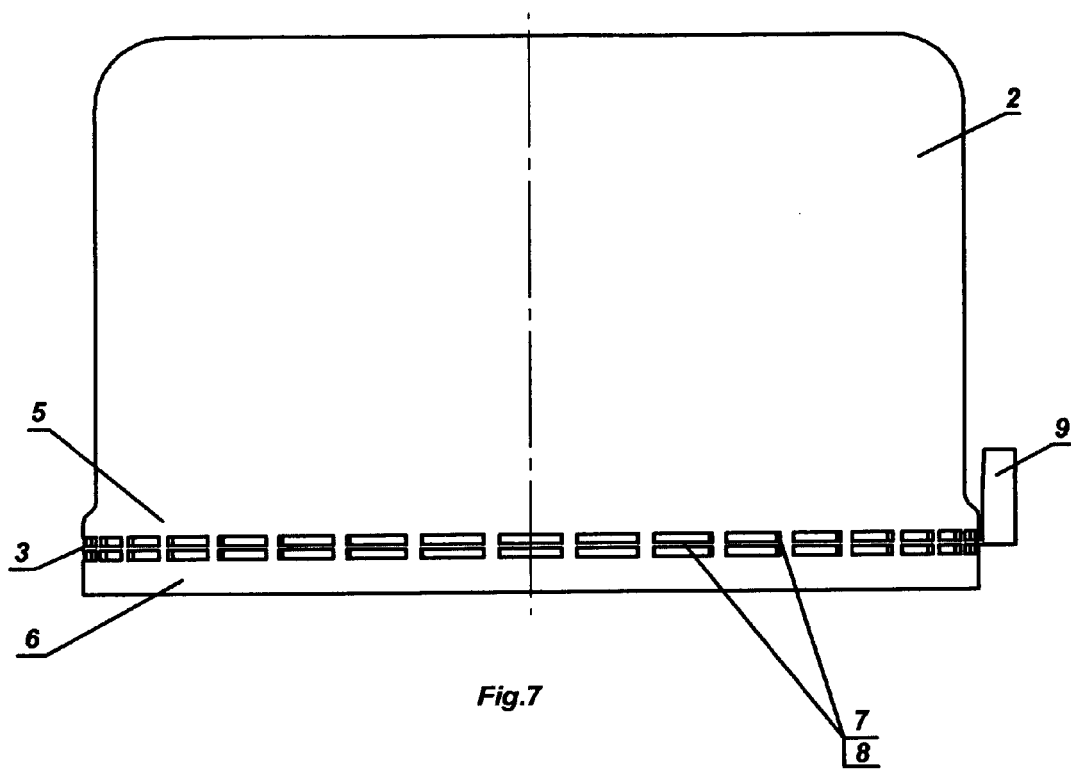


Fig.4





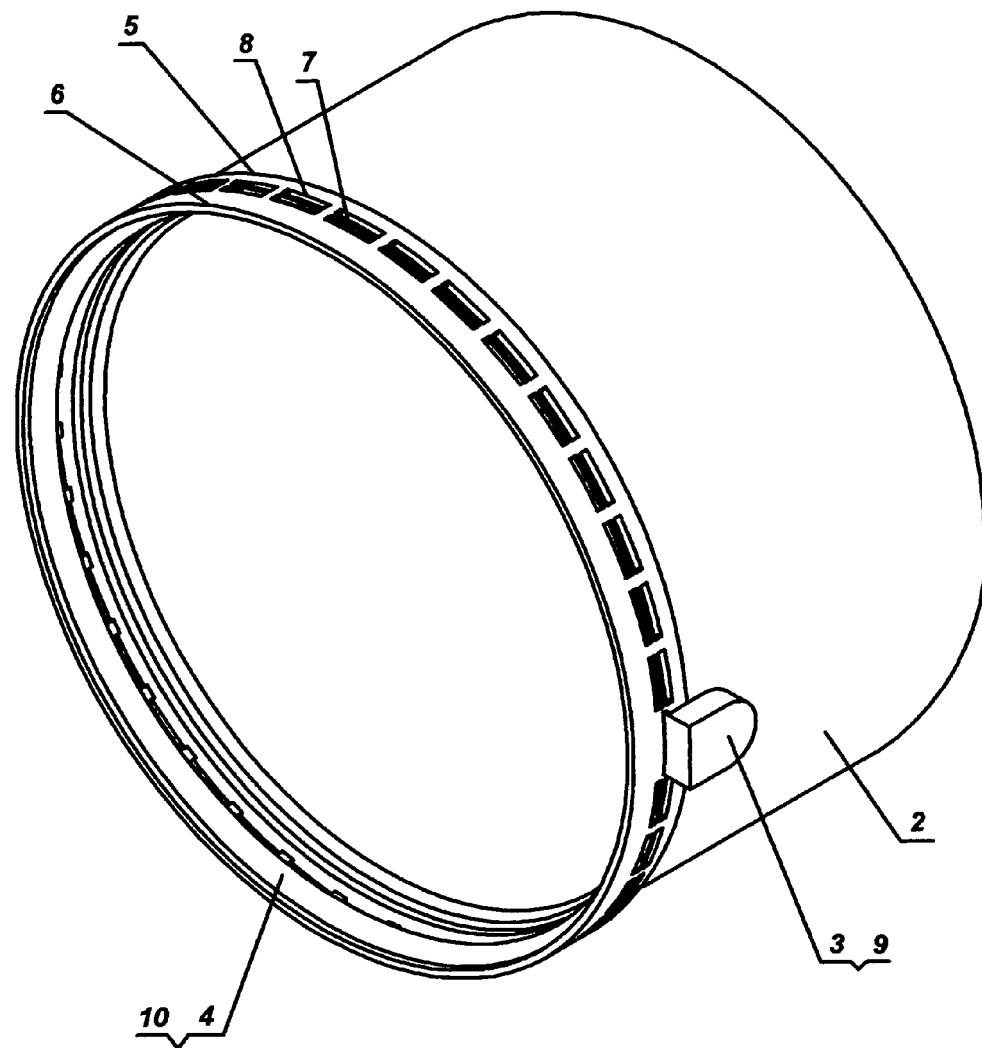


Fig.8



EUROPEAN SEARCH REPORT

Application Number
EP 11 46 0019

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 0 031 980 A1 (PROCTER & GAMBLE EUROP [BE]; PROCTER & GAMBLE [US]) 15 July 1981 (1981-07-15) * figures *	1-3	INV. B65D41/26 B65D41/34 B65D51/24 B65D51/28
A	EP 0 248 341 A1 (MIRA LANZA SPA [IT]) 9 December 1987 (1987-12-09) * figures *	1-3	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 7 June 2011	Examiner Vigilante, Marco
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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EPO FORM 1503 03.82 (P04C01)

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

EP 11 46 0019

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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- PL P352255 [0003]
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- PL 175182 [0006]