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(54) Transportation tray for bottles

(57) The invention relates to a transportation tray (1) for bottles (2), which is placed between a first and a second bottle layers (3, 4) to provide a transportation package. On one surface the transportation tray (1) comprises first positions (5) for the bottoms (6) of the bottles (2) to be placed in the first bottle layer (3) and on the other surface second positions (7) for caps (5), flanges (9) and mouth and neck parts (10) of the bottles (2) to be placed in the second bottle layer (4). At least one second position (7) comprises at least three ribs (22), which form a space (21) between them for the mouth and neck parts (10) and/or the flange (9) and/or the cap (8) of the bottle (2) to be placed in the second bottle layer (4). The ribs (22) comprise a guiding portion (11;12), which is arranged to guide the transportation tray (1) with respect to the mouth and neck parts (10), the flange (9) and/or the cap (8) of said bottle (2) to be placed in the second bottle layer (4).

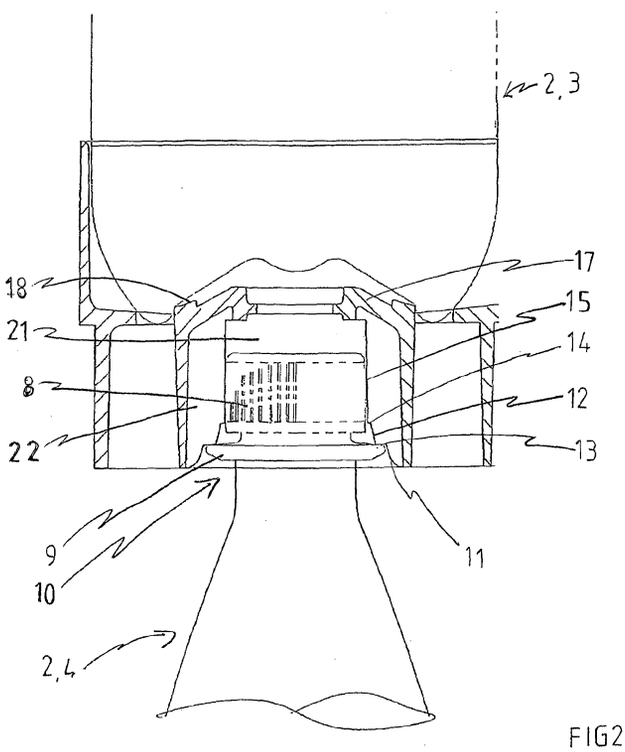

FIG2

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Description

BACKGROUND OF THE INVENTION

[0001] The invention relates to a transportation tray for bottles in accordance with the preamble of claim 1.

[0002] These transportation trays are used as a support for full and empty bottles in storage and transportation. In retail stores the bottles can be displayed for sale on these trays, i.e. the transportation tray can serve as a selling rack.

[0003] One purpose of the transportation tray is to transfer the weight of a first layer of bottles arranged on the transportation tray onto a second layer of bottles, to which the transportation tray is supported, i.e. on top of which the transportation tray is arranged and which is therefore placed beneath the transportation tray.

[0004] Previously there are known a plurality of transportation trays in accordance with the preamble of claim 1. The transportation tray described in US 6,279,770 can be given as an example. The transportation tray disclosed in said US patent comprises a plurality of cups, each being arranged to receive a bottle such that the bottoms of the bottles to be placed on the transportation tray are arranged in the cups. Each cup further comprises a central flange ring having a vertical flange, the lower edge of which is arranged to rest on the flange of a bottle standing in the bottle layer underneath the transportation tray in such a manner that the weight of the transportation tray and of the bottles placed in the cups is transferred onto the bottles beneath the transportation tray.

[0005] The above-described arrangement has a drawback that it may be difficult to arrange the transportation tray over the bottle layer, in particular if all the bottles of the layer are not properly fitted, if they are slanting, for instance. This is due to the fact that the flange ring that is arranged around the bottle neck has a vertical flange.

BRIEF DESCRIPTION OF THE INVENTION

[0006] The object of the invention is to provide a novel transportation tray for bottles, which alleviates the above-described drawback.

[0007] The transportation tray of the invention is characterized by what is stated in the independent claim.

[0008] The preferred embodiments of the invention are disclosed in the dependent claims.

[0009] The invention is based on the fact that at least one second position comprises at least three ribs that form between them a space for mouth and neck parts and/or a flange and/or a cap of a bottle to be placed in the second layer of bottles and that the ribs comprise an off-vertical, i.e. inclined, guiding portion, which is arranged to guide the transportation tray with respect to the mouth and neck parts and/or the flange and/or the cap of the bottle to be placed in the second layer of bottles, when the transportation is put into place on top of the second bottle layer. The guiding portion of at least one rib is advantageously arranged to guide the transport tray with respect to the mouth and neck parts and/or the flange and/or the cap of said bottle to be placed in the second bottle layer by coming into contact with the mouth and neck parts and/or the flange and/or the cap of the bottle to be placed in the second bottle layer, when the transportation tray is put into place on top of the second bottle layer.

[0010] An advantage is achieved with the solution of the invention that the bottles to be placed in the second bottle layer need not necessarily be in an absolutely upright position while the transport tray is put on top of the second bottle layer, because the guiding portion(s) of the ribs is/are arranged to guide the bottles to be placed in the second layer into second positions.

[0011] Advantageously the ribs form an at least partly tapering space between said ribs for the mouth and neck parts and/or the flange and/or the cap of a bottle to be placed in the second bottle layer, which space at least partly is arranged to guide the transportation tray with respect to one of the mouth and neck parts and/or the flange and/or the cap of the bottle to be placed in the second bottle layer, when the transportation tray is put into place on top of the second bottle layer. In other words, the space is wider at its open end, where the space between the ribs begins and from which open end the mouth and neck parts and/or the flange and/or the cap of the bottle to be placed in the second bottle layer penetrate into the space between the ribs, when the transportation tray is put into place on top of the second bottle layer.

[0012] Advantageously, but not necessarily, the ribs are also arranged to hold the mouth and neck parts and/or the flange and/or the cap of the bottle to be placed in the second bottle layer substantially in place in a second position with respect to the transportation tray, when the transportation tray is put into place on top of the second layer.

[0013] One advantageous embodiment of the transportation tray in accordance with the invention can be applied both to bottles having a small flange on the bottleneck and to bottles having a large flange on the bottleneck. For instance, the refPET bottles (refillable PET bottles) used in Finland have flanges that are larger in diameter than those of the corresponding disposable PET bottles used in Finland. In this embodiment the ribs of at least one second position comprise both a first support portion, by which the transportation tray can be supported to a flange of the first size and a second support portion, by which the transportation tray can be supported to a flange of the second size, which is smaller in diameter than the first flange.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] In the following the invention will be described

in greater detail in connection with preferred embodiments, with reference to the attached drawings, in which

Figure 1 is a schematic view of a transportation tray that is placed between a first and a second layer of bottles;

Figure 2 is a schematic view of an arrangement, in which each rib has a first and a second support portion and in which the transportation tray is supported by means of the first support portions to the flange of a bottle in the second bottle layer;

Figure 3 is a schematic view of an arrangement, in which each rib has a first and a second support portion and in which the transportation tray is supported by means of the second support portions to the flange of a bottle in the second bottle layer and by means of a second shoulder to the cap of the bottle in the second bottle layer;

Figure 4 is a schematic view of an arrangement, in which each rib has a first support portion and in which the transportation tray is supported by means of a second shoulder to the cap of a bottle in the second bottle layer;

Figure 5 is a schematic view of an arrangement, in which each rib has a first support portion and in which the transportation tray is supported by means of the first support portions to the flange of a bottle in the second bottle layer; and

Figure 6 is a schematic bottom view of the transportation tray.

DETAILED DESCRIPTION OF THE INVENTION

[0015] Figure 1 shows a transportation tray 1 for bottles 2, which is placed between a first bottle layer 3 and a second bottle layer 4 to provide a transportation package. It is obvious to a person skilled in the art that a transportation package may comprise more than two transportation trays 1 of the invention. On one surface (not indicated by a reference numeral) the transportation tray 1 comprises first positions 5 for bottoms 6 of the bottles 2 to be placed in the first bottle layer 3 and on the other surface (not indicated by a reference numeral) second positions 7 for caps 8, flanges 9 and/or mouth and neck parts 10 of the bottles 2 to be placed in the second bottle layer 4.

[0016] At least one second position 7 comprises at least three ribs 22 that form a space 21 between them for one mouth and neck part 10 and/or flange 9 and/or cap of a bottle to be placed in the second bottle layer 4. More advantageously all second positions 7 of the transportation tray are provided with at least three ribs 22 that form a space 21 between them.

[0017] The ribs 22 are spaced from one another. Figure 6 shows a transportation tray 1, in which each second position 7 comprises eight ribs 22. The ribs 22 are mutually placed such that the ribs 22 surround at least partly the cap 8 of the bottle 2 to be placed in the second bottle layer 4 and/or surround at least partly the flange 9 of the bottle and/or surround at least partly the mouth and neck parts 10 of the bottle.

[0018] If there are three ribs 22, they may be placed at an angle of 120 degrees from one another. If there are eight ribs 22, they may be placed at an angle of 45 degrees from one another, as shown in Figure 6.

[0019] It is obvious to a person skilled in the art that the number of ribs 22 may vary and that there is no need to place the ribs 22 symmetrically.

[0020] Each rib 22 comprises an off-vertical, i.e. inclined, guiding portion 11, 12, which is arranged to guide the transportation tray 1 with respect to the mouth and neck parts 10 of the bottles 2 to be placed in the second bottle layer 4 by coming into contact with the mouth and neck parts 10 of the bottles 2 to be placed in the second bottle layer 4, when the transportation tray 1 is put into place on top of the second bottle layer 4. Alternatively the guiding portion 11, 12 may be at least partly curved.

[0021] Alternatively, or additionally, the guiding portion 11, 12 is arranged to guide the transportation tray 1 with respect to the cap 8 of the bottle 2 to be placed in the second bottle layer 4 by coming into contact with the cap 8 of the bottle 2, when the transportation tray 1 is put into place on top of the second bottle layer 4.

[0022] Alternatively, or additionally, the guiding portion 11, 12 is arranged to guide the transportation tray 1 with respect to the flange 9 of the bottle 2 to be placed in the second bottle layer 4 by coming into contact with the flange 9 of the bottle 2, when the transportation tray 1 is put into place on top of the second bottle layer 4.

[0023] The manner how the guiding of the transportation tray 1 is to be performed by means of the ribs 22 depends on dimensions and shapes of the mouth and neck parts 10 and/or the flange 9 and/or the cap of the bottle 2 to be placed in the second bottle layer 4.

[0024] Advantageously, but not necessarily, the ribs 22 are also arranged to hold the transportation tray 1 at least substantially in place with respect to the mouth and neck parts 10 and/or the cap 8 and/or the flange of the bottles 2 to be placed in the second bottle layer, for instance such that the transportation tray 1 is supported by means of the ribs 22 to the mouth and neck parts 10 and/or the cap 8 and/or the flange of the bottle to be placed in the second bottle layer. Alternatively the second positions 7 may comprise some other arrangement for holding the transportation tray 1 in place with respect to the bottles 2 to be placed in the second bottle layer 4. In that case, the function of the ribs 22 in the second positions 7 is just to guide the transportation tray 1 in the second position 7 with respect to the mouth and neck parts 10 and/or the flange 9 and/or the cap 8 of the bottle 2, when the transportation tray 1 is put into place on top of the second bottle layer 4.

[0025] Advantageously, but not necessarily, the ribs 22 can also be arranged for being supported to the mouth and neck parts 10 of the bottles 2 to be placed in the second bottle layer 4, when the transportation tray

1 is put on top of the second bottle layer 4.

[0026] Advantageously, but not necessarily, the ribs 22 can also be arranged for being supported to the caps 8 of the bottles 2 to be placed in the second bottle layer 4, when the transportation tray 1 is put on top of the second bottle layer 4.

[0027] Advantageously, but not necessarily, the ribs 22 can also be arranged for being supported to the flanges 9 of the bottles 2 to be placed in the second bottle layer 4, when the transportation tray 1 is put on top of the second bottle layer 4. Figures 2, 3 and 5 show an arrangement, in which the transportation tray 1 is arranged for being supported and it is supported by means of the ribs 22 to the flange 9 of the bottle 2 in the second bottle layer 4.

[0028] Advantageously, but not necessarily, each rib 22 comprises a first guiding portion 11, which is arranged to guide the transportation tray 1 with respect to the bottles 2 in the second bottle layer 4, in other words to guide the transportation tray 1 with respect to a specific part, such as the cap 8, the flange 9 and/or the mouth and neck parts 10, of the bottles 2 to be placed in the second bottle layer 4, when the transportation tray 1 is put on top of the second bottle layer 4.

[0029] The function of the first guiding portion 11 is to facilitate the transportation tray 1 being put on top of the second bottle layer 4. The first guiding portion 11 can be arranged to cooperate with the cap 8, the flange 9 and/or the mouth and neck parts 10 of the bottle 2 such that the first guiding portion 11 comes into contact with the cap 8, the flange 9 and/or the mouth and neck parts 10 of the bottle 2, when the transportation tray 1 is put into place on top of the second bottle layer 4. In the figures the first guiding portion 11 is rounded such that the space 21 between the ribs 22 becomes narrower in the direction of introduction (not indicated by a reference numeral) of the bottles 2 in the second bottle layer 4. In other words, the space 21 is wider at the open end (not indicated by a reference numeral) of the space 21, where the inter-rib space begins and through which open end the bottles 2 to be placed in the second bottle layer 4 penetrate into the space 21, when the transportation tray 1 is put into place on top of the second bottle layer 4.

[0030] Advantageously, but not necessarily, the ribs 22 comprise a first support portion 13, by means of which the transportation tray 1 can be supported to the mouth and neck parts 10 of a bottle 2 to be placed in the second bottle layer 4. Alternatively, or additionally, the first support portion 13 may be such that the transportation tray 1 can be supported by means of the support portion 13 to the cap 8 and/or flange 9 of the bottle 2 to be placed in the second bottle layer 4.

[0031] In Figures 2 to 5, the ribs 22 comprise a first support portion 13, by means of which the transportation tray 1 can be supported to the flange 9 of a bottle 2 to be placed in the second bottle layer 4.

[0032] In Figures 2 and 3, in addition to the first support portion 13, each rib 22 comprises a second support portion 14, by means of which the transportation tray 1 can be supported to such a flange 9 that is smaller in diameter than the flange 9, to which the transportation tray 1 is supported by means of the first support portions 13. In the solution of Figures 2 and 3 this is implemented such that the space (A) formed between the second support portions 14 is smaller than the space (B) formed between the first support portions 13 in such a manner that the transportation tray 1 can be supported by means of the second support means 14 to a bottle flange 9 having a smaller diameter than the first support portion 13.

[0033] In Figures 1 and 2, the bottle 2 is provided with a flange 9 whose diameter is smaller than measurement B, i.e. the measurement between the first support portions 13. Therefore, the mouth and neck parts 10 of the bottle 2, and the flange 9 arranged thereon, are guided deeper in the second position 7, when the transportation tray 1 is put into place on top of the second bottle layer 4, as a consequence of which the second support portions 14 come into contact with the flange 9, because the diameter of the flange 9 is larger than measurement A between the second support portions 14.

[0034] In Figures 1 and 2, each rib 22 is stepped in such a manner that between the first support portion 13 and the second support portion 14 there is a second guiding portion 12, which is arranged to guide the mouth and neck parts 10, the cap 8 and the flange 9 of the bottle 2 into the second position 7 in such a manner that if the first support portions 13 do not touch the flange 9 of the bottle 2, the second support portions 14 will touch the flange 9. In the figures the second guiding portions 12 are inclined from horizontal such that the space 21 between the ribs 22 becomes narrower from the first support portions 13 to the second support portions 14 and there is formed a tapering structure that guides the flange 9 towards the second support portions 14.

[0035] In Figure 3 the ribs 22 also comprise a third support portion 15, which is arranged to cooperate with the cap 8 of the bottle 2. More precisely, the ribs 22 of Figures 2 and 3 comprise such a third support portion 15 that is arranged to hold the transportation tray 1 substantially in place in the horizontal direction on top of the horizontal, second bottle layer 4. In other words, the third support portions 15 come into contact with a side of the cap or they are in the vicinity of the side of the cap 8 such that the transportation tray 1 cannot move substantially while resting on top of the second bottle layer 4.

[0036] In the figures the second positions 7 comprise a second support shoulder 16, by means of which the transportation tray 1 can be supported to the cap 8 of the bottle 2 to be placed in the second bottle layer 4. This support may be necessary for bottles 2 of a particular type. These include, for instance, bottles 2 without a flange, or bottles 2 provided with a flange 9 that is smaller, equal or just slightly larger in diameter than the diameter of the cap 8.

[0037] In Figure 4 the transportation tray 1 is supported by means of the second support shoulder 16 to the cap 8 of the bottle 2 to be placed in the second bottle layer 4 and the weight of the transportation tray 1 and the bottle or bottles 2 arranged therein is thus transferred onto the bottle 2 in the second bottle layer 4 via the second support shoulder 16.

[0038] The function of the second support shoulder 16 is to transfer the weight of the transportation tray 1 and the bottles 2 arranged therein, i.e. the bottles 2 placed in the first bottle layer 3, directly onto the bottles 2 in the second bottle layer 4. For instance, in the situation of Figure 4, where the bottle 2 placed in the first bottle layer 3 has a bottom shape that corresponds to the shape of the first support shoulder 17 and where the bottle arranged in the first bottle layer 3 is arranged substantially in the middle of the support shoulder 17, the weight of a bottle placed in the first bottle layer 3 is transferred substantially directly downwards via the second support shoulder 16 onto the bottle 2 placed in the second bottle layer 4.

[0039] Advantageously, but not necessarily, the first support shoulder 17 and the second support shoulder 16 are arranged substantially in the middle of the first position 5 and the second position 7, respectively.

[0040] Advantageously, but not necessarily, the first position 5 is provided with first centring means (not indicated by a reference numeral) for centring the bottle 2 in the first position 5, when the bottle 2 is placed in the first position 5.

[0041] Advantageously, but not necessarily, the second position 7 is provided with second centring means (not indicated by a reference numeral) for centring the bottle 2 in the second position 7, when the transportation tray 1 is put on top of the bottle 2.

[0042] Advantageously, but not necessarily, the first centring means and the second centring means are arranged to centre the bottles 2 to be placed in at least one first position 5 and at least one second position 7 in such a way that the bottles 2 to be placed in said at least one first position 5 and said at least one second position 7 will stand one on top of the other and substantially concentrically. In this case the first support shoulder 17 and the second support shoulder 16 are arranged advantageously, but not necessarily, substantially in the middle of the first position 5 and the second position 7, respectively, in such a way that the weight of the bottle 2 to be placed in the first position 5 can be transferred directly downwardly onto the bottle 2 to be placed in the second position 7.

[0043] In the figures, the second support shoulder 16 consists of a support ring (not indicated by a reference numeral), which is to be supported to the cap 8 of the bottle 2.

[0044] In Figures 4 and 5, the first positions 5 comprise advantageously, but not necessarily, a first support shoulder 17, to which a portion of the bottom 5 of the bottle 2 to be placed in the first bottle layer 3 is to be supported.

[0045] In the figures, the first support shoulder 17 comprises a first support ring 18, which is located at the edge of the first support shoulder 17 and to which a portion of the bottom 5 of the bottle 2 to be placed in the first bottle layer 3 is to be supported.

[0046] In the figures, the first positions 5 comprise a ring-shaped opening 19, into which a portion of the bottom 6 of the bottle 2 to be placed in the first bottle layer 3 can be partly arranged. To put it more precisely, the lowermost ring-shaped portion (not indicated by a reference numeral) of the bottom 6 of the bottle 2 to be placed in the first bottle layer 3 can be arranged in the ring-shaped opening 19. The bottom 6 of the bottle 2 is arranged for being supported to the inner circumference 23 and/or the outer circumference 24 of the ring-shaped opening 19. In Figure 5 the bottom 6 of the bottle 2 is arranged for being supported both to the inner circumference 23 and the outer circumference 24. The function of the ring-shaped opening 19 is to contribute to the right positioning of the bottle 2 in the first position 5, for instance to centre the bottle 2 in the first position 5 and to hold the bottle 2 therein. Another function of the ring-shaped opening 19 is to form a hole through the transportation tray 1, which hole can be utilized when the transportation tray 1 is washed and cleaned.

[0047] Alternatively, in place of the ring-shaped opening 19 there can be a ring-shaped recess. The function of the ring-shaped opening 19 or the ring-shaped recess is to enable the bottle 2 to be placed in the first bottle layer 3 to sink partly in the transportation tray 1 and thus to stay better in place.

[0048] In figures 4 and 5 the ring-shaped opening surrounds the first support shoulder 17.

[0049] It is obvious to a person skilled in the art that as technology advances the basic idea of the invention can be implemented in a variety of ways. Thus, the invention and its embodiments are not restricted to the above-described examples, but they may vary within the scope of the claims.

Claims

1. A transportation tray (1) for bottles (2), which is to be placed between a first bottle layer (3) and a second bottle layer (4) so as to provide a transportation package, the transportation tray (1) comprising:

   first positions (5) on one surface for bottoms (6) of bottles (2) to be placed in the first bottle layer (3), and
   second positions (7) on the other surface for caps (8), flanges (9) and mouth and neck parts (10) of bottles (2) to be placed in the second bottle layer,

   characterized in that

at least one second position (7) comprises at least three ribs (22), which form a space (21) between them for the mouth and neck parts (10) and/or the flange (9) and/or the cap (8) of the bottle (2) to be placed in the second bottle layer (2);

the ribs (22) are arranged with a mutual spacing;

the ribs (22) comprise an off-vertical guiding portion (11;12), which is arranged to guide the transportation tray (1) with respect to the mouth and neck parts (10) and/or the flange (9) and/or the cap (8) of the bottle (2) to be placed in the second bottle layer (4), when the transportation tray (1) is put into place on top of the second bottle layer (4).

2. A transportation tray as claimed in claim 1, **characterized in that** the ribs (22) are arranged to hold the transportation tray (1) at least substantially in place with respect to the mouth and neck parts (10) and/or the flange (9) and/or the cap (8) of the bottle (2) to be placed in the second bottle layer (4).

3. A transportation tray as claimed in claim 1 or 2, **characterized in that** by means of the ribs (22) the transportation tray (1) can be supported to the flange (9) of the bottle (2) to be placed in the second bottle layer (4).

4. A transportation tray as claimed in any one of claims 1 to 3, **characterized in that** the ribs (22) comprise a first off-vertical guiding portion (11), which is arranged to guide the transportation tray (1) with respect to the mouth and neck parts (10) and/or the flange (9) and/or the cap (8) of the bottle (2) to be placed in the second bottle layer (4), when the transportation tray (1) is put into place.

5. A transportation tray as claimed in any one of claims 1 to 4, **characterized in that**

each rib (22) comprises a first support portion (13), and

that by means of the first support portions (13) the transportation tray (1) can be supported to the flange (9) of the bottle (2) to be placed in the second bottle layer (4).

6. A transportation tray as claimed in any one of claims 1 to 5, **characterized in that**

each rib (22) comprises a first support portion (13) for supporting the transportation tray (1) to the flange (9) of the bottle (2);

each rib (22) also comprises a second support portion (14) for supporting the transportation tray (1) to the flange (9) of the bottle (2); and

that the second support portions (14) form a space (A) between them that is smaller than the space (A) between the first support portions (13), in order that by means of the second support portions (14) the transportation tray (1) can be supported to a bottle (2) provided with a flange (9) that is smaller in diameter than the one supported by the first support portions (13).

7. A transportation tray as claimed in claim 6, **characterized in that**

each rib (22) comprises a second off-vertical guiding portion (12) that extends between the first (13) and the second (14) support portions.

8. A transportation tray as claimed in any one of claims 1 to 7, **characterized in that**

at least one second position (7) comprises a second support shoulder (16), by means of which the transportation tray (1) can be supported to one cap (8) of the bottle (2) to be placed in the second bottle layer (4).

9. A transportation tray (1) as claimed in any one of claims 1 to 8, **characterized in that**

the first positions (5) comprise a first support shoulder (17), and

at least a portion of one bottom (6) of the bottle (2) to be placed in the second bottle layer (4) can be supported to the first support shoulder (17).

10. A transportation tray as claimed in any one of claims 1 to 9, **characterized in that**

the first positions (5) comprise a ring-shaped recess (19) or opening, into which a portion of the bottom (6) of the bottle (2) to be placed in the second bottle layer (4) can be arranged, and that

the bottom (6) of the bottle (2) is arranged for being supported to the edges of the recess (19) or the opening.

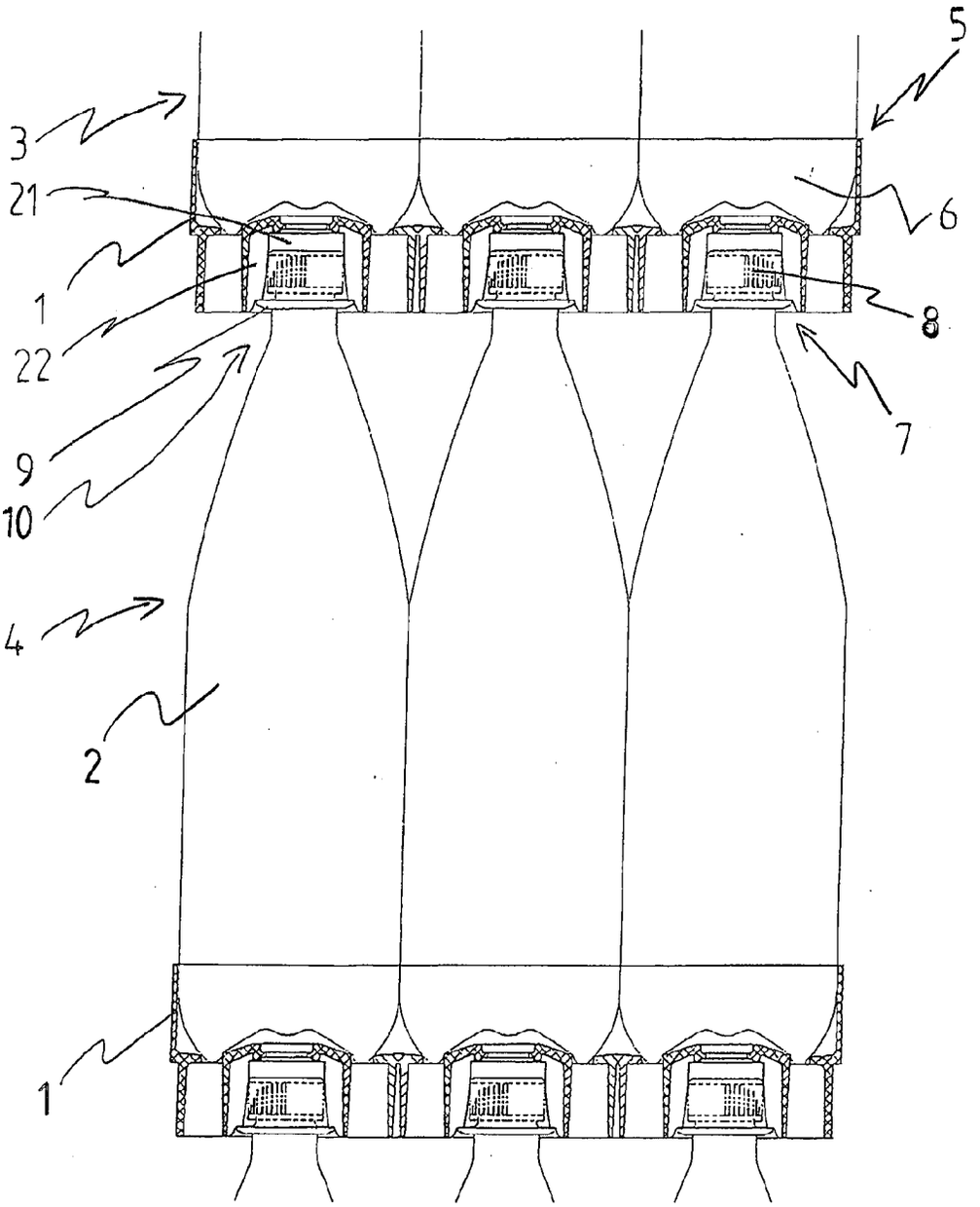

FIG1

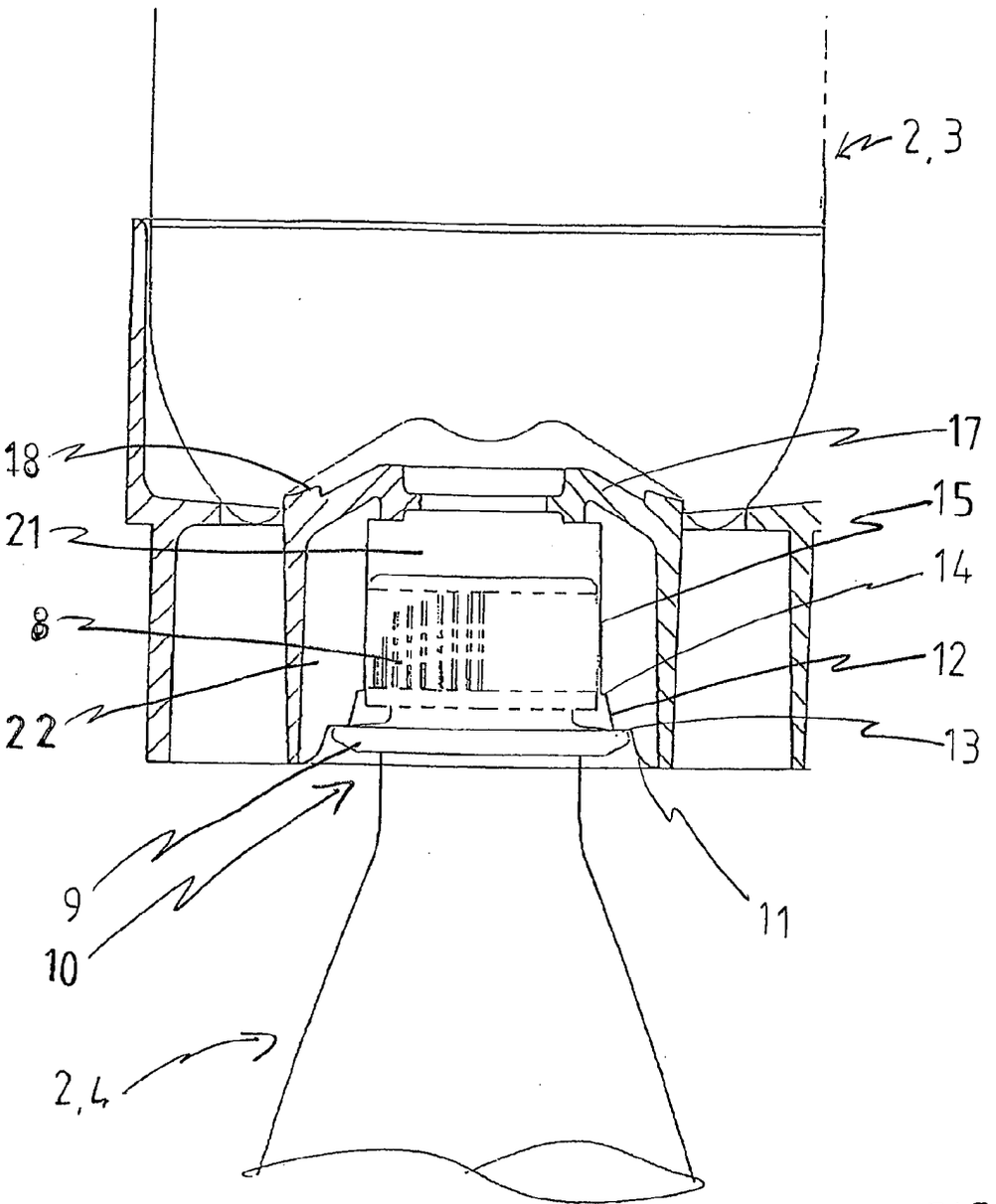

FIG2

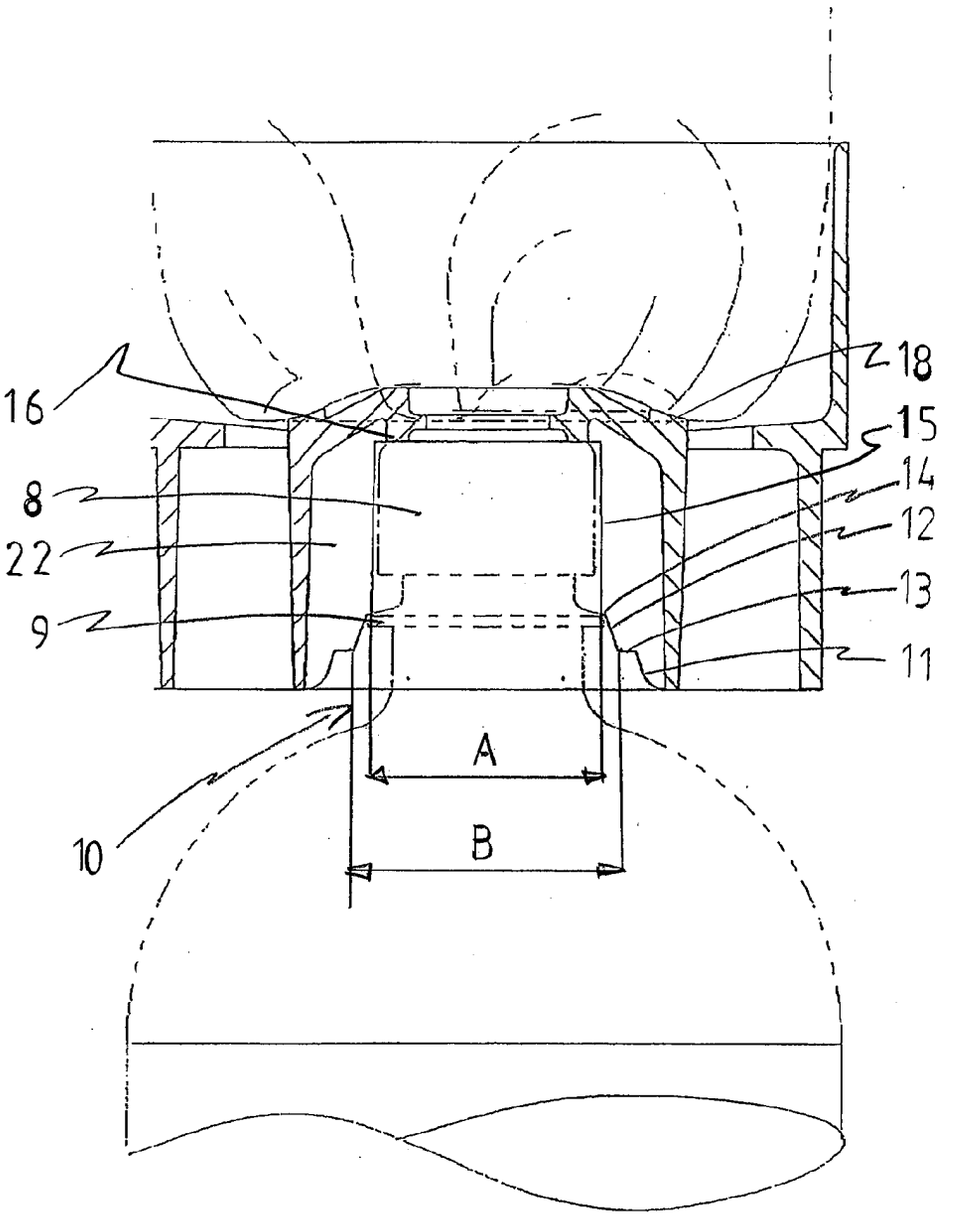

FIG 3

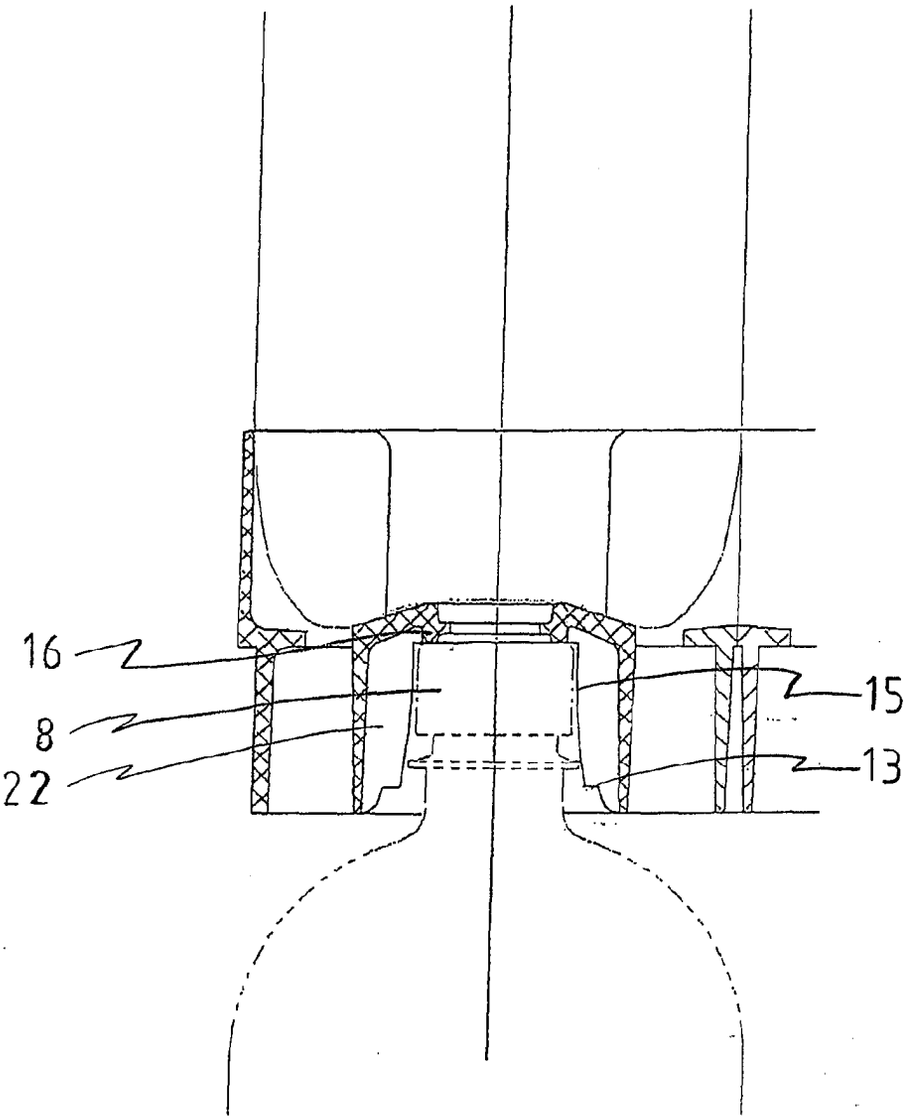

FIG 4

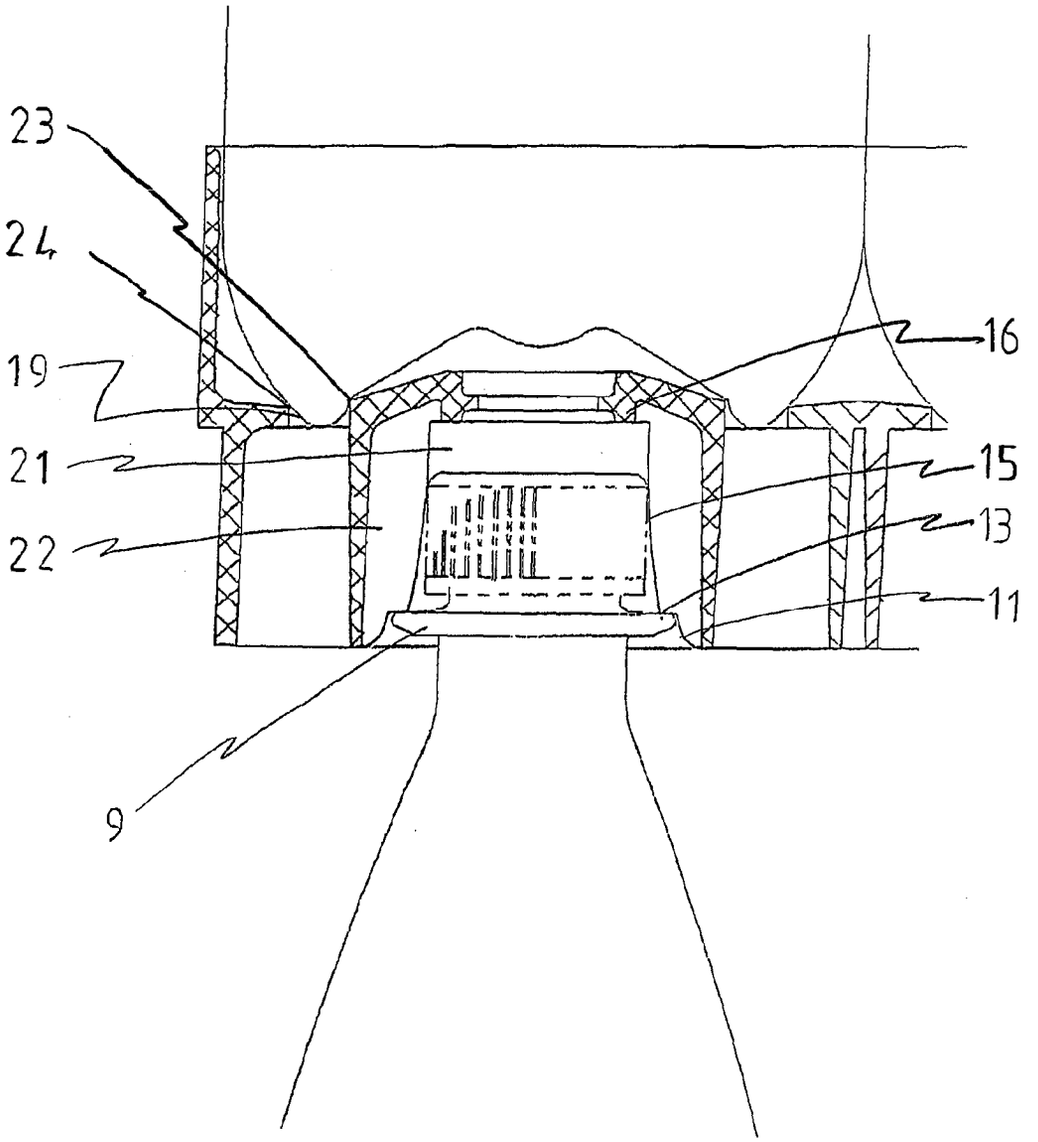

FIG5

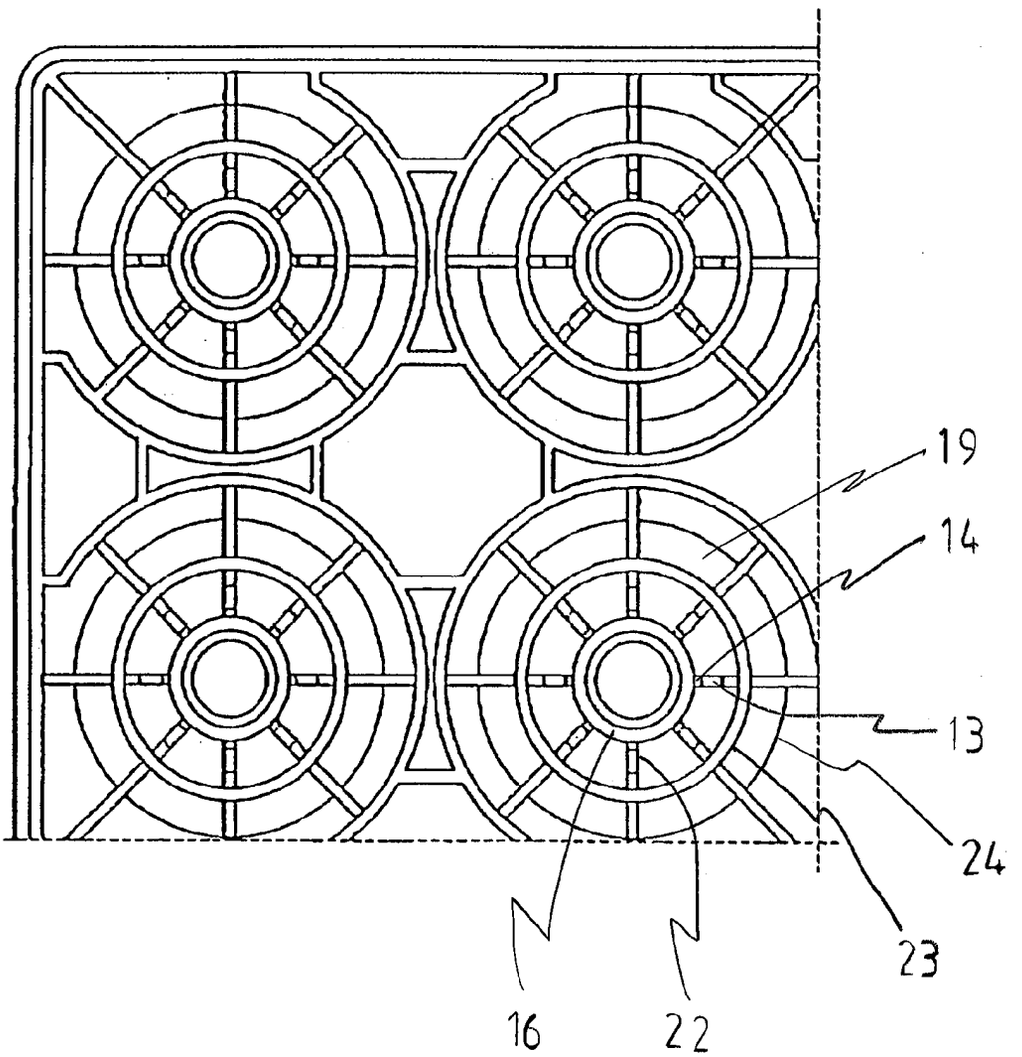

FIG 6

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 10 1366

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.7)
X	NL 1 004 725 C (WAVIN TREPAK B V) 11 June 1998 (1998-06-11) * the whole document *	1-5,10	B65D71/00
X	US 6 279 770 B1 (LERUM BJARNE ET AL) 28 August 2001 (2001-08-28) * the whole document *	1-5,10	
X	WO 99/15427 A (DEKKERS HENDRIK ; WAVIN TREPAK B V (NL)) 1 April 1999 (1999-04-01) * the whole document *	1,2,4	
A	US 5 038 961 A (WATANABE MAKOTO ET AL) 13 August 1991 (1991-08-13) * figures *	1	
A	WO 01/94233 A (SCHOELLER WAVIN SYSTEMS N V ; DEKKERS HENDRIK (NL)) 13 December 2001 (2001-12-13) * figures *	1	
A	WO 02/34638 A (AIKIO VEIJO ; OYJ HARTWALL ABP (FI)) 2 May 2002 (2002-05-02) * figure 1 *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 July 2004	Fournier, J

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

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