(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 736 413 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
27.12.2006 Bulletin 2006/52

(51) Int Cl.:
B65D 5/48 *(2006.01)*

(21) Application number: **06012487.2**

(22) Date of filing: **19.06.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(30) Priority: **24.06.2005 AR 0502625**

(71) Applicants:
- **Lattanzi, Fernando**
  Buenos Aires (AR)
- **Lattanzi, Laura Isabel**
  Buenos Aires (AR)
- **Lattanzi, Carina Adriana**
  Buenos Aires (AR)
- **Lattanzi, Rosana Marisa**
  Buenos Aires (AR)

(72) Inventors:
- **Lattanzi, Fernando**
  Buenos Aires (AR)
- **Lattanzi, Laura Isabel**
  Buenos Aires (AR)
- **Lattanzi, Carina Adriana**
  Buenos Aires (AR)
- **Lattanzi, Rosana Marisa**
  Buenos Aires (AR)

(74) Representative: **Canela Giménez, Teresa**
C/Girona no 148, 1o 2a
08037 Barcelona (ES)

(54) Separator for using in packaging of items or products

(57) A separator (1) for using in the packaging of various kinds of items or products such as packings made of glass, plastics, ceramics, metal, and the like in boxes o in any other containers made of various materials, preferably for the conditioning for the long- or short-distance transport and during the storage of said items or products. The separator comprises at least a first sheetlike plate (2) and a second sheetlike plate (3), it is possible both to have a substantially rectangular geometrical configuration. Said first and second plates are joined on their faces by at least one adhesion point (6). The utilization of the separator allows to protect the items or products in a correct manner, to optimize the manual accommodation process, and to automate said process by means of machinery; and its manufacturing is fast, simple and very economical.

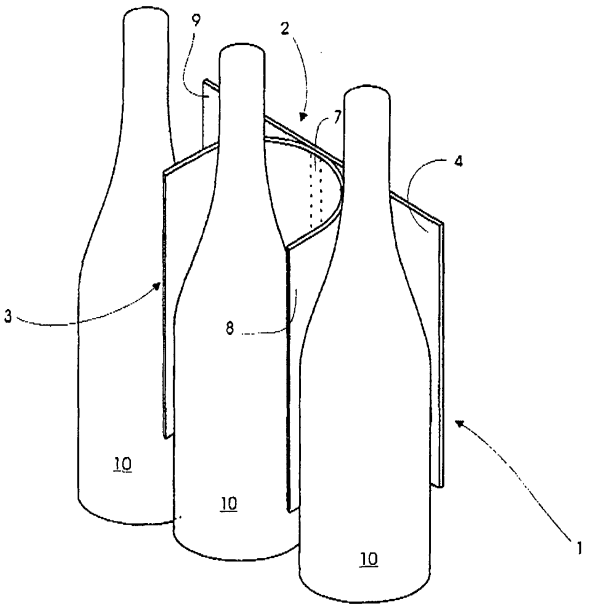

Fig. 5

EP 1 736 413 A1

Description

[0001] The present invention refers to a separator for using in the packaging of various kinds of items or products such as unit packings made of glass, plastics, metal, ceramics and the like in boxes or in any other such type of containers, preferably for preparing the long- or short-distance transport of said items or products or for the conditioning during the storage thereof.

[0002] Various packaging elements are widely known for assuring that the packaged contents to be transported will undergo the smallest number possible of breakages or damages. Generally speaking, in the packaging of glass bottles, preferably wine bottles, different types of jigs are used for assuring the separation among the bottles arranged within boxes. These boxes usually carry six bottles per box, and the use of jigs prevents said packaged bottles to collide during transportation and handling.

[0003] In order to improve the transportation of said bottles arranged within boxes, a great variety of jigs are used made of materials such as corrugated cardboard, paperboard, plastics, which allow to attain a better stability during their transportation, thus minimizing the risks of breakages and damages. For instance, the better known jigs and in fact used nowadays, are those jigs comprising three individual plates, one of then being wider than the other two ones and presenting two cuts or troughs which project parallel towards the middle part of the plate, whereas the other two plates, smaller sized, show each a single groove with a size similar to the grooves of the widest plate. The assembling of said jig is easy and requires only the fitting of the smallest plates in the grooves of the biggest plate in such a way to be arranged transversally, the fitting of the biggest plate with the smaller ones, and the latter fitting parallel between themselves, thus defining a separator for six unit packings.

[0004] Although this kind of jig is easy to manufacture and its costs are low, it generates inconveniences in its assembling and also builds up dirt due to the fact that the grooves always show rough edges from which material become loose upon assembling said jig. Moreover, the time required for its assembling and positioning cause the use of said jig in a production line to create a bottleneck, it being necessary to assemble said jigs with anticipation and in a great number.

[0005] Another important drawback found with conventional jigs: although it is possible to assemble them in anticipation in order to avoid creating a bottleneck in the production line, once said jigs start moving, they often tend to disassemble, this requiring the operator to reassemble them, and this extends the packaging times and thus restricts the possibility to automate this operation. In order to solve said issue, jigs have been designed with the basic concept of the above-mentioned jigs but with the addition of a kind of lock in the groove base. This kind of lock provides that when assembling the jigs outside the production line, they do not disassemble when being used. Unfortunately, although this approach is effective in assuring that the jig, once assembled, will not disassemble after its handling, the cost for obtaining this type of jig is high as compared with the conventional jig, the result being a high cost for packaging the product; besides, even so it is not possible to automate the packaging process.

[0006] Jigs are also known made of plastics, injected into moulds with predetermined sizes. Said jigs perform correctly, but their cost is high as compared with the conventional separators, this making the final cost of the product to increase joined to the drawback that they are made of a non-biodegradable material.

[0007] It is therefore an object of present invention to provide a separator for using in the packaging of various kinds of items or products such as for instance packings made of glass, plastics, ceramics, metal, and the like in boxes o in any other such type of containers, preferably for the conditioning for the long- or short-distance transport of said items, and for the conditioning during the storage thereof, allowing to protect them in a correct way, the separator having to be very easy to position, and to be produced fast, simply and at a very low cost.

[0008] Therefore, an object of present invention is to provide a separator for using in the packaging of various kinds of items or products such as for instance packings made of glass, plastics, ceramics, metal, and the like in boxes o in any other such type of containers, preferably for the conditioning for the long- or short-distance.transport of said items, and for the conditioning during the storage thereof, the separator comprising at least a first sheetlike plate and a second sheetlike plate, said first and second sheetlike plates being joined in their faces by means of at least one adhesion point.

[0009] Another object of present invention is to provide a separator for using in the packaging of various kinds of items or products such as for instance packings made of glass, plastics, ceramics, metal, and the like in boxes o in any other such type of containers, preferably for the conditioning for the long- or short-distance transport of said items, and for the conditioning during the storage thereof, allowing to facilitate its manual positioning and further allowing its positioning by automated means, commercially available or not.

[0010] And yet another object of present invention is to provide a separator for using in the packaging of various kinds of items or products such as for instance packings made of glass, plastics, ceramics, metal, and the like in boxes o in any other such type of containers, preferably for the conditioning for the long- or short-distance transport of said items, and for the conditioning during the storage thereof, the separator being an integral part and allowing its use for various types of items or products.

[0011] And a further object of present invention is to provide a separator for using in the packaging of various kinds of items or products such as for instance packings made of glass, plastics, ceramics, metal, and the like in boxes o in any other such type of containers, preferably

for the conditioning for the long- or short-distance transport of said items, and for the conditioning during the storage thereof, said separator providing a considerable reduction of the storage room needed and avoiding at the same time the loosening or liberation of material from rough edges upon being manipulated.

[0012] For greater clarity and better understanding of the object of present invention, same has been illustrated in several figures, the latter representing the invention in one of the preferred embodiments, all of them in an exemplary way, and wherein:

Figure 1 is a perspective view of the separator object of present invention;
Figure 2 is a perspective exploded view of the separator of Figure 1;
Figure 3 is a perspective view of a first alternative embodiment of the separator of Figure 1;
Figure 4 is a perspective view of a second alternative embodiment of the separator of Figure 1; and
Figure 5 is a perspective view showing the utilization of the separator with bottles.

[0013] Referring now to Figures 1 and 2, it is possible to view the separator object of present invention denoted with the gencral reference number (1), comprising at least a first sheetlike plate (2) and a second sheetlike plate (3). Both plates are substantially quadrangular-shaped and may be made of any kind of material, such as corrugated cardboard, paperboard, plastics, etc. Said plates (2) and (3) are joined in their respective faces, (4) and (5), by at least one adhesion point (6). It should be mentioned that in present particular embodiment said at least one adhesion point (6) is defined through transversal adhesion stripe (7), shown in phantom lines. Importantly, said at least one adhesion point (6) may be represented in a variety of ways, such as for instance a transversal segmented adhesion line or any other manner for adhering both sides or faces (4) and (5). This adhesion point allows attaining folding areas in the sheetlike plates for conforming packaging spaces.

[0014] Figure 1 shows that adhesion stripe (7) is positioned in the middle part of the sheetlike plates' side. This causes that upon manipulating separator (1) and separating ends (8) and (9) of he respective plates (2) and (3), the adhesion stripe allows the folding of sheetlike plate (3) in such a way to form three spaces for the insertion of bottles (10) (see Figure 5). It is therefore apparent that the conformation of separator (1) object of present invention is basically the joining of plates (2) and (3), face (4)'-to-face (5) by means of at least one adhesion point (6).

[0015] Referring now to Figure 3, a first alternative embodiment is shown. It should be mentioned that for a better understanding of the invention, similar parts are designated with similar reference numbers. Indeed, this first alternative embodiment of separator (11) rests on the same basic principle as separator (1), i.e., it comprises mainly a first sheetlike plate (2) and a second sheetlike plate (3), joined at their faces (4) and (5) by means of at least one adhesion point (6) defined by an adhesion stripe (7). However, the difference resides in the fact that further to said first and second plates, (2) and (3) respectively, a third plate (12) has been added joined by its face (13) to the face opposite to face (4) of sheetlike plate (2). As shown in Figure 3, the addition of a third sheetlike plate (12) in separator (11), allows to attain twice the spaces for accommodating the bottles (10), .i.e., the space shown in Figure 5 is increased twofold.

[0016] Turning now to Figure 4, same illustrates a second alternative embodiment for a separator (14), also comprising first and second sheetlike plates, (2) and (3), but unlike the above explained embodiments, sheetlike plates (2) and (3) are joined in their faces (4) and (5) by means of two adhesion stripes (7). It should be mentioned that the utilization of two adhesion stripes (7) in separator (14) allows to provide packaging spaces for items with a square or rectangular transversal section. It is important to point out that based on the disclosure in present description any person skilled in the art to which present invention belongs, will be able to realize a separator with twice the packaging spaces by utilizing the principle explained when referring to Figure 3, i.e., by merely adding a third sheetlike plate (not shown) joined in its face to first sheetlike plate (2) and by utilizing two adhesion stripes (7). It should be noted that although adhesion stripes (7) have been shown arranged parallel, their arrangement and mutual separation will depend on the product to be packaged, it being possible to accommodate unit packings with any geometrical configuration.

[0017] Referring again to Figures 1, 3 and 5, it should be pointed out that although first and third plates, (2) and (12) respectively, have been illustrated provided with a noticeable curvature, in fact the latter is not attained until the separator is inserted among the items to be separated - in this particular case the bottles -, the original state of the separator, be it separator (1), (11) or (14), being flat or plane, as shown in Figure 2. On the other hand, it is important to make clear that the adhesion stripe may be implemented with any kind of adhesive commercially available, but same has to be strong enough for resisting the load exerted by the inherent resiliency of the material from which the separator is made, i.e., the thicker the sheetlike plate, the greater the strength of the adhesive will have to be.

Claims

1. A separator for using in the packaging of various kinds of items or products such as packings made of glass, plastics, ceramics, metal, and the like in boxes o in various type of containers made of various materials, preferably for the conditioning for short-distance transport or long-distance transport of the various items or products, and for the conditioning

during the storage of said items, **characterized in that** the separator comprises at least a first sheetlike plate and a second sheetlike plate, said first and second sheetlike plates being joined in their faces by means of a least one adhesion point.

2. The separator according to claim 1, **characterized in that** said first and second sheetlike plates show a geometrical configuration, substantially rectangular.

3. The separator according to claim 1, **characterized in that** said at least one adhesion point is defined by a first transversal adhesion stripe.

4. The separator according to claim 1, **characterized in that** said at least first transversal adhesion stripe is arranged in the middle zone of the faces of said first and second plates.

5. The separator according to claim 1, **characterized in that** it further comprises a third plate similar to said first and second plates.

6. The separator according to claim 3, **characterized in that** said third plate is joined by its face to the face of said first plate without adhering..

7. The separator according to claims 3 and 4, **characterized in that** said the adhesion of said third plate to said first plate is attained by adding a second transversal adhesion stripe symmetrically opposed to said first adhesion stripe.

8. The separator according to anyone of preceding claims, **characterized in that** said first and second transversal adhesion stripes define folding zones in said fist and third sheetlike plates.

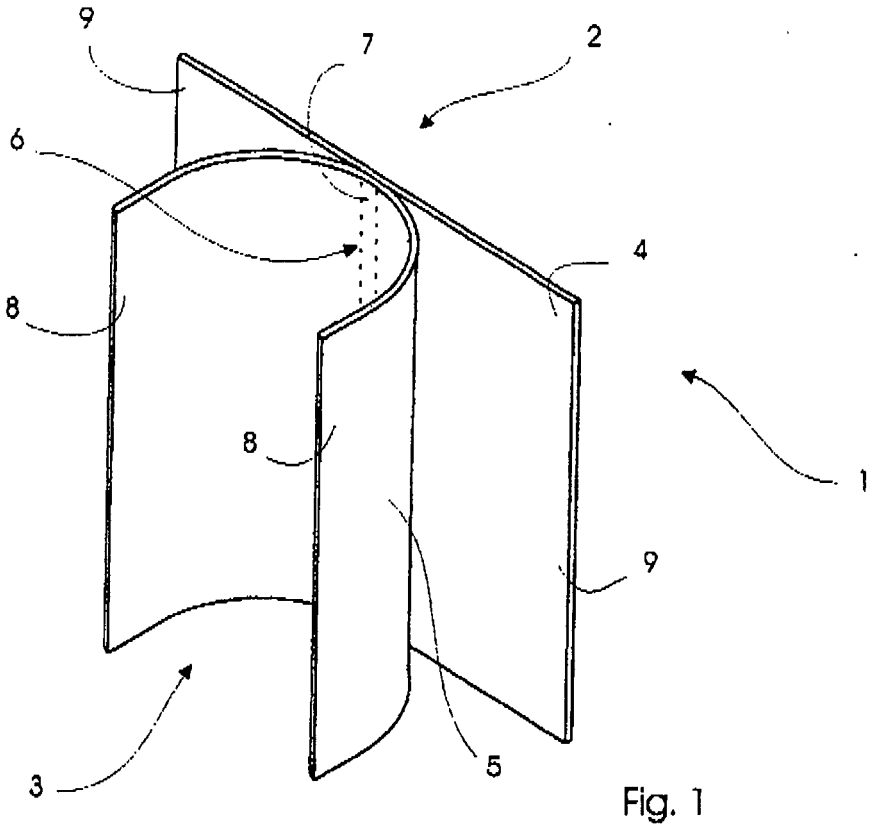

Fig. 1

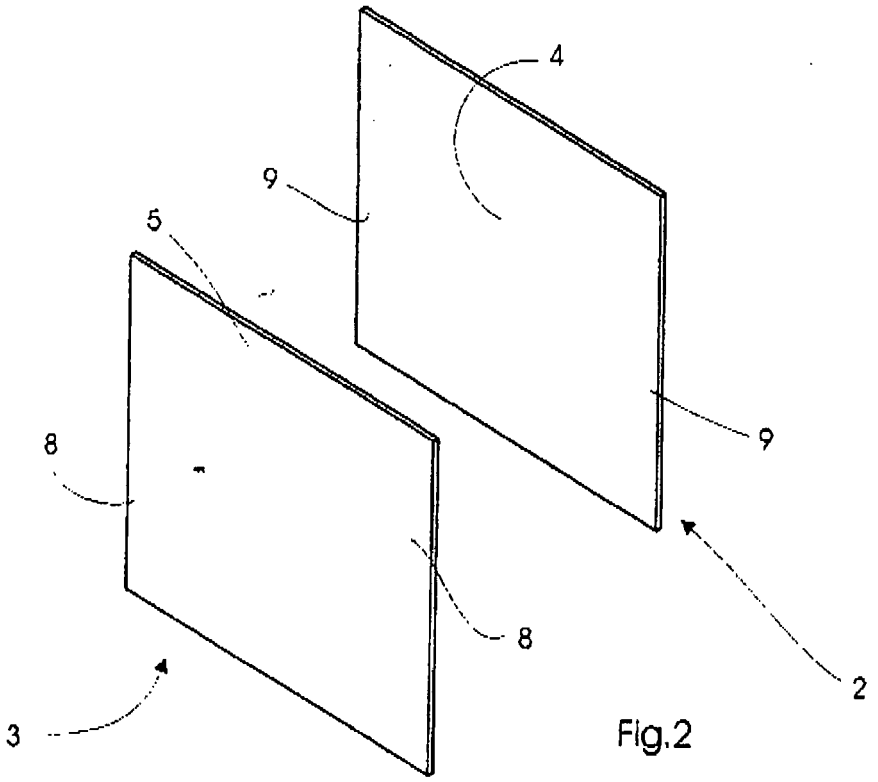

Fig.2

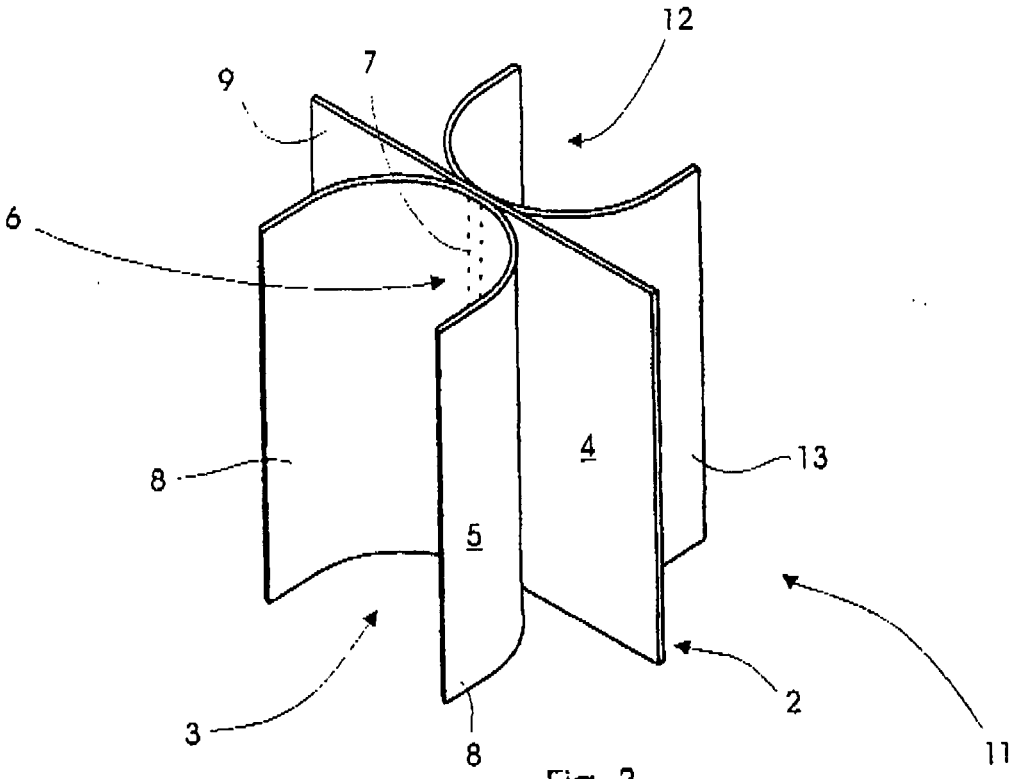

Fig. 3

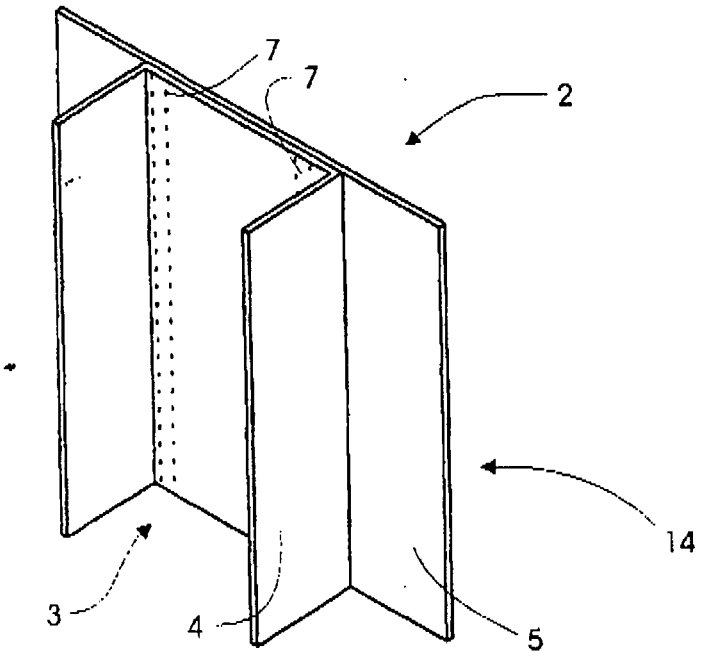

Fig. 4

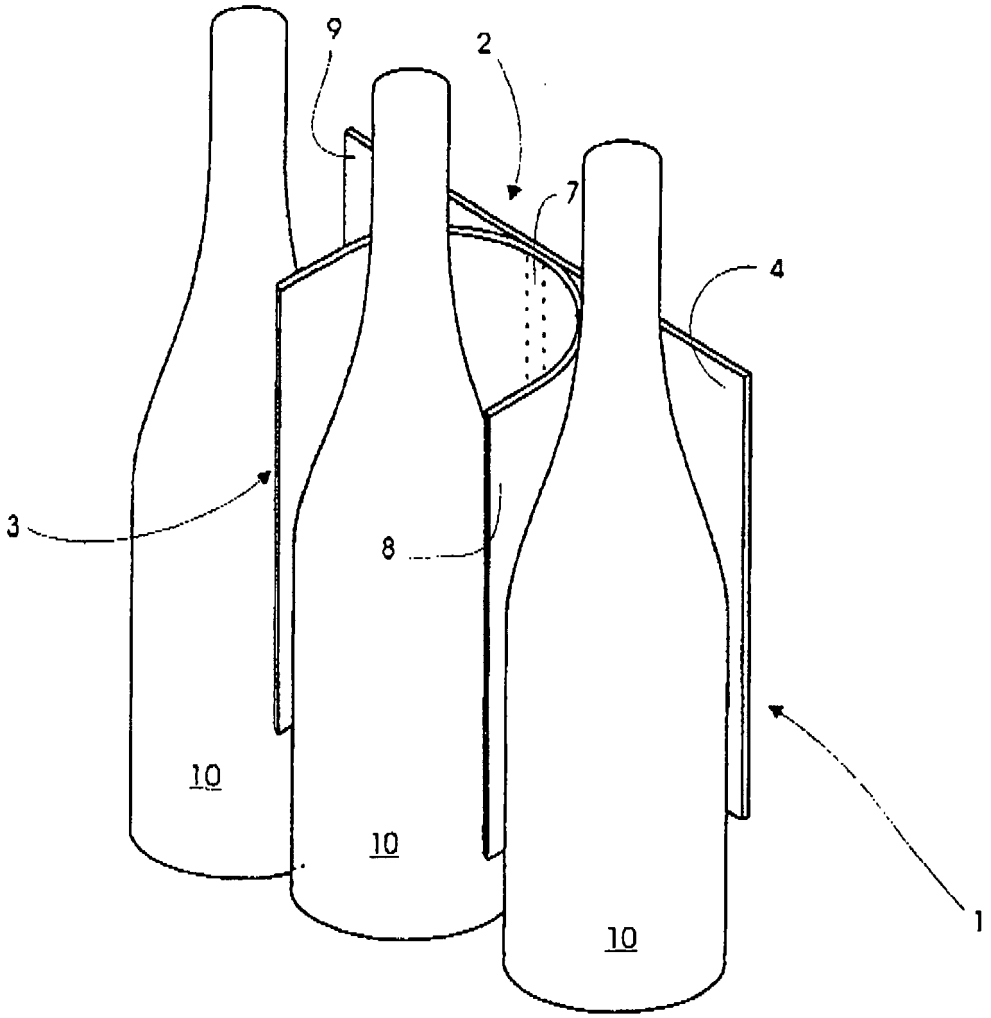

Fig. 5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 01 2487

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2002/017555 A1 (TAYLOR J. STEVE ET AL) 14 February 2002 (2002-02-14) * paragraph [0023]; figure 4 * -----	1-3,5-7	INV. B65D5/48
X	EP 0 934 885 A (VIDECART, S.A) 11 August 1999 (1999-08-11) * column 5, paragraph 35-39; figures 2,3 * -----	1-3,5-7	

TECHNICAL FIELDS SEARCHED (IPC)

B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	31 August 2006	Cazacu, C

CATEGORY OF CITED DOCUMENTS

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

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

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 06 01 2487

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.

31-08-2006

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002017555 A1	14-02-2002	NONE	
EP 0934885 A	11-08-1999	AU 3851297 A	06-03-1998
		DE 69702669 D1	31-08-2000
		ES 2133070 A1	16-08-1999
		WO 9806632 A1	19-02-1998
		ES 2150787 T3	01-12-2000
		US 6309334 B1	30-10-2001

EPO FORM P0459

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