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(72) Inventor: Sain, Marino
33080 Roveredo in Piano (Pordenone) (IT)

(74) Representative: Gotra, Stefano
BUGNION S.p.A.
Via Emilia Est 25
41100 Modena (IT)

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(71) Applicant: Bortolin Kemo S.P.A.
33080 Porcia (IT)

(54) A box for packing bottles

(57) A box can be made from the precut sheet by folding and fixing the sheet, which exhibits at least four consecutive lateral surfaces (2, 3, 4, 5) and a plurality of flaps (2a, 2b, 2c, 2d), which are foldable and superposable to define, by use of points of glue between the flaps, two opposite base surfaces (8, 9). The lateral surface (2) can be rotated about a line (23) of the sheet, which represents an edge of the lateral surface (2), be-

tween a closed or reclosed position, in which the lateral surface (2) is neared to the box, and an open position, in which the lateral surface is distanced from the box and exhibits a flap (2c) which is connected to the lateral surface (2) along a transversal fold line (22), and which is conformed and arranged in order to be glueable to an outside of the box to obtain closure of the box (1). The flap (2c) can also be inserted into the box in order to re-close the box (1).

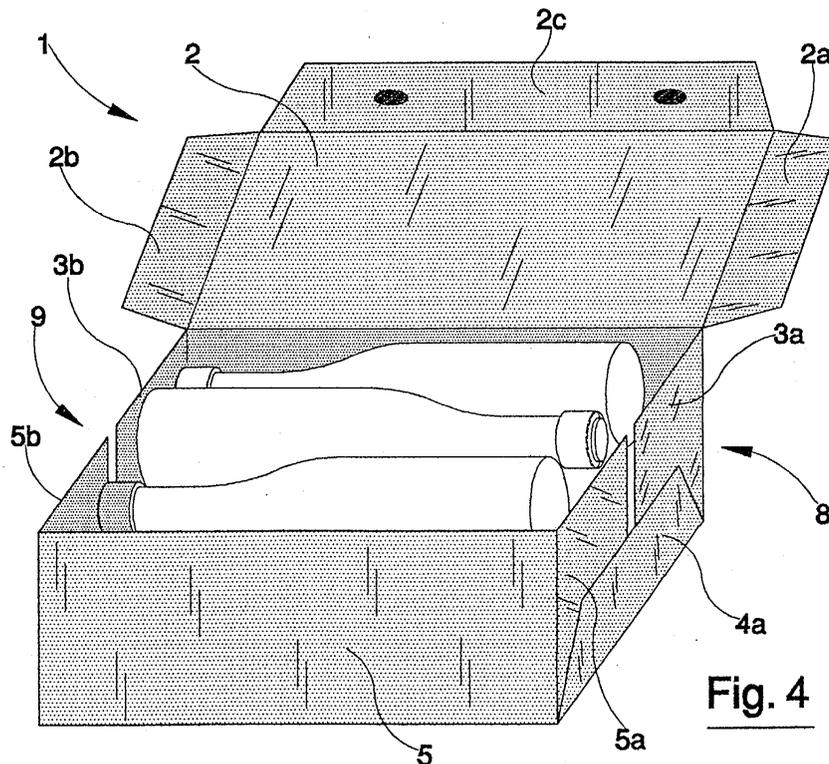


Fig. 4

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Description

[0001] The box of the invention packs bottles on sides thereof; it can also be used for packing other products which can be vertically manipulated during packing and for which packing on the side of the product is preferred or requested.

[0002] At present a box commonly known as RSC (Regular Slotted Case) is used for this purpose.

[0003] The boxes are obtained from a pre-cut cardboard sheet which is a flat right-angled parallelepiped. The sheet exhibits a plurality of transversal fold lines which separate the four lateral faces of the box. The two base surfaces are constituted by a plurality of appendices, or flaps, each connected to a respective lateral face along a longitudinal fold line. The flaps are foldable at a right angle with respect to the lateral faces and are superposable one on another in order to be reciprocally fixed, for example by gluing. One of the lateral faces located at an end of the pre-cut sheet also exhibits a flap connected to the end along a fold line. This flap is folded and glued internally to the opposite lateral face, in order to join the box, which is maintained in a flattened configuration before passing on to the process in which the products will be introduced there-into.

[0004] A drawback of this type of box concerns the opening of the box to gain access to the products contained in it.

[0005] Usually a perforation is exhibited on one of the surfaces of the box, defining a tear-off strip, affording a sort of window through which the products can be extracted. This solution is not very practical as imprecision in the perforation leads to difficulty in opening the box as well as ugly tears on the surface of the box which give the whole a damaged look, making it unsuitable for location in a display area of a sales point. Also this tearing system means that the box cannot be closed again once torn open.

[0006] The main aim of the present invention is to provide a box for packing bottles which offers a practical and precise opening system and which also enables the box to be re-closed.

[0007] Further characteristics and advantages of the present invention will better emerge from the detailed description that follows, of a preferred but not exclusive embodiment of a bottle-packing box, illustrated purely by way of example in the accompanying figures of the drawings, in which:

figure 1 is a plan view of a cut sheet for realizing a tradition tear-open box;

figure 2 is a plan view of a cut sheet for realizing a box according to the present invention;

figure 2a is a perspective view of the sheet of figure 2, folded and pre-glued; figure 3 is a perspective view of the box of the present invention obtained by folding and gluing the sheet of figure 2;

figure 4 is a perspective view of the box of figure 3,

in an open configuration; figure 5 is a perspective view of the box of figure 3 in a re-closed configuration.

[0008] With reference to the figures of the drawings, 1 denotes in its entirety a box according to the present invention.

[0009] The box can be fashioned by folding and fixing a pre-cut sheet, made for example of corrugated cardboard. The base sheet is a flat development of a right-angled parallelepiped. The sheet exhibits at least four consecutive lateral sides 2, 3, 4, 5, reciprocally connected by common sides constituted by transversal fold lines 23, 34, 45. The surfaces have been termed "lateral" inasmuch as it is supposed that, once the sheet has been folded to form the box, at least initially these surfaces will be arranged perpendicularly to the rest plane of the box. If the box is destined to contain bottles, it can for example rest on the lateral surface 4 so that the bottles lie horizontally arranged. The sheet further comprises at least two longitudinal fold lines, 6, 7, to which a plurality of flaps are connected, indicated by 2a, 2b, 3a, 3b, 4a, 4b, 5a, 5b, which are foldable and superposable to define, by means of glue spots between the flaps, two opposite bottom surfaces 8, 9.

[0010] A further flap 2c is connected to the lateral surface 2, the function of which will be described herein below.

[0011] The cut sheet shown in figure 2 exhibits the following characteristics.

[0012] The internal folds 3a, 3b, 5a, 5b are of a greater height than the external folds 2a, 2b, 4a, 4b. This height corresponds to about a half of the width of the lateral surfaces 2 and 4.

[0013] The fold 2c has a greater width than normal RSC type boxes, for example the width of fold 2c can be the same as the height of the external flaps 2a, 2b, 4a, 4b.

[0014] During assembly of the box a fold is made in the base sheet along two transversal lines, for example lines 23 and 45, and glue is deposited on the flap 2c externally of the lateral surface 5. The gluing operation must be carried out preferably only in proximity of the fold line 22. The box at this stage is basically flat, as can be seen in figure 2a, with the lateral surfaces 2 and 5 in contact with the lateral surfaces 3 and 4.

[0015] In order to proceed to the packing of the products, the box is opened out, with the lateral surfaces being distanced so as to obtain a tubular element having a rectangular section. The products are packed, normally in a vertical position, by inserting them through one of the two openings. The products may be kept from directional contact with one another by use of separators.

[0016] To close and seal the box, the base surfaces 8 and 9 are assembled, not necessarily in that order. The surface 8 is assembled by sequentially folding the internal flaps 3a, 5a, and thereafter the external flaps 2a, 4a, after laying some glue. Similarly the surface 9 is

assembled by sequentially folding the internal flaps 3b, 5b, and thereafter the external flaps 2b and 4b, after laying some glue.

[0017] To open the box, it is sufficient to lift and break the glue holding the flaps 2a, 2b, 2c. The lateral surface 2 can be rotated about the line 23, which is in fact an edge of the lateral surface 2, from a position of closure or reclosure, and an open position, in which it is distanced from the box 1, enabling access to the inside of the box 1. The surface 2 is in effect a reclosable cover of the box 2. A user, once the box 1 has been opened by breaking the layer of glue, can reclose the box 1 by slightly inwardly folding the flaps 2a, 2b, 2c and 2d and inserting them in the box. The flaps 2a, 2b, 2c further exhibit a tapered edge with a decreasing width in a direction away from respective fold lines thereof; this is to facilitate folding of the flaps 2a, 2b and 2c and insertion thereof into the box 1 to achieve the re-closed position.

[0018] To facilitate first opening of the box 1, the flaps 2a, 2b, 2c are glued in a zone which is close to the respective fold lines 6, 7, 22. In this way the user will find it easy to raise a flap and exert sufficient traction thereon to overcome the resistance of the various glue spots.

Claims

1. A box for packing bottles, obtainable by folding and fixing a precut sheet, having at least four consecutive lateral surfaces (2, 3, 4, 5) which are reciprocally connected by common sides constituted by transversal fold lines (23, 34, 45), further comprising at least two longitudinal fold lines (6, 7) to which a plurality of flaps (2a, 2b, 3a, 3b, 4a, 4b, 5a, 5b) are connected, which plurality of flaps (2a, 2b, 3a, 3b, 4a, 4b, 5a, 5b) can be glued, folded and superposed one on another thereof in order to define two opposite base surfaces,

characterised in that: the flaps 2a and 2b are connected at a lateral surface (2) of the four consecutive lateral surfaces (2, 3, 4, 5), which lateral surface (2) can be rotated about a line (23) thereof between a closed and re-closed position, in which the lateral surface (2) closes the box, and an open position in which the lateral surface (2) is distanced from the box and affords access to inside the box; the lateral surface (2) exhibiting a further flap (2c) connected to the lateral surface (2) along a transversal fold line (22); the flaps (2a, 2b, 2c) being conformed and arranged in order to be gluable to an outside of the box and insertable internally of the box in a re-closed position.

2. The box of claim 1, **characterised in that** during a stage of formation of the box, two of the flaps (2a, 2b) are free, while another of the flaps (2c) is glued to a lateral surface (5) of the lateral surfaces (2, 3, 4, 5) in proximity of a fold line (22).

3. The box of claim 2, **characterised in that** the flaps (2a, 2b, 2c) exhibit a tapered edge having a width which decreases in a direction away from fold lines of the flaps (2a, 2b, 2c).

4. The box of claim 3, **characterised in that** internal flaps (3a, 3b, 5a, 5b) of the flaps (2a, 2b, 3a, 3b, 4a, 4b, 5a, 5b) exhibit a height which corresponds to about a half of a width of the lateral surfaces (2, 4).

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Fig. 1

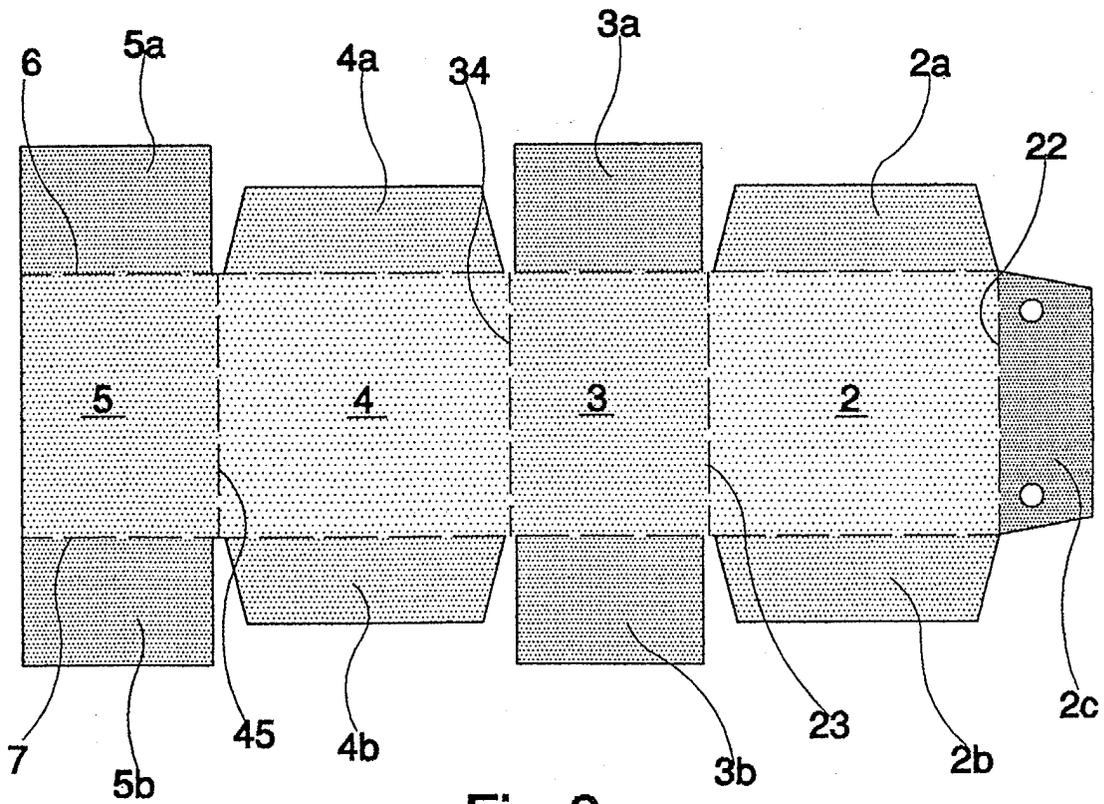
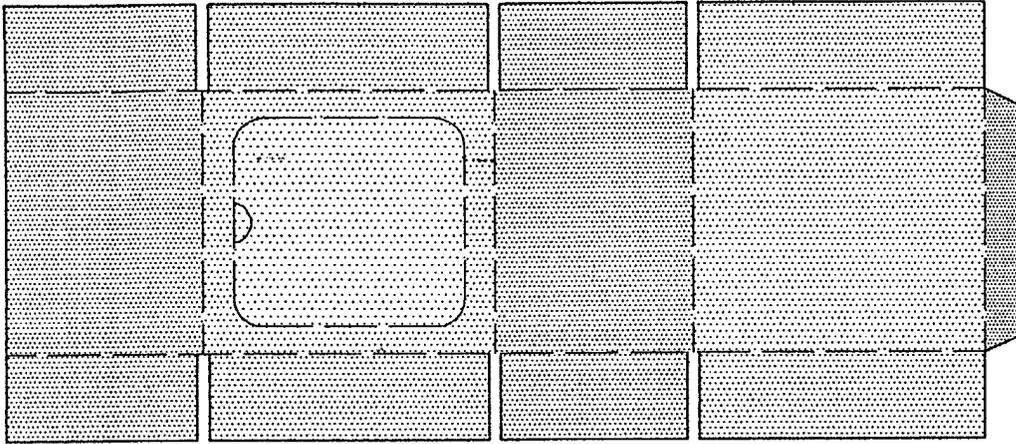


Fig. 2

Fig. 2a

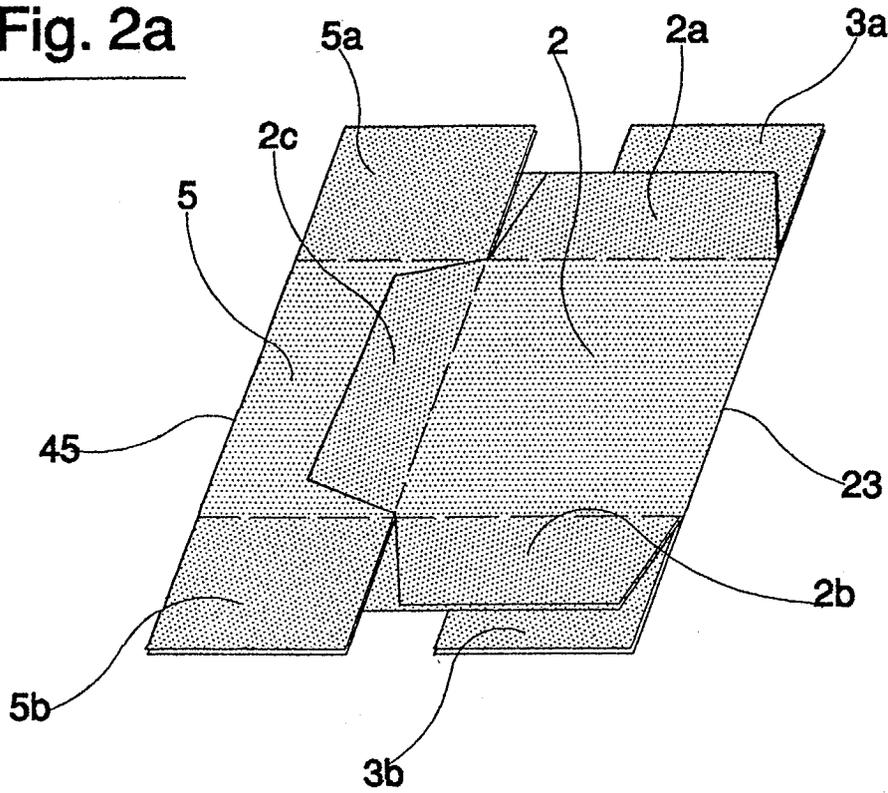


Fig. 5

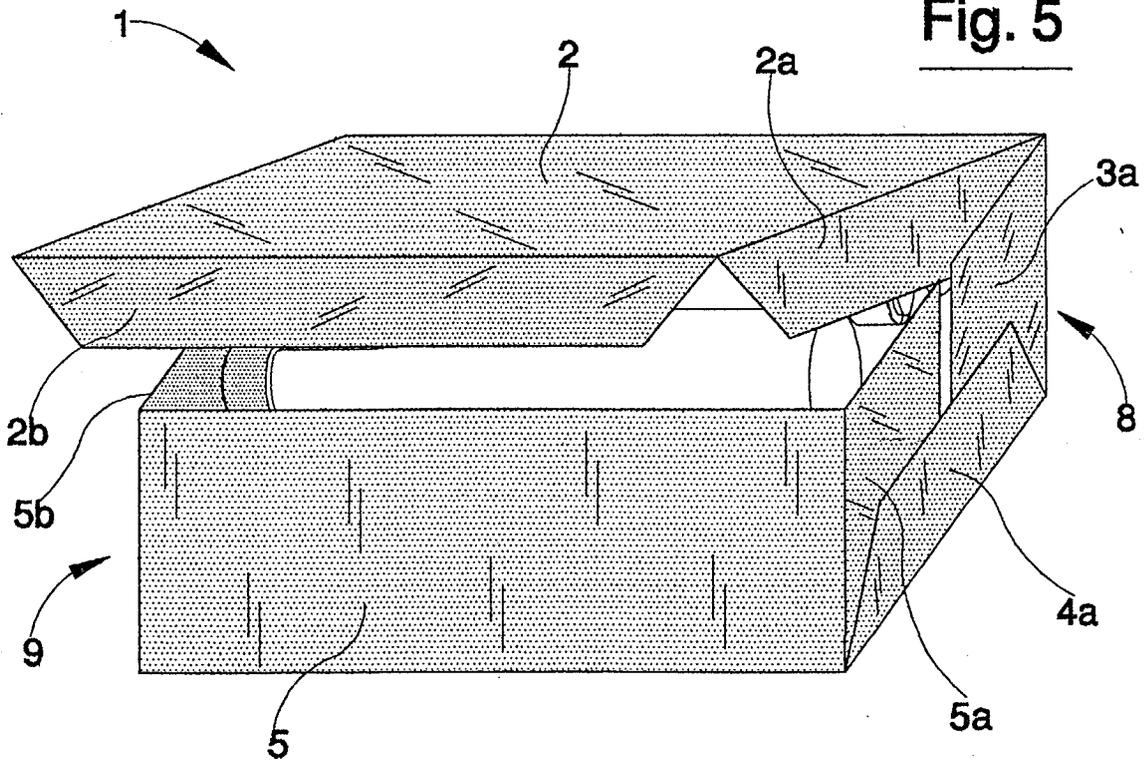


Fig. 3

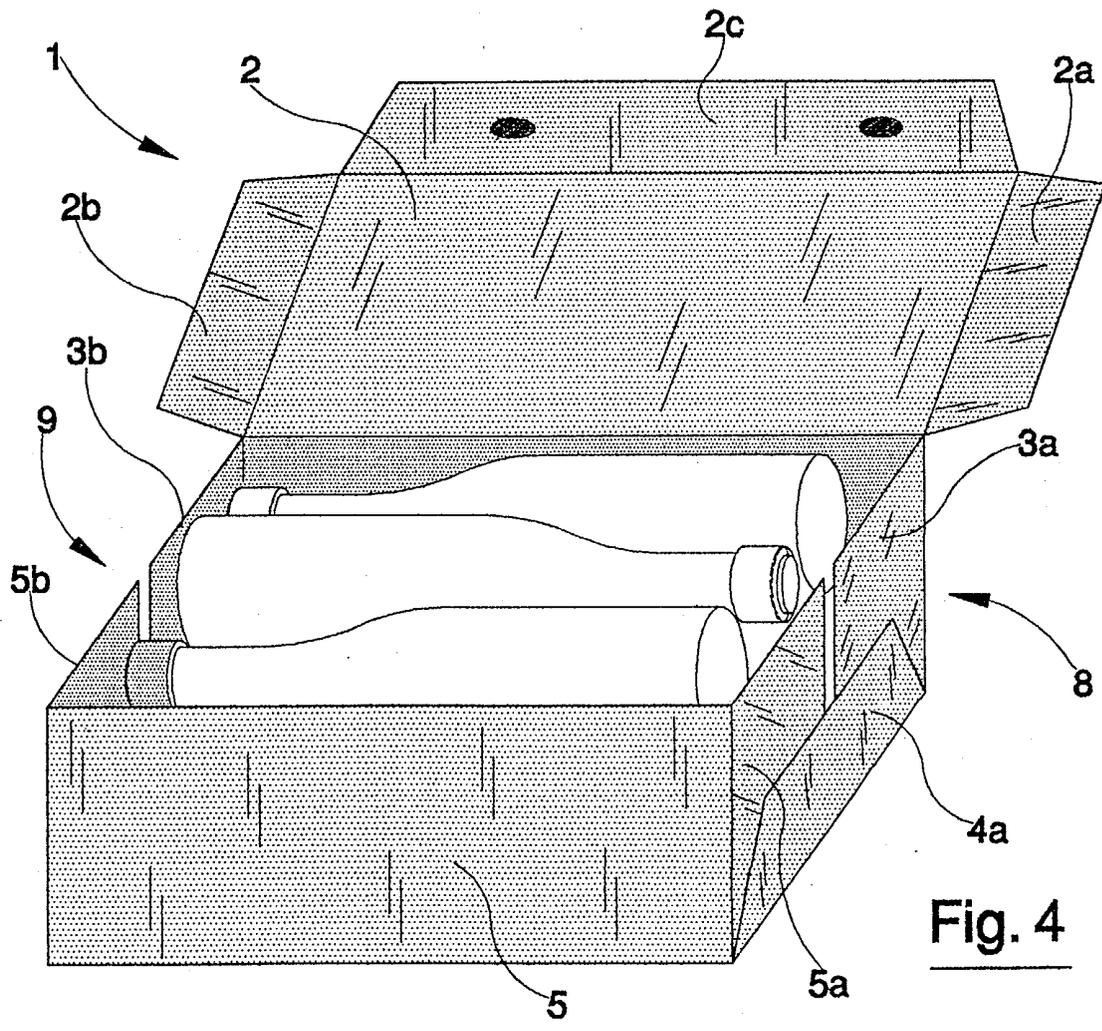
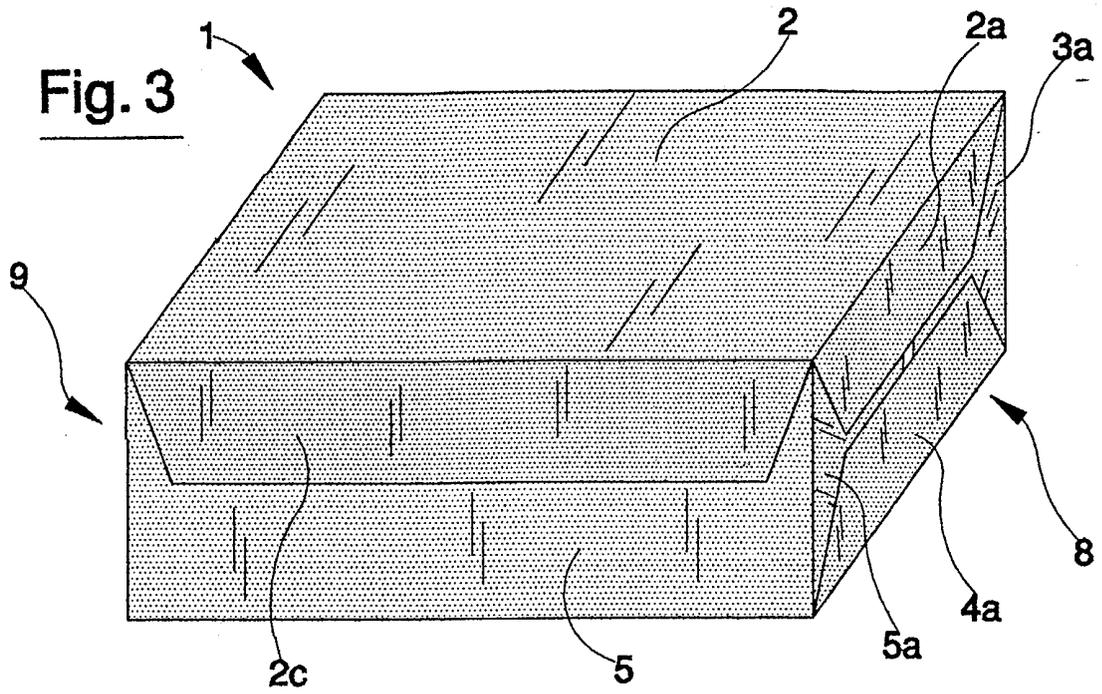


Fig. 4