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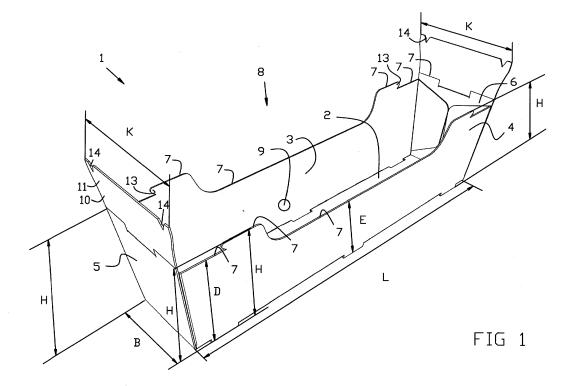
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(54) Packaging, blank for manufacturing such packaging and method for packing products with such packagings

(57) Packaging (1) with a bottom (2) surrounded by side walls (3-6) having side edges (7) which define an opening (8) including at least the bottom (2), provided with a pair of movable or removable support sections (10), whereby in a support rendering position the support sections (10) extend along the side edges (7) of two op-

posite side walls (5,6), parallel to the bottom (2), and the support sections (10) restrict the dimensions of the opening (8) so as to form a support on which a bottom (2) of an overlying packaging (1) can be stacked, whereby in a non-support rendering position the opening (8) is entirely free.



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[0001] The present invention first of all relates to a packaging.

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[0002] In particular, the present invention concerns a packaging in the form of a bin, tub, crate, case or box or the like, suitable for storing and/or preserving products such as vegetables, fruits and flowers and so on.

[0003] Such packagings are widely known and they must have an open structure in order to ensure a high quality, freshness and/or shelf life of the products concerned for a longer period.

[0004] The products for which the packaging is suitable are for example typically products that have to stay fresh thanks to a sufficient air circulation, such as vegetables, fruits, flowers, seafood, fish, meat and so on.

[0005] Other products to which the same principle applies, i.e. that the shelf life requires a certain open structure and air circulation, are of course also part of the intended target group of products for which the packaging according to the invention is extremely suitable.

[0006] These products may for example also be certain textile products or clothing and the like.

[0007] In particular, the present invention concerns such a packaging, provided with a bottom surrounded by side walls having side edges which define an opening with dimensions including at least the bottom and via which the products can be provided in the packaging.

[0008] In short, with the packagings to which the present invention relates, the aim is that the products can be placed very easily on the bottom of the packaging via a large opening without being hindered in any way to this end.

[0009] A typical example is the packaging of so-called vine tomatoes, whereby preferably a whole branch of a tomato plant provided with numerous tomatoes is put as a whole in the packaging, and more specifically on the bottom of the packaging, without thereby being hindered by any protrusions on the edges of the side walls of the packaging.

[0010] Naturally, the same applies to many other products having dimensions which practically correspond to the dimensions of the packaging and in particular the bottom of the packaging, such as flowers, asparagus, leek, celery, etc.

[0011] According to the present state of the art, several packagings are already known to that end, but they usually have a number of disadvantages.

[0012] A disadvantage of the known packagings which are provided with an opening which is wider than the bottom is that they cannot be stacked.

[0013] Indeed, the dimensions of the bottom of a similar packaging are smaller than the opening of an underlying packaging, making stacking impossible.

[0014] Other known packagings, which are stackable, generally have an opening whose dimensions are smaller than those of the bottom, but this complicates to a large extent the introduction of products having dimen-

sions in the order of magnitude of the bottom of the packaging.

[0015] Other known stackable packagings are simply provided with a lid, but this type of packagings is highly unsuitable for the preservation of products for which this invention is intended, because of the closed structure.

[0016] Moreover, these packagings require a lot of material, which on a large scale entails huge costs, which moreover is typically the case for the packaging of agricultural and horticultural products.

[0017] Further, the latter two known embodiments of packagings are disadvantageous in that the products which are packed in the packaging are not or hardly visible.

[0018] As a result, the products can hardly be recognized and their inspection, for example on freshness, is made very difficult.

[0019] Furthermore, the presentation of the products leaves much to be desired, which is often inadmissible for reasons of marketing or sales.

[0020] Also, the present invention aims to remedy one or several of the aforesaid and/or other disadvantages.

[0021] More specifically, the invention aims to provide a packaging which allows to introduce products having dimensions which practically correspond to the dimensions of the bottom of the packaging in a simple manner in the packaging on the one hand, and to easily stack several of such packagings on the other hand.

[0022] An additional aim hereby is to sufficiently expose the products concerned in the packaging to the ambient air and to make sure that the products packed in the packaging remain sufficiently visible for inspection, for example, and/or to present them in an aesthetical manner so as to be able to offer them in an attractive manner in a sales environment.

[0023] Another aim of the invention is to offer packagings which can be easily stacked as nested when empty or unused, so that a lot of place can be saved.

[0024] To this end, the present invention concerns a packaging in the form of a bin, tub, crate, case or box or the like, suitable for storing and/or preserving products, with a bottom surrounded by side walls having side edges which define an opening with dimensions including at least the bottom and through which the products can be introduced in the packaging, whereby the packaging is provided with a pair of movable or removable support sections, which can be put in a support rendering position and a non-support rendering position, whereby in the support rendering position, the support sections extend along the side edges of two opposite side walls, parallel to the bottom, and the support sections restrict the dimensions of the opening to the extent that the support sections form a support on which the bottom of an overlying, similar packaging can be stacked, and whereby in the non-support rendering position the opening is entirely free.

[0025] A major advantage of such a packaging according to the invention is that the packaging actually has two

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modes of operation.

[0026] More specifically there is a first mode of operation, which corresponds to a non-support rendering position of the support sections, whereby products can be easily put in the packaging since the opening on the top side of the packaging is entirely free.

[0027] Further, in this mode of operation, different packagings can be easily stacked as nested and be packaged themselves in a surrounding box or the like.

[0028] Further, there is a second mode of operation which corresponds to a support rendering position of the support sections, whereby the aim is that the support sections are used as a support for a following, similar packaging which is stacked on top of the packaging concerned.

[0029] In this manner is obtained a stackable packaging which also makes it possible to package products whose dimensions practically correspond to those of the bottom of the packaging and whereby packaging can be done in a quick and efficient manner, while still maintaining a sufficient air flow.

[0030] Another advantage of this type of packaging is that even in a stacked condition of several of such packagings the products remain clearly visible.

[0031] According to a preferred embodiment of a packaging according to the invention, the packaging is made of a single piece of cardboard which is cut, folded and glued into a tub with movable flaps on either side, provided on a respective side edge of said two opposite side walls, whereby the support sections are each formed of such a movable flap which can move between a folded-down position parallel to the bottom and a standing position parallel to the corresponding side wall.

[0032] A major advantage of such an embodiment of a packaging according to the invention is that such a packaging is very inexpensive and can be manufactured in a very simple manner, making it possible to apply the packaging on a large scale.

[0033] In addition, such a packaging meets the aforesaid objective of efficient use during the packaging process as well as while stacking, whereby furthermore an open structure is maintained guaranteeing the freshness of the products and allowing for a nice presentation thereof.

[0034] The invention also concerns a template for manufacturing a packaging according to the invention as described above. Such a template according to the invention is preferably made of a piece of cardboard cut in a shape which is centrally provided with a rectangular section, intended to form a bottom, whereby along each side of the rectangular section is provided a trapezium-shaped portion to form a side wall, whereby a first pair of opposite trapezium-shaped portions is laterally provided with ears designed to be able to connect the side walls, and whereby the other, second pair of opposite trapezium-shaped portions has a crosscut far end provided with a flap to form a support section.

[0035] It is clear that such a template is very simple

and inexpensive to make on an industrial scale and that it meets all the above requirements and consequently also offers the aforementioned advantages.

[0036] Finally, the invention also concerns a method for packaging products by means of packagings according to the invention as described above.

[0037] More specifically, a method according to the invention comprises at least the following steps:

- putting the support sections of the packaging in the non-support rendering position;
 - putting one or several products in the packaging through the entirely free opening;
 - putting the support sections of the packaging in the support rendering position; and,
 - placing a following packaging on the support sections.

[0038] Precisely the shape of a packaging according to the invention allows for a combination of the aforesaid steps of a method according to the invention, which naturally entails the advantages of a simple packaging of said products and the simple stacking of several packagings.

[0039] In order to better explain the characteristics of the invention, the following preferred embodiments of a packaging and a template for manufacturing such a packaging according to the invention are described by way of example without being limitative in any way, as well as a method according to the invention for packaging products with such packagings, with reference to the accompanying figures, in which:

figure 1 shows a packaging according to the invention seen in perspective, whereby the support sections have been put in a non-support rendering position:

figure 2 shows the packaging from figure 1 seen in perspective, whereby the support sections have been put in a support rendering position;

figures 3 and 4 show side views of the packaging from figure 2 according to arrows F3 and F4;

figure 5 represents a top view according to arrow F5 in figure 2;

figures 6 and 7 show side views of a stacking of three packagings according to the invention; and, figure 8 shows a template according to the invention for manufacturing a packaging as represented in the preceding figures.

[0040] A possible embodiment of a packaging 1 according to the invention is represented in figures 1 to 5. **[0041]** This packaging 1, as represented in the position of figure 1, has the shape of a bin or tub, by which is meant that it has a simple structure, consisting of a bottom 2 which is surrounded by side walls 3 to 6.

[0042] The bottom 2 is rectangular, although according to the invention that is not strictly necessary.

[0043] The packaging 1 in this case has a pair of longitudinal side walls 3 and 4 in accordance with the length L of the packaging 1.

[0044] Further, the packaging 1 in this case has a pair of lateral side walls 5 and 6 extending according to the width B of the packaging 1.

[0045] These side walls 3 to 6 each have side edges 7 which together define an opening 8 through which products 9, for example a branch of vine tomatoes 9 or the like, can be put in the packaging 1.

[0046] In the figures, the products 9 are merely represented symbolically by means of a circle.

[0047] In the introduction we already extensively examined the fact that a packaging 1 according to the invention may just as well be used for other products.

[0048] With a packaging 1 according to the invention, it is intended that the dimensions of the opening 8 comprise at least the bottom 2.

[0049] To put it differently, the gap formed by the opening 8 is larger than the bottom 2.

[0050] To that end, the side walls 3 to 6 in this case taper outwards from the bottom 2.

[0051] This makes it possible to stack the packagings 1 nested in each other, at least when they are brought in a position as represented in figure 1.

[0052] What is special to the packaging 1 according to the invention, as represented in figures 1 to 6, is the characteristic that the packaging 1 is provided with a pair of support sections 10, which in this case are movable.

[0053] Thanks to their movability, these support sections 10 can be brought in two positions, more specifically in a non-support rendering position, as is represented in figure 1, and a support rendering position, as is represented in figure 2.

[0054] In the given embodiment, the support sections 10 are each formed of a movable flap 11 provided on a respective side edge 7 of two opposite side walls 5 and 6 of the packaging 1.

[0055] These support sections 10 can be moved between a standing position parallel to the respective side wall 5 or 6, as is represented in figure 1, and a folded-down position parallel to the bottom 2, as is represented in figure 2.

[0056] In the non-support rendering position, represented in figure 1, the opening 8 is entirely free and products 9 can be provided in the packaging 1 without any hindrance.

[0057] In the support rendering position, as is represented in figure 2 for example, the support sections 10 extend along the side edges 7 of the two opposite lateral side walls 5 and 6, parallel to the bottom 2.

[0058] The support sections 10 hereby restrict the dimensions of the opening 8 to dimensions which are smaller than the dimensions of the bottom 2, such that the support sections 10 can form a support on which the bottom 2 of an overlying, similar packaging 1 can be stacked. [0059] This is represented by way of example in figures 6 and 7.

[0060] The support sections 10 are made as flaps 11 which extend along the lateral side walls 5 and 6 in the support rendering position.

[0061] Each flap 11 is T-shaped in this case and is centrally connected via a folding line 12 to the respective side wall 5 or 6.

[0062] Each flap 11 in this case has a length K which is larger than the width B of the packaging 1, at least at the opening 8, so as to be able to rest on the longitudinal side walls 3 and 4.

[0063] In the given embodiment, the packaging 1 according to the invention has longitudinal side walls 3 and 4 which are provided with hook-shaped portions 13.

[0064] The support sections 10 are further also provided with slots 14 which can co-operate with the hookshaped portions 13 so as to maintain the support sections 10 in the support rendering position.

[0065] All side walls 3 to 6 of the packaging 1 have portions 14 with a height H measured as of the bottom 2 which is larger than the distance D between the support sections 10 and the bottom 2 when the latter are in the support rendering position.

[0066] These portions 14 form edges which are designed to maintain an overlying packaging 1 inside the contours of the side walls 3 to 6 of an underlying packaging 1.

[0067] According to a preferred embodiment of a packaging 1 according to the invention, one or several side walls 3 to 6 have a portion 15 with a height E measured as of the bottom 2 which is smaller than the distance D between the support sections 10 and the bottom 2 when the latter are in the support rendering position.

[0068] This is also the case in the shown figures, at least for the longitudinal side walls 3 and 4.

[0069] Figure 8 shows a template 16 according to the invention that can be used for manufacturing a packaging 1 as described above.

[0070] The template 16 consists of a piece of card-board cut in a shape which is centrally provided with a rectangular section 17.

[0071] This portion 17 is meant to form the bottom 2 of the packaging 1.

[0072] Along each side 18 of the rectangular section 17 is provided a trapezium-shaped portion 19.

[0073] Trapezium-shaped should be broadly understood here, in the sense that it is the intention to form a side wall 3 to 6 with said portions 19 which taper outwardly as of the bottom 2.

[0074] A first pair of opposite trapezium-shaped portions 20 and 21 is laterally provided with ears 22.

[0075] These ears 22 are designed to connect the side walls 3 to 6, for example with glue.

[0076] The other, second pair of opposite trapezium-shaped portions 23 and 24 has a crosscut far end 25 which is provided with a flap 26 to form a support section 10.

[0077] In the embodiment from figure 7, in the first pair of opposite trapezium-shaped portions 20 and 21, at a

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distance X from each ear 22 corresponding to the width Y of the flaps 26, a hook 13 is cut out, directed to the respective ear 22.

[0078] Further, the flaps 26 are provided with slots 14 which, after the assembly of the template 16 into a packaging 1, can co-operate with the hooks 13, with the intention to be able to hold the flaps 26 behind the hooks 13. [0079] Each flap 26 is further provided with an L-shaped incision 27 on either side, so that each flap is T-shaped.

[0080] Each flap 26 is also centrally connected via a folding line 12 to the respective trapezium-shaped portion 23 or 24.

[0081] The embodiments discussed here are mere examples.

[0082] In another embodiment it is not excluded for example to make the support sections 10 removable.

[0083] The support sections 10 may for example each be formed of a separate, removable, flat element which is merely provided to support an overlying packaging 1 without being connected to the rest of the packaging 1. [0084] The invention is by no means restricted to the embodiments of a packaging 1 and a template 16 according to the invention described by way of example and illustrated in the accompanying drawings; on the contrary, such a packaging 1 and such a template 16 can be achieved in many other ways while still remaining within the scope of the invention.

[0085] Nor is the invention restricted to the described examples of methods according to the invention for packaging products with packagings according to the invention.

Claims

1. Packaging (1) in the form of a bin, tub, crate, case or box or the like, suitable for storing and/or preserving products such as vegetables, fruits and flowers, with a bottom (2) surrounded by side walls (3-6) having side edges (7) which define an opening (8) with dimensions including at least the bottom (2) and through which the products (9) can be provided in the packaging (1), characterised in that the packaging (1) is provided with a pair of movable or removable support sections (10) which can be put in a support rendering position and a non-support rendering position, whereby in the support rendering position, the support sections (10) extend along the side edges (7) of two opposite side walls (5,6), parallel to the bottom (2), and the support sections (10) restrict the dimensions of the opening (8) to the extent that the support sections (10) form a support on which the bottom (2) of an overlying, similar packaging (1) can be stacked, and whereby in the nonsupport rendering position the opening (8) is entirely free.

- 2. Packaging (1) according to claim 1, **characterised** in **that** the support sections (10) are each formed of a movable flap (11) provided on a relative side edge (7) of said two opposite side walls (5,6) and which can move between a folded-down position parallel to the bottom (2) and a standing position parallel to the relative side wall (5,6).
- 3. Packaging (1) according to claim 1, **characterised** in that the support sections (10) are each formed of a separate, removable, flat element.
- 4. Packaging (1) according to one or several of the preceding claims, characterised in that the packaging (1) has a pair of lateral side walls (5,6) in accordance to the width (B) of the packaging (1), as well as a pair of longitudinal side walls (3,4) in accordance with the length (L) of the packaging (1), and in that the support sections (10) extend in the support rendering position along the lateral side walls (5,6) and have a length (K) which is larger than the width (B) of the packaging, at the opening (8), so as to be able to rest on the longitudinal side walls (3,4).
- 25 5. Packaging (1) according to one or several of the preceding claims, characterised in that longitudinal side walls (3,4) are provided with hook-shaped portions (13) and the support sections (10) are provided with slots (14) which can co-operate with the latter so as to be able to maintain the support sections (10) in the support rendering position.
 - 6. Packaging (1) according to one or several of the preceding claims, characterised in that the side walls (3-6) of the packaging (1) have portions (14) with a height (H) measured from the bottom (2) which is larger than the distance (D) between the support sections (10) and the bottom (2) when the latter are in the support rendering position, so as to form edges which are designed to maintain an overlying packaging (1) inside the contours of the side walls (3-6).
 - 7. Packaging (1) according to one or several of the preceding claims, characterised in that one or several side walls (3,4) has or have a portion (15) with a height (E) measured from the bottom (2) which is smaller than the distance (D) between the support sections (10) and the bottom (2) when the latter are in the support rendering position.
 - Packaging (1) according to one or several of the preceding claims, characterised in that the packaging (1) is made of a single piece of cardboard which is cut, folded and glued into a tub with movable flaps (11) on either side.
 - **9.** Packaging (1) according to one or several of the preceding claims, **characterised in that** the side walls

(3-6) taper outwards as of the bottom (2).

- 10. Packaging (1) according to one or several of the preceding claims, characterised in that several of such similar packagings (1) can be stacked as nested when the support sections (10) are brought in the non-support rendering position.
- 11. Template (16) for manufacturing a packaging (1) according to one or several of the preceding claims, characterised in that it is made of a piece of card-board which is cut in a shape which is centrally provided with a rectangular section (17) designed to form a bottom (2), whereby along each side (18) of the rectangular section (17) is provided a trapezium-shaped portion (19) to form a side wall (3-6), whereby a first pair of opposite trapezium-shaped portions (20,21) is laterally provided with ears (22) designed to be able to connect the side walls (3-6), and whereby the other, second pair of opposite trapezium-shaped portions (23,24) has a crosscut end (25) which is provided with a flap (26) to form a support section (10).
- 12. Template (16) according to claim 11, characterised in that, in the first pair of opposite trapezium-shaped portions (20,21), at a distance (X) of each ear (22) corresponding to the width (Y) of the flaps (26) forming the support sections (10), a hook (13) directed to the respective ear (22) is cut out, and in that the flaps (26) are provided with slots (14) which, after the assembly of the template (16) into a packaging (1), can co-operate with the hooks (13) so as to be able to maintain the flaps (26) behind the hooks (13).
- 13. Template (16) according to claim 11 or 12, characterised in that each flap (26) is provided with an L-shaped incision (27) on either side, so that each flap (26) is T-shaped, and whereby each flap (26) is centrally connected via a folding line (12) to the respective trapezium-shaped portion (19).
- **14.** Method for packaging products (9) by means of packagings (1) according to one or several of claims 1 to 9, **characterised in that** the method comprises at least the following steps:
 - putting the support sections (10) of the packaging (1) in the non-support rendering position; introducing one or several products (9) in the packaging (1) via the entirely free opening (8); putting the support sections (10) of the packaging (1) in the support-rendering position; and, placing a following packaging (1) on the support sections (10).

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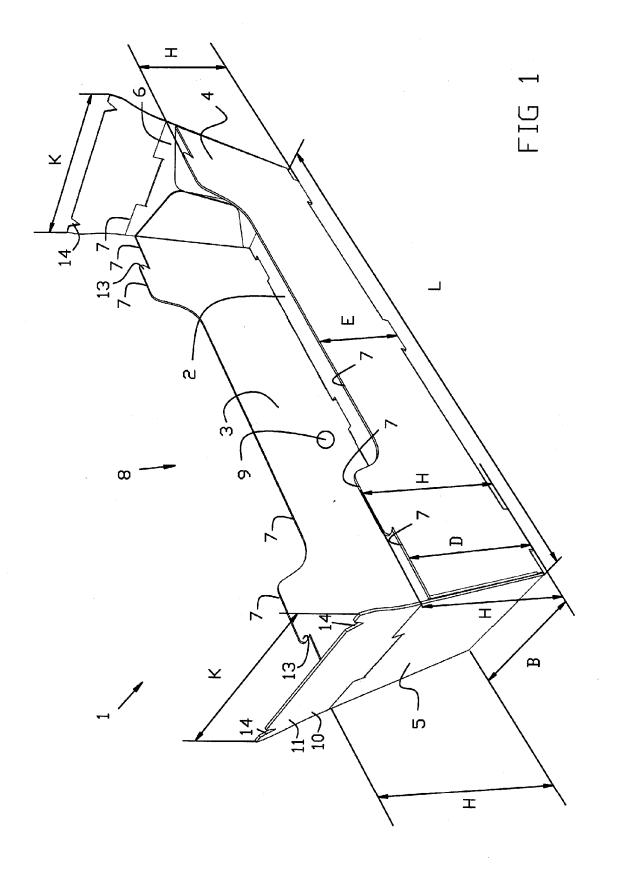
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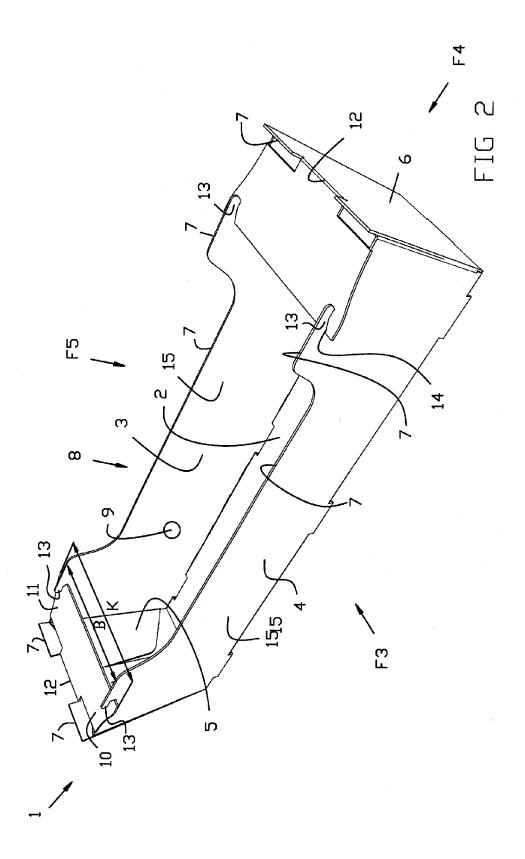
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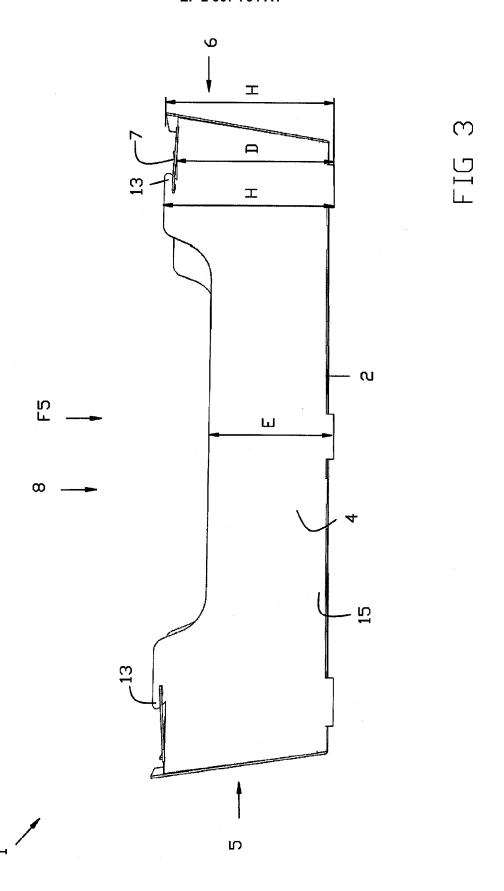
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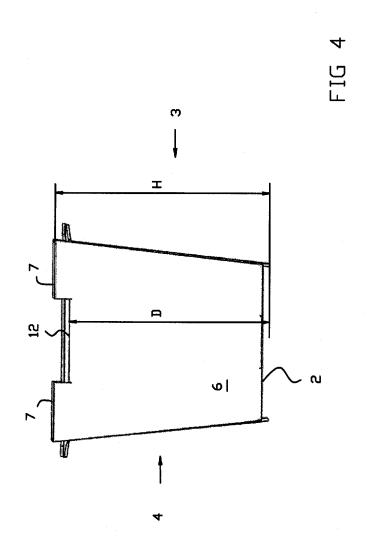
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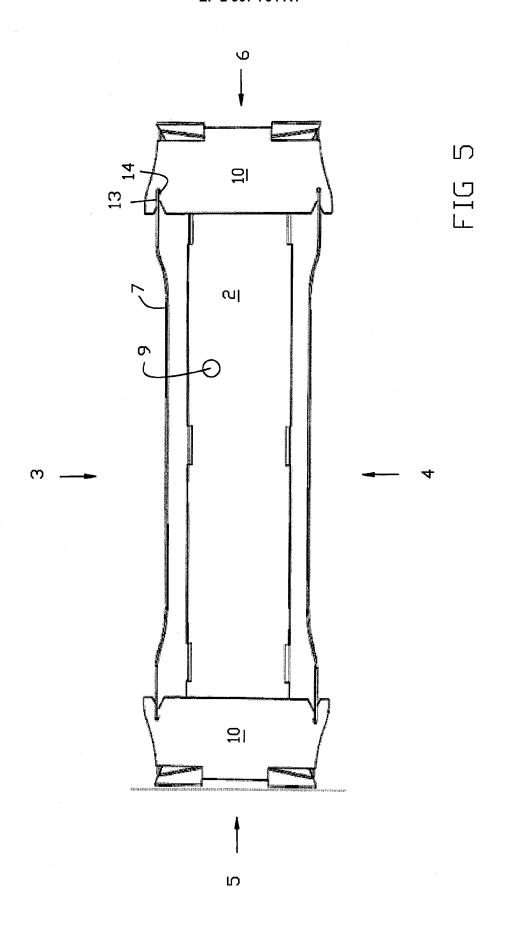
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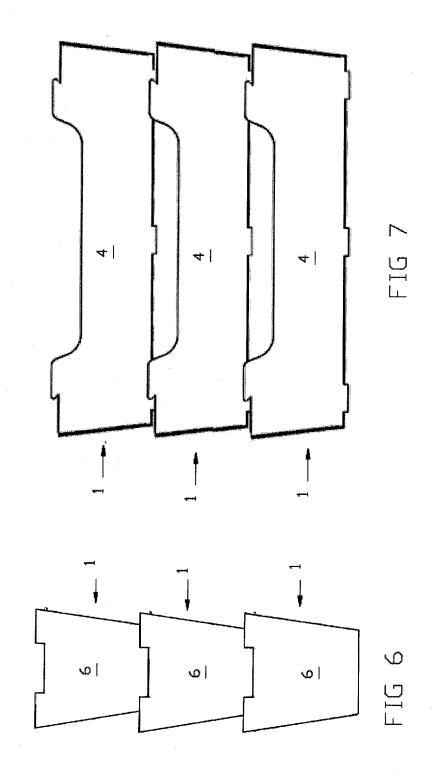


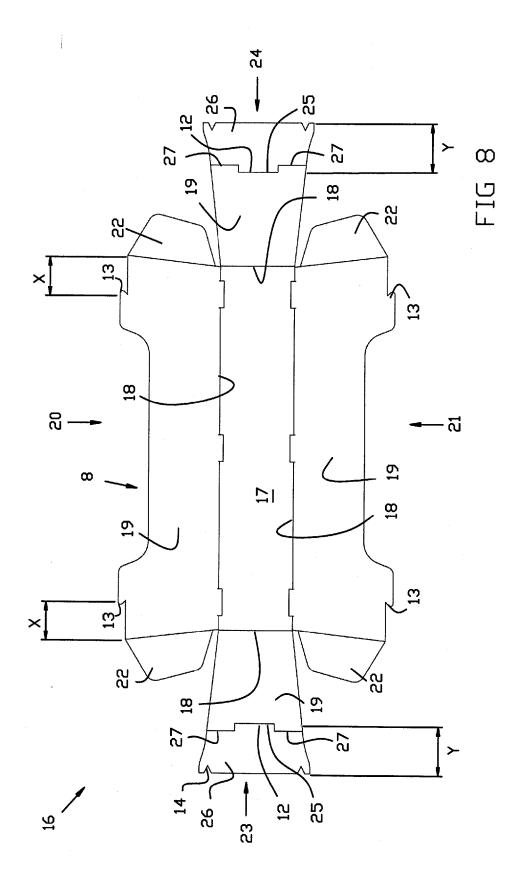














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	Munich	18 May 2015	Lei	jten, René
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Munich		18 May 2015	Lei	jten, René
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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