



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
30.12.2020 Bulletin 2020/53

(51) Int Cl.:
B65D 5/32 (2006.01) B65D 5/52 (2006.01)

(21) Application number: **20181694.9**

(22) Date of filing: **23.06.2020**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

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(30) Priority: **25.06.2019 NL 2023369**

(54) **ASSEMBLY OF A BOX AND A LID, BLANKS FOR FOLDING THESE, AND METHOD OF HANDLING AT LEAST ONE PRODUCT**

(57) The invention relates to a display box (10) and a lid (20), wherein the box and the lid comprise mutually interlocking elements (30) for interlocking the lid and the

box. The invention also relates to blanks (40, 50) for folding the box and lid form, and to a method of handling at least one product.

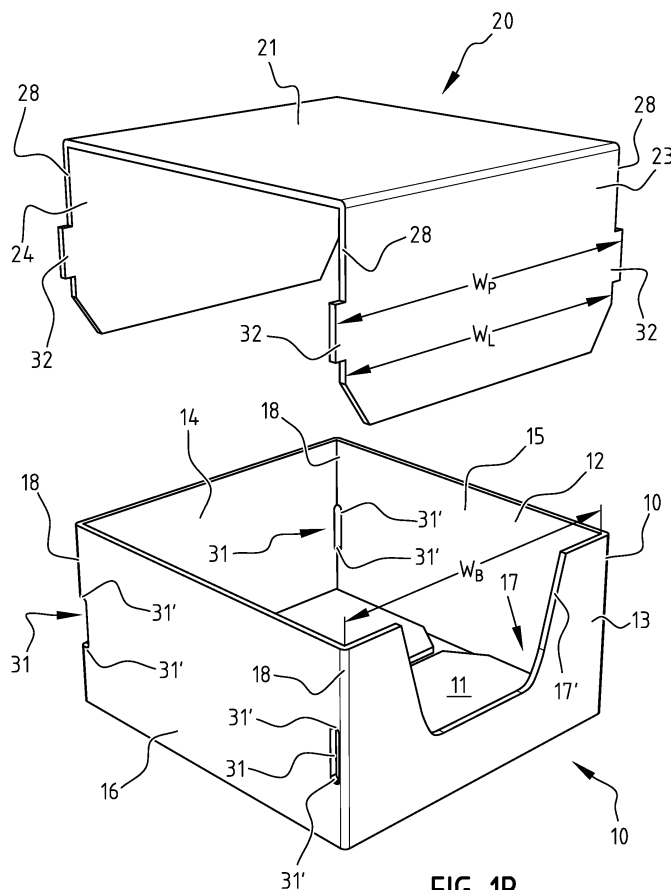


FIG. 1B

Description

[0001] The invention relates to an assembly of a box and a lid manufactured from separate blanks, the box comprising a bottom; and a peripheral side wall connected to the bottom, the peripheral side wall having opposing front and back sections and two opposing side sections, each of which is positioned between the front and back section, wherein at least one of the front section and the back section comprises a recess for displaying the contents of the box, the lid comprising: a top, configured to close the box along a free end of the peripheral side wall; and a front part and opposing back part connected to the top, each extending away from the top at a non-zero angle with respect to a main plane of the top, configured to extend into the box along the front and back sections respectively.

[0002] Such an assembly is known per se, and is often referred to as a display box. Display boxes may be used in e.g. discount supermarkets. The display box is first used during transport and storage of the contents of the display box. Later, when the products are to be moved to shelves for sale, the lid is at least partly removed, thereby opening the top of the box and the recess, so that the contents of the box, e.g. products, can be seen through the top and/or recess by customers, and can possibly be taken out by customers through the top and/or the recess.

[0003] While the display box introduced in the preamble has been used advantageously particularly on the shelves for allowing easy display, the display box can be handled only with relative difficulty, because in order to prevent the lid from inadvertently detaching from the box during handling, the box must be supported when the box is lifted or moved. In practice this may be achieved by manual labor or relatively complex machinery, both of which increase the cost of handling significantly.

[0004] The object of the invention is therefore, to provide a display box that may be handled more easily.

[0005] The object is achieved by an assembly according to the preamble, characterized in that the box and the lid comprise mutually interlocking elements for interlocking the lid and the box.

[0006] By virtue of the interlocking elements of the lid and the box, the lid and the box may be interlocked. Consequently, the interlocking elements may prevent the lid from detaching from the box inadvertently, for instance during handling. Accordingly, the lid and box may be handled by manipulation of the lid only. This may allow the advantageous use of box handling machines employing suction surfaces for moving boxes, which can pick up boxes by applying a suction force to the lid of a box.

[0007] In order to open the box, for instance by at least partly removing the lid, the interlocking elements may be unlocked, for instance upon the application of a force exceeding an unlocking threshold force. The unlocking threshold force may be determined by the structural rigidity of the interlocking elements and/or the box and/or the lid. The interlocking elements may therefore be con-

figured to at least withstand a force which is equal to the weight of the box and products to be contained therein. Consequently, the use of a display box of the above-described type, may be particularly advantageous for handling and displaying relatively light-weight products, such as cotton pads, because in that case the interlocking elements need not be exceptionally rigid.

[0008] In particular, the box and the lid can be mutually connected via the interlocking elements. Separating the box and the lid may take place by unlocking the interlocking elements, preferably without tearing and/or breaking them.

[0009] Since the box and lid are manufactured from separate blanks, the box and lid may be completely separable from each other. When closing the box, the lid may be attached to the box only via the interlocking elements. Particularly, no glue, tape, or other joining methods, other than the locking elements, may be used to join or interconnect the lid and the box. As a result, the lid may be attached to and/or removed from the box with relative ease and/or relatively quickly.

[0010] The recess may connect to a free end of its respective front or back section. This may facilitate e.g. a customer taking a product out of the box after the lid has been at least partly removed, especially if the box is placed at a relatively high shelf, because the product may be removed via both the recess and the open top of the box. Accordingly, the recess may not be a through hole, as its circumference connects to the free end of its respective front or back section, i.e. the recess is not delimited by the box over a part of the circumference thereof.

[0011] The recess in the front and/or back section may be a permanent recess, meaning it is already cut out before the box is folded. Alternatively, the recess may be formed by a removable section in the front and/or back section. In order to facilitate removal of the removable section, it may be connected to the front and/or back section via a tearable pre-cut connection. Preferably in the example of the permanent recess, but optionally also in case of the recess being formed by a removable section, the front part and/or back part of the lid may close off the recess and/or the removable section if the lid is arranged on the box. In such a case the front part and/or back part of the lid may extend parallel to a plane of the recess and/or the removable section, practically on an inner side thereof.

[0012] It is noted that the box may have a substantially cuboid or cubic shape, having only one front section, one back section, and two side sections, but it may alternatively have any other desired shape, and thereby any number of front and/or back and/or side sections adapted thereto.

[0013] In an embodiment of the assembly according to the invention, the mutually interlocking elements comprise at least one through hole in the peripheral wall of the box; and at least one protrusion protruding from the front and/or back part of the lid, configured to extend at

least partly through the at least one through hole when the lid is arranged on the box.

[0014] The through hole and protrusion may provide an interlocking element that is relatively easy to make and/or requires little extra material. Therefore, this embodiment may be manufactured at a lower cost.

[0015] It should be noted that in particular, the through hole of the interlocking elements may be additional to the recess in the front and/or back section of the box.

[0016] It is further noted that the through hole may be delimited by the box over the whole circumference thereof.

[0017] As the assembly may comprise more than one interlocking element, more than one, i.e. multiple, through holes and corresponding protrusions may be provided. However, it is not strictly required the same amount of through holes and protrusions is provided for every interlocking element. For instance, a single interlocking element could comprise one through hole and two protrusions configured to extend into the same single through hole.

[0018] In alternate forms of this embodiment, the interlocking elements, and therefore the through holes and protrusions may be provided in other locations than the peripheral wall of the box and the front or back parts of the lid respectively. Further, as an example, the box may additionally or alternatively comprise the at least one protrusion, and the lid may in that case comprise at least one through hole.

[0019] In particular, the at least one through hole may be a slot, wherein the at least one protrusion substantially corresponds in shape and size to said slot.

[0020] When the through holes are shaped like a slot, and the protrusions correspond in shape and/or size thereto, the interlocking elements may form a non-rotating connection, such that the box and lid can not rotate with respect to each other when the protrusion extends into the through hole. The non-rotating connection may contribute to the structural rigidity of the connection between the box and the lid. It is noted that corresponding in shape and/or size may be understood here as that in particular a length and/or thickness of the protrusion may be substantially equal to the length and/or width of the slot.

[0021] In particular, the slot may extend substantially parallel to a direction in which the lid is removed from and/or placed on the box. This direction may be identified as the vertical direction, extending away from the bottom of the box in a direction perpendicular to a main plane of the bottom. In turn, the protrusion corresponding to a slot oriented in this direction, has a relatively large dimension in the vertical direction, or perpendicularly away from the main plain of the top of the lid. As a result the protrusion is relatively strong in this direction. This may be particularly advantageous when the box is picked up by its lid, because the weight of the box will then exert a downward force on the protrusions, parallel to the vertical direction. The downward force thus corresponds in direction to the

relatively large dimension of the protrusions. As a result, the protrusion can withstand a relatively strong force.

[0022] The slot may have rounded end zones. Rounded end zones may help to prevent tearing of the material of the box and/or lid around the slot, when a force is applied thereto, for instance by a protrusion of an interlocking element.

[0023] In another embodiment of the assembly according to the invention, the interlocking elements are positioned at or near corner edges of the peripheral wall of the box between the front section and at least one of the side sections and/or between the back section and at least one of the side sections, and at a side edge of the front and/or back part of the lid.

[0024] By positioning the interlocking elements at the corner edges, especially at all or all four corner edges, the lid may be interlocked to the box particularly securely using the interlocking elements. Moreover, the corner edges form a relatively strong part of the box as compared to for instance a flat part of the peripheral wall of the box, so that the interlocking elements may benefit from the enhanced strength of the box at this location. Additionally or alternatively, since the at least one through hole of interlocking elements may decrease the strength of the box at its location, placing the interlocking elements at the corner edges may aid in maintaining strength of the box, due to the box's increased strength at the corner edges.

[0025] The corner edges referred to hereabove may be corner edges in the peripheral side wall, i.e. between sections of the peripheral side wall. When the box is in a normal use orientation, with its bottom facing downwards, the corner edges of the peripheral side wall are disposed vertically. The interlocking elements may be provided in the peripheral side wall, on or along the corner edges. The box may additionally have bottom edges between the peripheral side wall and its bottom.

[0026] In a particular form of this embodiment, the interlocking elements of the box lie tangent to a folding line between the side sections and the front and/or back sections of the peripheral wall, on a side section side of said folding edge.

[0027] Accordingly, the interlocking elements may lie close to the folding lines and achieve the advantages associated therewith, without jeopardizing the integrity of the folding line. Moreover, the interlocking elements lying tangent to the folding line in the side section of the box, places the interlocking elements just towards the inside of the front and back sections of the box. Consequently, the interlocking elements may be placed on the front and/or back part of the lid, which, when closing the box, lie just inside of the front and back part of the box respectively.

[0028] Even more in particular, the at least one protrusion protrudes from said side edge of the front and/or back part of the lid in a main plane of said respective front and/or back part.

[0029] The protrusion protruding from the side edge in

a main plane of the front or back part may be particularly strong, because no folding and/or creasing is required between the protrusion and its respective front or back part of the lid. Moreover, these protrusions may be particularly easy to manufacture from a blank.

[0030] Even more in particular, a local width of the front and/or back part at the at least one protrusion may exceed an internal width of the box.

[0031] As a result, the at least one protrusion may protrude through the at least one through hole in the box, and the at least one protrusion may be prevented from inadvertently exiting the through hole due to the local width of the front and/or back part exceeding the internal width of the box.

[0032] In a particular exemplary embodiment of the assembly the front and/or back part of the lid may comprise at least two protrusions, wherein at least one protrusion protrudes from each side edge of the front and/or back part of the lid in a main plane of said respective front and/or back part, and wherein the at least two protrusions are arranged at a same distance from the top of the lid, such that the local width of the front and/or back part is maximized in the area of the at least two protrusions. This further reduces the chance of the protrusions exiting their respective through holes.

[0033] In order to close the box with the lid, it may be advantageous that the lid is transferred to the top of the box via the open bottom and interior of the box before the box is completely folded. Before completely folding of the box, e.g. prior to folding at least the bottom of the box, the box is somewhat compliant and/or deformable and/or bendable so that the at least one protrusion may be positioned through the at least one through hole without damaging the box or the lid. After the at least one protrusion protrudes through the at least one through hole, the bottom of the box may be folded, thereby giving the box its final structural rigidity. This method is explained further below.

[0034] For removing the lid from the box, in particular when the local width of the lid exceeds the internal width of the box, it is possible that the box and/or the lid and/or the at least one protrusion have to be bent and/or torn and/or folded. As a result, a combination of a box and lid may be useable only once.

[0035] In yet another embodiment of the assembly according to the invention, the interlocking elements are provided at each corner of the peripheral wall. Moreover, when the box is of cuboid shape, and the bottom therefore of rectangular shape, the interlocking elements may be provided at each of the four corners in the peripheral wall.

[0036] Placing the interlocking elements at the corners allows a distribution of forces over all corners. Furthermore, in a cuboid configuration of the box, two front interlocking elements and two back interlocking elements may be provided, all positioned at respective corners. By unlocking the two front interlocking elements, whilst leaving the back interlocking elements in place, the lid may be folded backwards and upwards to create a placehold-

er for advertising products contained in the box.

[0037] The invention also relates to a blank for folding a box out of, the blank comprising: a bottom section, configured to form a bottom of the box when the blank is folded; and a front section, a back section, and two side sections, together configured to form a peripheral side wall of the box when the blank is folded, wherein when the blank is folded the front and back sections oppose each other, and the side sections oppose each other, and each of the side sections is positioned between the front and back sections, wherein at least the front or back section comprises a recess for displaying the contents of the box folded from the blank, wherein the blank comprises elements for interlocking with interlocking elements of a lid.

[0038] The blank may be used to fold a box for use in an assembly as described above, and may have the above-described characteristics, alone or in any combination whatsoever.

[0039] Any section of the blank, in particular the bottom section, may consist of several distinct pieces of the blank that together, in a folded state of the blank, form the corresponding part of the box, e.g. the bottom.

[0040] It is noted that the blank may comprise any desired further section, for example for attaching a said section to another section.

[0041] The invention also relates to a blank for folding a lid out of, wherein the blank comprises: a top part, configured to close a box when the blank is folded; and a front part and a back part, connected to the top part on opposing sides thereof, configured to extend into the box along front and back sections thereof respectively when the blank is folded, wherein the blank comprises elements for interlocking with interlocking elements of a box.

[0042] The blank may be used to fold a lid for use in an assembly as described above, and may have the above-described characteristics, alone or in any combination whatsoever.

[0043] The invention also relates to a method of handling at least one product, preferably in an assembly as described above, the method comprising the steps, to be performed in any suitable order, of:

a) providing a blank for forming a box out of, preferably as described above, and partly folding the front, back and side sections but leaving a bottom of the box open, thereby forming a box which is tubular in cross sectional shape;

b) providing a blank for forming a lid, preferably as described above, and folding front and back parts with respect to the top part so that they extend away from a main plane of the top part towards a same side of the main plane,

c) placing the at least one product between the front and back parts of the lid,

d) inserting the lid with the at least one product be-

tween the front and back parts of the lid into the partly folded box through the bottom of the box, until the top part of the lid closes a top side of the box, thereby inserting the product in the box; and

e) completing the folding of the box by folding the bottom with respect to the peripheral side wall,

wherein the box and the lid are interlocked during or after step d) using interlocking elements on the lid and the box.

[0044] The method according to the invention may provide a product in an assembly as described above, and thus offer the same advantages. The assembly may have any one or more of the characteristics described above, in any combination. In particular, the assembly can be handled via a suction device applied to the lid, without supporting the box.

[0045] Therefore, in a particular embodiment, the method comprises:

f) picking up and/or moving the box closed with the lid with the at least one product contained therein by applying a force, preferably a suction force, on the lid.

[0046] Moving the box by applying a force on the lid is particularly useful when multiple boxes are closely stacked together, because then the box may be difficult to reach for manipulation via grippers or by hand.

[0047] Step f) may in particular be performed without supporting the box.

[0048] The invention will be further elucidated with reference to the attached schematic figures, in which:

Figure 1A shows a perspective view of an assembly of a box and lid according to the invention;

Figure 1B shows an exploded perspective view of the assembly of figure 1A;

Figure 2 shows a perspective view the assembly of figures 1A and 1B partly opened.

Figure 3 shows a plan view of blank for folding a box out of, according to the invention;

Figure 4 shows a plan view of blank for folding a lid out of, according to the invention; and

Figure 5 shows in a perspective view how a product may be inserted into a box, while closing the box with a lid, according to the invention.

[0049] In the figures, like elements are referred to by like reference numerals.

[0050] Figures 1A and 1B show an assembly of a box 10 and a lid 20. The box 10 comprises a bottom 11, and a peripheral side wall 12 connected thereto. In this specific example the bottom 11 is of rectangular shape, so that the box 10 is of cuboid shape. The peripheral side wall 12 has a front section 13, a back section 14, and two

side sections 15, 16. The front section 13 opposes the back sections 14, with side sections 15, 16 disposed on alternate sides in between. The lid 20 comprises a top 21 and a front part 23 and a back part 24. The front section 13 of the box 10 comprises a recess 17 defined by recess edge 17'. The recess 17 connects to a free end of the front section 13 of the peripheral side wall 12. When the lid 20 is removed from the box 10, contents of the box 10 may be displayed through a top of the box 10, but also through the recess 17. Additionally, the contents, such as products, may be taken out via the recess 17 and/or top of the box 10. Such a box 10 is known as a display box 10, and is particularly popular amongst for example discount supermarkets. Front part 23 and back part 24 of the lid 20 extend away from the top 21 at a non-zero angle with respect to a main plane of the top 21, in this shown example of figures 1A and 1B the front and back parts 23, 24 extend away from the top 21 at approximately a right angle, towards a same side of the top 21. The top 21 of the lid 20 is configured to close the box 10 along a free end of the peripheral side wall 12 of the box, as shown in figure 1A. The front part 23 of the lid 13 extends into the box 10 along the front section 13 of the box 10, while the back part 24 of the lid 24 extends into the box 10 along the back section 14 of the box 10. The recess 17 in the front section 13 is thereby closed by the front part 23 of the lid 20.

[0051] The box 10 and the lid 20 both comprise interlocking elements 30 for interlocking the lid 20 and the box 10 at each of four corners of the box 10. When the lid 20 is interlocked with the box 10, as shown in figure 1A, the box 10 may be moved by applying a force to the lid 20. The interlocking elements 30 of the example shown in the figures each comprises a through hole 31 and a protrusion 32. The through hole 31 is provided in the peripheral side wall 12 of the box 10, and the protrusion 32 protrudes from the front and/or back parts 23, 24 of the lid 20. In order to interlock the box 10 and the lid 20, each protrusions 32 is configured to extend at least partly through its respective through hole 31 as shown in figure 1A. The through holes 31 shown have a longitudinal shape, resembling that of a slot. The protrusions 32 correspond in shape and size thereto, and are therefore also longitudinal in cross sectional shape. The slots 31 have rounded end zones 31'.

[0052] The interlocking elements 30 are positioned at or near corner edges 18 of the peripheral side wall 12 of the box 10. The corner edges 18 of the peripheral side wall 12 connect the front and back sections 13, 14 to side sections 15, 16, and are oriented vertically when the box 10 is in an upright position with its bottom 11 facing downwards. In this case the through holes 31 of slot shape lie tangent to a folding line between the side sections 15, 16 and the front and/or back sections 13, 14 of the peripheral side wall 12. The above-identified corner edges 18 are formed by folding the peripheral side wall 12 along the above-identified folding lines. More specifically, the through holes 31 lie in the side sections 15, 16 of the

peripheral side wall 12. Consequently, they can interlock with protrusions 32 protruding in a main plane of the front and back parts 23, 24 from a side edge 28 of the front and back parts 23, 24 of the lid 20. When the box 10 is closed with the lid 20, the side edges 28 of the lid 20 correspond to the corner edges 18 of the box 10.

[0053] As can best be seen in figure 1B, the local width W_P of the front and back parts 23, 24 at the protrusions 32 exceeds an internal width W_B of the box 10. The width W_L of the front and back parts 23, 24, away from the protrusions, corresponds substantially to the internal width W_B . Consequently, the front and back parts 23, 24 fit into the box 10, extending along the front and back sections 13, 14 thereof, while the protrusions 32 extend through the through holes 31 in the side sections 15, 16 of the box 10.

[0054] As shown in figure 2, the box 10 may be opened by removing the lid 10. The lid 10 may be removed only partly, e.g. by only unlocking interlocking elements 30 near the front section 13 of the box 10. The lid 20 can then be folded up as shown in figure 2. A bottom of the lid then forms a surface 29 on which a product label may be printed. Alternatively, all interlocking elements 30 could be unlocked, so that the lid 20 can be removed completely from the box 10.

[0055] Figure 3 shows a blank 40 for forming a box 10 out of. The blank 40 includes side sections 15, 16 and front and back sections 13, 14, which are together configured to form a peripheral side wall 12 of a box 10. The blank also includes several bottom parts 41, which can be folded with respect to the respective peripheral side wall parts 13, 14, 15, 16 to which the bottom parts 41 are attached, to together form a bottom 11 of the box 10. The blank 40 is provided with through holes 31 to form the interlocking elements 30 introduced above. The blank also includes a connection portion 42 for connecting one side of the back part 13 to another side of the blank 40 after partly folding the blank 40 into a box 10, which results in a peripheral side wall 12 of tubular cross section. The connecting portion 42 is also provided with a through hole 31, which aligns with through hole forming recess 43 in side section 16 when the blank 40 is folded into a box 10.

[0056] Figure 4 shows a blank 50 for forming a lid 20 out of. The blank 40 has the features described above in relation with the lid 20, and is therefore not explained further here.

[0057] Figure 5 shows how a box 10 can be filled with products 60. First, a box 10 is formed only in part by folding a blank 40. The blank is folded along the corner edges 18 so that its peripheral side wall 12 has a tubular shape. The bottom 11 which will ultimately be formed by bottom parts 41 is however left open, by leaving the bottom parts 41 unfolded with respect to the part of the peripheral side wall 12 they are connected to. The partly folded box 10 is shown in the top part of figure 5. Next a lid 20 is folded from a blank 50 by folding front and back parts 23, 24 thereof towards one side of a top 21 thereof.

In practice the front and back part 23, 24 thus extend in parallel. Products 60 are then placed between the front and back parts 23, 24 of the lid 20 as shown in the bottom part of figure 5. Subsequently, the lid 20 with the products 60 between its front and back parts 23, 24 is inserted into the box 10 via the open bottom of the box 10 in the direction of arrow A. Because the bottom of the box 10 is at this point still open, the box 10 can be deformed slightly. Consequently the lid 20, which has a local width W_P at the projections which exceeds then the internal width W_B of the box 10, can be inserted into the box 10 by slightly deforming the box. When the lid 20 has moved through the box 10, and arrives with its top 21 near a free end of the peripheral side wall 12 to close a top side of the box 10, the protrusions 32 of the lid 20 align with the through holes 31 of the box 10, so that they may interlock by protruding into the through holes 31. When the protrusions 32 interlock with the through holes 31, the box 10 may be brought back or move back by itself to its undeformed shape. The box 10 may then be completed by folding the bottom parts 41 with respect to their respective parts of the peripheral side wall 12, so as to form a bottom 11 and close the box 10. The box 10 may then be manipulated, e.g. picked up, by the lid 20, for instance by applying a suction force thereon.

[0058] Although the invention has been described hereabove with reference to a number of specific examples and embodiments, the invention is not limited thereto. Instead, the invention also covers the subject matter defined by the claims, which now follow.

Claims

1. Assembly of a box and a lid manufactured from separate blanks, the box comprising:

- a bottom; and
- a peripheral side wall connected to the bottom,

the peripheral side wall having opposing front and back sections and two opposing side sections, each of which is positioned between the front and back section, wherein at least one of the front section and the back section comprises a recess for displaying the contents of the box, the lid comprising:

- a top, configured to close the box along a free end of the peripheral side wall; and
- a front part and opposing back part connected to the top, each extending away from the top at a non-zero angle with respect to a main plane of the top, configured to extend into the box along the front and back sections respectively, **characterized in that** the box and the lid comprise mutually interlocking elements for interlocking the lid and the box.

2. Assembly according to claim 1, wherein the mutually interlocking elements comprise:

- at least one through hole in the peripheral wall of the box; and
- at least one protrusion protruding from the front and/or back part of the lid, configured to extend at least partly through the at least one through hole when the lid is arranged on the box.

3. Assembly according to claim 2, wherein the at least one through hole is a slot, the at least one protrusion substantially corresponding in shape and/or size to said slot.

4. Assembly according to claim 3, wherein the slot has rounded end zones.

5. Assembly according to any of the preceding claims, wherein the interlocking elements are positioned at or near corner edges of the peripheral wall of the box between the front section and at least one of the side sections and/or between the back section and at least one of the side sections, and at a side edge of the front and/or back part of the lid.

6. Assembly according to claim 5, wherein the interlocking elements of the box lie tangent to a folding line between the side sections and the front and/or back sections of the peripheral wall, on a side section side of said folding edge.

7. Assembly according to claim 6 as dependent on at least claim 2, wherein the at least one protrusion protrudes from said side edge of the front and/or back part of the lid in a main plane of said respective front and/or back part.

8. Assembly according to claim 7, wherein a local width of the front and/or back part at the at least one protrusion exceeds an internal width of the box.

9. Assembly according to any one of the preceding claims, wherein interlocking elements are provided at each corner of the peripheral wall.

10. Blank for folding a box out of, the blank comprising:

- a bottom section, configured to form a bottom of the box when the blank is folded; and
- a front section, a back section, and two side section, together configured to form a peripheral side wall of the box when the blank is folded, wherein when the blank is folded the front and back sections oppose each other, and the side sections oppose each other, and each of the side sections is positioned between the front and back sections, wherein at least the front or back

section comprises a recess for displaying the contents of the box folded from the blank, **characterized in that** the blank comprises elements for interlocking with interlocking elements of a lid.

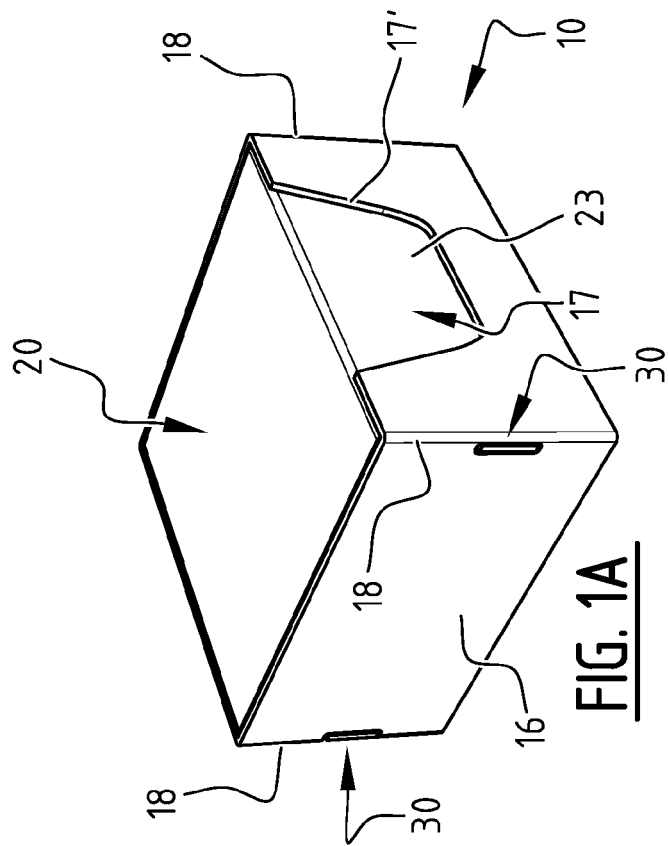
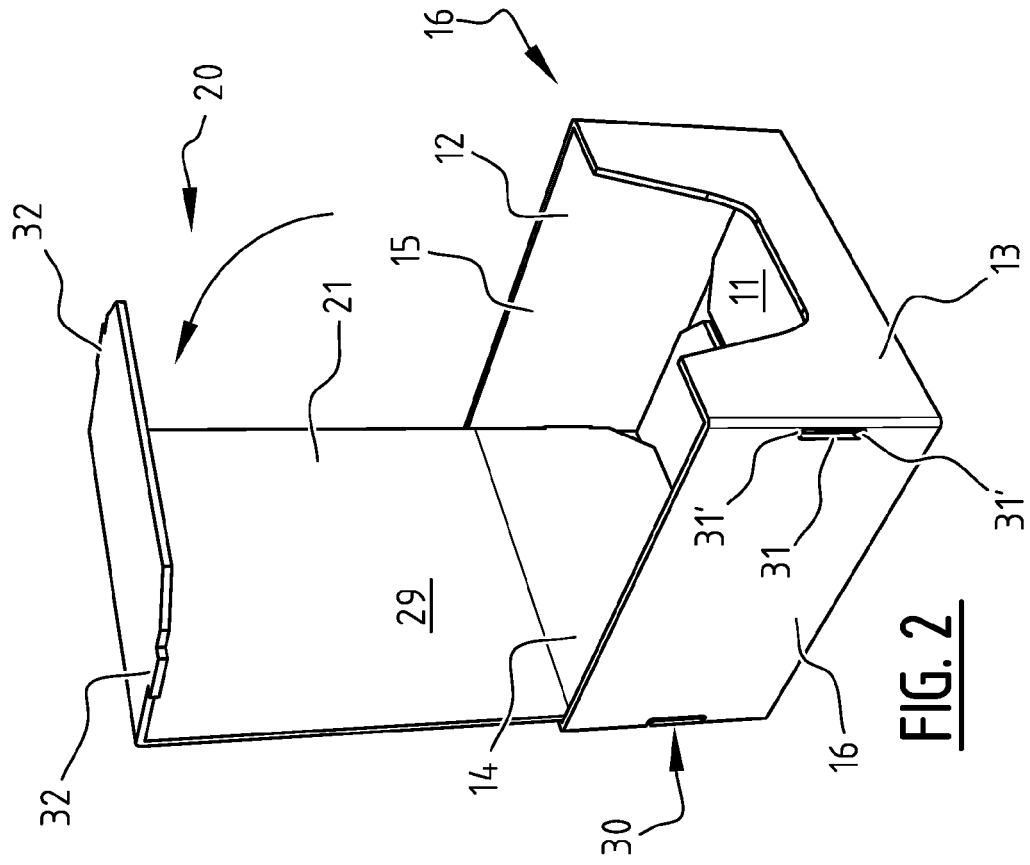
11. Blank for folding a lid out of, wherein the blank comprises:

- a top part, configured to close a box when the blank is folded; and
- a front part and a back part, connected to the top part on opposing sides thereof, configured to extend into the box along front and back sections thereof respectively when the blank is folded, **characterized in that** the blank comprises elements for interlocking with interlocking elements of a box.

12. Method of handling at least one product, preferably in an assembly as described in any one of claims 1 - 9, the method comprising the steps, to be performed in any suitable order, of:

- a) providing a blank for forming a box out of, preferably according to claim 10, and partly folding the front, back and side sections but leaving a bottom of the box open, thereby forming a box which is tubular in cross sectional shape;
- b) providing a blank for forming a lid, preferably according to claim 11, and folding front and back parts with respect to the top part so that they extend away from a main plane of the top part towards a same side of the main plane,
- c) placing the at least one product between the front and back parts of the lid,
- d) inserting the lid with the at least one product between the front and back part into the partly folded box through the bottom of the box, until the top part of the lid closes a top of the box, thereby inserting the product in the box; and
- e) completing the folding of the box by folding the bottom with respect to the peripheral side wall, **characterized by** interlocking the box and the lid during or after step d) using interlocking elements on the lid and the box.

13. Method according to claim 12, further comprising:
- f) picking up and/or moving the box closed with the lid with the at least one product contained therein by applying a force, preferably a suction force, on the lid.



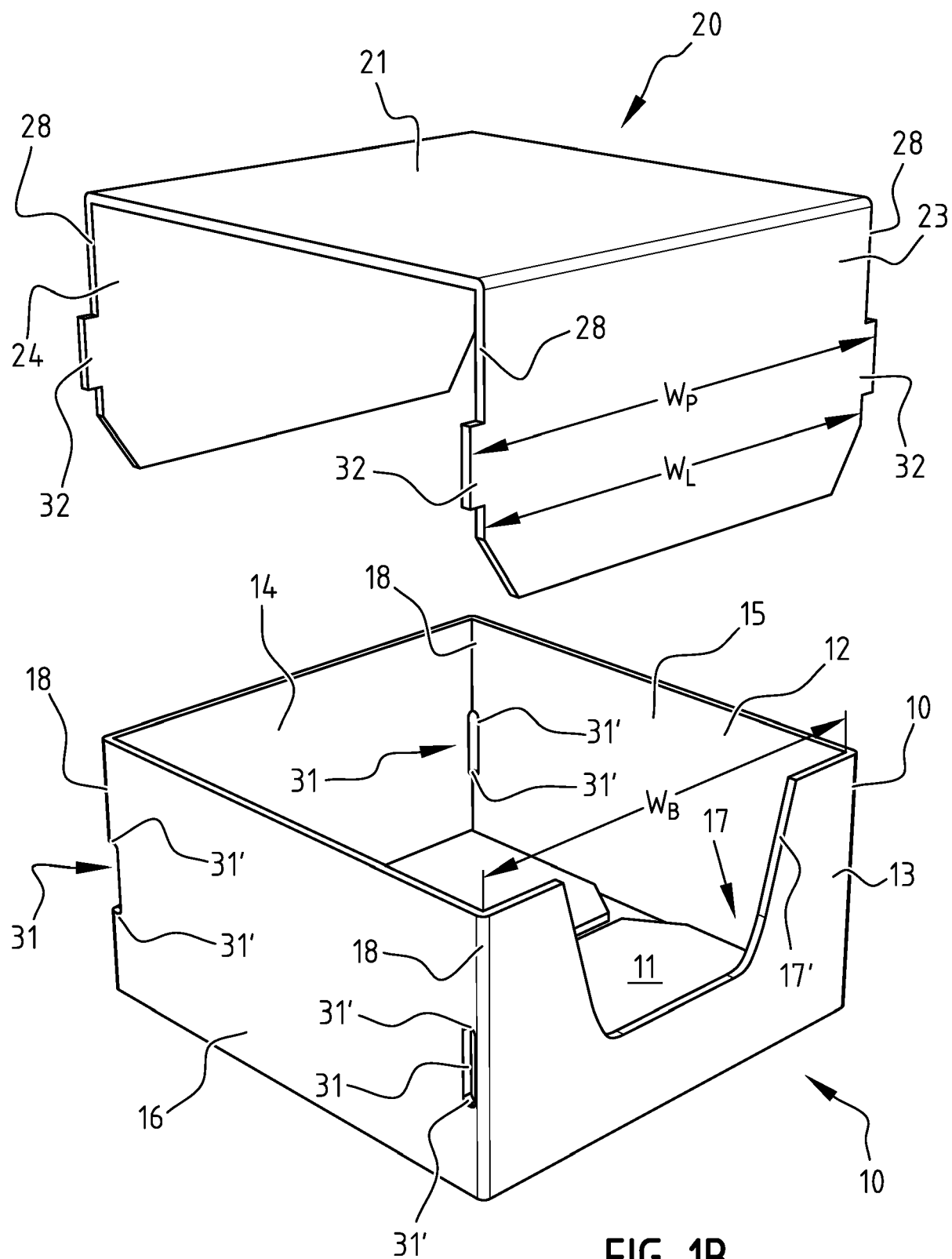
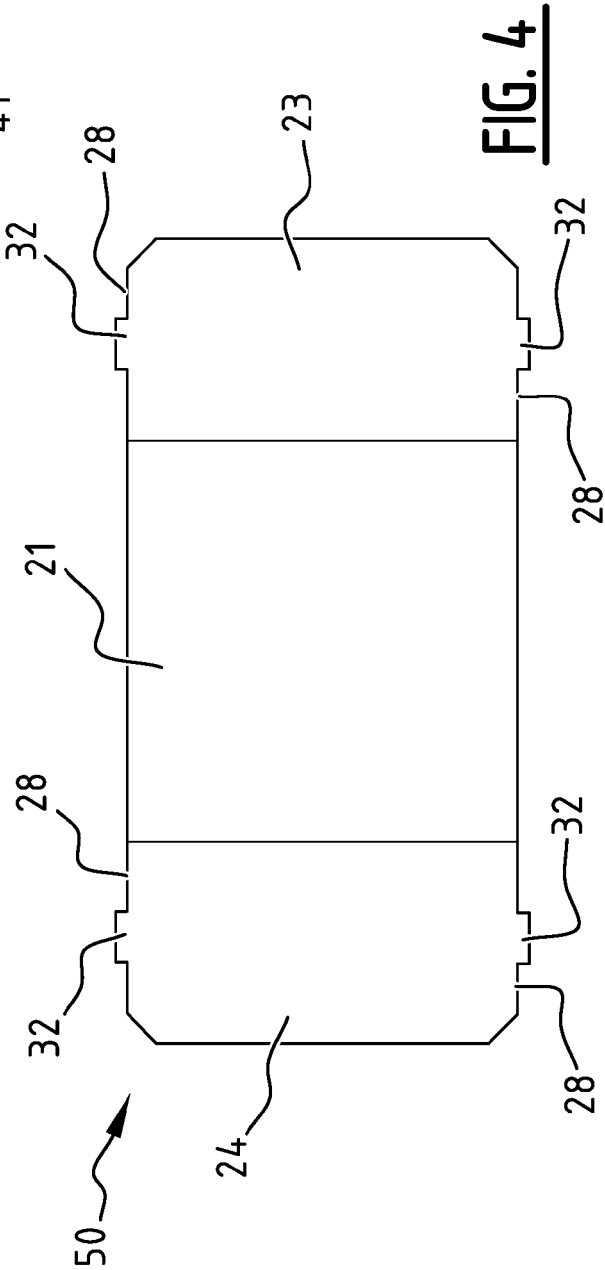
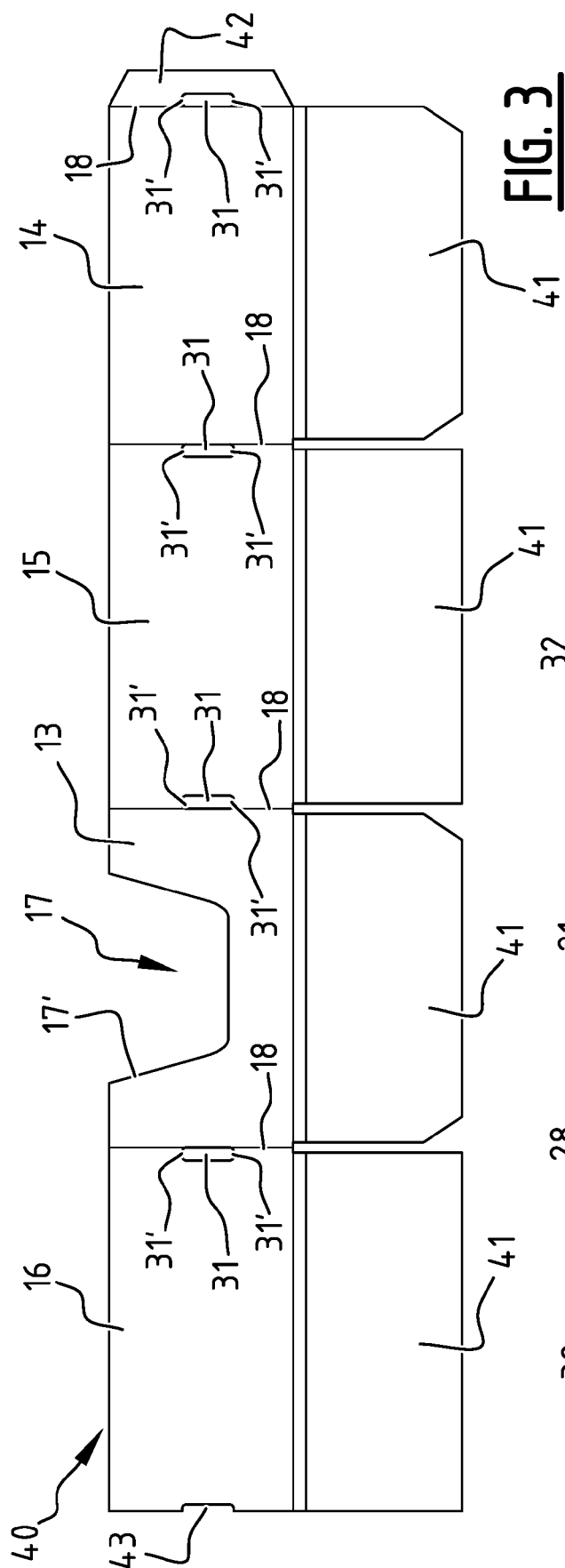


FIG. 1B



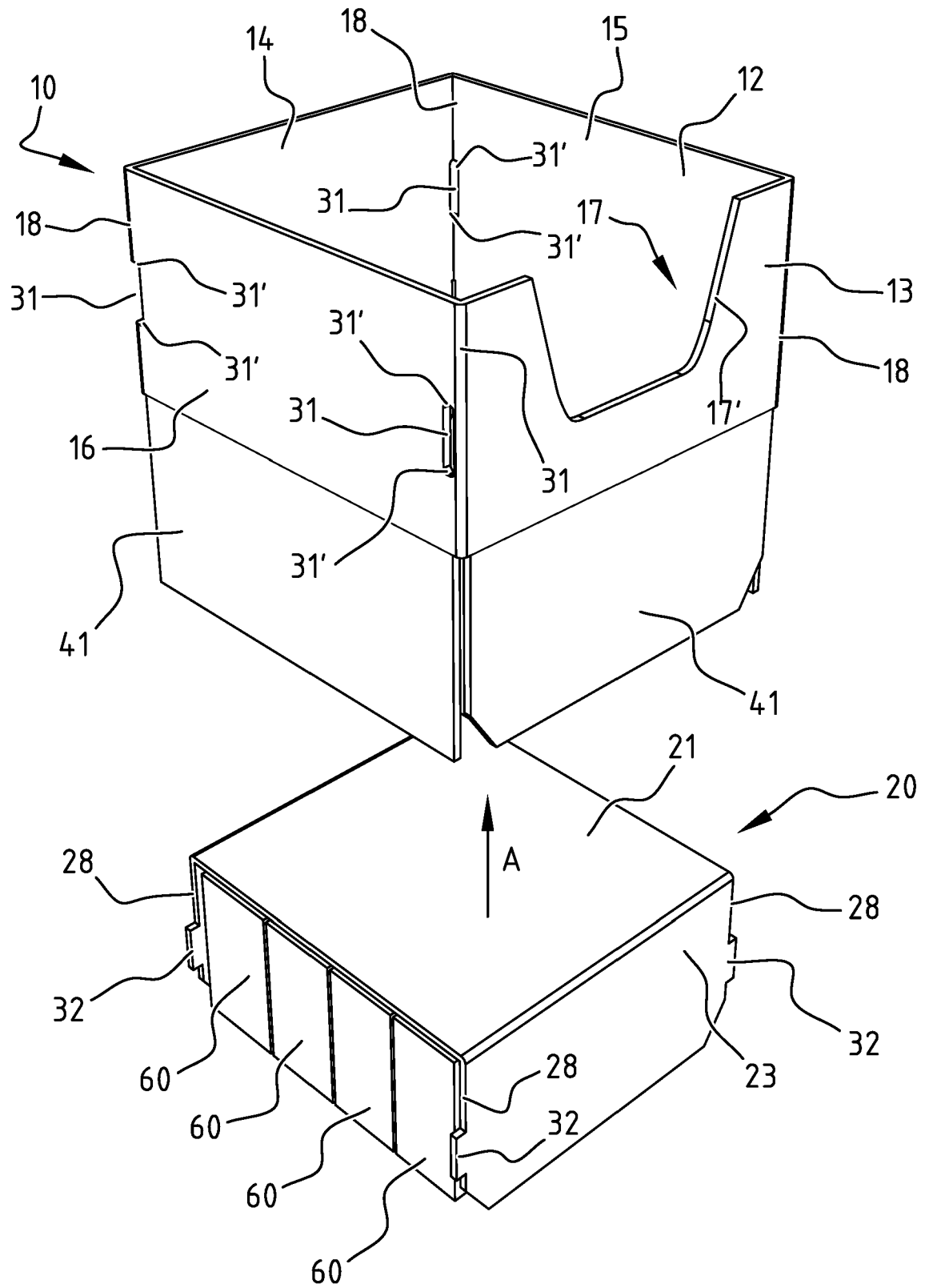


FIG. 5



EUROPEAN SEARCH REPORT

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